



## Arboretum

UNIVERSITY OF WISCONSIN-MADISON

### 2021 UW–Madison Arboretum Research Fellowships

The University of Wisconsin–Madison Arboretum is pleased to announce two graduate research requests for proposals. We are soliciting proposals that will address our mission and vision, as well as build on a tradition that began with the earliest plantings in 1935 to establish tallgrass prairie and continued with subsequent experiments in maintaining these early restorations. While we are committed to continuing this long tradition of research on adaptive restoration, the Arboretum is also a valuable research site for studies in botany, landscape ecology, horticulture, soil science, wildlife ecology, environmental engineering, social science, and public health. Proposals may address any of these areas, or other areas that utilize Arboretum land and other resources. The Fellowships will be awarded annually.

***Arboretum Mission:*** Conserve and restore Arboretum lands, advance restoration ecology, and foster the land ethic.

***Arboretum Vision:*** The Arboretum is a global source of knowledge of and a model for restoring ecologically sustainable relationships between people and the land through integrative, innovative, and collaborative approaches in science, stewardship, education, and public engagement.

**Resources and connections:** Arboretum research fellows will have access to the 1,200 acres of Arboretum land in Madison and over 500 acres at outlying sites; long-term records of restoration and management activities on these sites; facilities, vehicles, equipment, and staff support as appropriate and available; and connections with the public.

**Focus research areas:** We invite research proposals in all areas relevant to the Arboretum mission, including the social sciences. We are particularly interested in restoration ecology, invasive species monitoring and management, stormwater impacts, horticulture, visitor experiences, citizen science, science communication, public engagement, K–12 outdoor education, and the collection and analysis of long-term monitoring data at remnant and restored sites. Research addressing other areas will be considered if it makes wise use of Arboretum property and other resources. In addition, other scholarly activities may be considered if they align with the Arboretum’s mission and vision. Faculty members or students with interest in these fellowships must contact the Arboretum Ecologist, Brad Herrick, or another relevant staff member to ascertain programmatic fit. Potential Arboretum staff research advisors include the Ecologist, Research Specialist, Citizen Science Coordinators, Longenecker Horticultural Gardens Curator, Land Care Manager, Native Plant Gardener, Education Coordinator, Director, Assistant Director/Database Administrator, and Communications Coordinator (<https://arboretum.wisc.edu/about-us/people/>).

### **Description of Fellowships:**

- 1) ***Leopold Fellowship (NOT OFFERED IN 2021)***. Full support (academic year and summer stipend, equivalent to a 50% Research Assistantship, plus up to \$4,000 annually for research support) for up to three years. Fellowship will usually begin during the first or second year of the graduate program. The Leopold Fellow will be housed in a UW–Madison department, with primary advising responsibility held by a campus faculty member and an additional advisory connection to one or more Arboretum staff members. Leopold Fellows will become part of a research cohort that includes Arboretum Research Fellows. Except in unusual circumstances that involve long-term Arboretum research, Leopold Fellows will not be eligible for subsequent or concurrent Arboretum Research Fellowships.
- 2) ***Arboretum Research Fellowships***. Research support of up to \$8,000 per year, with the possibility of renewal for ongoing projects. This can include summer stipend, undergraduate research assistants, materials, analyses, or other research needs. Research Fellowships are designed to fund one year of research, but no-cost extensions will be granted, given satisfactory communication about the reasons that they are required. Three to five fellowships will be awarded each year. The fellowship can occur at any time during the graduate program, although we anticipate that most will be awarded during the first through fourth years of the program. In some cases, an early-program awardee could apply for a Leopold Fellowship in a subsequent year. Arboretum Research Fellows, along with the Leopold Fellow(s), will form a cohort that 1) will meet regularly with campus faculty and Arboretum staff, 2) may choose to conduct collaborative research, and 3) will engage in and learn about outreach to the public and land managers; land management implications of research; and other aspects of public/land management/research connections. We anticipate that most research will occur during the summer, although it could take place at any time of the year.

### **Eligibility:**

#### **Leopold Fellowship (NOT OFFERED IN 2021)**

- Student is a current or matriculating Master's or PhD candidate at the UW–Madison
- If the student is an incoming PhD candidate, there is guaranteed support from the home department for at least one additional year of funding
- A significant portion of the work will be conducted on Arboretum property

#### **Arboretum Research Fellowship**

- Student is a current or matriculating Master's or PhD candidate at the UW–Madison or other Wisconsin college or university
- A significant portion of the work will be conducted on Arboretum property

**To apply:** The following items should be electronically submitted by February 1, formatted to standard page size, single-spaced, and using 12-point font (references and table or figure legends may be in 10-point font) and 1-inch margins. Two reference letters should be submitted directly by the referees (not included in the applicant's package). In most circumstances, fellowships will begin the following fall term for the Leopold Fellowship, and in the following summer for the Arboretum Research Fellowships. Completed applications should be sent as a single pdf (except the letters of reference) in the order listed below to Brad Herrick, Ecologist, at [bradley.herrick@wisc.edu](mailto:bradley.herrick@wisc.edu).

