

Cowling Arboretum



Collaboration with ACM Campuses

The Arboretum has been part of two “Seminars in Advanced Interdisciplinary Learning” (SAIL), a program of the Associated Colleges of the Midwest. The seminars bring faculty from multiple campuses together in settings that encourage collaboration across disciplines.



The 2017 Wilderness in the Anthropocene Seminar sought to tackle questions such as: What places do wilderness, the wild, and nature have in our communities and campuses today? What is the value of wilderness to a liberal arts education?



Professor of Art Stephen Mohring plans to use the results to encourage his sculpture students to explore how timber harvest in the Arboretum fits in with our concept of “wild nature.” Professor of Chemistry Trish Ferrett incorporated wilderness issues into her course Mining and the Environment, exploring local notions of “wilderness,” resource extraction and management, and conflict of interest in the Arboretum.

Cowling Arboretum Mission

Provide opportunities for education and research.

Preserve and restore native plant and animal communities on College natural lands.

Provide opportunities for outdoor recreation and nature appreciation.



Special Funding

In addition to operating support provided by Carleton College, the Arboretum’s programs are supported by grants and funds that have been established through generous gifts (listed alphabetically):

Arboretum Endowed Fund

Arboretum Restoration Fund

The Cole Family Memorial Arboretum Fund

U.S. Department of Agriculture (Conservation Reserve Program and Environmental Quality Incentive Program)

George W. Megeath Fund for the Cowling Arboretum

The Louise '51 and Frank '50 Wright Endowed Arboretum Fund

The Puzak Family

We wish to thank the Arboretum’s many benefactors who help make our work possible.

Arboretum Academics

Not all classes are offered each year.

Archaeology

Archaeological Methods

Biology

Ecosystem Ecology
Entomology
Grassland Ecology
Introductory Biology
Plant Biology
Population Ecology

Cinema and Media Studies

Digital Foundations

Educational Studies

Methods of Teaching Science

English

American Nature Writing

Environmental Studies

Environmental Ethics
Introduction to Environmental Studies
Introduction to Geospatial Analysis

Geology

Introduction to Geology
Geology of Soils
Geochemistry of Natural Waters
Geomorphology

Math

Sample Survey Design and Analysis

Physical Education

Nordic Skiing
Outdoor Skills—Adventure
Winter Sports Fitness

Political Science

Measuring and Evaluating Social and Ecological Systems

Religion

The Sacred Body

Sociology/Anthropology

Environmental Anthropology

Studio Art

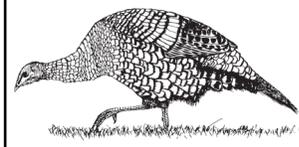
Advanced Ceramics
Advanced Photography
Field Drawing
Intro to Digital and Film Photography
Sculpture: Form and Context
Table Making
The Digital Landscape
Woodworking



American Nature Writing in the Arboretum

For several years now, Michael Kowalewski, Lloyd McBride Professor of English and Environmental Studies, has included a trip to McKnight Prairie with students in his literature courses. The students learn about the history and ecology of McKnight and hike to an overlook where they hold class outdoors. “The experience has a powerful effect,” Mike says. “The vistas, the silence, the open skies, the currents of wind rippling through tall-grass prairie on an autumn afternoon. No classroom experience, no matter how stimulating, can convey such a grounded understanding of why nature and landscape have played such an abiding role in American literature. Students write me years later about their fond memories of these trips to McKnight.”

Mike also requires students in his “American Nature Writing” class to do presentations on local species of flora and fauna in the Arboretum. Students visit the Arboretum throughout the term to observe, sketch, and photograph their species. Their presentations – which incorporate science as well as history, art, literature, and music – are both informative and highly entertaining. “We are incredibly lucky to have McKnight Prairie and the Arboretum,” Mike says. “They are invaluable teaching resources not only for those in the sciences but for those in the humanities as well.”



Wild Turkey by Christian Heuchert '20.

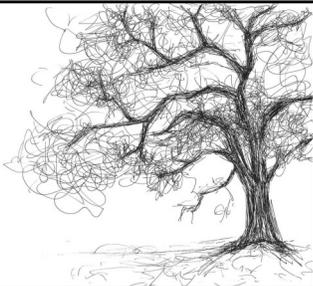
Cole Student Naturalist Program 2017-2018



Student Naturalist Featured Seniors:

Sylvie Stanback '18 grew up in Davidson, North Carolina. In her childhood, she was always encouraged to learn as much as she could about the natural world, and that hasn't changed much! In her time as a Student Naturalist, she has brought her studio art major into her naturalist work, creating illustrations and visual guides for different species of plants and animals that can be found in the Arboretum and on campus.

Alex Bynum '18 is from central Vermont. He loved exploring the rivers, damming up streams, and wandering through the forests of his own backyard. At Carleton, he has extended his study of geology beyond the classroom to examine Cannon River processes and local geologic history. His focus has not been exclusively geology, however, as the naturalist program allowed broader study into the worlds of plants, birds, and community outreach.

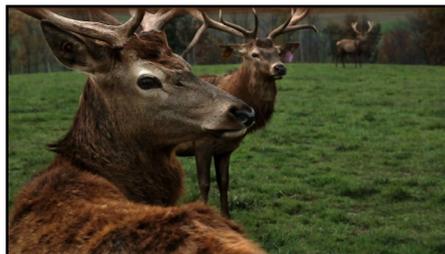


The leaves change colors
Oak acorns fall gracefully
A ground squirrel eats
-Lia Spencer '18

Bur Oak by Sarina Chaiken '18.

