Academic Engagement

This fall the Carleton College Cowling Arboretum hosted a performance of the walking play *Nature* by TigerLion Arts. A walking play is a performance where the audience moves along with the actors from scene to scene. *Nature* tells the story of Emerson and Thoreau and their love for and interest in the natural world. Community members and Carleton students were members of the chorus for this performance, and the chorus was co-directed by two Carleton students, Nora Katz ‘16, and Liza Davis ‘16. In an interview with Carleton College, Tyson Forbes (the producer/writer/creator/technical director) said that he “hope[s] audience members ask themselves what their relationship is to the bigger character in this piece. [He] want[s] them to reflect on nature.” The event drew in more than 300 audience members who hopefully did just that in the setting of the Upper Arboretum.

Arboretum Academics

*Not all classes are offered each year.*

**Archaeology**
- Archaeological Methods

**Biology**
- Ecosystem Ecology
- Entomology
- Grassland Ecology
- Introductory Biology: Genes, Evolution, and Development
- Plant Biology
- Population Ecology

**Cinema and Media Studies**
- Digital Foundations

**Educational Studies**
- Methods of Teaching Science

**English**
- American Nature Writing

**Environmental and Technology Studies**
- Environmental Ethics
- Introduction to Environmental Studies
- Introduction to Geospatial Analysis

**Geology**
- Introduction to Geology
- Geology in the Field
- Geology of Soils
- Geochemistry of Natural Waters
- Geomorphology

**Math**
- Sample Survey Design and Analysis

**Physical Education**
- Nordic Skiing
- Outdoor Skills for the Backcountry
- 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
- Critical Studies in Public Space with N55
- Field Drawing
- Intro to Digital and Film Photography
- Sculpture: Form and Context
- Table Making
- The Digital Landscape
- Woodworking

Cast members performing. By Audrey Kan ‘18

Photo by: Klay Christianson ‘82

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.*
Academic Highlights

Archaeological Methods
Alex Knodell, Assistant Professor of Classics, is interested in archaeological approaches to landscape, interaction, and long-term social change. During spring term 2015 his Archaeological Methods class chose the place of the Women's League Cabin as a site of archaeological interest in the Carleton Arboretum. The class excavated the area to see what they could learn about the habits of those who used the cabin. This project allowed students to learn about methods of archaeology, learn some Carleton history, and get their hands dirty while doing so. Their findings and photos were posted every week on their class website: archaeologyinthearb.wordpress.com.

The Arboretum Sense of Place Project
Assistant Professor, Constanza Ocampo-Raeder and her Environmental Anthropology class aim at uncovering layers of meaning embedded in the Arboretum. Ocampo-Raeder trains students in ethnographic methods that help document perspectives, document and portray multiple meanings of the Arb, and evaluate if a more holistic understanding of a natural space can lead to improved environmental ethics. The students hope to show that the Arb is not only a natural space with recreational and research opportunities but also a social space where community is created, articulated, and remembered. Ocampo-Raeder and her students have been designing methods to document student activities, world views, and perceptions of the Arb. These include cultural mapping, interviews with students, focus group activities, and a photo assignment that asked participants to photograph places of the Arb that matter to them.

Preliminary findings show significant variation in the meaning and uses of the Arb. Differences are based on race, gender, providence, major, religious traditions, and involvement in athletics. In particular, there are radical differences between how campus natural scientists explain and see this area with how non-science students conceive of it. Ocampo-Raeder hopes to compare the Arb with her work in the Amazon to show that you do not need to live in a jungle to have a deep and meaningful connection with nature.

Critical Studies in Public Space with N55
Over Winter Term 2015, students worked with Danish art and design collective N55 and Assistant Professor of Art History, Ross Elfline, to develop a speculative proposal for a new Arboretum office. N55’s practice embraces a critical investigation of how public spaces function in our contemporary era. Who has access to public space? Who has the right to build, and where? What is an environmentally ethical way to occupy the land? Students researched the needs and desires of the Arb staff and the community, then worked to fabricate models and structures to create a hypothetical new Arboretum Center. While there are no plans to build in the near future, the class and guest collective hope that their work may enrich and inform future conversations about the space.

2015 Featured Students:

Student Publication of Work
Nisi et al. (2015) published their paper “Patterns of Selective Herbivory on Five Prairie Legume Species” in the journal The American Midland Naturalist. Research for this paper was conducted in the Arboretum by Associate Professor of Biology, Dan Hernandez, and recent graduates Anna Nisi ’14, Lydia English ’13, and Emily Rogers ’13.