1. **Cover page** should include applicant's name, department, advisor, project title and abstract, and name of the Arboretum staff person with whom you have been in communication. In addition, indicate the fellowship for which you are applying and

- the amount of funding requested. If you are applying for the Leopold Fellowship and would like to be considered for the Arboretum Fellowship in the event that you are not selected for the Leopold Fellowship, please include two separate budgets (one for each award) and indicate your desire to be considered for both awards in the event that you are not awarded your preferred choice.
2. **CV** should be up to two pages long and include undergraduate institution, graduate advisor, and other standard information.
  3. **Personal statement** should be up to two pages long and include relevant background information about the candidate, a summary of why research interests are relevant to the mission and vision of the Arboretum, and professional goals.
  4. **Research statement** should be up to four pages long (not including references cited) and should clearly address 1) the relevance of the research, including descriptions of relevant literature and theoretical frameworks within which the project is set, 2) the questions and hypotheses that will be addressed, 3) the methods that will be used to test the hypotheses, 4) proposed project timeline, 5) any relevant previous findings by the applicant, 6) both the intellectual merit (the potential to advance knowledge) and broader impacts (the potential to benefit society and contribute to the achievement of specific, desired societal outcomes) of the proposed research, 7) why the Arboretum is an appropriate location for the research, and 8) references cited (not included in page count).
  5. **Budget** should detail 1) the amount of the request and 2) the way in which the funds will be spent. For the Leopold Fellowship, include the standard amount of a 50% RA in the home department, tuition remission, and anticipated annual research costs (research costs will be awarded separately for each year of the Fellowship). For the Arboretum Research Fellowships, detail all costs (allowable costs include summer stipend, undergraduate research assistant salary, travel, equipment, and other research costs). A budget justification should follow the budget, with detailed explanations for all costs.
  6. **Plan for data management and for sharing the products of research.** This should include identifying an external audience to which you will present research findings (i.e. conference, campus event, etc.).
  7. **IRB and/or IACUC Certifications** should be included if relevant (if the research involves human subjects or vertebrate animals). If these certifications have not been obtained, note the expected application date.
  8. **Two letters of reference** from 1) the faculty advisor, who should include a statement regarding the availability of resources necessary to carry out the proposed research, and 2) an undergraduate professor, other faculty member at the graduate institution, or someone familiar with the candidate's professional science or research skills. Letters should be sent directly to Brad Herrick, Ecologist: [bradley.herrick@wisc.edu](mailto:bradley.herrick@wisc.edu).

#### **Expectations of Fellows:**

- Attend a spring kick-off meeting with Arboretum staff (this expectation may be waived for fellows who are not current UW-Madison students).
- Obtain proper permits to conduct work, including an Arboretum research permit (<https://arboretum.wisc.edu/science/research-permits/>).
- Participate in, and periodically lead, cohort meetings focused on ecological, cultural, and social issues around land conservation and restoration (~every 2 months).
- Each year, submit a brief progress report—including project title, permit number, names and titles of investigators, preliminary findings, and photos of research activities—by November 1 for inclusion in the Arboretum annual research report.

- Participate in the annual Arboretum Research Symposium (<https://arboretum.wisc.edu/science/research-symposium/>) and other Arboretum events for research fellows, including a presentation to the Arboretum Committee (<https://arboretum.wisc.edu/about-us/people/arboretum-committee/>).
- Acknowledge the Arboretum as a source of funding in presentations and publications.
- Present research findings to an external audience (e.g. conference, campus event, public outreach event, etc.).
- Provide project updates and summaries upon request for inclusion in Arboretum communications.
- Submit data and resultant publications or reports to the Arboretum.
- Submit a final report in the final year of funding that includes:
  - Project title
  - Project leader(s): name, title(s), department(s)
  - Project duration
  - Grant amount
  - How grant funds were spent (include specific line items and dollar amounts)
  - Project accomplishments

**Review Process:** A high quality proposal will detail the following elements:

- **Intellectual Merit:** How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?
- **Significance of the Research:** Contribution to knowledge in the relevant field.
- **Feasibility:** Is there a high likelihood that the project will be completed successfully?
- **Justification:** Has the applicant demonstrated knowledge of relevant literature?
- **Approach:** Are there well-reasoned hypotheses? Are the overall strategy, methodology, and analysis well-reasoned, well-organized, and appropriate to meet the specific aims of the project? Is the timeline appropriate to meet the objectives of the project?
- **Resources:** Is the applicant qualified to conduct the proposed activities? Is the proposed budget reasonable and well justified? Are other sources of budgetary support identified?
- **Arboretum & Broader Impact:** Is the project in line with the Arboretum's mission and vision? Does the project support or build from current Arboretum research or programs? Will the project contribute to the understanding of Arboretum land? Does the project have the potential to benefit society?

Questions? Contact Brad Herrick, Arboretum Ecologist, (608) 263-7344 or [bradley.herrick@wisc.edu](mailto:bradley.herrick@wisc.edu).