



United States Department of the Interior

NATIONAL PARK SERVICE
Boston Support Office
15 State Street
Boston, Massachusetts 02109-3572

IN REPLY REFER TO:

August 29, 2001
A4415 (BOSO-COS)
1443-IA4525-B-0007

Dr. Alan O'Connell
USGS-Biological Resources Division
Patuxent Wildlife Research Center
12100 Beech Road, STE035
Laurel, MD 20708-4035

Dear Mr. O'Connell:

Enclosed is a fully executed copy of Interagency Agreement 1443-IA4525-B-0007 between the USGS Biological Resources Division and the National Park Service.

We would like to remind you at this time of the annual reporting requirements outlined in the OMB Circulars. Both financial and performance reports shall be submitted to the Contracting Officer within thirty days at the end of each reporting period.

Thank you very much for your support. We look forward to a continuing mutually beneficial relationship.

Sincerely,

Lisa M. Cutone
Procurement Assistant

Enclosure

cc: Mary Foley/BOSO

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE - BOSTON SUPPORT OFFICE
INTERAGENCY / INTRA-AGENCY AGREEMENT

1. Fiscal Year 2001	2. IA # IA4525-B-0007	3. Other agency #	4. Type (Check appropriate box) ☒ Original ☐ Modification	5. Modification #
6. This agreement is entered into by the National Park Service: Park/Office NPS-Boston Support Office			7. Amount of this transaction \$8,500	
Location 15 State Street Boston, MA 02109			8. Previous amount, if applicable	
☐ To perform work as described herein for the agency named in item 11 (NPS as Servicing / Billing Agency) ☒ To have work performed for the NPS by the agency named in item 11 (NPS as Requesting / Paying Agency)			9. Total amount	
11. Name of Participating Agency/Bureau/Office USGS-Biological Resources Division			10. Under the authority of: ☐ Economy Act, 31 USC 1535 ☐ Reciprocal Fire Act, 42 USC ☐ Other (Cite Authority)	
Location Patuxent Wildlife Research Center, 12100 Beech Road, STE035 Laurel, MD 20708-4035			12. Economy Act determination attached? ☒ Yes ☐ No	
			13. BPC approval ☐ Yes ☐ No	

14. Statement of work (See attached) National Park Service (NPS)-Northeast Region Inventory & Monitoring Program - Voucher and Documentation Plan for Vertebrate and Botanical Specimens (full proposal attached)

	REQUESTING (PAYING) AGENCY	SERVICING (BILLING) AGENCY
15. Agency Location Code	15a. 14-10-0099	15b. 14-08-0001
16. Fund account symbol/appropriation	16a. 14X-1036	16b.
17. Period of fund availability	17a. 2001	17b.
18. Account/cost structure	18a. 4525-6661-NII-253H-G-01	18b.
19. Procurement document number	19a.	19b.
20. Name of agency contract	20a. Cheryl Corbett/Michele Valenza	20b. Marian Clark
21. Contact's telephone number	21a. 617-223-5035/617-223-5162	21b. 301-497-5623

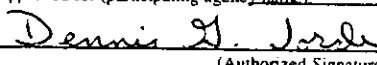
22. Billing method: ☐ SF-1080 ☒ OPAC ☐ Other (Identify)

23. Billing frequency: ☐ Annually ☐ Quarterly ☐ Monthly ☒ Other (Identify)

24. Bill to (Name and address, including zip code):

National Park Service
Accounting Operations Center
Department CDB-3, P.O. Box 4800
Reston, VA 22090

Execution of this agreement constitutes an obligation against the requesting (paying) agency, and authority for the performing (billing) agency to proceed with the work and services to be performed.

25a. Approved for National Park Service:  (Authorized Signature)		26a. Approved for (participating agency name): (Authorized Signature)	
Typed name: Richard J. Armenia		Typed name:	
Title: Contracting Officer	Date: 8/28/01	Title:	Date:
25b. Approved for National Park Service: (Authorized Signature)		26b. Approved for (participating agency name):  (Authorized Signature)	
Typed name:		Typed name: Dennis H. Jorde	
Title:	Date:	Title: Acting Director	Date: 8/23/2001

Proposal – Patuxent Wildlife Research Center

Title: National Park Service (NPS) – Northeast Region Inventory & Monitoring Program -Voucher and Documentation Plan for Vertebrate and Botanical Specimens

Abstract

As part of the National Park Service's Northeast Regional Inventory and Monitoring Program (I&M), the NPS plans to gather information on vertebrate and vascular plant specimens collected on NPS lands and housed in various natural history collections. As part of this plan, voucher specimen information will be gathered from select institutions with computer-accessible collections. A complete list of institutions (and contacts) currently housing vertebrate and vascular plant specimens collected on NPS lands will be compiled, and an assessment made on the need and effort necessary to extract this information from those institutions that have not yet been computerized.

