

Environment News Futures

Dinosaur-killing Asteroid Strike Gave Rise to Amazon Rainforest

April 2, 2021

The asteroid impact that killed off the dinosaurs gave birth to our planet's tropical rainforests, a study suggests.

Researchers used fossil pollen and leaves from Colombia to investigate how the impact changed South American tropical forests.

After the 12km-wide space rock struck Earth 66 million years ago, the type of vegetation that made up these forests changed drastically.

The team has outlined its findings in the prestigious journal *Science*.

Co-author Dr Mónica Carvalho, from the Smithsonian Tropical Research Institution in Panama, said: "Our team examined over 50,000 fossil pollen records and more than 6,000 leaf fossils from before and after the impact."

They found that cone-bearing plants called conifers and ferns were common before the huge asteroid struck what is now the Yucatan Peninsula in Mexico.

- Splosh! How to make a giant impact crater
- Dinosaur asteroid's trajectory was 'perfect storm'

But after the devastating impact, plant diversity declined by roughly 45% and extinctions were widespread, particularly among seed-bearing plants.

While the forests recovered over the next six million years, angiosperms, or flowering plants, came to dominate them. (*See Snapshot*)

Nasa to Fly Ingenuity Mars Helicopter in Early April

March 23, 2021—Jonathan Amos, Science correspondent@BBCAmoson Twitter

- **Nasa Perseverance Mars rover**

A helicopter the size of a Chihuahua will explore Mars

The US space agency says it expects now to fly the first helicopter on Mars in early April.

The little chopper was carried to the Red Planet by the Perseverance rover, which made its dramatic landing in Jezero Crater just over a month ago.

Called Ingenuity, the 1.8kg, twin-rotor aircraft will attempt a series of short hops in Mars' rarefied air.

If successful, it would represent something of a “Wright Brothers moment”, says Nasa.

This is a reference of course to Orville and Wilbur Wright, who in 1903 conducted the historic first heavier-than-air, powered aircraft flight here on Earth.

And to mark the connection, the agency revealed that a postage stamp-sized piece of fabric from a wing of the brothers’ plane has been taped to Ingenuity.



Image Copyright Nasa/Jpl-Caltech

The Wright Brothers fabric is taped just under Ingenuity’s solar panel.

At the moment, the chopper is still attached to Perseverance, to its belly. A protective covering was released at the weekend and in the coming days the craft will be lowered to the ground.

Engineers have identified a 10m by 10m area in Jezero that they’re calling the “airfield”.

This is at one end of a 90m “flight zone”, inside which perhaps five sorties will be performed. Perseverance will endeavour to record everything on camera.

“We are going to do our very best to capture Ingenuity in flight,” said Nasa engineer Farah Alibay.

“We’re going to be taking images, we’re hoping to take video.”

This will be challenging, she cautioned. Both rover and helicopter function autonomously and carry separate clocks. The timing devices will need to be in sync for the photography to catch the action.

Sewage Discharged into Rivers 400,000 Times in 2020

By David Brown, BBC News

Water companies discharged raw sewage into rivers in England more than 400,000 times in 2020, according to *new figures* published by the Environment Agency.

Untreated effluent, including human waste, wet wipes and condoms, was released into waterways for more than three million hours last year.

Companies Back Moratorium on Deep Sea Mining

David Shukman, **Science Editor**

A long-running dispute over plans to start mining the ocean floor has suddenly flared up.

For years it was only environmental groups that objected to the idea of digging up metals from the deep sea. But now BMW, Volvo, Google and Samsung are lending their weight to calls for a moratorium on the proposals.

The move has been criticised by companies behind the deep sea mining plans, who say the practice is more sustainable in the ocean than on land.

India ‘Getting the Job Done’ on Climate Crisis, says John Kerry

April 07, 2021—Jayashree Nandi, Hindustan Times, New Delhi

The United States’s special presidential envoy for climate John Kerry is on a four-day visit to India from April 5 to April 8, during which he will meet representatives from the government, the private sector and NGOs.

