ANTHROPOLOGY NEWS DIARY

(AND)

04.06.2021

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. Genetic Engineering
   ● Genetic engineering, the artificial manipulation, modification, and recombination of DNA or other nucleic acid molecules in order to modify an organism or population of organisms.
   ● The term genetic engineering initially referred to various techniques used for the modification or manipulation of organisms through the processes of heredity and reproduction.
   ● As such, the term embraced both artificial selection and all the interventions of biomedical techniques.
   ● Most recombinant DNA technology involves the insertion of foreign genes into the plasmids of common laboratory strains of bacteria. Plasmids are small rings of DNA; they are not part of the bacterium’s chromosome (the main repository of the organism’s genetic information).
   ● Nonetheless, they are capable of directing protein synthesis, and, like chromosomal DNA, they are reproduced and passed on to the bacterium’s progeny. Thus, by incorporating foreign DNA (for example, a mammalian gene) into a bacterium, researchers can obtain an almost limitless number of copies of the inserted gene.
   ● Furthermore, if the inserted gene is operative (i.e., if it directs protein synthesis), the modified bacteria will produce the protein specified by the foreign DNA.
   ● Genetic engineering has advanced the understanding of many theoretical and practical aspects of gene function and organization.

Reference:
https://www.britannica.com/science/genetic-engineering

2. Paleontology - T-Rex bite marks

Context:
In a paper published in the journal *PeerJ*, paleontologists present bite force estimates for a juvenile *Tyrannosaurus rex* based on mechanical tests designed to replicate its bite marks.

Highlights:
● For the study, University of Wisconsin Oshkosh’s Professor Joseph Peterson and colleagues made a replica of the scimitar-shaped tooth of a young *Tyrannosaurus rex* using a dental-grade cobalt chromium alloy.
● They then mounted the metal tooth in a mechanical testing frame and pushed it slowly, at a millimeter per second, into a fresh-frozen and thawed humerus of a cow.
● Forces required to replicate punctures were recorded and puncture dimensions were measured.
● The paleontologists determined that juvenile *Tyrannosaurus rexes* could have exerted up to 5,641 newtons of force, somewhere between the jaw forces exerted by a hyena and a crocodile.
● Compare that to the bite force of an adult *Tyrannosaurus rex* — about 35,000 newtons — or to the puny biting power of humans: 300 newtons.

● Previous bite force estimates for juvenile *Tyrannosaurus rexes* — based on reconstruction of the jaw muscles or from mathematically scaling down the bite force of adult *Tyrannosaurus rexes* — were considerably less, about 4,000 newtons.

● The study revealed that juvenile *Tyrannosaurus rexes*, while not yet able to crush bones like their 30- or 40-year-old parents, were developing their biting techniques and strengthening their jaw muscles to be able to do so once their adult teeth came in.

● It is just adding more to that full picture of how animals like tyrannosaurus lived and grew and the roles that they played in that ecosystem.

Reference:

3. Peking Man

Context:
The archeological discovery at the Zhoukoudian site, about 50 kilometers southwest of downtown Beijing, proves that Homo erectus and Homo sapiens once inhabited the land.

Highlights:
● The site is a cave system, discovered by Swedish geologist Johan Gunnar Andersson and Austrian paleontologist Otto Zadansky in 1921. Zadansky found two dental remains there, which inspired later archeological investigation. After years of excavation, a skullcap was unearthed by Chinese archeologist Pei Wenzhong (1904-82) on December 2, 1929.

● According to scientific research, the skullcap belonged to a Homo erectus, which became known as Peking Man.
Another four skullcaps were found at the site in the following years, along with teeth, bones, stone artefacts, traces of fire and mammal fossils. Evidence suggests that the fossils can be traced to between 710,000 and 230,000 years ago.

The skull of Peking Man is flat in profile and thicker than that of modern humans. He had a small forehead, heavy brow ridges, an occipital torus, a wide nose and a protruding and chinless jaw. His teeth are bigger than ours.

The experts assume that the cranial capacity of Peking Man averages 1,043 cubic centimeters, which is in between of that of ape and modern man. Based on the length of bones, the height of Peking Man is believed to be 1.56-1.57 meters.

