



Pollinator Conservation Summary Forest Service Southern Region

2013 Accomplishments

The Forest Service Southern Region had another good year for pollinator conservation. While we do have some small pollinator gardens established at administrative sites, recreation areas, and seed production areas, the majority of our effort was placed on landscape scale restoration projects. These included thinning overstocked dense stands of trees allowing sunlight to reach the forest floor, removing offsite overstory species and planting with the appropriate species, control of non-native invasive species (both plant and animal), and prescribed burning.

Nearly 1 million acres of habitat was improved for pollinators in 2013. Of this, 35 to 45 percent is in good condition, either restored or nearly so, and immediately available to pollinators. The remaining acreage is at some stage in the restoration process, some of which is suitable but not optimal for pollinators, and some areas of first treatment are not much use at all at this point. These first thinnings are a necessary step in development of native understory vegetation. As we move forward in our efforts, considerable attention is being given to locally sourced seed and plants, trying to maintain the genetic integrity of our native plants.



Eastern bumble bee on sunflower



Growing season prescribed burn

Year Project Initiated:2011

Project completion: Ongoing

Report number: 1 of 1

Expenditures (through 09/2012):

FY13 funding:
Partners/Contractors/Coop:).

Contact Person & phone number:
Dennis L Krusac: 404-347-4338



USDA Forest Service
1720 Peachtree Road, NW
Suite 816 North
Atlanta, GA 30309



The Greater Atlanta Pollinator Partnership Forest Service Southern Region 2013 Accomplishments

The Greater Atlanta Pollinator Partnership (GAPP) was initiated in 2009 to encourage development of pollinator habitat at a landscape scale. We designed our project to focus on an area within a 25 mile radius around downtown Atlanta, Georgia comprising nearly 1.2 million acres of potential pollinator habitat.

Key components of GAPP include using native species when available, controlling invasive species, establishing community gardens, citizen science projects, conservation, education and research. Developing schoolyard habitats is a priority so pollinator gardens can function as outdoor classrooms. There will also be an emphasis on registering individual gardens using an on-line registration process. All garden locations will be plotted on an on-line map so project progress can be monitored. The GAPP website was completed this year: <http://gapp.org/>

In 2013, 25 schoolyard habitats were developed, two, two-day learning garden workshop was held for teachers, more than 5,000 people were educated with pollinator outreach efforts, and pollinator-friendly maintenance schedules were established for local parklands. Presentations were given to the Atlanta Science Tavern and at the Swiss Consulate in conjunction of the viewing of "More than honey", a Swiss film on honey bee decline.



15 acre GAPP meadow maintained for pollinators, Cobb County Parks



Leaf cutter bee on Joe pye weed,
GAPP registered garden

Year Project Initiated: 2009

Project completion: Ongoing

Report number: 1 of 1

Expenditures (through 09/2013): \$10,000

Partners/Contractors/Coop.): Atlanta Botanical Garden, Georgia Highlands College, National Wildlife Federation, Captain Planet Foundation, several school districts

Contact Person & phone number:
Dennis L Krusac: 404-347-4338



USDA Forest Service
1720 Peachtree Road, NW
Suite 816 North
Atlanta, GA 30309



Native Plants for Pollinators Chattahoochee-Oconee National Forest 2013 Accomplishments

The project objective is to develop native grass and forb seed sources using locally collected material from the upper Piedmont in North Georgia. Additionally, this project continues to develop the availability of native plant materials including forbs for native pollinators.

In In 2011, the Forest and State Botanical Garden of Georgia collected forb seed and developed increase plots for native grasses and forbs. Seed has been collected from increase plots for 20 species such as blazing star, goldenrod, and wild bergamot. The increase beds have provide an excellent opportunity for educating visitors and University of Georgia professors interested plant development.

In 2013, 21 acres were seeded or planted in North Georgia. The initial work and partnerships has led to several new projects including understory restoration in longleaf pine forest. Restoration of the understory includes both native grasses and forbs. In 2014, herbaceous forbs will be seeded into existing restoration sites.



