



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

February 3, 2004

Mr. Ronald R. Switzer
Superintendent
Mammoth Cave National Park
P.O. Box 7
Mammoth Cave, Kentucky 42259-0007

Dear Mr. Switzer: *Ron*

Enclosed is an executed copy of the cooperative management agreement for Eggert's sunflower populations within Mammoth Cave National Park. We appreciate your expedited action in signing the agreement, and look forward to working with you – primarily through our Kentucky Field Office in Frankfort – to further the recovery of this rare plant species.

Please give my warm regards to old friend Henry Holman. And if you have any questions about this agreement, the management of Eggert's sunflower, or other issues of mutual interest, please feel free to call Lee Andrews (Supervisor, Kentucky Field Office; telephone 502/695-0468), Timothy Merritt (Recovery Coordinator, Tennessee Field Office; telephone 931/528-6481, ext. 211), or me (telephone 931/528-6481, ext. 212).

Sincerely,

Lee A. Barclay, Ph.D.
Field Supervisor

Enclosure

xc: Lee Andrews, FWS, Frankfort, KY



United States Department of the Interior

NATIONAL PARK SERVICE
Mammoth Cave National Park
P.O. Box 7
Mammoth Cave, Kentucky 42259-0007

FEB -3 2004

IN REPLY REFER TO:

L7617 X H4217

January 30, 2004

Lee A. Barclay, Ph.D.
Field Supervisor
U.S. Fish and Wildlife Service
446 Neal Street
Cookeville, Tennessee 38501

Dear Dr. Barclay:

I have signed the enclosed agreement for cooperative management of Eggert's Sunflower populations within Mammoth Cave National Park. Eggert's Sunflower populations are expanding in several areas of the park primarily due to application of prescribed fire.

After you also have signed the agreement, please send us a copy. If you have any questions, please contact Management Assistant Henry Holman at 270-758-2187.

Sincerely,

Ronald R. Switzer
Superintendent

Enclosure

COOPERATIVE MANAGEMENT AGREEMENT

Between

**THE U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE**

And

**THE U.S. DEPARTMENT OF THE INTERIOR
MAMMOTH CAVE NATIONAL PARK
MAMMOTH CAVE, KENTUCKY**

For

THE MANAGEMENT OF

EGGERT'S SUNFLOWER (*HELIANTHUS EGGERTII*)

Purpose

This Cooperative Management Agreement (Agreement) is entered into between the U.S. Department of Interior, Fish and Wildlife Service (USFWS) and Mammoth Cave National Park (MCNP) in Mammoth Cave, Kentucky. The purpose of the Agreement is to provide long-term protection of the Eggert's sunflower populations that occur on property owned by the Department of Interior and managed by the National Park Service by implementing habitat management activities that will sustain these populations. To achieve this, the parties jointly commit to the management and protection of the species on MCNP. This will be accomplished by implementing the protection and management measures identified later in this Agreement. These measures are designed to further the recovery and protection of Eggert's sunflower by improving and maintaining its habitat within MCNP. The role that MCNP can serve in the long-term conservation and recovery of Eggert's sunflower is an important one and is hereby recognized by both parties.

Description of the Species

Eggert's sunflower is a perennial herb with a colonial tendency. Numerous related plants can arise from an individual parent plant through extensive rhizomes. Individual stems can reach heights of over two meters and are smooth and waxy with a distinct blue cast. Leaves are opposite (in 7-15 pairs), entire, sessile, taper at the base, and they are scabrous (rough) above and white-glaucous and smooth below. Flowering is primarily in August and September, and there are typically few flower heads composed of both yellow ray and disk flowers. Flower heads are 2.0-2.5 cm across the disk and up to 8.0 cm across the rays. Seeds generally mature during September and October. Since individuals can be established via seed germination or

vegetative growth through rhizomatous extensions, genetic composition of clusters of plants is difficult to determine.

Eggert's sunflower typically occurs on rolling-to-flat uplands and in full sun or partial shade. It is often found in open fields or in thickets along woodland borders and with other tall herbs and small trees. It persists in, and may even invade, roadsides, power line rights-of-way, or fields that have suitable open habitat. The distribution of this species shows a strong correlation with the barrens (and similar habitats) of the Interior Low Plateau Physiographic Province, with some records from the Cumberland Plateau Section of the Appalachian Plateau Physiographic Province. Historically, barrens communities were probably maintained by periodic fires, drought, soil conditions, and grazing resulting in a semi-open canopy and herbaceous understory.

Management Strategies for MCNP Eggert's Sunflower Sites

MCNP has 22 known Eggert's sunflower sites. MCNP is conducting prescribed burns and yearly monitoring on many of these sites. The following are management strategies that MCNP will implement to improve existing Eggert's sunflower populations and other habitat for the species on MCNP.

1. Conduct prescribed burns on sites containing Eggert's sunflowers as necessary to maintain habitat quality for the species.
2. Perform structural alterations of the forest canopy as necessary to improve habitat conditions for Eggert's sunflower.
3. Identify and remove invasive pest plants within areas where Eggert's sunflower is present.
4. Monitor existing Eggert's sunflower sites for signs of disease, excessive herbivory, or stress caused by degradation of habitat quality.
5. Monitor existing and future Eggert's sunflower sites to determine the success of the management strategies.

General Provisions

This Agreement and the above-referenced management strategies will be re-evaluated as needed and may be amended or renewed by mutual consent of the parties. If amended, any additional management strategies will either be attached as an appendix or formal amendment to this Agreement or incorporated through the revision of this Agreement.

The Parties will ensure that the Agreement and the actions covered in the Agreement are consistent with applicable Federal, State, and Tribal laws and regulations.

