

Chiricahua Trees Course

Tree-related Microhabitats and Biodiversity

Sept 30 - Oct 4, 2024

Southwestern Research Station, Portal, AZ

Sponsored by the University of Arizona and The University of California along with the American Museum of Natural History.



Purpose

The trees course is an introduction to the ecology and field biology of desert-adapted trees. The course goals are to give attendees knowledge about how trees survive in nature and what lessons this teaches for their cultivation in urban and suburban landscapes. We offer 30 arborist CEU's for this five-day course. The course theme is Tree-related Microhabitats (TreMs).

Structure of the course

The course starts each day with lectures followed by field trips to various forest sites and ends with evening seminars. Attendees and instructors will examine TreMs in an effort to assess impacts of individual tree species to biodiversity in a range of locations from desert to sub-alpine.

Registration

Course sign up is through the Southwestern Research Station. The course fee is \$800 for a five-night stay, meals, and course materials. A \$100 deposit is required to register. Arrive at SWRS in the morning on Sept. 30 and depart after breakfast on Oct 5th. Instruction begins after lunch on Monday and ends with evening lectures on the 4th. An online registration form can be found at <https://www.amnh.org/research/southwestern-research-station> Early arrival and late departure are available for extra cost. For more course information email Jim Downer at ajdowner@ucanr.edu or swrs@amnh.org

Schedule

Sunday (optional)

- Reception at Downer residence in Portal

Monday

- An introduction to tree species found at SWRS

- Edaphic alliances in the Chiricahua mountains and exploring the station grounds, creeks, canyons, and riparian woodlands
- Communities in Isolation: adversity vs. prosperity how soils drive biological diversity

Tuesday

- Drought adaptation strategies for trees in the Chiricahua Mountains
- An Introduction to Tree Related Microhabitats (TreM's)
- Insects, ants, and other arthropods
- Granite Gap field trip. Trees in a desert environment: drought survival and monsoon restoration
- Fungi in the Chiricahua mountains and their relationships to trees and their ecology
- Raptors in Cave Creek Canyon

Wednesday

- Southfork of Cave Creek: Field Trip
- Walking laboratory: TreMs: tree identification, geology and landforms
- Fungi in trees
- Pathogens in the forest
- Arid-land oaks--identification and adaptations
- Ecology of cavity nesting birds in Cave Creek Arizona. This includes owl observations after the presentation

Thursday

- Tree reproduction
- Field trip to Barfoot Park. Conifer biology and taxonomy--restoration of Aspen and Pine forests post Horseshoe II fire. Fungi of Conifers
- From wild to landscape: adapting wild oaks to urban landscapes
- Cultural ecosystem services! What are they? Why do they matter?

Friday

- Field Trip to the Chiricahua Monument.
- Wonderland of Rocks and tree adaptations to rhyolite geology.
- TreM Data collection what have we learned?



Instructors

Dr. James Downer University of California plant pathologist and horticulturist emeritus.

Dr. Ursula Schuch is Professor and Cooperative Extension Specialist at University of Arizona. Woody plant physiology and desert plant horticulture are her specialties.

Mr. David Kelley is a Consulting Plant and Soil Scientist and certified arborist at Kelley & Associates Environmental Sciences, Inc.

Dr. Laurent Larrieu is a forest ecologist at the National Research Institute for Agriculture, Food and the Environment (INRAE) and forest adviser at the National Center of Forest Property (CNPF).

Dr. Jason Smith is a mycologist for Bartlett tree group.

Dr. Kevin T. Smith is Supervisory Plant Physiologist for the USDA Forest Service, stationed in Durham, NH.

Mr. Adam Black is Assistant Curator and head of propagation at Bartlett Tree Research Laboratories.

Dr. Rita Butler Sauvain is a Forest Ecologist responsible for knowledge transfer at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL.

Mr. Michael Eason heads the Rare Plant and Conservation Department at San Antonio Botanical Garden.

Dr. Michele Lanan is Professor of Practice University of Arizona Department of Entomology.

Dr. David Oleyar is Director of Long-term Monitoring & Community Science for HawkWatch International.

Mr. Dave Muffly is a Certified Arborist, Horticulturist, and Educator.

Ms. Helen Snyder is a resident biologist in Portal Arizona who studies raptors in Cave Creek Canyon.

Dr. Kathleen Wolf is a Research Social Scientist emeritus at U. Washington College of the Environment.

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