Background and Justification

Years of scientific research and biological surveys on lands under NPS jurisdiction has resulted in an enormous amount of specimen collection. Until recently, curatorial oversight and a commitment to the preservation of scientific (i.e., natural history) collections have languished within the NPS. This has resulted in the storage of specimens at a variety of scientific and educational institutions around the country and the world. Unfortunately, the exact location and status of many of these specimens and collections remains uncertain. Poor permitting procedures have resulted in voucher specimens lost and deposited at institutions far from where the research and collecting took place. As a result of not having a standardized vouchersing policy, missing or poorly maintained voucher specimens, disproportionate attention to "popular" taxa, a lack of catalogued or readily accessible information, and no standardization in recording procedures has been an ongoing problem for the park service (Stohlgren et al. 1992).

Currently, the NPS does not have complete lists with current information on many of the natural resources found within Park boundaries. Two recent projects have attempted to remedy this situation. The former mid-Atlantic region of the NPS cooperated with Pennsylvania State University to produce a list of institutions including contacts and the potential for retrieving information on specimens and collections thought to originate within NPS boundaries. Although some specimens were documented as a result of this effort, most collections are still yet to be evaluated. A second project involved a collaborative effort between the NPS Midwest region and the BRD (National Wildlife Health Center/Field Station at the University of Wisconsin) to document botanical specimens originating from 15 NPS units within the Heartland Network. More than 3,000 specimens were documented at institutions across the country (Dr. J. Bennett, pers. comm.) Using the Automated National Cataloging System (ANCS+) and NPS Investigator Report databases, both projects compiled institutional lists as well.

Natural history collections in museums, arboreta, zoos, and educational institutions as well as private collections, represent a wealth of information regarding biodiversity at all levels. The two aforementioned projects demonstrate the variety and importance of information potentially available. In addition, curation and validation of voucher specimens is an important first step in determining data gaps, conducting field inventories, establishing long-term monitoring programs and evaluating changes in biodiversity on NPS lands. Voucher specimens encourage repeatability of historical research and evaluation of local changes in biodiversity (Huber 1998). In summary, the usefulness of good specimen-based science demands the preservation and automated tracking of proper voucher material (Winker et al. 1998).

Issues and Information Needs to be Addressed

As noted, one of the goals of the NPS I&M Program is to gather all existing information on vertebrate and vascular plant species found on park property. Part of this plan to gather existing information involves reviewing natural history collections. Such a review will help to determine the number and diversity of specimens that have already been collected in parks.

A logical first step in this process is to determine the number of institutions where voucher specimens may exist. Using computerized databases, compiling a list of institutions where scientific specimens reside is plausible, but in many scientific collections specimen counts number in the millions. Information is often not computerized and considerable work is required to access local, site-specific data. Despite the cataloguing of many collections, especially in some of the larger museums, computerization of collections where records can be retrieved instantly is far from complete. A review of the 525 collections in the "Directory of Systematics Collections" indicates that many collections have not been computerized and information access is a slow process. Until such time as a collection has been catalogued and the information computerized, a complete list of institutions will provide the NPS with historical information on where specimens reside and the level of effort required to document specimens in NPS databases.

Objectives

This project will seek to determine where scientific specimens are located that originate from NPS lands within the subject Northeast Temperate Network and four parks in the Coastal and Barrier Network (CACO, GATE, SAHI, FIIS). Those collections that are digitally available will be searched for specific voucher information as well as nondigital collections housing the majority of specimens collected for any one particular park in these networks.

Methods

1. Establish a list of institutions that serve as repositories of natural history specimens originating from NPS lands in the Northeast Temperate Network and the four parks in the Coastal and Barrier Network. This list will be developed based upon:

- A review of the scientific literature originating from the park. (NPBIB)
- A review of Investigator annual reports.
- A review of each park's collection permits.
- Personal communication with park personnel, major scientific cooperators, Universities and natural resource agencies.
- A search of NPS linked databases including ANCS+.

