



Week ending Friday, February 19, 2021

Sonic Explorers

The songs of fin whales are the loudest in the sea and may soon be used to help map the world's ocean floor. A seismologist at Oregon State University says he and colleagues have found the sound waves generated by the whale species are strong enough to penetrate several feet into the ocean floor, where they reverberate off sediment and layers of rock. "After each whale call, if you look closely at the seismometer data, there is a response from the Earth," said researcher John Nabelek. Blasts from high-energy air guns are now the main tools used to explore the ocean floor, but they are expensive, require permits and contribute to noise pollution harmful to marine creatures.

Etna Eruption

Sicily's Mount Etna dusted the nearby city of Catania with ash after the mountain produced one of the strongest eruptions in its current eruptive phase. The city's airport was temporarily closed, and bicycles and motorbikes were prohibited on roads affected by the falling ash.

Bitcoin Fuel

Electricity used to operate Bitcoin's "mining" operations around the world now exceeds that used by the entire nation of Argentina. Experts told the BBC that the energy consumed by the cryptocurrency's operations increased sharply as its value soared to ever-higher record levels during February. The complex puzzles that run on a vast network of computers, required to keep Bitcoin secure and verify its transactions, consume an enormous amount of power. The operators of those "mining" efforts earn a small amount of bitcoins for the tasks, with some filling warehouses with computers that operate continuously to maximize profits. Some suggest imposing a carbon tax on all cryptocurrencies to offset the greenhouse gas emissions that result from their operations.

Earthquakes

A powerful aftershock of Japan's devastating 2011 temblor injured more than 150 people as it caused widespread damage in the region around the meltdown-plagued Fukushima nuclear power plant.

- A temblor centered in Tajikistan was felt widely across South Asia, as far away as India and Pakistan.
- At least 37 people were injured when a strong quake struck southwestern Iran.
- Earth movements were also felt in Armenia, eastern India's Assam state, southern Vanuatu and the Canadian resort of Banff.

Ozone Healing

The level of ozone-depleting chemicals banned by the 1987 Montreal Protocol to stop the annual ozone hole from forming over the Antarctic is once again falling. The illicit use of chlorofluorocarbons (CFCs) in the manufacture of polyurethane insulation foam in China, discovered in 2018, had caused the levels of atmospheric CFCs to be higher than expected.

This caused the healing of the ozone layer to be slower than what scientists had predicted. But now that China has reined in the use of those compounds, their levels in the atmosphere are once again declining.

Predator Chow

British researchers say that feeding domestic cats a meaty diet can help prevent the felines from killing as many birds and other wildlife when roaming outside. Robbie McDonald at the University of Exeter says playing with your cat for five to 10 minutes each day can also result in the pets killing 25% less prey. It's estimated that domestic cats kill at least 1.3 billion birds each year in the U.S. alone, along with 6.3 billion small mammals. Cats introduced into New Zealand and Australia since colonial times have also ravaged native species there. "Our work shows that noninvasive methods, like food and play, can change cats' inclination to hunt and be positive for cats and their owners," says McDonald.

Tropical Cyclones

Cyclone Guambe formed off the coast of Mozambique and was expected to loop around southern Madagascar.

- Tropical Storm Djuan formed to the southeast of the Philippines.

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