

**PR Number:** 20046867

**Award Number:** P14AC00726

**Project Number**: UAZCP-303

**CFDA #:** 15.945

**Park/NPS Unit:** Intermountain Region Museum Services Program

**Title of Project:** Make Archeological Dendrochronology Specimens Web Accessible (Year 2) and Research Museum Documentation

**Administered through the:**  Colorado Plateau Cooperative Ecosystem Studies Unit Cooperative Agreement Number H1200-09-0005

**CESU Partner:** University of Arizona Board of Regents

**PROJECT CONTACTS:**

**Principal Investigator:** Pearce Paul Creasman, Curator, Laboratory of Tree-Ring Research, University of Arizona, PO Box 210026, Tucson, AZ 85721-0026; telephone: (520) 621-2414; fax (520) 626-6761; email: [pcreasman@email.arizona.edu](mailto:pcreasman@email.arizona.edu)

**Partner Administrative Contact*:*** Sherry Esham, Director, Sponsored Projects, University of Arizona, P.O. Box 3308, Tucson, AZ 85722; telephone: (520) 626-6000; fax: (520) 626-4130; email: [sponsor@email.arizona.edu](mailto:sponsor@email.arizona.edu)

**NPS Certified ATR:** Kim Beckwith, Registrar, Western Archeological and Conservation Center, 255 N. Commerce Park Loop, Tucson, AZ 85745; telephone: (520) 791-6450; fax: (520) 791-6465; email: [kim\_beckwith@nps.gov](mailto:kim_beckwith@nps.gov)

**NPS Alternate Certified ATR:** Tef Rodeffer, Intermountain Region Museum Services Program Manager, Western Archeological and Conservation Center, 255 N. Commerce Park Loop, Tucson, AZ 85745; telephone (520) 791-6401; fax: (520) 791-6465; email: [tef\_rodeffer@nps.gov](mailto:tef_rodeffer@nps.gov)

**FUNDING INFORMATION:**

**Amount Funded:** $221,880

**NPS Account Numbers (amounts in parentheses):**

PH.P0192649A.01.3 ($3,000) – Casa Grande Ruins National Monument;

PPIMBANDR1 PPMRSCR1Z.CA0000 144P103601 ($3,000) – Bandelier National Monument;

PPIMBIBER0 PPMRSCR1Z.Y00000 ($4,200) – Big Bend National Park;

PPIMCHIR00 PPMRSNR1Z.Y00000 ($6,000) **-** Chiricahua National Monument/Fort Bowie National Monument;

PPIMCORO00 PPMRSNR1Z.Y00000 ($3,000) - Coronado National Memorial;

PPIMFODAI0 PPMRSCR1Z.CM0000 ($6,000) – Fort Davis National Historic Site;

PPIMMOCA0 PPMRSCR1Z.Y00000 ($6,000) - Montezuma Castle National Monument/Tuzigoot National Monument;

PPIMORPIV0 PPMPSAS1Z.Y00000 ($3,000) - Organ Pipe Cactus National Monument;

PPIMTONT00 PPMRSCR1Z.Y00000 ($3,000) - Tonto National Monument;

PPIMTUMAR0 PPMRSCR1Z.CS0000 ($3,000) - Tumacacori National Historical Park;

PX.P0163345B.00.3 ($176,680) PPIMWACC00 PPMRSCR1C.CA0000 144P103601 – Western Archeological and Conservation Center;

PPIMWACCTO PPMRSCR1.Y.CM0000 ($5,000) – Western Archeological and Conservation Center

**Fund Source (e.g., ONPS, FLREA, CRPP, CESU, etc.):** ONPS, Cultural Resources

NPS Funding

Is this funded using a reimbursable account number? If yes, IMR contracting needs a copy of the Interagency Agreement.