(All NPS databases (NPSpecies, NPBib, Dataset Catalog, Investigator Reports, ANCS+) and other relevant databases (State Gap Analysis Projects, State Heritage Programs) will also be reviewed to determine whether data from identified collections have already been entered into any of the NPS databases in order to avoid duplication of effort.)

2. Create a prioritized list of institutions to be searched. Institutions will be prioritized in terms of the number of Northeast Temperate/Coastal and Barrier Network specimens thought to be stored there.

3. Determine and list which of these collections can be searched digitally, and which have to be searched manually. This will be done by reviewing the directory of research systematic collections database (~ 500 institutions).

4. From the above lists, those institutions whose collections are available digitally will all be searched by the research assistant hired for this project. Those institutions that must be searched manually will be contacted for cost estimates. It will then be determined which of these institutions will be searched based upon the possible number of specimens that may be stored there from NPS lands. Travel may be required to some of the high priority, non-digital institutions for manual search.

Method for Contacting Institutions

1. Institutions will be contacted initially via surface mail
2. Re-contacting institutions will be done via phone, if there has been no response to the initial letter after one month.
3. Once records have been received:
 - A verification of receiving records and a thank you letter will be sent to the institution.
 - Records will be organized by those possibly collected in the park, eliminating those that were definitely not from the park. (Institutional records are usually organized at the county level)
4. Verification of records by each park include:
 - Sending records and letter to each park to verify whether or not a specimen

record was collected from within the park. There will be a return data of one month assigned. (See sample letter attached)

- Upon receipt of returned records, a verification of receiving records and a thank you letter will be sent to the park.

5. All returned and verified records will be entered into the NPSpecies database.

Products

- Quarterly briefings will be made to the NPS Inventory & Monitoring Coordinator, Northeast Region.
- A final report will be provided in MS Word format.
- A summary of the information gathered from the various sources described in methods #1 will be provided in MS Word format.
- A list of institutions housing natural history specimens for each park in the Northeast Temperate Network as well as the four parks in the Coastal and Barrier will be provided. This will be provided in MS Word or Excel format. This list will state whether an institution was available digitally, and whether it was actually searched, as well as how many specimens for each taxa collected in a park, are housed there.
- Information gathered on each specimen will be provided in an ANCS+ database. This information will then be converted to an Oracle database in order to be merged with the NPS NPSpecies database available on the web.

Work Areas

Work will be conducted from Center offices in Laurel, MD where a research assistant will be housed. Travel will be made to those scientific institutions deemed necessary to complete the above work.

Work Schedule

Work will begin no earlier than April 1, 2001 and be completed by May 1, 2002.

Personnel

A Research Assistant, under the direct supervision of Dr. Allan O'Connell, USGS, BRD, and PWRC, will conduct this project. Dr. O'Connell has worked in the Ornithology and Mammalogy Departments at the American Museum of Natural History in NY and has

experience in curatorial functions related to natural history collections. The Research Assistant will be hired through the Patuxent WRC and operate out of Center offices in Laurel, MD.

Budget

Research Assistant, Biological Technician (Hire through Patuxent WRC) 1 year @GS-5	\$13,500
--	----------

Computer and software (this will be the property of the NPS)	\$4,000
---	---------

Travel	\$3,000
--------	---------

Report Preparation	\$250
--------------------	-------

TOTAL:	\$20,750
---------------	-----------------

I.E., These funds, due to operational and budget constraints, will be spent over two years. Initially, the NPS will transfer \$8,500.00 to Patuxent in FY01. The remainder, \$12,250.00 will be transferred in FY02.

Literature Cited

Huber, J. T. 1998. The importance of voucher specimens, with practical guidelines for preserving specimens of the major invertebrate phyla for identification. *J. Natural History* 32:367-385.

Stohlgren, T. J., and J. F. Quinn. 1992. An assessment of biotic inventories in western U.S. National Parks. *Natural Areas Journal* 12: 145-154.

U.S. Department of the Interior. 2000. Inventory and Prototype monitoring of Natural resources
In selected national park system units, 1998-1999. National Park Service, Natural Resource Technical Report NPS/NRI&M/NRTR-2000/1. 58pp.

Winker, K., M. J. Braun, and G. R. Graves. 1996. Voucher specimens and quality control in avian molecular studies. *Ibis* 138:345-346.