Figure 2. *Seed increase plots at the State Botanical Garden.*

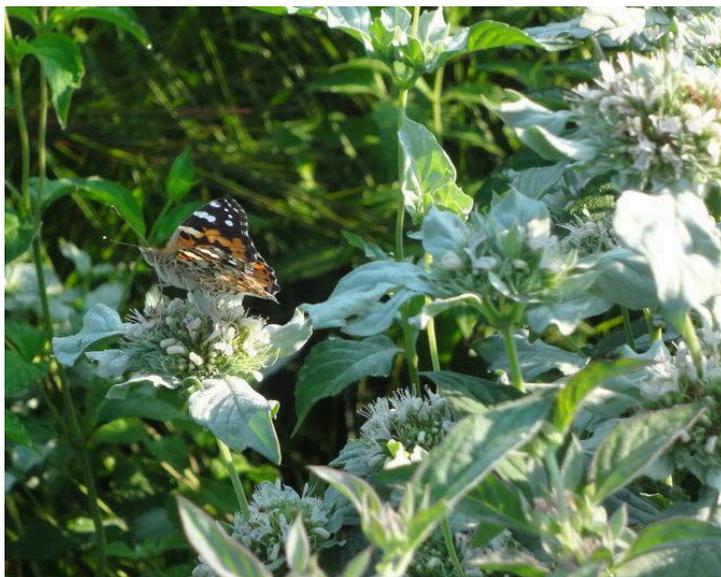


Figure 1. *Seed increase plots at the State Botanical Garden.*

Year Project Initiated 2011

Project completion: 2014

Report number: 3 of 4

FY13 funding: \$28,650

Partners/Contractors/Coop: State Botanical Garden of Georgia, Atlanta Botanical Garden, Georgia Plant Conservation Alliance, Georgia Department of Natural Resources.

Contact Person & phone number:
Joanne Baggs 770-297-2971



**Chattahoochee Oconee
National Forest**
1755 Cleveland Highway
Gainesville, Georgia 30501



Woodland Restoration Chattahoochee-Oconee National Forest 2013 Accomplishments

In fiscal year 2013, the Chattooga River Ranger District completed 7,762 acres of prescribed burning for restoration of woodland habitat. The restoration on Piedmont prairie in north Georgia by the use of fire restores the diversity of the native understory including the federally-listed smooth purple coneflower, candidate Georgia aster and other rare species.

The Oconee Ranger District also completed 22,000 acres of prescribed burning. Many of the acres occur in habitat for red-cockaded woodpecker. One of the goals is to improve herbaceous understory species.

Numerous pollinators benefit from the increase in native herbaceous understory species. The open stands provide a wide diversity of wildflowers that area host to adult and larval butterflies and other pollinators.



Figure 2. *Butterfly weed (Asclepias tuberosa)*



Figure 1. *Prescribed fire on the Chattooga River Ranger District.*

Year Project Initiated 2010

Project completion: on-going

Report number: 1

FY13 funding: \$ 856,576

Partners/Contractors/Coop: Georgia Plant Conservation Alliance, Georgia Department of Natural Resources

Contact Person & phone number:
Joanne Baggs 770-297-2971



**Chattahoochee Oconee
National Forest**
1755 Cleveland Highway
Gainesville, Georgia 30501



Woodland Restoration George Washington and Jefferson National Forests 2013 Accomplishments

In 2013, the George Washington and Jefferson National Forests completed 21,869 acres of prescribed fire treatments in Virginia and West Virginia, as part of an ongoing landscape level woodland restoration program. Numerous pollinator species benefit from increased herbaceous plant diversity in open woodland conditions, created by fire disturbance regimes in predominately pine and mixed pine/hardwood forest communities.



Monarch butterfly on Aster



Restored Open Oak/Pine Community



Prescribed Burn in Mountain Pine Community

Year Project Initiated: 2003

Project completion: Ongoing

Report number: 1 of 3

FY13 Funding: \$1,313,175

Partners: The Nature Conservancy - Virginia and West Virginia; Virginia Department of Game and Inland Fisheries; West Virginia Department of Natural Resources; Virginia Department of Conservation and Recreation, Natural Areas Division

Contact Person & phone number:
Dr. Carol Croy, Forest Wildlife Biologist ,
540.265.5136



**George Washington and
Jefferson National Forests**
5162 Valleypointe Pkwy
Roanoke, Virginia 24019



MONARCH
JOINT VENTURE

Grassland and Shrubland Restoration

George Washington and Jefferson National Forests

2013 Accomplishments

In 2013, the George Washington and Jefferson National Forests completed 1,206 acres of grassland and shrubland restoration and maintenance work Virginia and West Virginia, as part of an ongoing landscape level open lands restoration program. Currently 20,000 acres on the GW/Jeff are open grasslands and shrublands, providing herbaceous habitat that benefits numerous pollinator species, such as the rare Regal fritillary and Diana fritillary.



Regal Fritillary



Liatris Wet Meadow



High Elevation Grassland – White Top Mountain

Year Project Initiated: 1993

Project completion: Ongoing

Report number: 2 of 3

FY13 Funding: \$785,000

Partners: Virginia Department of Game and Inland Fisheries; West Virginia Department of Natural Resources; National Wild Turkey Federation, The Nature Conservancy

Contact Person & phone number:
Dr. Carol Croy, Forest Wildlife Biologist ,
540.265.5136



**George Washington and
Jefferson National Forests**
5162 Valleypointe Pkwy
Roanoke, Virginia 24019



Forest Restoration George Washington and Jefferson National Forests

2013 Accomplishments

In 2013, the George Washington and Jefferson National Forests completed 4,715 acres of silvicultural treatments on forest land in Virginia and West Virginia. Regeneration treatments such as shelterwoods and intermediate thinning treatments retain overstory trees but increase light conditions for ground nectaring plants, providing potential habitat for rare butterfly species such as the Grizzled skipper. With approximately 1,440,000 acres of the GW/Jeff in mature forest conditions, habitat is also provided for rare species such as Diana fritillary.



