

# Earthweek: Diary of a Changing World

Week ending Friday, September 30, 2022

By Steve Newman

## Fall Colors

Despite the deepening effects of climate change, scientists say autumn leaves in North America and Europe are not changing color later, but they may be becoming duller.

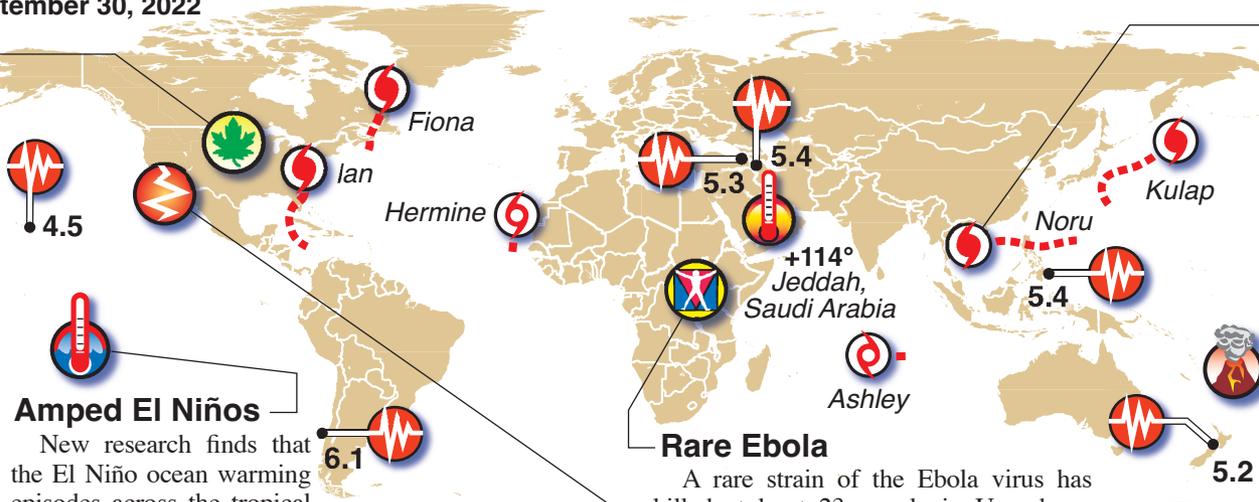
“Warmer temperatures in September and October reduce anthocyanin production in leaves, which could mean that fall colors would become less brilliantly red or purple,” said Susanne S. Renner of Washington University in St. Louis. She adds that only if the first frost comes later than it used to, would the brilliant foliage appear later.

“The end result is that leaves still start to die after about the same amount of time on the tree as they have in years and even decades past,” Renner said.

## Earthquakes

A sharp tremor in far northwestern Iran was also felt strongly in neighboring Armenia.

• Earth movements were also felt in northeastern Turkey, central New Zealand, the southern Philippines, Hawaii’s Big Island and the coast of south-central Chile.



## Amped El Niños

New research finds that the El Niño ocean warming episodes across the tropical Pacific will become more frequent as the Arctic becomes more ice-free in the warmer decades to come.

Writing in the *Journal Nature Communications*, lead author Jiping Liu of the University of Albany says that as the ice loss continues in the Arctic to the point that it is ice-free in summer, strong El Niño events will increase by more than a third.

Arctic sea ice cover is now about 50% less in summer than a century ago.

The rapidly warming Arctic is already altering weather, and the predicted increase in strong El Niños would mean there will be even stronger climate impacts later this century, Liu says.

## Seismic Echoes

Reverberations of a powerful temblor in southwestern Mexico on Sept. 19 caused water to slosh against the surrounding limestone rock 1,500 miles away in a Death Valley National Park pool just a few minutes later.

Experts call the phenomenon a “desert tsunami.” It also has been caused by strong quakes as far away as Japan, Indonesia and Chile.

“It depends on the depth, magnitude and location around the world,” said National Park Service aquatic ecologist Kevin Wilson.

He said the waves from the Mexican quake lasted about 30 minutes.

## Rare Ebola

A rare strain of the Ebola virus has killed at least 23 people in Uganda as health officials scrambled to cope with the Sudan variant, for which there is no treatment or vaccine.

They worry that the outbreak may already be spreading rapidly because many of the infected victims so far were buried in traditional ceremonies, with large gatherings that included touching the deceased.

The World Health Organization says the virus is transmitted to people from fruit bats and spreads among humans through direct contact with bodily fluids.



Oozing lava from an undersea eruption near Tonga birthed a small temporary island. Image: Lauren Dauphon/NASA Earth Observatory

## Tropical Cyclones

Super Typhoon Noru tore roofs off homes in Vietnam and Laos after causing at least eight deaths and widespread flooding in the northern Philippines.

• Category-4 Hurricane Ian destroyed crops and knocked out power across Cuba before bringing severe floods and wind damage to parts of Florida.

• Hurricane Fiona ravaged parts of the Canadian Maritimes while creating the lowest barometric pressure ever recorded in the country.

• Tropical Storm Hermine caused local flooding in Spain’s Canary Islands.

• Hurricane Kulap churned in the Pacific as Tropical Storm Ashley formed in the Indian Ocean.

## Temporary Island

The recent eruption of an undersea volcano in Tonga created a new, small landmass that has grown to about 50 feet in height, covering approximately 9 acres.

The new island, in an area known as Home Reef, is not expected to withstand the waves and wind of the South Pacific for very long.