

Environment News Futures

Survival Secret of ‘Earth’s Hardest Animal’ Revealed

Nathan Tauger and Victoria Gill, BBC Science reporters
20 September 2016

Researchers have discovered a genetic survival secret of Earth’s “hardest animal”. A gene that scientists identified in these strange, aquatic creatures—called tardigrades—helps them survive boiling, freezing and radiation.

In future, it could be used to protect human cells, the researchers say. It was already known that tardigrades, also known as water bears, were able to survive by shrivelling up into desiccated balls. But the University of Tokyo-led team found a protein that protects its DNA—wrapping around it like a blanket.

China Embarked on Wind Power Frenzy, says IEA

Roger Harrabin, BBC Environment analyst
20 September 2016

China has been building two wind turbines every hour, the International Energy Agency (IEA) has told BBC News. This is the world’s biggest programme of turbine installation, double that of its nearest rival, the US.

The nation’s entire annual increase in energy demand has been fulfilled from the wind. But the IEA warns China has built so much coal-fired generating capacity that it is turning off wind turbines for 15% of the time. The problem is that coal-fired power stations are given priority access to the grid.

Let Mangroves Recover to Protect Coasts

Mark Kinver, Environment reporter, BBC News
19 September 2016

Allowing mangrove forests to recover naturally result in more resilient habitats that benefit both wildlife and people, say conservationists. In Indonesia, a Wetlands International project uses permeable dams to restore sediment needed for the trees to grow.

The charity says early results suggest “ecological restoration” is more effective than planting programmes. More than half of the world’s most at-risk habitats have been felled or lost over the past century, UN data shows.

Green City in UAE Desert has Much to Teach the World

A new desert city in the United Arab Emirates without light switches or water taps has much to teach people around the world about saving energy and precious resources. With its low-rise and energy efficient buildings, smart metering, excellent public transport and extensive use of renewable energy, the 2000 citizens of Masdar City, in Abu Dhabi, are living in a place which is a 'green' example to city planners around the globe.

There are no light switches or water taps in Masdar City. Movement sensors control lighting and water in order to cut electricity and water consumption by 51% and 55% respectively. Masdar is the world's first city designed to be 'zero carbon' and 'zero waste', but its environmental experts can learn much from the historic, post-industrial British city of Birmingham, as it too aims to become a low-carbon metropolis.

World Deforestation: We're Losing a Forest the Size of NYC Every Two Days!

This is an issue of global concern. Climate change, urbanization and resource depletion (more mouths to feed, burn wood in stoves for, graze more cattle for) are still happening at a fast and alarming clip, influencing our planet's ability to store CO₂ emissions, and protect diversity.

We hate scare tactics, but put it into scale and see how much we are losing compared to reference points you can understand.

See more at: [Green Prophet](#)

Arctic Sea Ice Heading towards Second Lowest on Record

This year the extent of summer sea ice in the Arctic is heading towards being the second lowest on record. The Arctic sea ice minimum marks the day—typically in mid-September—when sea ice reaches its smallest extent at the end of the summer melt season. British Antarctic Survey sea-ice scientist, Dr Jeremy Wilkinson, provides a scientific perspective on the trend of rapidly decreasing Arctic sea ice.

Unquestionable Arctic Sea Ice Retreat

The retreat of summer Arctic sea ice is unquestionable. For over 35 years special satellite-mounted sensors, which can see through cloud and the polar night, have obtained daily 'images' of the entire Arctic region. From these images, the extent of the sea ice has been accurately determined, year after year. This data shows September sea ice has declined from over 7 million km² in the 1970s to about 3.5 million km² in 2012; a loss of about half the summer Arctic sea ice cover.

Selecting the Right House Plant could Improve Indoor Air

American Chemical Society via EurekAlert!

August 24, 2016

Indoor air pollution is an important environmental threat to human health, leading to symptoms of “sick building syndrome”. But researchers report that surrounding oneself with certain house plants could combat the potentially harmful effects of volatile organic compounds (VOCs), a main category of these pollutants. Interestingly, they found that certain plants are better at removing particular harmful compounds from the air, suggesting that, with the right plant, indoor air could become cleaner and safer.

The researchers are presenting their work today at the 252nd National Meeting & Exposition of the American Chemical Society (ACS). ACS, the world’s largest scientific society, is holding the meeting here through Thursday. It features more than 9000 presentations on a wide range of science topics. A brand-new animation on the research is available at <http://bit.ly/ACSindoorairpollution>.

This Popular Aquarium Fish might Vanish from the Wild

Adam Cruise

September 16, 2016

The survival of a spectacular coral fish from Indonesia may depend on a decision made in South Africa this month. Banggai cardinalfish are taken from the wild in large quantities to supply the aquarium trade, which has conservationists worried.

The tropical setting is postcard perfect. A palm tree on a deserted white beach surrounded by turquoise water imprints itself on my mind as I roll backward off the boat in full scuba gear. Just six feet underwater a rich coral bed stretches out as I pass through clouds of multicoloured reef fish. I’m following Alejandro Vagelli, a marine biologist from Rutgers University and director of the Center for Aquatic Sciences in the United States, as he zigzags over the reef.

A gesture from Vagelli, and there before us flitting effortlessly among the spines of a cluster of sea urchins is a group of tiny, exquisite fish, the largest about an inch long.

Here in Indonesia the tranquil bays of 34 small islands in the Banggai archipelago are the only places on Earth where you can see Banggai cardinalfish, so named because the first discovered cardinalfish evoked the scarlet vestments of a cardinal, although Banggai cardinalfish have silver spots, black stripes, blue fins, and no red colouration.

I’m lucky enough to be one of only a handful of people from outside the islands to see Banggai cardinalfish in their natural habitat, which according to a survey in 2015 by Vagelli *in partnership* with Fondation Franz Weber, a Swiss-based organization that funds conservation projects throughout the world, encompasses a mere nine square miles.

“This”, Vagelli tells me after we climb back on board the dilapidated fisheries department vessel that, apart from villagers’ dugouts and fishing boats, is the only mode of transport out here, “makes it one of the most restricted distributions ever documented in a marine fish.”

But my joy in watching these fish is tempered by the prospect that they may soon be gone from the wild. That’s because they’re being collected for the aquarium trade faster than they can

reproduce in nature. Even though Banggai cardinalfish are bred in captivity—they're one of the few coral reef fish that can be—the captive-bred supply satisfies only a fraction of the insatiable demand of aquarium hobbyists.

Dyed but Alive, Disguised Birds Skirt Laws and Fetch High Prices

Moushumi Basu

Kolkata, India: September 10, 2016

Stroll down the lanes and alleys of Kolkata's Galiff Street on any Sunday morning, and you'll see hundreds of wild-caught native and exotic birds for sale, crammed into wire cages of all shapes and sizes. You'll hear a cacophony of bird calls and flapping wings. From their makeshift stalls, traders shout all kinds of bird names, vying for customers' attention.

A common sight in India's markets, birds dyed to look like rare and exotic species are a growing problem for both conservation and animal welfare.