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December 12, 2016

Scientists create ice storms to study nature's chilly response

Novel experiment at Hubbard Brook Experimental Forest to quantify cost of ice storms on forest ecosystems

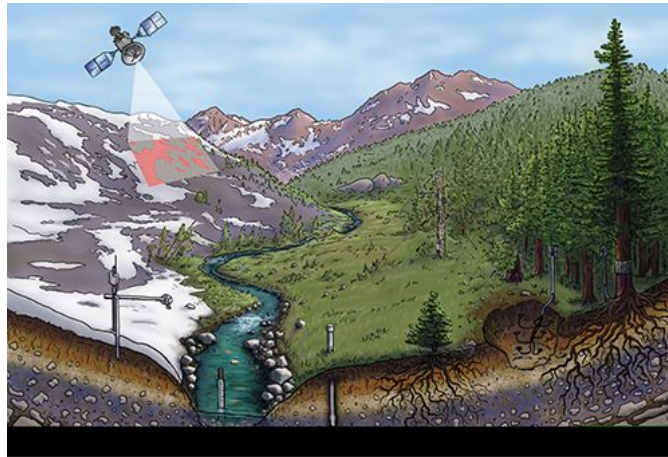
Anyone who has ever driven in freezing rain knows all too well the potential hazards of an ice storm. These powerful winter weather events are also capable of catastrophic ecological and socio-economic impacts on forest ecosystems, affecting forest species and productivity, and even increasing the risk of fire.

Syracuse University bio-geochemist Charley Driscoll and U.S. Department of Agriculture (USDA) Forest Service ecologist Lindsey Rustad are part of a team supported by the National Science Foundation (NSF) to scientifically monitor more precisely how a forest ecosystem responds to and recovers from ice storms. And, the researchers are not waiting on Mother Nature to provide the right weather. They're creating their own ice storms in New Hampshire's Hubbard Brook Experimental Forest <<https://www.nsf.gov/cgi-bin/good-bye?http://www.hubbardbrook.org/>>.

The research in this episode was supported by NSF award #1457675 ([//awardsearch/showAward?AWD_ID=1457675&HistoricalAwards=false](https://www.nsf.gov/awardsearch/showAward?AWD_ID=1457675&HistoricalAwards=false)). Collaborative Research: Understanding the Impacts of Ice Storms on Forest Ecosystems of the Northeastern United States.

Miles O'Brien ([producers/obrien.jsp](#)), Science Nation Correspondent
Kate Tobin ([producers/tobin.jsp](#)), Science Nation Producer

Related Multimedia



Snow – that icon of winter – blankets the land with a beautiful silence. Love it, hate it, we all depend on snow. Our year-round water supply largely comes from snowmelt. Waiting for spring flowers? They're fertilized by nutrients in snow. Species from microscopic fungi to 800-pound moose need snow. They survive the winter by living, each in its own way, in nature's igloo. Find out more in this [Science Nation video \(/news/special_reports/snow/\)](#).

Credit: NSF Southern Sierra Critical Zone Observatory/Jenny Park



Cold snaps in sub-tropical ecosystems, life under cities in soils, drought in rainforests and desertification in grasslands were among the topics that were featured at the 2016 meeting of the Ecological Society of America. Scientists have proposed a new epoch, the Anthropocene, to describe our present time, in which the pervasive presence of humans and the products of human invention have altered the world's atmosphere, oceans and ecosystems. Find out more in this [news release \(/news/news_summ.jsp?cntn_id=139064\)](#).

Credit: J.S. Rehage/NSF Florida Coastal Everglades Long-Term Ecological Research Site

Related Links

[Environmental Biology \(DEB\) \(/bio/deb/about.jsp\)](#)

The Division of Environmental Biology (DEB) of the Biological Sciences Directorate supports fundamental research on populations, species, communities and ecosystems. Scientific emphases range across many evolutionary and ecological patterns and processes at all spatial and temporal scales.

[Evolutionary Processes Cluster \(/div/index.jsp?div=DEB\)](#)

The Evolutionary Processes Cluster supports research on micro- and macroevolutionary processes and their consequences. These investigations attempt to explain causes and consequences of genetically-based change in the properties of groups of organisms (at the population level or higher) over the course of generations as well as large-scale patterns of evolutionary change, phylogeography, origin and maintenance of genetic variation, and molecular signatures of evolution at the population or species level.

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