Silvicultural Treatment



Diana Fritillary



Grizzled Skipper

Year Project Initiated: 1993

Project completion: Ongoing

Report number: 3 of 3

FY13 Funding: \$1,950,794

Partners: Virginia Department of Game and Inland Fisheries; West Virginia Department of Natural Resources, National Wild Turkey Federation, Ruffed Grouse Society

Contact Person & phone number:
Dr. Carol Croy, Forest Wildlife Biologist ,
540.265.5136



**George Washington and
Jefferson National Forests**
5162 Valleypointe Pkwy
Roanoke, Virginia 24019



Native Warm Season Grass Restoration Land Between The Lakes National Recreation Area 2013 Accomplishments

This project was initiated in 2012 to restore native warm season grasses and associated forbs found on Land Between The Lakes National Recreational Area. Restoring native plant diversity enhanced habitat for an entire guild (70+) of wildlife species. A Stewardship agreement was used with the National Wild Turkey Federation to complete 190 acres of habitat improvement over 2 years in Crossroads area of FS roads 117, 123, and 124, Lyon County, Kentucky. All undesirable woody stems were mechanically removed with a skidder-driven grinder. Prescribed fire & follow-up herbicide treatments allowed the native seed bank to erupt with a plethora of flora; thus, encouraging numerous wildlife species to make home here again.



Figure 3. Skidder grinder removing trees up to 10" diameter breast height.



Figure 1. Conditions before field treatment.



Figure 4. Native species respond from restoration efforts.



Figure 2. Field condition after grinding & herbicide treatment.

Year Project Initiated: 2012

Project completion: 2013

Report number: 1 of 1

Expenditures: \$76,500 cost not including RX Burn

Partners: National Wild Turkey Federation. Photos by Jason Lupardus, NWTF.

Contact Person & phone number: Elizabeth Raikes
270-924-2062



Land Between The Lakes
National Recreation Area
100 Van Morgan Drive
Golden Pond, KY 42211



Field Border Habitat Enhancement Land Between The Lakes National Recreation Area 2013 Accomplishments

This project was initiated in 2012 to create transitional 120 ft edges of natural vegetation around the borders of existing agricultural fields found on Land Between the Lakes National Recreational Area. Improvement of nesting, brood range, and understory diversity were primary goals. A Stewardship Agreement was used with the National Wild Turkey Federation to complete 406 acres of habitat improvement over 2 years in the Demumbers Watershed, Kentucky. All undesirable woody stems, including non-native invasive species, less than 8" diameter breast height were treated using a "hack & squirt" technique. A six man crew used machetes to cut approximately 600 stems/acre and applied a low concentration of herbicide to induce mortality.



Figure 3. Treatment results 6 months later of hedgerow between fields.



Figure 1. Workers treating woody stems with machete & herbicide.



Figure 4. Abundant *Asclepias* & *Helianthus* respond to treatments.



Figure 2. Post treatment results 6 months later on 120ft field edge.

Year Project Initiated: 2012

Project completion: 2013

Report number: 1 of 1

Expenditures (through 10/2014): \$33,500

Stewardship Agreement Project Accomplishments

Partner: National Wild Turkey Federation

Photos by Jason Lupardus, NWTF

Contact Person & phone number: Elizabeth Raikes
270-924-2062



Land Between The Lakes
National Recreation Area
100 Van Morgan Drive
Golden Pond, KY 42211



Open Lands Management Benefits Pollinator Species in Land Between The Lakes National Recreation Area 2013 Accomplishments

Open lands in Land Between The Lakes National Recreation Area are managed in a variety of cover types that benefit pollinator species (Figure 1). Cover types include old field, wildlife plantings, and fields maintained in early succession grass/forb habitat. Management includes herbicide applications for treatment of non-native invasive species, landscape burns of forest and open lands, mowing, and standard agricultural practices for plantings (i.e. disking, liming, fertilizing, and seeding).

In particular during 2013, spring wildlife plantings were established on 134 acres to provide foraging habitat for a wide range of wildlife species. Buckwheat and sunflowers were included in seed mix for pollinator and other species use. During fall 2013 a total of 121 acres were established in a cover crop of wheat and Austrian winter pea. Pollinators are shown using plantings during spring 2013, Figure 2 insets of a field planting.



Figure 1 Open lands management in LBL helps provide pollinator habitat like the common milkweed for species such as the bumble bee and Eastern tiger swallowtail butterfly shown in the above photo 7/23/2013.