**PROJECT DATES:**

**Start Date:** May 1, 2014

***NOTE: This Task Agreement will become effective on the date of final signature or the effective date of the Award document, whichever is later.***

**End Date:** April 30, 2018

**NPS Administrative Contacts**

**Interim CESU Coordinator:** Todd Chaudhry, National Park Service/CPCESU, NAU P.O. Box 5765, Flagstaff, AZ 86011, 928-523-6638, Fax: 928-523-2014; todd\_chaudhry@nps.gov

**Intermountain Region Administrative Contact:** Kelly Adams, Grants and Agreements Specialist, National Park Service, 12795 West Alameda Pkwy, Lakewood, CO 80228. Phone: 303-969-2303 Fax: 303-969-2992 Email: Kelly\_adams@nps.gov

**FEDERAL FINANCIAL REPORTS AND DRAWDOWN SCHEDULE:**

***Federal Financial Reports*** (Check as required for project based on spending plan, period of performance, risk, cooperator history, etc.)

{X} Quarterly { } Semi-annually { } Annually {X} Final

**Project SCHEDULE AND TECHNICAL REPORT DEADLINES:**

List all technical reports and products in sequential order as required in the scope (more lines and milestones can be added as needed):

*Project Start Date* – May 1, 2014

*Technical progress reports –* { } Quarterly {X} Semi-annually { } Annually

(Check as needed from PI to monitor progress of specific project. Content should be addressed in the scope.)  
  
*Database, Collections/Specimens, Archives, and Maps provided to the NPS ATR or Technical Expert* – Draft electronic records due as parks are completed, at an expected average rate of 2,000 to 4,000 specimens per month (for an aggregate total of an estimated 62,000 specimens); created-or-updated museum documentation for 12 parks due no less often than every 6 months, starting September 15, 2014 (may be submitted more frequently if cooperator wishes)..

*Draft Final Report* – January 31, 2018

*Final Report* – April 30, 2018

*Project End Date* – April 30, 2018

*Final SF425 FFR* must be submitted within 90 days of project end date

**PAYMENTS**

**2 CFR PART 215.22*:*** Cash advance (drawdown) to recipient organization shall be limited to the minimum amounts needed and be timed to be in accordance with the actual immediate cash requirements of the recipient organization in carrying out the purpose of the approved program or project. The timing and amount of cash advances shall be as close as is administratively feasible to the actual disbursements by the recipient organization for direct program or project costs and the proportionate share of any allowable indirect costs.

**2 CFR PART 215.25 (8)(e)(1):** Incur pre-award costs 90 calendar days prior to award or more than 90 calendar days with the prior approval of the Federal awarding agency. All pre-award costs are incurred at the recipient’s risk. (i.e. the Federal awarding agency is under no obligation to reimburse such costs if for any reason the recipient does not receive an award or if the award is less than anticipated and inadequate to cover such costs.)

**CESU REQUIRED PRODUCTS (may be different from those products required by the ATR – See Statement of Work for Products required by the NPS unit):**

The Principal Investigator will prepare a brief report abstract suitable for public distribution and two hard copies and an electronic version (in PDF file format) of the final report and mail all toJudy Bischoff, National Park Service, CPCESU, NAU P.O. Box 5765, Flagstaff, AZ 86011. Please be sure to include the project number (e.g.; NAU-###, UMT-###, UAZDS-###) and the P number on the cover page of the final report.

**PROJECT ABSTRACT:**

This project will continue efforts to integrate NPS archeological tree-ring specimens stored at the Laboratory of Tree-Ring Research (LTRR), University of Arizona, into a complete, on-line searchable catalog to increase accountability and public and researcher access. Students, in cooperation with staff of the Intermountain Region Museum Services Program, will identify legacy collecting events from NPS lands, and enter information on an estimated 62,000 archeological dendrochronological specimens into an existing data exchange format known as the Tree-Ring Standard for integration into a web-accessible catalog linked to the scientific data repositories International Tree-Ring Data Bank and/or the International Multi-Proxy Paleofire Database. The specimens also will be accessioned, cataloged, labeled, and the data entered into the Interior Collections Management System (ICMS) to meet or exceed accountability standards for submission to the NPS National Catalog. Additionally, museum collections and collecting events-related documentation will be researched, vetted for accuracy and completeness, and databases and paper records will be created, corrected or updated as needed for 12 park units (Bandelier National Monument, Big Bend National Park, Casa Grande Ruins National Monument, Chiricahua National Monument, Coronado National Memorial, Fort Bowie National Historic Site, Fort Davis National Historic Site, Montezuma Castle National Monument, Organ Pipe Cactus National Monument, Tonto National Monument, Tumacacori National Historical Park, Tuzigoot National Monument) as part of this project. Complete and accurate data is an essential first step in making object and specimen data available as a web resource. Research on the location and condition of (primarily) natural history collections stored in non-NPS repositories for the 12 parks, and assessments of associated databases and records, as well as, some cataloging of natural history or other collections identified during museum research may also occur, time permitting.

