



ALL IN ALL

# **What's New** at the Frontiers of Science, Technology and Exploration

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## Rock the (Green) House

**Scientists from the Earth Institute at Columbia University in New York City may have discovered nature's own carbon sink.**

A 5-kilometre-thick layer of a rock called peridotite, found in Oman, could help absorb some of the massive amounts of carbon dioxide pumped into our atmosphere. The rock is typically found below the earth's surface, but in some areas geological action has forced it to the surface.

When it comes into contact with  $\text{CO}_2$  it forms a solid carbonate substance like limestone or marble.

Scientists believe the peridotite deposit in Oman is already absorbing 10,000 to 100,000 tonnes of  $\text{CO}_2$  a year. This process could be speeded up 100,000 times or more by drilling into the peridotite and injecting pressurised  $\text{CO}_2$  along with hot water. The ensuing chemical reaction would generate more heat and hasten the absorption process by fracturing more peridotite, exposing it to more  $\text{CO}_2$ .

Using this approach, the Oman field could absorb up to 4 billion tonnes of the harmful gas a year.





# Shaking up History

**It's hard to know whether 18th century Shakers would approve** of newfangled devices such as the computer.

Approve or not, computers are now responsible for preserving a significant part of Shaker history: its striking architecture.

At the Christian Protestant group's peak in the mid-1800s, 6,000 Shaker members thrived in 19 communities across America. Their communal living arrangements em-

phasised strict separation of the sexes, unless at worship, which could explain why, by the early 1900s, Shakers were practically extinct.

A project at the Center for the Electronic Reconstruction of Historical and Archaeological Sites at the University of Cincinnati, Ohio, is seeking to keep Shaker architecture from the same fate by creating virtual buildings from the former Shaker community of White Water, Ohio.



## Sugar and Spice?

**Boys who think they can get germs** from holding hands with a girl might be right. Using a new technique dubbed metagenomics, which analyses DNA in a sample taken from a specific environment, researchers surveyed bacteria on the hands of 51 participants, and discovered over 4,700 different species of germs.

Lead study author Noah Fierer, of the University of Colorado in the United States, says the new technique reveals humans as “continents of microscopic ecological zones” with diversity comparable to deep oceans or tropical jungles. Even more revealing? The women surveyed had significantly more microbes than the men. Yuk.

## Floating Refreshment

Scientists have discovered that a minute difference in the weight of water can mean life or death for thousands of sea snakes. Previously, researchers theorised that the creatures drank the water in which they were swimming and purified it using internal saltwater glands.

But scientists studying sea snakes off the coast of Taiwan have come to a different conclusion: The sea snakes drink freshwater. Because saltwater has a density of 1.025 and fresh rainwater is lighter with a density of 1.0, rainwater floats on ocean water, forming what researchers call a “lens.” Canny sea snakes actually use this lens to quench their thirst. This explains why there is a greater concentration of sea snakes in bodies of water like lagoons, where the lens stays relatively undisturbed by waves or currents.