ANTHROPOLOGY NEWS DIARY

(AND)

21.04.2021

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. TRIBAL AFFAIRS

1. Tribal India Outlets

Context: 4 New Tribes India Outlets Virtually Inaugurated in New Delhi

Highlights:

- Four new outlets of Tribes India in prime locations in New Delhi were virtually inaugurated by Shri Bhaskar Khulbe, Advisor to the Prime Minister today.
- To help the tribal artisans and forest dwellers cope with these unprecedented times, and as a part of its ongoing initiatives to promote the livelihood of the tribal artisans through marketing and provide support to tribal produce and products, TRIFED is expanding its retail operations across the country.
- TRIFED is continuing its efforts to better the lives of the tribal people and enable them to get better access to larger markets, especially during the times when the pandemic is impacting their income and livelihoods. It is a momentous and joyous occasion since “Janjatiya Jeevika” is getting into enterprise mode.
- TRIFED also promotes tribal products abroad through embassies.
- The four showrooms will showcase the best of authentic tribal handicrafts and handlooms from traditions such as Maheshwari, Pochampally, Chanderi, Bagh from across all the states of India, and also feature natural, organic produce and products Van Dhan essentials and immunity boosters such as organic grains, spices, herbal teas, besides exquisite bell and metal work items.
- Categorised into attractive segments, there are dedicated counters for textiles, sarees and stoles such as Bagh print, readymade garments for men, women and children, exquisite tribal jewellery, metal work, iron items, pottery paintings, Van Dhan natural produce in this large store.
- In its mission to empower the downtrodden tribal people, by promoting the economic welfare of their communities across India (through development of marketing and the sustained upgradation of their skills), TRIFED, as the national nodal agency for tribal welfare, had started the procurement and marketing of tribal art and craft items through its network of retail outlets under the Tribes India brand.

Reference:

2. Bru tribals

Context:
Bru migrants move to permanent homes in Tripura 23 yrs after exiting Mizoram

Background:
- Bru or Reang is a community indigenous to Northeast India, living mostly in Tripura, Mizoram and Assam. In Tripura, they are recognised as a Particularly Vulnerable Tribal group.
- In Mizoram, they have been targeted by groups that do not consider them indigenous to the
state. In 1997, following ethnic clashes, nearly 37,000 Brus fled Mamit, Kolasib and Lunglei districts of Mizoram and were accommodated in relief camps in Tripura.

- Since then, 5,000 have returned to Mizoram in eight phases of repatriation, while 32,000 still live in six relief camps in North Tripura.
- In June 2018, community leaders from the Bru camps signed an agreement with the Centre and the two state governments, providing for repatriation in Mizoram. But most camp residents rejected the terms of the agreement.
- The camp residents say that the agreement doesn't guarantee their safety in Mizoram.
- In October 2019, the supply of ration to relief camps was stopped on instructions of the Home Ministry in a bid to hastily complete the repatriation of refugees to Mizoram. Civil society outfits had alleged that at least six refugees died due to starvation.

**Proposed New Agreement**

- According to the 2018 agreement, the Bru tribals would have settled in Mizoram, but according to the new agreement, they will now settle in Tripura.
- The stakeholders in the issue expect a package of Rs 600 crore from the Centre which includes:
  - Plots of 2,500 sq ft for each Bru family in addition to agricultural land.
  - A stipend of Rs 5,000 per month and free ration for each family for the next two years.
  - Bru tribals would be included in Tripura’s voter list.

*Reference:*

**B. BIOLOGICAL ANTHROPOLOGY**

1. **Genomic Data - Colon Cancer, Alzheimer’s**

   **Context:**

   - Genomic Data Offers Insight into Colon Cancer, Alzheimer’s Disease
   - In two separate studies, Mayo Clinic researchers leveraged genomic data to better understand the pathology of colon cancer and Alzheimer’s disease.

   **Highlights:**

   - In an analysis published in *Clinical Gastroenterology and Hepatology*, a team from the Mayo Clinic Center for Individualized Medicine found that one in six patients with colorectal cancer had an inherited cancer-related gene mutation that likely predisposed them to the disease.
Researchers also found that 60 percent of these cases would have gone undetected if they relied on a standard guideline-based approach.

15.5 percent of the 361 patients with colorectal cancer had an inherited mutation in a gene associated with the development of their cancer.

One in ten of these patients had modifications in their medical or surgical therapy based on the genetic findings.

Researchers tested the patients using a sequencing panel that included more than 80 cancer-causing or predisposing genes. In comparison, standard panels for colorectal cancer include only 20 or fewer genes.

The study highlights the benefits of using universal testing approaches and broader gene panels to uncover hidden inherited genetic mutations. These methods could lead to opportunities for cancer management in families, as well as targeted cancer therapies.

While many mutations that cause colon cancer happen by chance in a single cell – from environmental factors, diet, smoking and alcohol use – the study confirmed that many are inherited mutations that set off a cycle of events that can lead to cancer.

Genomic data analyses can also allow patients to share the heritable cause of their disease with their blood relatives, leading to earlier disease detection and management.

The power of genetics makes it possible to foresee the cancer that will develop in other family members. This can allow target cancer screening to those high-risk individuals and hopefully prevent cancer altogether in the next generation of the family.

