



Week ending Friday, January 15, 2021

Marine Record

Temperatures of the world's oceans between the surface and about 6,500 feet deep during 2020 reached the warmest levels ever measured, according to a report in the journal *Advances in Atmospheric Sciences*

. "Over 90% of the excess heat due to global warming is absorbed by the oceans, so ocean warming is a direct indicator of global warming," said lead researcher Lijing Cheng of the Chinese Academy of Sciences. The past five years have been the hottest on record for the world's vast oceans, with the rate of heating eight times higher than from 1960 to 1985. The warmth is said to be harming marine life and supercharging extreme weather conditions.

Earthquakes

The Azores archipelago was jolted by an unusually powerful quake.

- Earth movements were also felt in the Turkish capital of Ankara, India's Jammu and Kashmir territory, northern Mongolia, Bali, northwestern Argentina and western Yukon.

Warmest Year

Year-end calculations reveal that 2020 was effectively the planet's hottest year in human history, virtually tying with the previous record set in 2016. Europe's Copernicus Climate Change Service says that last year was about 2.25 degrees Fahrenheit above the long-term average. The Japan Meteorological Agency's calculations came to a similar conclusion. Some places on Earth recorded an average temperature of 10.5 degrees above that average. Copernicus scientists note that 2016 was made warmer by a strong El Niño ocean warming, while last year was cooled slightly by an emerging La Niña. This means climate change was even more powerful in 2020 despite the pandemic's economic slowdown around the world.

'Ghastly Future'

An international group of scientists warns that Earth is headed for a "ghastly future of mass extinction, declining health and climate-disruption upheavals" because of ignorance and dithering. Writing in the journal *Frontiers in Conservation Science*, experts say that the scale of the threat is so great that it's difficult even for experts to grasp. The report warns that climate-induced mass migrations, more pandemics and conflicts over resources will become inevitable unless urgent action is taken. It asks world leaders to meet the challenges posed by the climate emergency.

Creepy Climbers

One species of invasive brown tree snakes in Guam has learned a previously unknown way of climbing trees and tall poles to find food, which scientists describe as "lassoing" their bodies to ascend. The ability was discovered as researchers were studying the native birds on the Pacific Island that have been decimated since the snakes were inadvertently introduced in the 1940s and 1950s. While monitoring a nest of Micronesian starlings that had been placed on a tall pole to protect them, Colorado State University and University of Cincinnati researchers were shocked to see the lasso technique, which they say probably evolved to help the snakes reach food.

Greenhouse Climbers

Levels of the greenhouse gas carbon dioxide will become 50% higher in the atmosphere this year than before the Industrial Revolution due to ongoing manmade emissions, according to the British Met Office. It predicts the average CO₂ concentration will exceed 417 parts per million (ppm) at Hawaii's Mauna Loa observatory sometime between April and June. That will be 50% higher than the 278 ppm that prevailed in the late 18th century before a burgeoning industrial economy began spewing clouds of CO₂ into the atmosphere.

Java Eruption

Clouds of superheated volcanic debris cascaded down the slopes of Indonesia's Mount Merapi, sending 500 people who live and work on the restive volcano's slopes fleeing for safety. Many had returned after evacuating in November when authorities warned of building seismic unrest. Volcanologists have placed Merapi under the second-highest warning level.

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