

# Earthweek: Diary of a Changing World

Week ending Friday, June 28, 2024

By Steve Newman

## Mosquito Rescue

In a last-ditch effort to save Hawaii's colorful honeycreeper birds from imminent extinction, millions of mosquitoes carrying a form of "birth control" bacteria are being released to save the birds from malaria. At least four species could go extinct within the year without help.

Malaria-carrying mosquitoes that were inadvertently brought to Hawaii on European ships in the 1800s have since ravaged the populations of honeycreepers.

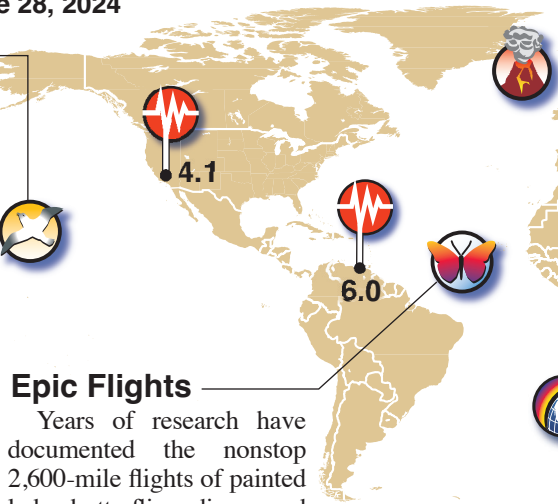
But it is hoped that the naturally occurring bacteria carried by millions of male mosquitoes being dropped on eastern Maui from helicopters will give the birds a chance to survive.

The bacteria stops the eggs of female mosquitoes that mate with the males from hatching.

## Earthquakes

Northeastern Venezuela as well as Trinidad and Tobago were rocked by a strong temblor that knocked out Trinidad power.

• Earth movements were also felt in northeastern Japan and around Bakersfield, California.



## Epic Flights

Years of research have documented the nonstop 2,600-mile flights of painted lady butterflies discovered on a beach in French Guiana in 2013. The species is typically not found in South America.

After reconstructing wind directions and speeds before the butterflies arrived, an international team of researchers also used genetic analysis to determine they were related to African and European populations. DNA of pollen grains carried by those butterflies was also helpful.

The team believes the painted ladies made their epic voyage across the Atlantic from tropical Africa, after migrating southward from Western Europe, in a flight that lasted five to eight days, buoyed by advantageous wind conditions.

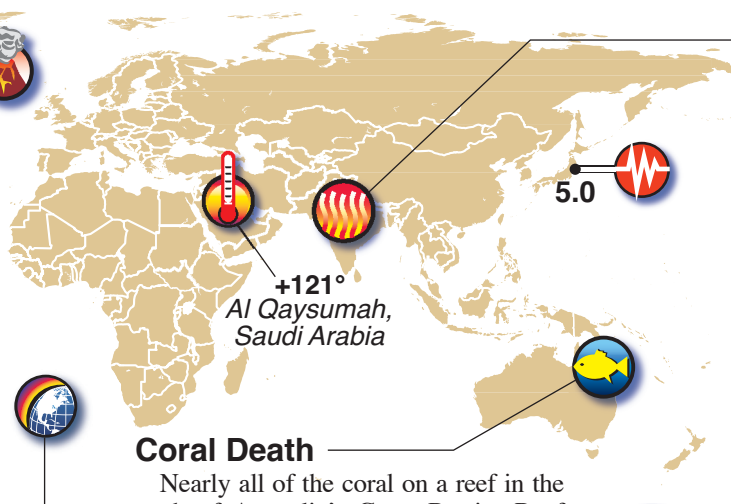
## Core Slowing

Researchers say they have proven that Earth's inner core is slowing down compared to the planet's surface.

Writing in the journal *Nature*, the team says the core began to slow down around 2010 and is now moving slower than the surface.

Roughly the size of the moon, the inner core sits more than 3,000 miles beneath our feet. Studying it is difficult, but analysis of seismic waves from earthquakes can determine its movement.

The study shows that the core is moving slightly slower instead of faster than the Earth's mantle for the first time in approximately 40 years.



## Coral Death

Nearly all of the coral on a reef in the north of Australia's Great Barrier Reef have recently died in one of the worst coral bleaching events ever observed there.

Analysis of drone imagery revealed that 97% of the coral died at a Lizard Island reef between March and June.

Record oceanic heat has resulted in the fifth coral bleaching event in eight years for several parts of the world's largest reef system.

Bleaching occurs when unusual levels of heat cause coral animals to expel the algae that live in their tissues and provide them their color and much of their nutrition.



Mass coral bleaching is becoming more common around the world as oceans become hotter and hotter. Photo: Diana Kleine / Univ. of Queensland

## Fatal Heat

Extreme heat around the Northern Hemisphere during July has already killed potentially thousands of people in a sign that this summer could exceed last year's record-breaking heat as the warmest in 2,000 years.

The exact number of those who have perished in the torrid conditions is difficult to determine because most health officials do not typically attribute deaths to heat, but rather the illnesses made worse by it.

Adding to the fatalities are nights that fail to cool off as overnight temperatures warm faster than days in many parts of the world.

Climate experts say heat waves will continue to get more severe because the world has failed to curb greenhouse gas emissions.

## Eruptive Pause

Iceland's fifth eruption on the Reykjanes peninsula since last December came to an end, but geologists say such eruptions may continue to plague the area for years or even decades to come.



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