

Earthweek: Diary of a Changing World

Week ending Friday, January 31, 2020

By Steve Newman

Missing Monarchs

The number of wintering monarch butterflies along the coast of California has not recovered significantly from last year's record low.

While about 4.5 million of the colorful monarchs fluttered through forest groves there in the 1980s, that number had plunged to about 27,000 last year and has risen by only 2,000 since.

The disappearance is being blamed on destruction of the milkweed they feed on along their migratory route, as well as agricultural use of pesticides and herbicides.

The western monarchs migrate from areas west of the Rockies to winter at more than 200 sites in coastal California each year.

Their eastern counterparts migrate to Mexico from summer habitats in eastern Canada and the northeastern United States.

Tropical Cyclone

Mauritius was soaked as Tropical Storm Diane spun up almost directly over the western Indian Ocean island.

Desert Survivors

Scientists are scrambling to save a species of critically endangered frog that lives in a tiny oasis of water and reeds in Chile's otherwise parched Atacama Desert, the world's driest.

Because pollution, habitat loss and an expanding nearby mining city threaten what few of the tiny, dark-spotted amphibians that have survived, 14 of the last remaining Lao River water frogs were airlifted to Santiago's Metropolitan Zoo. Only one failed to survive the move.

Oswaldo Cabeza, the zoo's herpetology supervisor, says a team will work to encourage the survivors to feed and reproduce in captivity as the species' only chance of survival.

The range of *Telmatobius dankoi* is now limited to just 4 square miles of dried-up riverbed outside of the city of Calama.

Climatic Swarms

Vast swarms of desert locusts, ravaging crops and threatening a hunger crisis from the Horn of Africa to Kenya, appear to be amplified by a changing climate, according to a forecaster at the U.N. Food and Agriculture Organization.

Keith Cressman points to a sharp increase in the number of tropical cyclones over the northern Arabian Sea during the past decade, with rains that created perfect breeding conditions for this season's swarms.

While cyclones were once rare in the region, meteorologists say higher Arabian Sea temperatures are increasing their frequency.

Carbon Pollution

Smoke from the massive Australia bushfires of recent months will contribute to an anticipated record annual rise in atmospheric carbon emissions this year, according to Britain's Met Office.

The CO2 concentration is predicted to peak above 417 parts per million (ppm) in May, while the 2020 average should be around 414 ppm. That would be nearly 3 ppm above the 2019 average, according to the agency.

Smoke from the protracted bushfire crisis will contribute up to one-fifth of the CO2 increase caused by global warming's altered weather patterns and the resulting effects on the landscape, the British experts say.



Recent climate change appears to be magnifying the record locust swarms spreading from the Red Sea to East Africa. File photo: ©FAO/G. Tortoli

Icelandic Alert

Iceland's meteorological agency cautioned that lava was rising beneath a part of the island that has experienced swarms of tremors for more than a week.

It raised a yellow alert for the Reykjanes Peninsula, including the famed steaming waters of the Blue Lagoon, located southwest of the capital of Reykjavik.

The agency said that the landscape of the peninsula has risen almost an inch on average during January due to magma accumulating thousands of feet below.

This could possibly lead to a low-intensity eruption or more powerful earthquakes.

Earthquakes

At least 41 people perished and more than 1,200 were injured when a temblor wrecked buildings in southeastern Turkey.

- Buildings from Jamaica to Miami rocked when a magnitude 7.7 quake struck beneath the Caribbean.

- Earth movements were also felt in Puerto Rico, southwestern Iran, southern Taiwan, the Solomon Islands, central New Zealand and Puget Sound.