

Earthweek: Diary of a Changing World

By Steve Newman

Week ending Friday, May 26, 2017

Radio Shield

Earth appears to be protected from space radiation by a type of radio signal mainly used by the military and government agencies.

Very Low Frequency (VLF) signals have been transmitted since the 1960s, some with the intense power necessary to reach submarines in the oceans.

But they also radiate past Earth's atmosphere, creating a protective "bubble" that extends to the innermost edges of the Van Allen Radiation Belts, which also shield against harmful radiation.

The VLF bubble seems to add additional protection to Earth's surface from potentially dangerous space weather, such as bursts of charged particles ejected during solar storms.

Earthquakes

Northeastern Iran was jolted by an aftershock of a deadly temblor from the previous week.

• Earth movements were also felt in central New Zealand, Hawaii's Big Island, southern Mexico, along the Yukon-British Columbia border and southeastern Ohio.

Antarctic Greening

The Antarctic Peninsula has been getting much greener since the 1950s with a surge in moss growth brought on by a changing climate. The region has become one of the most rapidly warming places on Earth.

Paleoclimatologist Matthew Amesbury studied moss cores, which provide a record of climate and plant growth going back several thousand years.

He writes in the journal *Current Biology* that there has been an unprecedented surge in moss and microbe growth along a 375-mile stretch of the peninsula's coastline, especially in the last 60 to 70 years.

Doomsday Melt

A deep-freeze "doomsday" seed vault on a remote Arctic island has become another victim of climate change.

The melting permafrost around Norway's Svalbard Global Seed Vault has caused water to collect near the facility's entrance.

The melting was expected as a result of the heat generated by the facility's construction a decade ago, and experts had predicted the melted permafrost would eventually refreeze.

But the Arctic's record warming seems to have prevented that from happening.

Yemeni Cholera

An outbreak of cholera is spreading at an alarming rate across war-torn Yemen, with a total of more than 35,000 new cases being reported by the World Health Organization since April 27.

At least 340 people have died from the bacterial disease, which can kill within hours as victims suffer from acute watery diarrhea. Its short incubation period can cause outbreaks to spread with explosive speed, especially in areas with poor sanitation.

Yemen has been ravaged by a protracted civil war that has also led the country to the brink of famine.

Aegean Swarms

A plague of locusts has denuded much of the Greek Aegean island of Agios Efstratios, causing sheep to starve because so much vegetation has been devoured.

Vegetable gardens across the island have also been ravaged. The BBC quotes a local expert who says the locusts will disappear by July or August, but are likely to come back because they are not of the migratory variety.

Efforts to eradicate the swarms have failed.



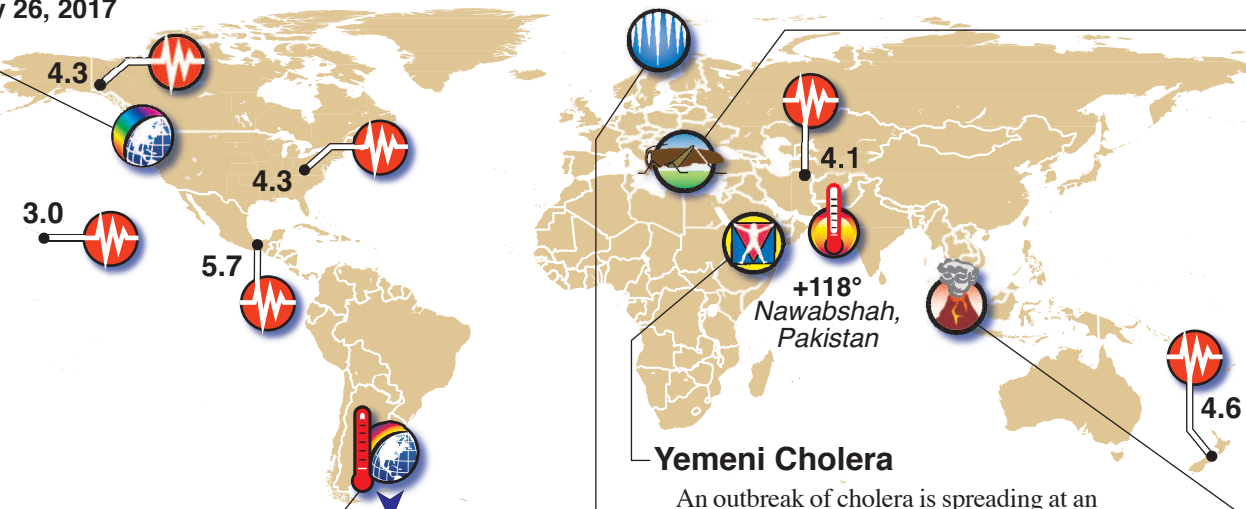
Sumatra's Mount Sinabung spewed ash on May 20. Photo: Beidar Sinabung

Sumatran Eruption

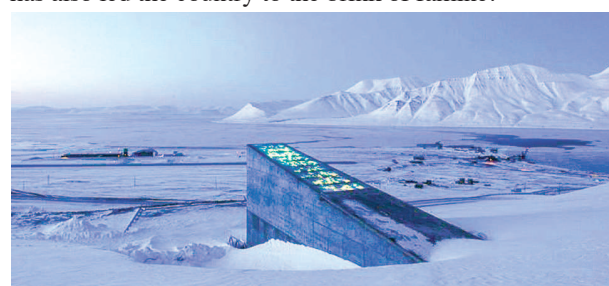
Indonesia's Mount Sinabung erupted ash up to 2.4 miles above Sumatra during the mountain's latest in a series of eruptions.

The restive volcano roared to life in August 2010 after 400 years of slumber, and has experienced nearly incessant activity since 2013.

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Vostok,
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Far northern Norway's "doomsday" seed vault is threatened by some of the effects of record warming across the Arctic. Photo: Global Crop Diversity Trust