Student Naturalists
Darcy Mishkind ’16 grew up surrounded by the beautiful green mountains of Vermont. She spent much of her youth exploring the woods, building forts, and learning bits and pieces about native species. She was immediately drawn to the distinctly different ecosystem of the Carleton Arb, and has spent many happy hours exploring its prairies and forested lands. In particular, she has appreciated learning more about the birds found there and better understanding its distinctive habitats.

Forrest Williams ’16 grew up in rural Northern Lower Michigan where he spent much of his childhood playing in the woods and learning about the importance of living symbiotically with the land. From an early age he grew to love nature by going out on tree identification expeditions, cutting wood for the winter months, and working on his family’s small organic farm. Forrest first fell in love with the Arb by running across its beautiful open landscape. He now spends a large portion of his time in the Arb helping the Arb Crew restore and protect the prairies, and seeking respite from the fast pace of life. Forrest is interested in the role species play in ecosystems and the slow, yet inevitable, way in which the natural world transforms itself.
Environmental Education and Community Outreach

Community Outreach in the Arb includes field trips, workshops, volunteer opportunities, and cooperative programming. These vital Arboretum experiences are utilized by both the College and Northfield Communities. In addition to the programing noted in the accompanying chart, 32 volunteer opportunities were offered in 2015, representing more than 500 total hours of assistance.

Prescribed Burn Education was offered to local landowners and volunteers, attracting 27 community members to learn about this valuable land management tool.

Youth Programming - Teaching Kids Outdoors
The Arboretum served as the location for this workshop hosted by the University of Minnesota Extension. The event helped leaders to gain skills and confidence for leading hands-on, interactive science and nature activities to get youth engaged in the outdoors.

Carleton Arboretum hosts Kids for Conservation BioBlitz
This fall the Arboretum hosted a modified BioBlitz for youth in grades 3-5 who are part of the Kids for Conservation program in Northfield schools. This program is designed to help solve environmental issues by educating kids and giving them the tools to make informed decisions about their actions. They learn about big picture events and little things that they can do to have an individual impact. This fall’s event was organized by Anna Guasco ’16. Anna has been involved with the BioBlitz program on the national level, and she felt it would be a perfect fit for the Carleton Arboretum. A traditional BioBlitz lasts for 24 hours and is hosted by places like national parks. Community volunteers are used to canvas an area of the park and do an in-depth species survey of a chosen area, with experts available to answer questions and help with identification. This effort allows park staff to learn more about what is in the park, and sometimes discover new species! The Arboretum event was based on this model but designed to be a kid focused event, and was scaled down to be age appropriate. Over the course of the day, 120 children learned natural history, citizen science, and how to conduct a field survey. They worked with volunteers to identify plants and animals, and apply what they had learned in the classroom to the outdoor world.

Cole Student Naturalist Program 2015-2016

The Cole Student Naturalist Program is funded through an endowment created in memory of members of the Cole Family, especially Richard S. Cole ’69 and Richard F. Cole ’40. Students meet weekly, are trained in natural history and nature interpretation, and lead field trips and other events for the Carleton and Northfield communities.
Reforestation in the Arboretum

As part of the long-term management of the forests in the Arboretum, staff continued reforestation projects. Thousands of tree seedlings were planted in two areas where invasive species and pine trees not native to this part of the state were removed in 2013. Native trees and shrubs were planted as replacements to help capture the sites before non-native invasive species like buckthorn and honeysuckle could return, and to eventually create a forest similar to the historic forests of the area.

Running of the Cows Returns to the Cowling Arboretum After 5 Years

With the completion of a number of trail projects including opening a new section of trail, widening old trails, and reconfiguration of the start area, the Knights once again hosted the cross-country race “Running of the Cows.” Carleton’s men’s team had the first place man, and narrowly took second in the meet. The women’s team had the first place woman, and won the meet over all. Keep your eyes peeled for more races to come, specifically the 2016 and 2017 Central Region races—the qualifying race for the state event.

Awards

In 2015 the Carleton College Cowling Arboretum was ranked 4th in “The 50 Most Beautiful College Arboretums” as ranked by Best College Reviews. Arboretum size, age, size of collection and opportunities offered to students and the community were considered in the ranking process. Their review and the other Arboretums that made the top 50 list can be seen here:
http://www.bestcollegereviews.org/features/most-beautiful-arboretums/

In July the Carleton College Cowling Arboretum was selected by the Rice County Soil and Water Conservation District (SWCD) to receive the 2015 Forest Stewardship Award. This award recognizes efforts to restore and manage lands for the purpose of protecting or restoring forested areas. Specifically, staff mentioned that forest management on lands available to the public allow community members to see how forest health improves with restoration of native species and invasive plant management.