



News

Thawing permafrost releases greenhouse gas from depth

What effect did the heat wave of summer 2020 have in Siberia? In a study led by the University of Bonn (Germany), geologists compared the spatial and temporal distribution of methane concentrations in the air of northern Siberia with geological maps. The result: the methane concentrations in the air after last year's heat wave indicate that increased gas emissions came from limestone formations. The study is published in the journal Proceedings of the National Academy of Sciences (PNAS). Permanently frozen permafrost soils cover large areas of the northern hemisphere, especially in northern Asia and North America. If they thaw in a warming world, this can pose dangers, because CO₂ and methane are released during thawing -- and amplify the anthropogenic greenhouse gas effect. [.....Read more...](#)

Date: August 02, 2021

Source: Science Daily

Nations should compete over green list to measure efforts on conservation

Many of us know about the International Union for Conservation of Nature (IUCN)'s red list. This is, most simply put, a classification of animals and plants, in order of how threatened they are in the wild. But then there's the green list- a whole new idea that the IUCN has introduced. It looks at species in terms of the positive impact of conservation on them. This doesn't mean the species is necessarily out of danger, but that conservation has benefitted it. It helps understand conservation impact, drives pathways for further conservation and, drives home the importance of conservation. If anything, I think it also underscores that results from conservation are usually slow, multi-year if not multi-decade. In an era where countries all over the world are debating why infrastructure is more important than the wilderness, and where climate change is devastating habitats, this green list could play another role. [.....Read more...](#)

Date: August 02, 2021

Source: Hindustan Times

Keeping clubroot in rapeseed in check by using fungi

Teams from the Chair of Plant Physiology at Technische Universität Dresden and the Julius Kühn Institute in Braunschweig have been researching biological methods to better control the widespread plant disease 'clubroot' in rapeseed in a joint project. They were able to observe an increase in fresh weight in infected plants through the addition of the fungus *Acremonium alternatum*. This is a promising first result for the agricultural industry. Especially in northern Germany, but also in Saxony, the golden-yellow rapeseed carpets dominate the landscape in spring. Rapeseed is one of the most important crops in Europe and North America. However, the wide distribution and often close crop rotation favor the spread of plant diseases. Clubroot is one such typical crop rotation disease that is inexorably on the rise and poses major problems for many agricultural enterprises. [.....Read more...](#)

Date: August 04, 2021

Source: phys.org

Scientists ID enzyme for making key industrial chemical in plants

Scientists studying the biochemistry of plant cell walls have identified an enzyme that could turn woody poplar trees into a source for producing a major industrial chemical. The research, just published in Nature Plants, could lead to a new sustainable pathway for making "p-hydroxybenzoic acid," a chemical building block currently derived from fossil fuels, in plant biomass. "P-hydroxybenzoic acid is a versatile chemical feedstock. It can serve as a building block for making liquid crystals, a plasticizer of nylon resin, a sensitizer for thermal paper, and a raw material for making paraben, dyes, and pigments," said Chang-Jun Liu, a plant biochemist at the U.S. Department of Energy's Brookhaven National Laboratory and lead author on the paper. [.....Read more...](#)

Date: August 05, 2021

Source: Science Daily

Why frenzied tree planting is no answer to ecological restoration

With Early monsoon clouds, grey as elephant skin, span the skies over the hillock where we are planting tree saplings. From 500 saplings stacked in black plastic sleeves, I select and heave two over to nearby soil pits prepared to receive them. These are not just any trees, I think, as I slit open the covers, without disturbing the roots. These are very particular trees. A korangupila or *Cullenia exarillata* sapling and a wild nutmeg or *Myristica dactyloides*, picked from the 120 tree species in the stack, all native to this very place in the Anamalai Hills of the Western Ghats. A land of evergreens, a tropical rainforest, a place the great hornbills, lion-tailed macaques, and thousands of other lifeforms call home. As if echoing my thoughts, the loud bark of the hornbill sounds from the mist-breathing rainforest patch in the distance, where a 15-strong troop of macaques also lives. [.....Read more...](#)

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Source: The Hindu

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