SEEKING RESEARCH ASSOCIATE
13-26 WEEKS, MAY-OCTOBER 2016

RESEARCH PROJECT: EVALUATING AND IMPLEMENTING LIVING COLLECTION MANAGEMENT SOFTWARE IN NATIONAL PARKS

Based at Olmsted Center for Landscape Preservation, National Park Service
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www.nps.gov/oclp

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RESEARCH PROJECT PURPOSE

To investigate the application of technology to vegetation management; to evaluate existing living collections management software programs; and to begin implementation of preferred software program(s) at four national parks as pilot projects.

POSITION DESCRIPTION

A 13-week to 26-week research associate position (starting in May 2016) is available and based at the Olmsted Center preservation planning office in downtown Boston. Depending on the research associate’s availability, the summer internship can extend part time before and/or after the summer break. Public transportation is available and a vehicle is not needed. A stipend is provided.

RESEARCH PROJECT OVERVIEW

Vegetation in national park landscapes is viewed by visitors and cared for by NPS staff as a living collection for its aesthetic, cultural, historical, and scientific significance. However, relatively few NPS landscapes are managed with the same digital tools that support plant recordkeeping and interpretation at botanical gardens and arboreta throughout the world. A wide range of living collection management technologies exists to aid woody and herbaceous plant care and public education. However, parks with nationally significant plant collections lack guidance on the available digital tools for recordkeeping, management, and interpretation.

This project seeks to evaluate the range of living collection management software programs currently available, with an eye to their applicability for use in national parks, and begin to implement selected technologies at four national parks as pilot projects. The selected technologies will support park staff in research and maintenance recordkeeping, make plant information available to the public in an accessible format, and cultivate greater public appreciation for the parks’ living collections.

The research associate will work with historical landscapes architects and arborists at the Olmsted Center for Landscape Preservation (Massachusetts) and visit park-based horticultural advisors at John Muir National Historic Site (California), Hampton National Historic Site (Maryland), Frederick Law Olmsted National Historic Site (Massachusetts), and Longfellow House—Washington’s Headquarters National Historic Site (Massachusetts) to identify and evaluate the range of digital tools available for use in plant collection inventory, management, and interpretation.

The project will result in a white paper that outlines the advantages and disadvantages of each digital tool and pilot projects to begin implementation of the preferred program(s) at partner parks. Research findings will be made available to parks and programs throughout the service by posting on the Northeast Region Olmsted Center
for Landscape Preservation, participating parks, and the Washington Support Office Park Cultural Landscapes Program websites. The Olmsted Center for Landscape Preservation will also coordinate a webinar with interested NPS employees and partners to present findings, answer questions, and encourage additional parks to adopt living collections management software.

The interdisciplinary team of investigators will begin by identifying applicable living collections management software, including both high-end tools, such as BG-BASE, BRAHMS, IrisBG, MapCentrix, and geovisualization tools developed by North Carolina State University and the Missouri Botanical Garden, as well as more accessible tools, such as the Collector App for ArcGIS, Alliance for Public Gardens GIS Data Model, Plants Map, and the NPS Facility Management Software System (FMSS), among others.

The project team will also identify functional parameters for comparative analysis of the software, including cost, learning curve, speed, software and mobile technology compatibility, offline (field work) capabilities, as well as programmatic considerations related to resource management and interpretation. Existing park cultural landscape reports contain abundant detailed information about park plant collections that awaits translation into a database that is tied to a map-based, interactive application. The software programs’ capacity to capture and organize legacy and existing conditions information in both database and visual formats will merit priority consideration.

In addition to traditional plant records information—i.e. scientific and common names, trunk diameter, source, accession date and number, deaccession date and reason, etc.—software will also be evaluated for its ability to accommodate the unique aspects of NPS preservation maintenance recordkeeping, including condition, preservation maintenance history and needs, replacement strategies, phenological changes, current replacement value, mapping, as well as cultural history and photographs that are of particular interest to park visitors. (Park staff has indicated that this data will also support park climate change/natural resource management goals.)

**SCHEDULE**

**May 2016 (part time work is an option):** The project will commence with a kick-off meeting between the research associate, Olmsted Center staff, and horticulturists at John Muir, Hampton, Frederick Law Olmsted, and Longfellow House—Washington’s Headquarters National Historic Sites. The team of investigators will identify living collections management technologies to evaluate as well as a complete list of parameters for the analysis. The research associate will work with Olmsted Center staff to procure sample copies of all software programs and explore their capabilities in the office using data drawn from existing cultural landscape reports for the four parks.