Figure 2. Austrian winter pea and winter wheat cover crop established in fall 2012 being used by butterflies and bees spring 2013.

Year Project 2013

Project completion: 2013

Report number: 1 of 1

Expenditures: \$57,535 (Includes multiple treatments)

Partners/Contractors: National Wild Turkey Federation and Swift and Staley Mechanical, Inc.

Contact Person & phone number: Elizabeth Raikes @ 270-924-2062

Photos by: Patrick Lacienski and Elizabeth Raikes



Land Between The Lakes
National Recreation Area
100 Van Morgan Drive
Golden Pond, KY 42211



Monarchs and Milkweeds Ouachita National Forest

2013 Accomplishments

This project was initiated in 2012 to enhance the milkweed population on National Forest lands and to educate the need for milkweed as host plants for the Monarch butterfly. Seed was collected in the summer and fall of 2012 on NF and adjacent private lands, including the following species - 12 ounces of green milkweed (*Asclepias viridiflora*), .2 ounce of butterfly milkweed (*Asclepias tuberosa*) and 1ounce of Prairie milkweed (*Asclepias hirtella*) A portion of the seed was planted for an area to be used as a production field for future seed source. The remainder of the seed was used to produce individual plant plugs. Additional seed was collected in 2013.

Seeds were sent to Monarch Watch where they were used to grow containerized plants for transplanting on the National Forest. The Forest received approximately 1000 plugs which were planted in several locations throughout the Forest, including Blue Moon, Foster Fields, Holmes Fields, Mauldin Fields, Fourche Butterfly Garden, Tower Site, and Ouachita Seed Orchard. Local schools participated and helped with the plantings and they also received plants for their schools projects. Monarch Watch provided educational materials on planting and presented an educational program for the participating students.



Figure 1. Native milkweed at Foster Fields.



Figure 2. Local school children planting milkweed plugs at Mauldin Fields.

Year Project Initiated: **2012**

Project completion: **Ongoing**

Report number: **1 of 6**

Expenditures (through 10/2013): **\$3,000**

FY13 funding: CFLN \$4,000, NFWF \$6,000, volunteers \$2,000.

Partners/Contractors/Coop:

**Arkansas Game & Fish Commission
Arkansas Hwy. & Transportation Dept.
Montgomery County (AR)
Garland, Montgomery and Scott Counties
School Districts
Monarch Watch**

Contact Person & phone number:

Mary Lane, 501-321-5201



Ouachita National Forest
100 Reserve Street
PO Box 1270
Hot Springs, AR 71902



Fourche Pollinator Garden Ouachita National Forest

2013 Accomplishments

Planning for the Fourche Pollinator Garden began in 2008, after visiting a Monarch workshop on the Hiawatha NF. The actual construction of the garden began in FY 2010. The purpose of the garden is to provide adequate habitat for breeding Monarch butterflies and to educate the public about the vital importance of various pollinators (in particular insects, birds, and bats). Previous management actions for 2010 included prescribe burning, mid-story reduction, removal of invasive species, native seeding, the creation of a woodland vernal pond, installation of various bird and bat boxes, and the creation of a 780-foot concrete handicap-accessible trail. In 2011, the Ouachita Job Corps was a valuable partner, building concrete bases for four benches, creating a welded metal fence to keep vehicles out, and cutting, mulching and removing nine dead trees that were a safety hazard near the sidewalk. Since last year, we have planted more native plants from other local sources, weeded out invasive plants, refurbished faded signs and given several programs there. We also made preparations for a new hiking trail to be established to showcase the more shaded woods flowers in 2014. This year again, the local Senior Citizen Center visited the garden weekly for exercise and a natural experience. Many more improvements are planned and already underway for FY 2014 including prescribed burning.



Figure 1. Steel sign and fence made by Ouachita Job Corps, Ouachita National Forest

Year Project Initiated: Planning began in FY 2009. Project implementation began in FY 2010 and continues...

Project completion: Ongoing

Report number: 2 of 6

Expenditures (through 10/2013): \$6500 to NFWF

Contact Person & phone number: Mary Lynn Mentz
479-495-2844



Figure 2. Ouachita National Forest



Figure 3. Toad Houses, Ouachita National Forest



Ouachita National Forest
JWF Ranger District
1708 East 8th Street
Danville, AR 72833



Shortleaf pine – Bluestem Ecosystem Restoration Project Ouachita National Forest 2013 Accomplishments