**Scope of Work:**

Background and Objectives:

The Laboratory of Tree-Ring Research (LTRR) at the University of Arizona curates an estimated 250,000 National Park Service (NPS) tree-ring specimens resulting from over 80 years of archeological investigations at 44 parks in multiple regions. Tree-ring widths in these specimens are used to reconstruct past environmental conditions and changes. The LTRR lacks a comprehensive, integrated database system to manage these archeological specimens and provide accountability to the NPS for NPS-owned specimens in that facility. Less than one-half of 1% of the specimens in the archeological collection currently are cataloged or marked with NPS catalog numbers as required by NPS Management Policy, thereby making this collection of limited utility to the NPS and external researchers.

This project will continue the effort to integrate the NPS specimens into a complete, online searchable catalog of specimens maintained by LTRR and increase accountability for, and accessibility to, information about the specimens. The objectives of this project are to utilize developed protocols to enter information on archeological specimens into a web-accessible catalog linked to centralized scientific data repositories, and enter data into ICMS for submission to the NPS National Catalog. An estimated 62,000 archeological specimens will be cataloged, labeled, and entered into ICMS and the web-accessible catalog. Jointly-developed protocols will be evaluated and refined continuously to improve efficiency. The final report will include park-specific information about the specimens informing on each park’s archeological specimens housed at the LTRR, highlighting any especially important specimens or group of specimens, the history of dendrochronological collecting at that park, and recommendations LTRR has for future research efforts at the park.

Research on museum documentation regarding collecting events and associated collections and objects is necessary to ensure that available information and data is as complete and accurate as possible before being made accessible to the public on the internet.

Statement of Work:

The cooperator will complete the following tasks to achieve a goal of an estimated 62,000 ICMS-cataloged, web-accessible archeological specimens. The cooperator will coordinate with each of the 12 parks to identify their priorities for museum research. Work will be performed at LTRR, University of Arizona, Tucson, Arizona, and at the Western Archeological and Conservation Center, Tucson, Arizona. One on-site park visit to Fort Davis National Historic Site and Big Bend National Park will occur for museum records and collections research at those particular units. Specimen data recording, cataloging, and labeling is expected to proceed at an approximate rate of 2,500-4,000 completed specimens per month. Products will be provided to the ATR. Draft product reviews will be completed by NPS within 45 days of receipt.

