

**NPS
PROJECT SUMMARY**

**Cooperative Ecosystem Studies Unit
Cooperative Agreement Modification**

FUNDING AGENCY: **National Park Service**

MODIFICATION NO.: **04-11**

COOPERATIVE AGREEMENT NO.: **H2380040002**

FUNDING AMOUNT: \$ **10,000**

INVESTIGATORS' Contact Information: **Dr. Mary Barkworth, Director of Intermountain Herbarium, Utah State University, Logan UT, 435-797-1584**

PROJECT TITLE: **Line Drawings of grasses for Two Volumes of Flora of North America publication**

EFFECTIVE DATES: **June 2004/September 2005**

PROJECT ABSTRACT: **This project will oversee the preparation of approximately 13.5 plates illustrating grass species in the *Achnatherum* (c.a. 11 plates), *Pharus* (0.5 plates), *Leersia* (ca. 1 plates), and *Luziola* (ca. 1 plates) genera for the second volume of grasses for the Flora of North America. These two volumes will provide the most up to date reference for identifying grasses in North America. Completion of the two volumes for grasses is important since grasses occur in almost every terrestrial habitat, are important in restoration projects, and can help with early detection of invasive grass species. National Park Service resource specialists and managers will benefit from the completion of these volumes.**

Agency Representative:

Ron Hiebert, NPS
Research Coordinator
CPCESU
Northern Arizona University
P.O. Box 5765
Flagstaff, AZ 86011-5765
Tel: (928) 523-0877
Fax: (928) 520-8223
Ron.Hiebert@nau.edu

**Agency Administration
Representative**

Debi Cox
Program Analyst
NRSS Water Resources Division
1201 Oakridge Drive, Ste. 200
Fort Collins, CO 80525
Tel: (970) 225-3510
Fax: (970) 225-3585
Debi_cox@nps.gov

Investigator:

Dr. Mary Barkworth
**Director of Intermountain
Herbarium**
Utah State University
Logan UT 84322
Tel: (435) 797-1584
Fax: (435) 797-1575
mary@biology.usu.edu

Partner Admin. Contact:

Dennis Paffrath
**Sponsored Programs
Office**
Utah State University
1415 Old Man Road
Logan, UT 843220
Tel: (435) 797-8302
Fax: (435) 797-3543
denn.paffrath@usu.edu

List of Key Words: [Grasslands, Exotic Vegetation, Protocols/Reference Materials, Revegetation/Restoration, Threatened/Endangered Species]

Key Official from National Park - Include contact information @ Specific Park or NPS Office:

*Bruce Rittenhouse, NPS Biological Resources Management Division, 1201 Oakridge Drive, Suite 200, Fort Collins, CO 80525
Tel: (970) 225-3591, Fax: (970) 225-3585, bruce_rittenhouse@nps.gov*

Annual Report Received:

Final Report Received:

Publications on File:

This Modification is subject to all the provisions included in the Cooperative Agreement, dated 6/18/04.

Attach any supporting material as necessary.

Scope of Work

In collaboration with the National Park Service Biological Resources Management Division (BRMD), the Principal Investigator, Dr. Mary Barkworth, Director of the USU Herbarium, and author will prepare high quality line drawings of several native grass species. Professional botanical illustrators will be used to create high quality line drawings of the grass genera listed below. These drawings will be included in the second of two volumes for grasses of the *Flora of North America* series.

The project will include the preparation of approximately 13.5 plates illustrating grass species in the following genera:

1. *Achnatherum* – 11 plates
2. *Pharus* – 0.5 plates
3. *Leersia* – 1 plates
4. *Luziola* – 1 plates

National Park Service Substantial Involvement

Bruce Rittenhouse, NPS BRMD, will oversee the project for the National Park Service. Utah State University and BRMD will meet with the illustrator periodically to provide input, feedback and course correction as necessary as the project is underway to insure that the line drawings are botanically correct.

Benefits of Work

Completion of these two volumes is particularly important to the National Park Service because grasses are the most common group of plants in North America and include many invasive and threatened/endangered species, and many are difficult to identify. These illustrations will assist in the completion of these two volumes on North American grass species. The completion of these volumes will benefit park service managers in early identification of invasive grass species and management of threatened/endangered species.

Budget

Preparation of Illustrations	\$8,250
Overhead (IT Assistance, Facilities), 17.5%	\$1,750
Total	\$10,000