The shortleaf pine – bluestem ecosystem restoration project began in 1991. The purpose is to restore ecosystem function to this community in the Ouachita Mountains of Arkansas and Oklahoma. Management actions include prescribed burning, timber harvest, both thinning and regeneration, and midstory reduction. Management actions were coordinated with a massive research effort involving the Forest Service Southern Research Station and numerous colleges and universities. This allows the Ouachita National Forest to adapt their management based on sound science. Total project area is almost 350,000 acres, with over 100,000 acres already in a restored condition. In 2013, over 54,000 acres were prescribe burned, 4,600 acres had basal areas reduced through thinning, 1,000 acres of shortleaf pine regeneration and over 7,000 acres had midstory removal. It takes multiple treatments to reach restored condition. Some of the research focused on monarch migration and nectar resources. Areas that are undergoing restoration activities support increased abundances of nectar resources and migrating monarch compared to untreated controls. Link to paper below
http://www.srs.fs.usda.gov/pubs/ja/ja_rudolph018.pdf



Figure 2. Male Diana's and great-spangled fritillaries on butterfly weed, Ouachita National Forest



Figure 1. Restored shortleaf pine – bluestem, Ouachita National Forest

Year Project Initiated: 1991

Project completion: Ongoing

Report number: 3 of 6

Expenditures (through 10/2013): CFLN \$316,000, NFWF \$975,000, NFTM \$4,000,000, NFWW \$1,740,000, WFHF \$15,000,000, CWKV \$1,250,000

FY13 funding: CFLN \$1,739,000, NFWF \$200,000, NFTM \$525,000, NFWW \$83,000, WFHF \$825,000, CWKV \$569,000

Partners/Contractors/Coop: NWTf, TNC, ASU, UA Monticello, NRS, Central Hardwoods Joint Venture, AGFC, Native Expeditions, Monarch Watch, Buffalo River Nat Park, AR Natural Heritage Commission, ODWC, AR Forestry Commission

Contact Person & phone number:
Steve Cole, 501-321-5270



Ouachita National Forest

100 Reserve St.

P.O. Box 1270

Hot Springs, AR 79102



Native Plants for Pollinators Ouachita National Forest

2013 Accomplishments

This ongoing project was initiated in 2008 to increase the availability and enhance the health of native plants providing important habitat for the community of pollinators found on the Ouachita National Forest. Project activities have included planting three Pollinator Gardens at developed sites on the Caddo-Womble Ranger District in the following locations: the entrance to the district office in Mt. Ida, adjacent to the Mauldin Birding Trail, and adjacent to the Caddo Pond – all found in Montgomery County, Arkansas. At each site, native wildflowers were planted using both commercially available and locally collected seed sources.

To further enhance native plant growth beneficial to pollinators, approximately 65 acres of unimproved pasture were treated using chemical, mechanical, and prescribed fire applications to reduce non-native invasive plant species (NNIS) dominating local landscapes. Following these treatments, the sites were seeded in 2011 with native plant species using both commercially available and locally collected seed sources. In 2013, approximately 25 acres were harvested for seed collection, 107 acres were brushhogged to maintain early seral habitat, and 50 acres of temporary and permanent wildlife openings were also seeded with native grasses and wildflowers.



Figure 1. Diana fritillaries (*Speyeria diana*) benefit from wildflower gardens.



Figure 2. Native wildflowers such as this Blazing-star (*Liatris*) provide attractive landscaping while benefitting pollinators.

Year Project Initiated: **2008**

Promoting Native Plants & Pollinator Gardens

Project completion: **Ongoing**

Report number: **4 of 6**

Expenditures (through 10/2013): **\$64,000**

FY13 funding: NFWF \$6,000, Timber Sale Receipts \$42,000

Partners/Contractors/Coop:

**Arkansas Game & Fish Commission
Arkansas Hwy. & Transportation Dept.
Montgomery County (AR)**

Contact Person & phone number:

Mary Lane, 501-321-5201



Ouachita National Forest
Caddo-Womble Ranger District
1523 Hwy 270 East
Mt. Ida, AR 71957



Danville Mt Tower Site Ouachita National Forest 2013 Accomplishments

In 2011, American Tower elected to remove microwave tower sites that were not currently in use across the Ouachita National Forest. The site on Danville Mountain is approximately one acre in size and had a huge concrete structure, steel frame antennas, and a fence surrounding the property. The Forest Service requested that topsoil be brought in, weed-free rye grass be planted, native straw put down for erosion control, and native wildflower seed be purchased for pollinators. American Tower contractors purchased the requested seed and the District scattered it among the rye grass used for erosion control. Some of the native seed planted were purple coneflower, pale purple coneflower, black-eyed Susan's and blazing star. Prior to distributing the seed, the District sprayed herbicide on invasive species (such as serica lespedeza) around the perimeter. A gate was installed to keep trucks and ATV's from damaging the area. The site is level enough that the District plans to mow and burn the area in the future. In FY 2013, 50 milkweed plants were transplanted to the site, more invasive plants were pulled and sprayed. The site is about 10 minutes from the District office, so school groups and visitors can see the site in bloom along with various pollinators.