1. Work with Intermountain Region Museum Services Program staff to refine established project protocols that address LTRR needs and conventions as well as NPS requirements. Ensure that any proposed modifications to the protocols and the scheduling of park work is approved by the ATR in advance of any actual changes to scheduling or protocols. These revised approaches must still produce an ICMS catalog database that meets or exceeds NPS Museum Handbook requirements for cataloging and ensure that specimen data will be web-accessible to the public.
2. Enter information on NPS specimens into the LTRR catalog, including minimum identification codes, species, geographic origin (including, GIS information where readily identified), and time range represented if known, and NPS catalog and accession numbers, with links to non-sensitive metadata and derived data (e.g. site description files, publications, etc.). Complete, at minimum, information for NPS-required fields for cataloging for all specimens.
3. Format collections data into an existing data exchange format known as the Tree-Ring Standard. Integrate with or link the catalog data, where appropriate, to the International Tree-Ring Data Bank and the International Multi-Proxy Paleofire Database that are regularly used by dendrochronologists throughout the world, resulting in free and direct on-line access to the contents of the collections.
4. Work with the ATR, who will coordinate with park staff, to obtain accession and catalog numbers for the un-accessioned or un-cataloged specimens. Determine whether the specimen was collected from lands that belonged to the NPS at the time of collection to clarify ownership issues; work jointly with Intermountain Region Museum Services Program staff and park curators to clarify ownership issues when proveniences are questionable or vague.
5. Provide an electronic copy of draft ICMS catalog records on a park-by-park basis to the Intermountain Region Museum Services Registrar as parks are completed, or, if cooperator chooses, on an approximate monthly basis for parks with an exceptionally large number of specimens. This will facilitate regular and consistent coordination with park curators for park accession and catalog records, which is necessary to keep the project on schedule. The monthly ICMS data should be extracted or created in an Excel spreadsheet for new data or, be provided as corrected records in ICMS for updated old data. Records should identify, at minimum, the collection number(s) or FS number(s) of specimens, the LTRR reference numbers, the site names and/or numbers, finer within-site proveniences and/or provenience codes, and collector names and dates for specimens by park.
6. Provide completed ICMS records, with entered NPS accession and catalog numbers for final review by the NPS Registrar no less frequently than semi-annually. Upon approval by the ATR, the LTRR will be notified that the records have been accepted as final. If changes by the ATR occur, corrected records will be returned to the LTRR. Note: Because these completed records will be transferred intermittently to parks for inclusion in park databases and for submission to the National Catalog, any subsequent changes to these records by the LTRR must be submitted separately as revised records and so identified by the LTRR to the NPS.
7. Research and assemble documentation about museum collections from park and institution records and other relevant sources; assess park accession and catalog databases to identify deficiencies (this may result in additional cataloged items beyond those identified in task 1 above); locate collections in non-NPS repositories, and recommend and implement correction to records and documentation for the 12 parks based on the research.
8. Follow existing protocols for carrying out the tasks. An on-going dialog and exchange of information and documentation about issues and tasks should be maintained with the ATR who may also bring together other identified relevant parties (parks and partners) for discussions about changes to protocols, achieving efficiencies, setting priorities, identifying action items and scheduling.
9. Provide semi-annual Technical Progress Reports to the ATR detailing the number of specimens identified, labeled, entered into ICMS and/or uploaded/linked to on-line databases since the last report and cumulatively, and the findings of museum research and documentation activities for the various parks up to that point.
10. Provide draft final report to the ATR for review.
11. Complete Final Report. Final report should contain the following minimum content: Protocols/refinements; the numbers of specimens identified, labeled, and entered into ICMS; the numbers of specimens uploaded/linked to on-line databases; findings of museum research and documentation; appendices with park-specific summary data reports, tailored to a superintendent and resource manager audience, informing about each park’s archeological specimens housed at the LTRR, highlighting any especially important specimens or group of specimens, legacy/historical dendrochronological collecting at that park, and including any recommendations LTRR has for future research efforts regarding collection of future specimens from that park. Note: The park-specific appendices reports for Year 2 effort will only address those parks known to *have been completed* during the span of the Year 2 project work effort.

**COOPERATIVE AGREEMENTS OR TASK AGREEMENTS INVOLVING COOPERATORS WORKING ON-SITE**

**Background**

In cooperative agreements or task agreements with universities where the university utilizes interns, student employees, research associates (RAs) or cooperators on-site (hereafter called “cooperator personnel”), these cooperator personnel sometimes work on government sites in close proximity to federal employees. It is illegal (without specific statutory authority) for federal employees to directly supervise the cooperator personnel or any university employees or for the students or other university employees to supervise federal employees. When cooperator personnel are working on an NPS site, it is important that there is a clear distinction between students and federal employees.

