

Earthweek: Diary of a Changing World

Week ending Friday, July 10, 2020

By Steve Newman

Hotter Longer

Almost every part of the planet, down to the local level, is now experiencing longer and more frequent heat waves than during the 1950s, new research reveals.

A team of global scientists writes in the journal *Nature Communications* that the amount of excess heat is increasing globally on average by 1 to 4.5 degrees Celsius each decade.

But in some places, such as the Middle East and parts of Africa and South America, the trend is increasing by up to 10 degrees per decade.

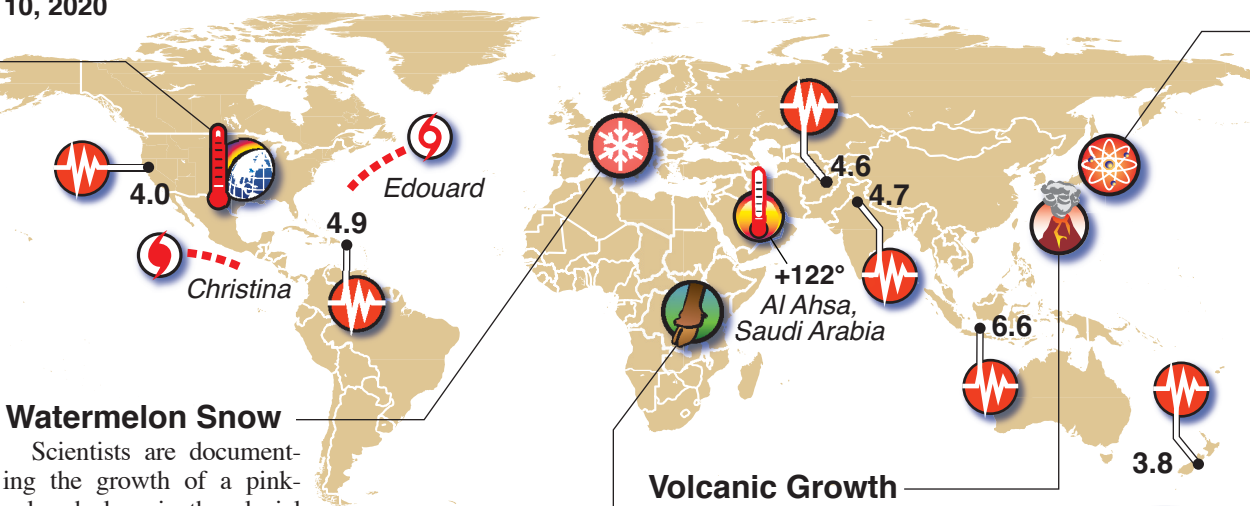
The central United States is the only inhabited region where this trend has not been observed.

Earthquakes

The Indian capital of New Delhi was jolted by another in a series of tremors that began weeks ago.

- Earth movements were also felt in the Afghan capital of Kabul, Java, New Zealand's Canterbury region, southwestern Puerto Rico and northern parts of the San Francisco Bay Area.

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Watermelon Snow

Scientists are documenting the growth of a pink-colored algae in the glacial ice of the Italian Alps, which has been melting rapidly under global heating.

The tiny plant responsible for the expanding warm hue, *Ancylonema nordenskioeldii*, has also been found in Switzerland's Morteratsch glacier and Greenland's so-called Dark Zone, which are also melting quickly.

Scientists warn that the darkening of these glaciers by the algae makes them absorb more sunlight, quickening the melt.

Sometimes called watermelon snow, the algae-laced ice has recently been fairly common in the Alps during spring and summer. But researchers say it has been more widespread this year.

Migration Blazes

The famed wildebeest migration in parts of East Africa was brought to a halt by huge wildfires that raged along the route.

More than 2 million of the migratory grazers cross from Tanzania's Serengeti National Park to Kenya's Maasai Mara Game Reserve each year at this time.

But rangers set fire to some of the overgrown grasslands in their path to help what they describe as pasture regeneration.

The smoke and fires have spooked the wildebeest, causing them to stop short of the Sand River, along the Kenya and Tanzania border.

Volcanic Growth

A young Japanese volcanic island about 600 miles south of Tokyo has recently undergone a dramatic growth spurt.

Nishinoshima emerged from the Pacific in the 1970s and later merged with another underwater volcano that surfaced about 1,600 feet away in 2013.

While it has since grown steadily, strong explosive activity and lava flows between mid-June and early July have caused the island to expand by almost 500 feet.

Volcanologists say there is a lot more magma rising beneath the volcano, meaning it is likely to grow larger.



Japan's remote Nishinoshima volcano has spewed huge amounts of lava and ash during recent weeks. Image: Japan Coast Guard

Lingering Layer

Japan's 2011 Fukushima nuclear power plant meltdowns blanketed snow and ice around the Northern Hemisphere with a thin layer of light radioactivity dubbed the Fukushima Layer.

The nuclear disaster was triggered by a massive thrust earthquake that spawned a devastating tsunami, which knocked out the nuclear plant's main cooling system.

The resulting meltdowns contaminated groundwater around the plant and spewed radioactive particles into the atmosphere. It was thought that the airborne radiation would have faded by now.

But scientists writing in *Environmental Research Letters* say the thawing and melting of glaciers around the hemisphere has made the radioactivity more concentrated, creating a lingering layer of contamination.

Tropical Cyclones

Tropical Storm Edouard became the earliest fifth-named storm on record when it spun up north of Bermuda.

- Hurricane Cristina passed over the Pacific between Mexico and Hawaii.