



News

New Research Shows Plants Are Photosynthesizing More in Response to More CO₂ in the Atmosphere

New research from Berkeley Lab and UC Berkeley shows that plants are photosynthesizing more in response to more carbon dioxide in the atmosphere. Because plants take up carbon dioxide from the atmosphere and convert it into food, forests and other similar ecosystems are considered to be some of the planet's most important carbon sinks. In fact, the United States and many other countries that participated in last month's UN Climate Change Conference have made nature-based solutions a critical feature of their carbon dioxide mitigation framework under the Paris Agreement. As human activities cause more carbon dioxide to be emitted into the atmosphere, scientists have debated whether plants are responding by photosynthesizing more and sucking up even more carbon dioxide than they already do – and if so, is it a little or a lot more.

[.....Read more...](#)**Date:** December 17, 2021**Source:** Sci Tech Daily**Space and time: How to better understand biological processes in plants**

If the perspective of space and time is not properly applied to plant research, the understanding of biological processes is limited as well as the response to the threats that endanger the life of plants worldwide. This is one of the main conclusions of an article published in the journal Trends in Plant Science by Professor Sergi Munné-Bosch, from the Faculty of Biology, the Biodiversity Research Institute (IRBio) and the Institute for Nutrition and Food Safety (INSA) of the University of Barcelona. In the global change scenario, methodological limitations in the field of plant biology are not helpful to obtain a full image of the processes that affect the plant life. Improving the level of knowledge on plant species requires adding a spatiotemporal framework using integrative and scalable data that capture the biological processes (such as germination, senescence,

[.....Read more...](#)**Date:** December 20, 2021**Source:** Science Daily**Plants as cold specialists from the ice age**

As cold relics in an increasingly warming world, plants of the spoonweed group time and again quickly adapted to a changing climate during the Ice Ages of the last two million years. An international team of evolutionary biologists and botanists led by Prof. Dr Marcus Koch of Heidelberg University used genomic analyses to study what factors favour adaptation to extreme climatic conditions. The evolutionary history of the Brassicaceae family provides insights into how plants may be able to cope with climate change in the future. "With the challenges of increasing global warming, developing a basic understanding of how plants adapted to severe environmental change is increasingly urgent," stresses Prof. Koch, whose "Biodiversity and Plant Systematics" working group conducts research at the Centre for Organismal Studies (COS).

[.....Read more...](#)**Date:** December 21, 2021**Source:** Science Daily**Plastic planet: How tiny plastic particles are polluting our soil**

The millions of tons of plastic swirling around the world's oceans have garnered a lot of media attention recently. But plastic pollution arguably poses a bigger threat to the plants and animals – including humans – who are based on land. Very little of the plastic we discard every day is recycled or incinerated in waste-to-energy facilities. Much of it ends up in landfills, where it may take up to 1,000 years to decompose, leaching potentially toxic substances into the soil and water. Researchers in Germany are warning that the impact of microplastics in soils, sediments and freshwater could have a long-term negative effect on such ecosystems. They say terrestrial microplastic pollution is much higher than marine microplastic pollution – estimated at four to 23 times higher, depending on the environment.

[.....Read more...](#)**Date:** December 22, 2021**Source:** UN Environment Programme**The Tallest Begonia Species in All of Asia Discovered in Tibet**

With over 2050 known species, Begonia is one of the largest plant genera. Since most Begonias are small weeds, a Begonia taller than a human is a very unusual sight. However, the newly discovered Begonia gigantea is one of the few exceptions. In 2019, Dr. Daiké Tian and his colleagues initiated a field survey on wild Begonias in Tibet, China. On September 10, 2020, when Dr. Tian saw a huge Begonia in full bloom during surveys in the county of Mêdog, he got instantly excited. After checking its flowers, he was confident it represented a new species. From a small population with a few dozens of individuals, Dr. Tian collected two of the tallest ones to measure them and prepare specimens necessary for further study. One of them was 3.6 meters tall,

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NEWSBULLETIN COMMITTEE

Executive Editor

Dr. Pankaj Kumar Srivastava

pankajk@nbri.res.in

Compiled By

Mr. Sunil Tripathi, Mr. Diwakar Saini

NBRI ENVIS Node: <http://www.nbrienvvis.nic.in>NBRI Website: <http://www.nbri.res.in>ENVIS Cell: <http://envvis.nic.in>Ministry of Environment & Forests: <http://envfor.nic.in>

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