**Office Environment and Vehicles**

* The office space of the cooperator personnel and NPS personnel should be clearly labeled (Name and NPS or University affiliation on office or cubicle space).
* Cooperator personnel should be listed separately from NPS personnel in telephone lists, other identification or organizational rosters, and publication credits.
* Cooperator personnel should not receive “all-employee” e-mail or other communications intended for NPS personnel (unless it relates directly to the work the cooperator is doing for the NPS). When the e-mail does relate to the work being done, a copy of the same e-mail message should be sent to the University or cooperator’s supervisor.
* Cooperator personnel may use NPS e-mail systems when the communication relates directly to the work the cooperator is doing for the NPS. The e-mail addresses of the cooperator personnel must include a label associated with their NPS e-mail address that identifies the cooperator’s status (i.e., “Linda Webb, Cooperator” would be the label associated with the e-mail address, [linda\_webb@contractor.nps.gov](mailto:linda_webb@contractor.nps.gov)). Doing so clearly identifies this individual each time they send an e-mail message using the NPS system, and it identifies their status as a research associate, student intern or student employee in the e-mail directory.
* Unless stipulated in the agreement, cooperator personnel should not drive government vehicles.
* Unless stipulated in the agreement, cooperator personnel should not ride as a passenger in a government vehicle. When this is planned as part of the agreement, an appropriate amount of liability insurance should be negotiated.
* Prior written approval by the Park Superintendent or Center Manager must be obtained in order for a task to allow cooperator personnel to drive or ride in government vehicles.

**Supervision and Scheduling**

* Each task must specify the university’s/cooperator’s supervisor for the cooperator personnel.
* Unless stipulated in the agreement, NPS staff should not set hours for cooperator personnel, specify where the work should be done, or conduct performance appraisals. National Park Service staff may give performance feedback to the cooperator personnel supervisor.
* Cooperator personnel should report leave, scheduling, and other related issues to the university or cooperator’s supervisor, not to NPS employees. The supervisor of the cooperator personnel should then communicate with the NPS. National Park Service employees cannot directly supervise cooperator personnel on a day-to-day basis. Work should be given to the cooperator personnel (via the cooperator’s supervisor) on a “task basis.” Cooperators should work without NPS supervision to accomplish each task, although technical consultations and cooperation is permissible.
* The Cooperator will be responsible for any disciplinary action needed to correct student employee conduct or performance problems. The NPS agreements technical representative will inform the university/cooperator’s supervisor of any conduct or performance problems.
* The Cooperator will remove student employees from their positions if they fail to improve performance or address conduct issues.
* The NPS will review and provide feedback to students or interns regarding work assignments.
* The NPS will inform the cooperator of conduct or performance problems with cooperator personnel so that the university can counsel employees and correct the performance problems.
* The NPS will recommend to the cooperator dismissal of cooperator personnel based on conduct or performance issues.
* The Cooperator will hire students, interns or RAs to work on NPS tasks identified in the agreement. Hiring will be conducted in consultation with the NPS Agreements Technical Representative (ATR).
* The Cooperator will: pay students, interns or RAs for hours they have worked in support of the agreement.

**Representation and Communication**

* Cooperator personnel cannot in any way represent themselves to the public as NPS employees.
* Cooperator personnel are required to wear visible identification at all times.

**Other Issues**

* Cooperator personnel should not list an NPS affiliation on publications, but rather should list the cooperative agreement under which the work was performed.
* Cooperator personnel should not be invited to official NPS “social” events.
* Cooperator personnel will follow the local policy of the facility when federal facilities are closed due to early release for holidays, snow days, etc.

**PRODUCTS:**

* A complete, electronic ICMS catalog database, meeting or exceeding NPS standards, for an estimated 62,000 archeological dendrochronological specimens and an updated ICMS database that incorporates those specimens as well as for possible new cataloging of other identified (non-dendro) newly-cataloged objects or specimens for each of the 12 parks relevant to the museum collections research.
* NPS-identifying labels affixed to cataloged dendrochronological specimens, identifying, at minimum, NPS accession and catalog numbers
* Formatted collections data for an estimated 62,000 archeological dendrochronological specimens into data exchange known as the Tree-Ring Standard.
* As appropriate, integrated or linked data to the 1) International Tree-Ring Data Bank, and, 2) International Multi-Proxy Paleofire Database, thereby providing free and direct, on-line access to the contents of the collections.
* Museum collections and collecting-related research documentation and databases following existing and/or jointly-revised protocols prepared and/or updated for 12 parks.
* Technical Progress Report
* Draft Final Report
* Final Report

**BUDGET:** Please see attached budget.