



News

For wetland plants, sea-level rise stamps out benefits of higher CO₂

"Too much water is a stress, an environmental stress, for plant response to high CO₂," said Chunwu Zhu, lead author of the report in Science Advances. Zhu, a biologist with the Chinese Academy of Sciences, conducted the study while on a fellowship with the Smithsonian Environmental Research Center (SERC). Conserving wetlands is critical both to fight climate change and adapt to it. Besides providing habitat, wetlands sequester massive amounts of carbon and protect people from some of climate change's more extreme effects, such as hurricanes and typhoons. "Although they occupy just a fraction of the Earth's surface, they provide outsized ecosystem services, which are basically benefits to people," said corresponding author Pat Megonigal, a biogeochemist with SERC.

[.....Read more...](#)**Date:** May 18, 2022**Source:** Science Daily**How plants colonize the base of an active stratovolcano**

An international team led by Angela Hancock at the Max Planck Institute for Plant Breeding Research in Cologne (Germany) and including scientists from the Associação Projecto Vitó and Parque Natural do Fogo (Cape Verde), the University of Nottingham (UK), and the University of Bochum (Germany) studied a wild thale cress (*Arabidopsis thaliana*) population that colonized the base of an active stratovolcano. They found that a two-step molecular process rewired nutrient transport in the population. The findings, published today in the journal Science Advances, reveal an exceptionally clear case of an adaptive walk in a wild population. The discovery has broader implications for evolutionary biology and crop improvement. Nutrient homeostasis is crucial for proper plant growth and thus central to crop productivity. Pinpointing the genetic changes that allow plants to thrive in novel soil conditions provides insights into this important process.

[.....Read more...](#)**Date:** May 18, 2022**Source:** Science Daily**These are the first plants grown in moon dirt**

That's one small stem for a plant, one giant leap for plant science. In a tiny, lab-grown garden, the first seeds ever sown in lunar dirt have sprouted. This small crop, planted in samples returned by Apollo missions, offers hope that astronauts could someday grow their own food on the moon. But plants potted in lunar dirt grew more slowly and were scrawnier than others grown in volcanic material from Earth, researchers report May 12 in Communications Biology. That finding suggests that farming on the moon would take a lot more than a green thumb. "Ah! It's so cool!" says University of Wisconsin-Madison astrobotanist Richard Barker of the experiment. "Ever since these samples came back, there's been botanists that wanted to know what would happen if you grew plants in them," says Barker, who wasn't involved in the study.

[.....Read more...](#)**Date:** May 23, 2022**Source:** Science News**Explained: How scientists plan to use plants to remove toxic metals from soil**

The Toxic heavy metals are absorbed by food crops and other plants before they eventually make their way into our food chain, directly affecting human life along with ecology. Soil contamination can happen due to a variety of reasons, including manufacturing, mineral extraction, accidental spills, illegal dumping, leaking underground storage tanks, pesticide and fertiliser use etc. A study published in the JNKVV research journal in 2015 concluded that heavy metal pollution of soil is "emerging at a speedy rate" in India due to industrialisation. These toxic heavy metals are then absorbed by food crops and other plants before they eventually make their way into our food chain, directly affecting human life along with ecology.

[.....Read more...](#)**Date:** May 24, 2022**Source:** Environmental News Network**White roofs and rooftop lawns can mitigate urban heat island effect, researchers say**

Alleviating the urban heat-island effect through regulating urban landscape can improve human thermal comfort and living environment in urban residential areas. However, most previous studies focused on the single environmental factor of temperature, ignoring the actual human feeling of thermal comfort, which is affected not only by temperature, but also by humidity, wind speed, and radiation, etc. Dr. Li Huidong from the Institute of Applied Ecology of the Chinese Academy of Sciences (CAS), together with Dr. Wang Xun from the Free University of Berlin, has recently conducted a study that integrated multiple environmental elements as an indicator of urban landscape regulation efficiency. The researchers evaluated the effectiveness of two schemes for mitigating heat-island effect and improving human thermal comfort,

[.....Read more...](#)**Date:** May 25, 2022**Source:** phys.org

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