Arboretum Documentary

Laska Jimsem, assistant professor of cinema and media Studies, completed her work *Deer of North America*, which premiered this year at the Walker Art Center in



Minneapolis. This experimental documentary intersects the relationships between humans and deer. Partially filmed in the Arboretum, and with references to the genre of wildlife documentary, Jimsem and her filmmaker partner, Jason Coyle, explore the spaces where lines between artificial and natural, domesticated and wild, are blurred.

Jimsem reports, “It is inspiring to see how students integrate the landscapes and textures of the Arboretum into diverse CAMS films, including a documentary about retired Arboretum Manager Myles Bakke, a comical narrative short about a "nature man" with a twist, and meditative observations on the beauty of the natural world.”

Environmental Education and Community Outreach

Community Outreach in the Arboretum includes field trips, workshops, volunteer opportunities, and cooperative programming. In addition to the programming noted in the chart, volunteers engaged in 29 events in 2017 representing more than 480 total hours of assistance. Volunteers provide valuable assistance with seed collecting, invasive plant control, and our prescribed burn program.

A cooperative program with the Northfield School District for cross-country skiing has been in place since 2010. The High School team utilizes the Arboretum trails for training and meets, and their parents assist with grooming the trails. For the past three years, we have also welcomed younger skiers as part of the Minnesota Youth Ski League to get their skiing start on the Arboretum trails. With the added grooming assistance, we provide one of the best skiing opportunities in our area.

Group Type	Number of Events	Total Number of Attendees
College Related	14	472
Youth (K–12)	6	265
Adult (Local Community)	8	88



Research on Wood Betony, *Pedicularis Canadensis*

This summer, Arboretum staff began looking at the possibility of using wood betony in our prairie restorations to reduce the competition of native grasses. Wood betony is one of several prairie plants that are hemiparasites; they are only partially parasitic. Unlike fully parasitic plants, such as mistletoe, which depend exclusively on the resources of their host plants, hemiparasites have chlorophyll and can generate some of their own nutrients. Hemiparasites are likely a crucial part of the prairie, helping to keep their host plants from dominating.

Finding seed was challenging, but records in the Carleton plant collection showed that it had been found locally on private land in the 1940's. The plant was still present and the landowner allowed us to collect seed for our project. Wood betony is native to much of eastern North America and will be a welcome addition to our prairies, regardless of what we find about its impact on grass cover.

Recent Publications

Dan Hernández, associate professor of biology, and Mark McKone, Towsley Professor of Biology, presented two talks at the annual meeting of the Ecological Society of America. The titles were "Experimental Community Assembly With and Without Dominant Grasses in Tallgrass Prairie: Impact on Higher Trophic Levels" presented by McKone, and "Experimental Community Assembly With and Without Dominant Grasses in Tallgrass Prairie: Biotic and Abiotic Effects on Litter Decomposition" presented by Hernández. The presentations described results from a long-term experiment in the Upper Arboretum prairies.

Roger Faust '19, Tris Dodge '19, M.J. McKone, and D.L. Hernández authored a poster presented by Faust at the Society for the Advancement of Chicano/Hispanic and Native Americans in Science conference entitled "Mammalian Herbivores Differentially Affect Light Availability and Species Richness in a Restored Prairie."



Athletes in the Arboretum

Winter does not mean all Arboretum users hibernate! Skiers, as well as those on snowshoes, are out daily. Erin Gustafson '19, Ski Club President, reports that the Nordic Skiing Club practices 4-5 days a week in the Arboretum. "It's very convenient to have such nice trails right here on campus. This year we have 40 club members and we love to share our love of skiing with anyone who'd like to enjoy winter in the best way possible!" Skis and snowshoes are available through the Recreation Center.



Runners find delight on the Arboretum trails when they are not snow covered. Carleton hosted the NCAA Central Regional Championships again. Women's team captain Emily Kaegi '18 reports "I love our home course for Cross-Country, and I think it's one of the best courses that we run on all season."

New Student Week Tree Planting

Each year the entering class participates in a tree planting to assist with our forest restoration program and to help them bond with each other and this important part of campus. This year, the freshmen planted 200 silver maple trees to help restore former agricultural fields in the Lower Arboretum.



Culinary House Foraging Event

Culinary House sponsored a foraging event in the Arboretum this fall. This Carleton living community comes together around the preparation and enjoyment of good food. Participants harvested wild parsnip and burdock root. Burdock was used to make a tea from dried root shavings and the parsnip was oven roasted in salt and oil. The students were very excited about the harvesting activity and competed to find the biggest root they could. Both of these plants are considered weeds in the Arboretum, so this was a win-win activity – eat your enemy!



Minnesota Bee Atlas

2017 marked the second year of participation in the Minnesota Bee Atlas. Bee nest blocks in the Arboretum and McKnight Prairie are monitored as a method of species inventory. This project is designed to update the previous state-wide bee survey last conducted in 1919! Summer Arboretum workers monitor and submit reports to the survey organizers at the University of Minnesota.

Photos in report by: Arboretum Staff, Joanne Bouknight P'14 , Adam Bigelow '20, Nancy Braker '81, Marlena Hartman-Filson '13, Audrey Kan '18, Hannah Marty '17, Erin Gustafson '19, Klay Christianson '82, and Professor Dan Hernandez.

Arboretum Aperture



Photo by Marlena Hartman-Filson '13

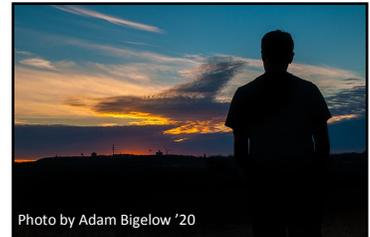


Photo by Adam Bigelow '20



Photo by Berett Wilber '14



Photo by Daniel Atkins '18

For additional information, contact the Arboretum director or visit our website or Facebook page:

<https://apps.carleton.edu/campus/arb/>

www.facebook.com/carletonarboretum

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