The United States’s special presidential envoy for climate John Kerry on Tuesday praised India for “getting the job done on climate”, calling the country a world leader in renewables as he began talks aimed at cutting carbon emissions amid growing concerns over global warming.

Deadly Heat Waves Will Become More Common in South Asia, say Scientists

March 25, 2021— PTI

According to the research, published in the journal *Geophysical Research Letters*, with two degrees of warming, the population’s exposure to lethal temperatures rises by close to three times as compared to recent years.

Potentially deadly heat waves will likely become more commonplace in South Asian countries, including India, in the coming decades even if global warming is limited to 1.5 degrees Celsius, according to a new study.

Scientists, including those from Oak Ridge National Laboratory in the US, said such an increase in extreme heat events can create unsafe labour conditions in major crop producing parts of India, such as Uttar Pradesh and West Bengal, as well as coastal regions and urban centres like Kolkata, Mumbai and Hyderabad.

Not all Deadwood: Furniture Fashioned from Hong Kong Tree Waste

March 17, 2021— Reuters, Hong Kong

HK Timberbank collected more than 300 tonnes of trees in Hong Kong for recycling last year, most of which would have otherwise been dumped in landfills because of rot or insect infestation.

The growl of a chainsaw fills the air as a dead longan tree is felled under the watchful eye of Ricci Wong, founder of a Hong Kong non-profit to turn tree waste into furniture and other household products. Wong and his partners store the wood at an industrial site in the city's New Territories, where they have an inventory of over 80 tree species to use as raw material for furniture, cutting boards, clocks, coasters and art.

Each piece of furniture takes three to four months to manufacture, Wong said, from drying the wood, to designing and making the items with professional woodworking tools.

During a recent showcase, a customer said she was delighted with her new coffee table.

"It is not too complicated or crafted sophisticatedly," said Sharon Ho. "They create mainstream furniture in the simplest way."

Novel Coronavirus Circulated Undetected Months Before First COVID-19 Cases in Wuhan, China

March 18, 2021—University of California, San Diego

Study dates emergence to as early as October 2019; Simulations suggest in most cases zoonotic viruses die out naturally before causing a pandemic

Using molecular dating tools and epidemiological simulations, researchers estimate that the SARS-CoV-2 virus likely circulated undetected for two months before the first human cases of COVID-19 were described in Wuhan, China in late-December 2019.

Separating Beer Waste into Proteins for Foods, and Fiber for Biofuels

April 6, 2021—American Chemical Society

All brewers experience the same result of the beer-making process: leftover grain. Once all the flavour has been extracted from grains, what's left is a protein- and fiber-rich powder that is used in cattle feed or put in landfills. Scientists now report a new way to extract the protein and fiber and use it to create new types of protein sources, biofuels and more.

Home brewing enthusiasts and major manufacturers alike experience the same result of the beer-making process: mounds of leftover grain. Once all the flavor has been extracted from barley and other grains, what's left is a protein- and fiber-rich powder that is typically used in cattle feed or put

in landfills. Today, scientists report a new way to extract the protein and fiber from brewer's spent grain and use it to create new types of protein sources, biofuels and more.

New Deadly Snake from Asia Named After Character from Chinese Myth 'Legend of White Snake'

April 6, 2021—Pensoft Publishers

The venomous krait that caused the death of famous herpetologist Joseph B. Slowinski turns out to be new to science, according to recent research. The new species, *Bungarussuzhenae*, was named after the character Bai Su Zhen from the Chinese myth the Legend of White Snake. In 2001, the famous herpetologist Joseph B. Slowinski died from snakebite by an immature black-and-white banded krait, while leading an expedition team in northern Myanmar. The very krait that caused his death is now confirmed to belong to the same species identified as a new to science venomous snake, following an examination of samples collected between 2016 and 2019 from Yingjiang County, Yunnan Province, China.