Figure 1. Picture of some transplanted milkweed.



Figure 2. Site after tower removal.



Figure 3. Gate installed.

Year Project Initiated: Planning began in FY 2011.
Project implementation began in FY 2011.

Project completion: Ongoing

Report number: 5 of 6

Expenditures (through 10/2013): \$ equipment use, invasive spraying, planting of milkweed and labor \$ 2699

FY13 funding
(Partners/Contractors/Coop): \$980 for volunteer gathering of seed pods

Contact Person & phone number: Mary Lynn Mentz
479-495-2844



Ouachita National Forest
Jessieville/Winona/Fourche RD
P.O. Box 459, 1708 East 8th St.
Danville, AR 72833



Ouachita National Forest Native Grass Restoration Project

2013 Accomplishments

This project was started in 2006 to establish native seed and plant sources for natural recruitment and anthropogenic restoration efforts. Implementation of this project has developed techniques and policies for use of native plant materials on the Ouachita National Forest and encouraged state and private groups to use native plant materials.

2013 Accomplished Actions

- Approximately 15,250 acres of prescribed fire was conducted in existing native warm season restoration plots, pine-bluestem management areas and old growth woodlands.
- 120 acres of brush hogging/mulching was completed within Chula Old Growth native grass plots.
- Harvested and processed approximately 25 lbs. of native warm season grass seed and 110 bales native grass hay at the Seed Orchard and Warren Fields. Due to a severe drought the volume of seed and hay was lower than expected in FY 13.
- Native seed and hay harvested was used by two Ouachita RD's for various soil restoration projects.
- Used native seed and hay to restore native vegetation along 1 mile of roadside along T&E habitat and 1 mile in the Wolf Pen Gap OHV area and 3 miles of unauthorized roads and trails.
- Completed approximately 25 acres of non-native invasive plant species (NNIS) herbicide treatments.

2014 Planned Actions

- Approximately 11,500 acres are scheduled for prescribed burning in Fall 2013 and Spring 2014 within Pine bluestem, Old Growth units and native grass plots.
- Plan to harvest approximately 25 acres of native grass seed and hay.
- Approximately 25 acres of brush hogging/stump grinding are planned in restoration areas and established plots.
- Approximately 350 acres of boundary re-establishment are planned in native warm season grass restoration areas.



Project Initiated: 2006 /Project completion: On going

Report number: 6 of 6

Expenditures (through 10/2012): NFN3 \$411,760; NFWF \$210,200; NFWW \$141,500; CWKV \$91,700; WFHF/CFLN \$309,750; WFW3 \$4,000 (Funding accomplished: 63,887 ac of burning, 2043 ac of midstory reduction, 1,300 ac of mowing, 248 ac mulching, 620 ac of NNIS treatments, 14.5 miles of OHV trail/road reclamation, 100 ac of native grassland restoration, 3 ac of wild and Scenic River Corridor campsite restoration, 541ac of native seed and hay harvest – producing 875 pounds of native seed and 1410 bales of native hay mulch).

FY13 funding: NFN3 \$17,000; NFWF \$38,500; NFWW \$6,000; CFLN \$40,500.

Partners/Contractors/Coop: Quail Unlimited, Arkansas Natural Heritage Commission, Arkansas Game and Fish Commission, The Nature Conservancy.

Contact person & phone number: Rhonda Huston (870-326-4574) or Susan Hooks (501-321-5323)



Ouachita National Forest
Mena/Oden Ranger District
1603 Hwy 71 North
Mena, AR 71953



Understory Habitat Maintenance, National Forests in Alabama

2013 Accomplishments

Using a variety of integrated funding areas, the National Forests in Alabama restored, enhanced, or otherwise maintained early-seral pollinator habitats on approximately 45,000 acres in FY2013. This was accomplished using a combination of non-native invasive species treatments on over 500 acres, NWSG planting, wildlife opening mowing and planting, midstory removal, brush mastication, native plant seed collection and propagation, and prescribed burning of over 105,000 acres. Approximately 40% of these burning acres were in open to semi-open forest. While most of these activities are typically performed annually for other wildlife species (including bob-white quail and red-cockaded woodpecker), the value of these activities to native pollinators including the declining monarch and southeastern blueberry bee is significant. We maintain hundreds of wildflower species in our open pine and mixed pine-hardwood stands and these understory plants are hosts to adult and larval butterflies and provide pollen for native bees, beetles, and pollinating flies. Other specific projects that benefit pollinators include glade and other rare plant community restoration on the Bankhead NF and bog plant community restoration on the Conecuh NF.



Thinning and burning in open timber stands provides a diverse assemblage of grasses, forbs, and legumes that are used by pollinators.



Adult female Southern Plains bumblebee (*Bombus fratermus*) on federally listed Price's potato-bean, Bankhead NF.

