

International

Study: Herbivores face higher extinction risk than predators

Dinosaurs got cancer too, say scientists

WASHINGTON: Herbivores face a higher risk of extinction than predators, whether they are mammals, birds or reptiles, according to an extensive study of 24,500 species both living and extinct that was published Wednesday. The paper, which appeared in *Science Advances*, suggests herbivores have suffered a higher extinction rate over the past 50,000 years compared to other parts of the food web and the trend continues to this day. This contradicts the idea, based on anecdotal evidence, that predators are the most vulnerable because they have extensive home ranges and slow population growth rates.

The threat is greatest for reptile herbivores, such as turtles, and large herbivores, like elephants. “There is so much data out there and sometimes you just need someone to organize it,” said Trisha Atwood, an ecologist at Utah State University and the first author of the study. Researchers first looked at modern day extinction risk patterns among herbivores, omnivores and predators in mammals, birds and reptiles at different levels of the food web.

They performed the same analysis on species from the late Pleistocene epoch, beginning 11,000 years ago for Africa, North America and South America, and 50,000 years ago for Australia. Fi-

nally, they examined how body size and position in the food web affected the threat status among 22,166 living species. The authors wrote that though there are probably several reasons for the trend, certain man made interventions seemed to affect herbivores more than others.

“Invasive vertebrates (e.g., rats), insects (e.g., fire ants), and plants (e.g., Hottentot fig) have all been implicated in the decline and even extinction of several reptiles,” they said. What’s more, invasive species, pollution and habitat alteration appeared to affect small herbivorous birds disproportionately. There are certain exceptions: predators living in marine habitats did face an elevated extinction risk, suggesting they faced existential pressures than their land-dwelling counterparts.

Dinosaurs got cancer too

In another development, a new study that identifies the first known case of cancer in the creatures shows dinosaurs suffered from the debilitating disease too. A badly malformed Centrosaurus leg bone unearthed in the Alberta, Canada badlands in 1989 had originally been thought by paleontologists to be a healed fracture.

But a fresh examination of the growth under a microscope and using a technique also em-

ployed in human cancer care determined it was actually a malignant tumor. “The cancer discovery makes dinosaurs more real,” study co-author Mark Crowther told AFP. “We often think of them as mythical creatures, robust and stomping around, but (the diagnosis shows) they suffered from diseases just like people.”

The findings were published in the August issue of *The Lancet Oncology*. Most cancers occur in soft tissues, which are not well-preserved in fossil records, noted Crowther, a dinosaur enthusiast and chair of McMaster University’s medical faculty in Canada. “Oddly enough, under a microscope it looked a lot like human Osteosarcoma,” he said. “It’s fascinating that this cancer existed tens of millions of years ago and still exists today.” Osteosarcoma is an aggressive bone cancer that still afflicts about three out of one million people each year.

‘Just part of life’

In this horned herbivore that lived 76 million to 77 million years ago it had metastasised and likely hobbled the giant lizard, the researchers said in the study. But neither the late-stage cancer nor a predator looking to make a meal out of slow and weak prey is believed to have killed it. Because its bones were discovered with more

than 100 others from the same herd, the researchers said, it’s more likely they all died in a sudden disaster such as a flood, and that prior to this catastrophe the herd protected the lame dinosaur, extending its life.

Lead researchers Crowther and David Evans, curator of vertebrate paleontology at the Royal Ontario Museum in Toronto, and their team sifted through hundreds of samples of abnormal bones at the Royal Tyrrell Museum in Drumheller, Alberta, to find the bone with a tumour, which is about the size of an apple. The team also used high-resolution computed tomography (CT) scans, a multidisciplinary diagnostic technique used in human cancer care.

Crowther said dinosaurs would probably have been at higher risk of Osteosarcoma, which affects youths with fast-growing bones, because they grew very quickly and big. “In terms of the biology of cancer,” he said, “you often hear about environmental, dietary and other causes of cancer. Finding a case from more than 75 million years ago you realize it’s just a part of life.” “You have an animal that surely wasn’t smoking (a leading cause of cancer in humans) and so it shows that cancer is not a recent invention, and that it’s not exclusively linked to our environment.” —Agencies

Why the fuss? US, Taiwan and China

WASHINGTON: Why has the announcement by the United States of its highest-level visit to Taiwan for four decades sparked such anger from Beijing? Here is a recap of the key issues surrounding the delicate relations between the US, China and Taiwan.

The deep rift between China and Taiwan dates back to China’s civil war, which erupted in 1927 and pitted forces aligned with the Communist Party of China against the Nationalist Kuomintang (KMT) army. Eventually defeated by Mao Zedong’s Communists, KMT chief Chiang Kai-shek fled to Taiwan, which was still under KMT control. From there, Chiang continued to claim the entirety of China — just as the mainland claimed Taiwan. Taiwan’s official name remains the Republic of China, while the mainland is the People’s Republic of China.

For years both sides still formally claimed to represent all of China although that landscape has changed in recent decades. Since the late 1990s, Taiwan has transformed from an autocracy into a vibrant democracy and a distinct Taiwanese identity has emerged. The current ruling party, led by popular president Tsai Ing-wen, regards Taiwan as a de facto sovereign nation, not part of China. —AFP

Thousands protest in Turkey against domestic violence

ISTANBUL: Thousands of women in Turkey took to the streets on Wednesday to demand that the government does not withdraw from a landmark treaty on preventing domestic violence. The protests were the biggest in recent weeks as anger grows over the rising number of women killed by men in the past decade since the Istanbul Convention was agreed in 2011. The convention is the world’s first binding instrument to prevent and combat violence against women, from marital rape to female genital mutilation. Hundreds of women in Istanbul rallied in support of the treaty, an AFP correspondent said, holding placards saying “Women will not forgive violence”, “Apply the Istanbul Convention” and “Long live women’s solidarity”.

“Today, throughout Turkey and across political divides, all women need this convention. We are convinced that, with the strength of the women’s solidarity, we will prevent the withdrawal,” Benazir Coskun, 31, told AFP in Istanbul. In the Aegean region of Izmir, police intervened to stop the women’s protest and dozens chose to start a sit-in protest, women’s rights group Nar Women’s Solidarity said on Twitter. The group claimed 10 women had been detained. There were also protests in Ankara and in the southern cities of Adana and Antalya.

The demonstrations began last month after a ruling party official said the convention was “wrong” and speculated over possible withdrawal. In recent years, women’s rights groups have accused authorities of failing to implement law 6284 - created following Turkey’s ratification of the treaty in 2012 - leaving women vulnerable to violence often by their



ISTANBUL: Demonstrators wearing protective face masks hold up placards during a demonstration for a better implementation of the Istanbul Convention and the Turkish Law 6284 for the protection of the family and prevention of violence against women, in Istanbul. —AFP

partners, husbands or relatives. But for some conservative groups and individuals, they claim the convention encourages homosexuality and is a force “destroying” the unity of Turkish families.

The issue has even appeared to divide the President Recep Tayyip Erdogan’s family, with one association whose deputy chair is his daughter Sumeyye supporting the treaty while an organization linked to his son Bilal has come out against the convention. Rights group “We Will Stop Femicide Platform” says 146 women were killed by men in the first half of 2020. The group says 474 women were killed last year while the figure was 180 in 2010. —AFP