

Earthweek: Diary of a Changing World

Week ending Friday, April 25, 2025

By Steve Newman

'New' Colour

Researchers at the University of California, Berkeley, say they have produced a new color for humans to see by using laser pulses to stimulate only one type of cone cell in the retina, something natural light cannot do.

The breakthrough was achieved through a system called Oz, which precisely targets cones that sense medium-wavelength light, by stimulating only one type of colour-detecting cell, avoiding the usual blending that prevents our eyes from seeing certain colours.

Five volunteers described the color, dubbed olo, as an extremely saturated blue-green unlike anything they had seen before.

The finding could lead to treatments for colour blindness or other eye disorders.

Earthquakes

Hundreds of people were injured in Istanbul during a magnitude 6.2 quake that officials say damaged 378 buildings.

• Tremors were also felt in New South Wales, central Japan, South Asia's Hindu Kush region, the Aegean Sea and southeastern Ohio.

Insect Killers

Insects are vanishing around the world, and a new study says it's not just due to pesticide use and farming.

Researchers at New York's Binghamton University looked at over 175 scientific papers and found more than 500 reasons why insect populations are shrinking — from pesticide use and climate change to things rarely mentioned, such as wildfires, pollution and even war.

The study shows that many of these threats are connected, creating a web of problems that's much more complex than previously thought.

The researchers emphasize the need to look at the bigger picture and to protect the many different species that keep Earth's complex ecosystems in balance.

Tropical Cyclones

Subtropical Storm Kanto formed well to the south of Madagascar as the first such system in the region since Issa spun up during the southern Indian Ocean's 2021-22 cyclone season.

While Kanto formed far from land, Issa caused significant death and destruction in parts of South Africa.

• After reaching Category-5 force for a few hours, Super Cyclone Errol weakened to a minimal tropical storm before making landfall on Australia's north-western coast.

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Canine Impacts

Pet dogs have a far larger impact on the environment than most people realize, according to new research.

The world's estimated 1 billion dogs are disturbing wildlife, polluting waterways and contributing to carbon emissions through pet food production.

Curtin University researchers say this is mostly caused by the actions — or inaction — of dog owners and not the dogs themselves. Simple steps like keeping dogs on leashes in sensitive areas, picking up waste and choosing more sustainable pet food could help reduce the canine environmental "paw print."



Initial phase of the Poás volcano eruption on April 21. Photo: RSN-UCR

Solar 'Droughts'

New research published in the journal *Geophysical Research Letters* reveals that climate change is making multiday solar power shortages, known as "solar droughts," more common, especially in tropical and developing regions.

These droughts happen when cloudy skies, high temperatures or pollution reduce solar power output just as energy demand surges, often for cooling purposes.

From 1984 to 2014, areas like the western US, eastern Brazil and parts of Africa experienced five or more solar droughts each year, increasing steadily over time.

Forecasts indicate these events could become seven times more frequent by the 2090s even if greenhouse gas emissions continue at only moderate levels.

Eruption

Costa Rica's Poás volcano produced its strongest eruption in years, spewing ash that blanketed the country's Central Valley.

Authorities advised residents to wear N95 masks and limit outdoor exposure to protect against ash and toxic gas inhalation.