Year Project Initiated: 2010

Project completion: 2015

Report number: 3

FY13 expenditures : \$1.1 Million (includes burning expenditures)

Partners/Contractors/Coop:
Auburn University, NRCS Coffeeville Plant Material Center, FS Seed lab, Wild South, Alabama Wildlife and Freshwater Fisheries

Contact Person & phone number:
Ryan Shurette, Forest Biologist, 334-241-8143



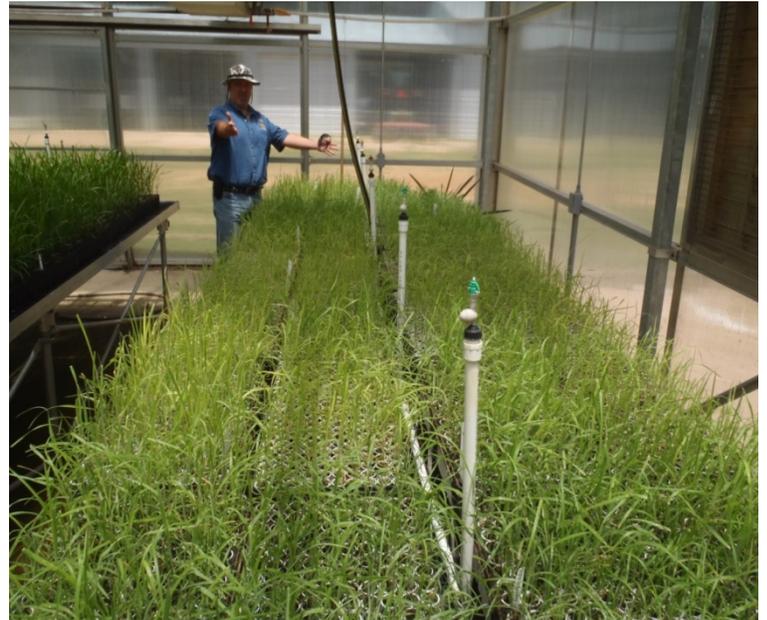
National Forests in Alabama
2946 Chestnut St.
Montgomery, AL 36107



Native Plant Materials Partnership Program National Forests and Grasslands in Texas

2013 Accomplishments

The National Forests and Grasslands in Texas is working in partnership with the Natural Resource Conservation Service and Cook's Branch Conservancy, a private conservation group, to establish a viable, dependable seed source of native east Texas understory species that can be used for ecosystem restoration projects. The restoration of native longleaf and shortleaf pine ecosystems is a strategic priority for the NFGT and an important component in this effort is the re-establishment of native understory species. The NRCS has agreed to establish a 10 acre seed production field at the East Texas Plant Material Center for growing desirable, understory species from seeds and plant materials collected from the National Forest in Texas. Funding for seed collection and propagation will be provided by Cook's Branch Conservancy. The project will provide a seed source for understory restoration on the Forest as well as on private lands. This project will benefit both public and private lands by restoring native ecosystems, re-habilitating severely burned areas, establishing wildlife habitat and controlling erosion.



Approximately 4000 plugs of Pinehill Bluestem to be planted in production fields.

Year Project Initiated: 2011

Project completion: Ongoing.

Report number: 1

Expenditures (through 10/2013): \$4,000 (salary).

FY13 funding

Partners/Contractors/Coop:): \$10,000.

Contact Person & phone number:

Ike McWhorter: 936-639-8672

Tom Philipps: 936-639-8514



Planting plugs of Pinehill Bluestem in production field.



**National Forests and
Grasslands in Texas**
2221 N. Raguet St
Lufkin, Texas 75904



Glade Restoration Ozark/St. Francis National Forests 2013 Accomplishments

This project was initiated to restore glade ecosystem. This project improved habitat for Monarch Butterfly and similar species by opening up the overstory and creating greater diversity of plants within the understory. Use the stick steer bob cat with mastication head to grind the cedars and other growth in areas cleared for burning. The project consisted of 250 acres of glade restoration.



Figure 2. Glade treated with mechanical removal of red cedar.



Figure 1. Glade area before mechanical treatment.

Year Project Initiated: 2013

Project completion: 2013

Report number: 1 of 8

FY13 funding
Partners/Contractors/Coop: Forest Service funding \$13,440, partner funding \$81,693.

Contact Person & phone number:
Jessica Hawkins 870-269-3228



Ozark/St. Francis National Forests
605 West Main
Russellville, AR 72801



Bearcat Hollow WSI Project Ozark/St. Francis National Forests

2013 Accomplishments

This project was initiated to improve wildlife habitat diversity through the restoration of woodland conditions on the Forest to create conditions more indicative of a fire adapted ecosystem. Due to past Forest practices, stands have become overstocked, species composition has been altered and overall canopy closures have dramatically increased in areas that support more open fire tolerant habitats such as woodlands. These changes have affected the resiliency of the forest and has caused a decline in species richness and diversity. There were 4,450 acres of habitat improvement accomplished. This improves habitat for Monarch Butterfly and other similar species by opening up the overstory and creating a greater diversity of plants within the understory. This is in the initial stages.



