

# How Plants Shape Ecosystems



Jason Fridley

Associate Professor, BiologyNSF International Research FellowNational Parks Foundation Ecological Research Fellow

## CURRENT RESEARCH

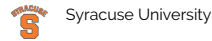
### Managing Earth's living reservoir of energy

Plants are the Earth's living reservoir of energy, as the energy captured and stored in plants regulates environmental cycles, including carbon, water, nutrients, and sequestration of pollutants. Understanding how plants respond to changes in their environment, therefore, will greatly improve the way we manage ecosystems and the services they provide to society. Dr. Jason Fridley, Associate Professor of Biology at Syracuse University, hopes to gain a deeper understanding of the ecology of plant communities, including their organization, distribution, and control over ecosystem processes, to design and protect a habitable biosphere for both humans and the natural diversity of living organisms. Collaborative and dynamic, much of Dr. Fridley's work is performed in the context of species invasions and environmental change. By studying how the changing climate, land use practices, and species introductions affect plant evolution and behavior, Dr. Fridley hopes to improve predictions of what our ecosystems will look like in the future.

Currently focused on woody plants, Dr. Fridley, his research staff, and students partner with national and international collaborators at several US universities, a research hub in the United Kingdom, in France, and in New Zealand to develop and test theory about how plants allocate and utilize energy and materials depending on their environment and interactions with other organisms. Basic research at his large, on-campus experimental garden combines fine-scale details of how plants function, from roots to shoots, with global-scale patterns of how these functions were influenced by a species' evolutionary history. Ultimately, Dr. Fridley's long-term goal is to establish common...

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## AFFILIATION



## EDUCATION

- Ph.D. in Biology 2002, University of North Carolina at Chapel Hill
- B.A. in 1997, Bennington College

## AWARDS

- Fulbright US Scholar, 2014
- Blavatnik Award for Young Scientists, 2012
- John Harper Prize for Best Paper by a Young Scientist, 2003

## RESEARCH AREAS

Environment, Ecology, Global Policy

## FUNDING REQUEST

Your contributions will support the continued research of Dr. Jason Fridley at Syracuse University as he studies plant behavior in a global context to develop appropriate solutions for ecosystem management. Donations will largely help fund personnel, operating costs associated with an on-campus experimental garden, and local infrastructure to match work done by colleagues abroad conducting comparative experiments. Partner with Dr. Fridley as he works to understand our future biosphere.