

Earthweek: Diary of a Changing World

By Steve Newman

Week ending Friday, July 1, 2022

Rocket Pollution

Researchers warn that the rapidly increasing number of rocket launches threatens to alter the highest levels of Earth's atmosphere, and perhaps the planet's weather.

The sootlike grains of black carbon produced when kerosene is burned as an oxidizer in rocket fuel can accumulate in the stratosphere, where they can trap heat from the sun and potentially damage the ozone layer.

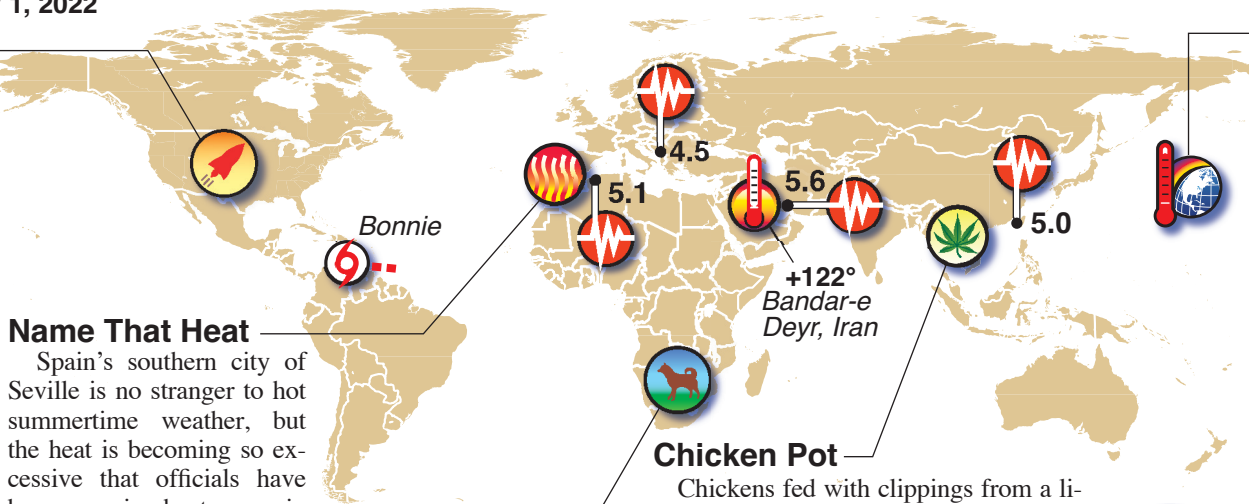
A team from the U.S. environmental agency NOAA looked at what would happen if such launches increase by 10 times their current level by 2040, which is predicted.

They found that the stratosphere could warm by up to 2.7 degrees Fahrenheit (1.5 C), with jet stream winds increasing by about 11 miles per hour.

Earthquakes

At least one person was killed and more than 30 others were injured when a temblor struck Iran's Hormozgan province.

• Tremors were also felt in Bosnia and Herzegovina, northwestern Algeria and southwestern Taiwan.



Name That Heat

Spain's southern city of Seville is no stranger to hot summertime weather, but the heat is becoming so excessive that officials have begun naming heat waves in the same way as tropical cyclones and winter storms.

"We are the first city in the world to take a step that will help us plan and take measures when this type of meteorological event happens — particularly because heat waves always hit the most vulnerable," said Mayor Antonio Muñoz.

The yearlong pilot project will use an algorithm to forecast up to five days in advance how intense the heat will be and how severe its potential impact on human health.

The list will be in reverse alphabetical order, with the first five names chosen as Zoe, Yago, Xenia, Wencslao and Vega.

Warming Births

Global heating is causing endangered African wild dogs in Botswana to give birth 23 days later than just three decades ago, according to researchers from the University of Washington.

Briana Abrahms and colleagues analyzed observations of when the canines had pups from 1989 to 2020, comparing them with temperature data from a nearby weather station.

The dogs seem to prefer breeding when the weather is the coolest, which is coming later and later each year.

The team says it found an almost parallel link between the shift in birthing dates and the warming climate.

Chicken Pot

Chickens fed with clippings from a licensed medical marijuana farm in northern Thailand appear to benefit from the supplement, which may also help poultry farmers cut antibiotic use.

Researchers from Chiang Mai University worked with Ong-ard Panyachatiraksa to see if leftover pot leaves at his organic farm could improve the quality and taste of his chickens, along with the birds' overall health.

The Guardian reports the cannabis-supplemented chickens tended to have fewer cases of avian bronchitis. The quality of the birds' meat was also judged superior, based on fat and moisture content as well as tenderness.



Global heating seems to be affecting the survival of endangered African wild dog pups as well as their birthing dates. Photo: Remembering Wildlife

Climate Disasters

Many of the extreme weather events so far this year, such as blistering heat waves and the catastrophic flooding in parts of India, Bangladesh and China, can be directly linked to global heating, scientists say.

Writing in the journal *Environmental Research: Climate*, an international team says that every heat wave occurring today is more intense due to climate change.

The team reports that such heat waves are now five times more likely on average than in pre-industrial times. However, the World Weather Attribution group says the one in April that baked India and Pakistan was made 30 times more likely by climate change.

The report says attributing drought and wildfires to a warming world is far more challenging.

Tropical Cyclone

Developing Tropical Storm Bonnie soaked the Leeward Antilles and northern coasts of Venezuela and Colombia, taking aim on Nicaragua or Costa Rica.



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