**June 2016:** The research associate will continue to evaluate software in the office using sample data from cultural landscape reports. Findings will be recorded in tabular format for later use in developing a white paper. The interdisciplinary project team will be available throughout the in-office software evaluation to assist as needed. This effort recognizes that the four parks may be interested in piloting different software based on the results of the May and June in-office evaluation.

In June, the research associate will also complete site visits to Frederick Law Olmsted and Longfellow House—Washington’s Headquarters National Historic Sites (both in Massachusetts, with shared field staff) to test the capabilities of living collection management software in the field, gather sample data on site, and collect feedback from park staff on the applications’ functionality. During all site visits, the research associate will be guided and assisted by park staff. Upon returning from field work, the research associate will continue to evaluate the capabilities of the selected software and coordinate with Olmsted and Longfellow National Historic Sites staff to begin implementing the preferred software at the parks.

**July 2016:** The research associate will complete a one-week site visit to Hampton National Historic Site (Maryland) that parallels site work at Olmsted and Longfellow National Historic Sites. Upon returning from field work,
work, the research associate will continue to evaluate the capabilities of the selected software and coordinate with Hampton National Historic Site staff to begin implementing the preferred software at the park.

**August 2016:** The research associate will complete a one-week site visit to John Muir National Historic Site (California) that parallels site work at Olmsted, Longfellow, and Hampton National Historic Sites. Upon returning from field work, the research associate will continue to evaluate the capabilities of the selected software and coordinate with John Muir National Historic Site staff to begin implementing the preferred software at the park. The research associate will initiate a draft white paper for internal review.

**September 2016 (part time work is an option):** The research associate will conclude software testing and pilot project implementation. S/he will work with Olmsted Center staff complete a first draft of the white paper based on data and observations gathered throughout the investigation.

**October 2016 (part time work is an option):** The research associate will finish the white paper with feedback from the entire project team. The associate will also work with Olmsted Center staff to coordinate a service-wide webinar to present findings, answer questions, and encourage other parks to adopt living collection management programs. The project will conclude at the end of October with a complete white paper to be shared digitally on NPS websites and made available for professional publication.

**RESEARCH TEAM**

The Olmsted Center for Landscape Preservation promotes the stewardship of significant landscapes through research, planning, and sustainable preservation maintenance. Based in Boston, Massachusetts, the Center provides cultural landscape technical assistance to parks and historic properties throughout the Northeast from Virginia to Maine. The Center accomplishes its mission in collaboration with a network of partners including national parks, universities, government agencies, and private non-profit organizations. The Center develops plans, training programs and recommendations to support the preservation of nationally-significant sites and public spaces. For more information on Olmsted Center preservation planning projects, visit our website at www.nps.gov/oclp

For this research project, the in-house expertise of Olmsted Center staff ranges from hand-on skills in horticulture and arboriculture, including plant identification, inventory, and preservation maintenance, as well as skills working with technology, including database and mapping tools like AutoCAD and Geographic Information Systems.

The four partner parks that have expressed a need for living collections management software employ staff that is both interested in living collections management and skilled in arboriculture, horticulture, and/or gardening. In addition, all four parks have completed cultural landscape reports that provide detailed baseline information that will make database creation feasible over the six-month project.

**RESEARCH ASSOCIATE QUALIFICATIONS**

The preferred candidate for this research associate position will have a demonstrated interest in cultural landscape preservation and management, an ability to work as part of a team, willingness to travel, and interest in: landscape architecture, horticulture, landscape maintenance, or mapping. Related skills may include writing, familiarity with Microsoft Word, Excel, Access, Adobe, AutoCAD, and/or Geographic Information Systems (GIS).

**TO APPLY**

To apply, please email (1) a one- to two-page letter that describes your interest in the position, your career and educational goals, and any experience with horticulture or living collections management software, (2) resume, (3) transcript (unofficial is accepted), (4) your dates of availability, and (5) contact information for two references. A combined .pdf is preferred. U.S. citizenship required. Please do not send portfolios until requested. Submit by
April 1, 2016 to margie_coffin_brown@nps.gov. For more information, contact Margie Coffin Brown by email or at 617-223-5116.