In a separate study published in *Nature Communications*, Mayo Clinic researchers combined clinical expertise, brain tissue samples, and machine learning to clarify and validate the relevance of the SERPINA5 protein-coding gene to Alzheimer’s disease.

Using brain tissue samples from brains donated to the Mayo Clinic Brain Bank, the team classified the pattern of protein tangles associated with Alzheimer’s. Researchers then used digital pathology and RNA sequencing to identify gene expression in the samples, effectively measuring gene changes responsible for instructing proteins.

Much of the focus of therapeutics is on abnormal proteins — amyloid and tau — used to biologically define Alzheimer’s disease.

The findings could help provide a deeper level of understanding to advance results to clinical trials faster.

Reference:

2. Genetic scissors integration

Context:
Genetically engineered animals provide important insights into the molecular basis of health and disease. Research has focused mainly on genetically modified mice, although other species, such as pigs, are more similar to human physiology. Researchers have now generated chickens and pigs in which target genes in desired organs can be efficiently altered.
Highlights:

- CRISPR/Cas9 is a tool to rewrite DNA information. Genes can be inactivated or specifically modified using this method. The CRISPR/Cas9 system consists of two components.
- The gRNA (guide RNA) is a short sequence that binds specifically to the DNA segment of the gene that is to be modified. The Cas9 nuclease, the actual "gene scissors," binds to the gRNA and cuts the respective section of the target DNA. This cut activates repair mechanisms that can inactivate gene functions or incorporate specific mutations.
- The generated animals provide the gene scissors, the Cas9 protein, right along with them. So all that needs to be done is to introduce the guide RNAs to get animals which have specific genetic characteristics.
- The initial generation of these animals took about three years. Cas9 can now be used at all stages of animal development, since every cell in the body permanently possesses the Cas9 protein.
- The healthy chickens and pigs produced by the researchers thus possess the Cas9 nuclease in all organs studied. This is particularly useful in biomedical and agricultural research.
- Cas9-expressing chickens and pigs represent an innovative resource for genome editing in the biomedical and agricultural sciences, but beyond that, these animals are also available to other research groups. Hence, efficient genome editing in living animals has the potential to significantly advance biomedical and agricultural research.

Reference:
https://www.sciencedaily.com/releases/2021/04/210420121451.htm

3. Genetic Therapies for brain diseases

Context:
A class of drugs that silence the effects of faulty genes could help tackle brain diseases — but a halted clinical trial has brought the field up short.

Highlights:

- Huntington’s disease (HD) is an inherited condition that causes widespread deterioration in the brain and disrupts thinking, behaviour, emotion and movement.
- The disease usually begins in midlife, with subtle changes such as mood swings and difficulty in staying focused. As it progresses, people develop dementia and an inability to speak or move.
- The gene involved in Huntington’s, called HTT, codes for a protein called huntingtin. The faulty version of the gene repeats a short piece of its sequence — the nucleotide combination CAG — too many times.
- Unlike some genetic conditions, in which a person will develop a disease only if they have two faulty copies of a gene, just one copy of the HTT mutation is enough to lead to Huntington’s, and carriers of the mutation have a 50% chance of passing it on to their children.
- There are no treatments available to stop or slow the progression of Huntington’s, even though its genetic cause has been clear since 1993.
- Most other neurodegenerative diseases also lack effective therapies and, although their genetic roots are less clear-cut than for Huntington’s, many of the genes associated with
conditions such as motor neuron disease (amyotrophic lateral sclerosis, or ALS), Alzheimer’s and Parkinson’s have been known for decades.

- Currently, the tide might be turning for treating these kinds of diseases. Many researchers are hopeful about drugs known as antisense oligonucleotides (ASOs). These are short strings of DNA or RNA letters that are designed to cling to particular sequences of RNA made by faulty genes, and to rebalance the levels of proteins they produce — boosting missing proteins or quashing faulty ones.

Reference:
https://www.nature.com/articles/d41586-021-00870-x

4. T-Rex Fossils
- Ferocious tyrannosaur dinosaurs may not have been solitary predators as long envisioned, but more like social carnivores such as wolves.
- Paleontologists developed the theory while studying a mass tyrannosaur death site found seven years ago in the Grand Staircase-Escalante National Monument in southern Utah.
- Using geochemical analysis of the bones and rock, a team of researchers with the University of Arkansas determined that the dinosaurs died and were buried in the same place and were not the result of fossils washing in from multiple areas.
- The new Utah site is the third mass tyrannosaur grave site that’s been discovered in North America — bolstering a theory first developed 20 years ago that they lived in packs.
- It’s possible that these animals may have lived in the same vicinity as one another without traveling together in a social group, and just came together around dwindling resources as times got tougher.
- In 2014, Bureau of Land Management paleontologist Alan Titus discovered the site, which was later named the Rainbows and Unicorns quarry because of the vast array of fossils contained inside.
- Excavation has been ongoing since the site’s discovery because of the size of the area and volume of bones.
- In addition to the tyrannosaurs, researchers have also found seven species of turtles, multiple fish and ray species, two other kinds of dinosaurs and a nearly complete skeleton of a juvenile Deinosuchus alligator. These other animals do not appear to have all died together.

UPSC Previous year questions based on today’s concept:

1. How does customary law function in the tribal society? Discuss its different sources. (15 Marks - 2018)  
2. Genome study (S.N. - 2007)

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