

Eureka! Failing the acid test

by Scott_LaFee

Increased ocean acidity seems to affect clownfish behavior. In more acidic water, some odors didn't drive away the clownfish larvae. Locusts tend to form swarms once the neurotransmitter serotonin is released. While in the swarm, individual locusts change from a green color to black and yellow. Located between Argentina and Chile, Monte Fitz Roy peak is named after Robert FitzRoy, the captain of the HMS Beagle. Rising ocean acidity – sometimes dubbed the evil twin of global warming – has long worried scientists, who say higher acidity makes it harder for creatures like coral and oysters to grow skeletons.

A new Australian study suggests acidity causes adverse effects in animal behavior, too. Researchers at James Cook University in Queensland raised clownfish larvae in either regular seawater or seawater with an acidity equivalent of 1,000 parts per million of carbon dioxide, a level predicted by the year 2100 if carbon dioxide emission levels are not curbed.

Clownfish larvae find their way to new homes through smell. Researchers found, though, that some odors in the more acidic water, such as those from tea tree leaves (which can be a warning of unsuitable swamp nearby), did not repel the larvae. The larvae also failed to respond to their parents' scent, believed to be an olfactory cue to avoid inbreeding.

Current geo-engineering schemes to reduce carbon dioxide emission levels do not take into account the rising acidification of the oceans.

QUIRKS OF NATURE

Researchers have discovered that desert locusts (*Schistocerca gregaria*), which are normally solitary creatures, come together in devastating swarms sometimes numbering in the billions because of a spike in the neurotransmitter serotonin.

The trigger seems to be when circumstances force lots of locusts together, prompting the release of serotonin and a sudden need to be even more chummy. The brain chemical induces another change as well: The locusts switch from their individual green coloration to black and yellow as members of the swarm.

BRAIN SWEAT

Which letter completes this group? A H I M O U V W X Y

BRAIN SWEAT ANSWER

The letter T. All of the letters can be reversed laterally and remain the same.

JUST ASKING

Since doctors always say take two aspirins, why not just double the size?

PRIME NUMBERS

30,000 – Estimated number of buildings in San Francisco that would be damaged beyond repair by an earthquake with a magnitude of 6.9. (The estimated magnitude of the 1906 San Francisco quake was 7.8.)

Source: San Francisco Planning and Urban Research Association

WHERE IN THE WORLD? ANSWER

Monte Fitz Roy (11,073 feet) is located on the border between Argentina and Chile. It is named after Robert FitzRoy, the captain of the HMS Beagle, which carried Charles Darwin on his legendary travels. The peak is also called Cerro Chalten, from the Tehuelche language, meaning "smoking mountain," a reference to the clouds that usually form at the top of the peak.

The mountain was first climbed in 1952.

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