The Peking Man site is listed as one of seven UNESCO World Heritage Sites in Beijing along with the Great Wall, the Summer Palace, the Forbidden City, the Temple of Heaven, the Ming Tombs and the Grand Canal.

Hundreds of thousands of years after the existence of Peking Man, the site “welcomed” their new guests — a group of Homo sapiens, dubbed “Upper Cave Man.” Enjoying a wider view, the sapiens lived in the cave-rooms that were higher than those of Peking Man.

Unfortunately, the original fossils of both Peking Man and Upper Cave Man were lost during World War II. Concerning the turbulent environment, the Kuomintang government decided to ship the fossils to the United States for safekeeping. However, the ship loaded with the treasures were attacked by the Japanese armies on the day after Pearl Harbor attack in 1941. Since then, the bones have never been recovered.

Reference:
https://www.shine.cn/feature/art-culture/2104298208/

B. TRIBAL AFFAIRS

1. Tribal Development

Context:
The Van Dhan programme is bridging the livelihood gap by boosting entrepreneurship in tribal clusters through countrywide Van Dhan Vikas Kendra clusters.
Highlights:

- Scheduled Tribes constitute over eight per cent of our national population. While half of these tribe-folks live outside tribal areas, the remaining still live in their native habitat. Most of these are forest dwellers. In exact terms, around five crore tribals live in their native environment.

- The guiding principle of the Government's economic development policy is inclusive development or sabka vikas. While much has been done for ST members who have migrated to the mainstream, the livelihood issues of the tribes-folk who have chosen to stay in the traditional forest habitats are yet to be adequately addressed.

- Evidently, there is an absence of a comprehensive plan to promote income-generating entrepreneurial activity. Van Dhan seeks to address this gap.

- Non-timber Forest Produces (commonly called 'Minor Forest Produces', or MFP) have been called "Van Dhan", meaning van ka dhan; and it rightfully belongs to the tribes residing in the forest. MFPs have major importance in the economy of tribal societies. MFPs are a major raw material for corporations in the food, pharmaceuticals and FMCG industries.

- Annually, around Rs 2,00,000 crores worth of MFP in raw form is gathered by the tribals and traded in the weekly haat bazaars. However, the income accruing to tribal gatherers in the above business is far below what may be called fair.

- They are getting around 20 per cent (the rest passes on to middlemen), whereas they deserve at least 60 percent of this amount. If MFP and market-led allied activities are strengthened, tribals can become prosperous in their own habitat in the shortest time span.

- MFP provides the best livelihood opportunity in tribal areas as tribals have natural, traditional skills and knowledge regarding forest products.

- Two mega MFP processing projects in Jagdalpur, Chhattisgarh and Raigad, Maharashtra — of the 100 such units planned for the country — are at advanced stages of completion.

- The enterprise approach under the mission will provide economies of scale and help in fostering tribal entrepreneurship on a large scale with the participation of NGOs, creating tribal-owned and tribal-managed production units while leveraging all existing funds and resource pools.

Reference:
http://www.millenniumpost.in/opinion/much-needed-elixir-441934?infinitescroll=1

2. North Sentinel Island & Cannibalistic Tribes

- It may look like a complete paradise, but North Sentinel Island in the Indian ocean has been home to a remote and decidedly unwelcoming Sentinelese tribe for over 60,000 years.

- Contacting the group without permission is forbidden - and for good reason.

- American John Chau was just 26 when he was reportedly shot dead with bows and arrows while visiting the island in 2018 in a bid to convert the tribe to Christianity.
- The tribesmen here are known to practise cannibalism.
- In 2006, two Indian fishermen were killed when their boat drifted onto the shore while they slept, and the helicopter sent to retrieve their bodies was met with a shower of arrows.
- There’s thought to be approximately 100 people living on the 20 square mile piece of land in a small camp consisting of approximately 18 huts.
- Speaking to the BBC, anthropologist TM Pandit who is one of the few to have contact with the tribe, first visiting the island in 1967, said: “During our interactions they threatened us but it never reached a point where they went on to kill or wound. Whenever they got agitated we stepped back.”

Reference:

UPSC Previous year questions based on today’s concept:
1. ‘Man is a Primate’. Discuss (15 Marks - 2015)
2. Forests & Tribal People. (S.N. - 1987)

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. Peking man. (20 Marks)