

Earthweek: Diary of a Changing World

Week ending Friday, January 24, 2020

By Steve Newman

Human Footprint

Around 85% of Earth's wildlife is now being trampled by intense human pressure, which researchers say is putting some of those species into an extinction crisis.

Scientists from the University of Queensland, the Wildlife Conservation Society and other groups point to land species with small ranges as being disproportionately exposed to human competition from factors such as grazing livestock, agriculture and urban sprawl.

The study's "Human Footprint" report also lists other influences, such as population density, transportation networks, and mining and utility corridors, for their impacts on wildlife.

Earthquakes

At least one person was killed when a magnitude 6.0 temblor toppled buildings, walls and utility poles in China's Xinjiang Uygur region.

- Tremors were also felt in New Zealand's Canterbury region, the northern Red Sea, Puerto Rico, eastern Tennessee, south-central Kansas and the northern Los Angeles Basin.

Record Pressure

London experienced what was likely the U.K. capital's highest barometric pressure since records began in 1692 as a massive area of high pressure blanketed the United Kingdom and much of northern Europe.

Instruments at London's Heathrow Airport recorded a pressure of 1,049.6 millibars (30.99 inches of mercury) on Jan. 19. The all-time British record of 1,053.6 millibars (31.11 inches of mercury) was set in Aberdeen, Scotland, on Jan. 31, 1902.

The development of such a powerful high pressure system helped spawn Spain's worst winter storm in decades to the south.

A deep low pressure area, dubbed storm Gloria, killed at least 11 people and caused widespread destruction and heavy snowfall across the Iberian Peninsula.

Everest Melt

The glaciers atop Mount Everest in the Himalayas have been shrinking for decades due to climate change, according to satellite images, some declassified from the height of the Cold War.

Researcher Tobias Bolch, of Britain's University of St. Andrews, and colleagues compared thousands of images from U.S. spy satellites taken in the 1960s with more recent observations of the world's most lofty mountain.

They found that glaciers began to recede at an average rate of 8 inches per year between 1962 and 1969.

Imja glacier has lost more than 300 feet during the past 60 years.

'Commoonication'

A study of vocalizations made by cows has led an Australian ruminant researcher to believe the animals communicate to each other about how they feel, expressing their individual identities to grazing companions throughout their lives.

University of Sydney cow researcher Alexandra Green collected recordings from 13 Holstein-Friesian heifers in various settings and activities. She found that the cows "gossip" to each other about such things as the weather and food.

"They have all got very distinct voices. Even without looking at them in the herd, I can tell which one is making a noise just based on her voice," said Green.



This Jan. 4, 2020, NASA image from the International Space Station shows pyrocumulonimbus clouds carrying smoke aloft, miles into the stratosphere.

Smoke Clouds

Smoke from Australia's massive firestorms is being transported high into the atmosphere to near the edge of space by intense thunderstorms created by the bushfires.

Meteorologists call the thunderstorm clouds rising above the fires pyrocumulonimbus, which inject smoke into the stratosphere.

David Peterson of the U.S. Naval Research Laboratory told a meeting of the American Meteorological Society that while much is known about how volcanic debris can have a cooling effect on the planet, scientists are still learning how the high-altitude smoke affects temperatures.

Tropical Cyclones

Cyclone Tino left two people missing and caused scattered damage as it raked eastern parts of Fiji and neighboring Tonga as a Category-1 storm on the Saffir-Simpson scale.

- Tropical storm-force Cyclone Nine formed briefly over the open waters of the central Indian Ocean.