Figure 1. Wildlife Stand Improvement work



Figure 2. Desired future conditions including fire

Year Project Initiated: 2013

Project completion: 2013

Report number: 2 of 8

FY13 funding
Partners/Contractors/Coop: Collaborative Forest
Landscape Restoration funding \$429,769.

Contact Person & phone number:
Dwayne Rambo 479-284-3150



**Ozark/St. Francis National
Forests**
605 West Main
Russellville, AR 72801



Lynn Hollow Glade Restoration Project Ozark/St. Francis National Forests 2013 Accomplishments

The objective of this project was to restore a glade ecosystem and restore surrounding closed canopy forest to open woodland condition. The project consisted of prescribed burning on 99 acres to remove woody vegetation, allow for increased sunlight penetration to the ground to allow for greater herbaceous species diversity and abundance. The area had been burned and thinned in previous years. The objective of the burn was to topkill small eastern red cedar and hardwood seedlings and saplings on the glade/woodland. Prescribed fire will be utilized on a 2-3 year return interval to maintain the stand in woodland condition, and maintain the glade areas within the woodland.

Realized results include reduction of canopy closure, improved herbaceous abundance and diversity, and related improved habitat conditions for quail, wild turkey, disturbance dependent landbirds, and butterflies.



Figure 1. Small headed pipewort – one of many desired plant species on glades



Figure 2. Glade treated with mechanical removal of red cedar.

Year Project Initiated: 2013

Project completion: 2013

Report number: 3 of 8

FY13 funding
Partners/Contractors/Coop: Forest Service funding
\$4,010.

Contact Person & phone number:
Gregory Taylor 479-754-2864



**Ozark/St. Francis National
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605 West Main
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Native Plant Pollinator Garden

Ozark/St. Francis National Forests

2013 Accomplishments

This project was initiated to increase public awareness on native plant pollinators. Many groups came to visit the garden in fiscal year 2013. The Ozark Garden Club came twice to collect seed sources to share with the community, 4-H and the schools. District personnel have also collected seed sources for the garden for future gardens and sharing. Several volunteers came throughout the year to take pictures of the pollinators and some are working on identifying the pollinators. We also installed a plant came in order to capture some of the pollinator usage. Several education tours of the gardens were completed during the year. This is the first native plant pollinator garden in the town of Ozark.



Figure 2. Side view of native plant pollinator garden.



Figure 1. Monarch on butterfly weed.

Year Project Initiated: 2013

Project completion: 2013

Report number: 4 of 8

FY13 funding

Partners/Contractors/Coop: Forest Service funding \$3,500; partner in-kind contribution \$550.

Contact Person & phone number:

Rhea Whalen 479-667-2191



Ozark/St. Francis National Forests
605 West Main
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Wedington WSI Stewardship Project

Ozark/St. Francis National Forests

2013 Accomplishments

This project was initiated to improve wildlife habitat diversity through the restoration of woodland conditions on the Forest to create conditions more indicative of a fire adapted ecosystem. Before treatment the fire class condition was III, after treatment it moved toward a class II and after prescribed burning, it will be in a condition class I and will be maintained in that condition. Different species of wildlife have been utilizing the area (deer, turkey, neotropical migratory birds). It is expected that the open woodland conditions will increase wildlife species diversity through time as there is very little of this type of habitat in the area. It is expected that a flush of herbaceous forbs will return where there was little to none prior to the project.

There were 2,750 acres of habitat improvement accomplished. This improves habitat for Monarch Butterfly and other similar species by opening up the overstory and creating a greater diversity of plants within the understory (Initial Stages).



Figure 1. Wildlife Stand Improvement work



Figure 2. Desired future conditions including fire

Year Project Initiated: 2013

Project completion: 2013

Report number: 5 of 8

FY13 funding

Partners/Contractors/Coop: Forest Service funding \$113,250, Collaborative Landscape Forest Restoration funding \$20,300, partner funding \$2,800.

Contact Person & phone number:
Rhea Whalen 479-667-2191



Ozark/St. Francis National Forests
605 West Main
Russellville, AR 72801



Forest Native Warm-Season Grass Restoration Project Ozark/St. Francis National Forests 2013 Accomplishments

The objective of this project was to restore and maintain fields across the Forest to native warm-season grasses that are currently dominated by non-native species like fescue. This was accomplished through herbicide application, disking, seeding, and fire management. The fields were sprayed and then burned during the spring and summer of 2013. Part of the fields were planted in the spring and part of them will be planted in the fall. Limited dozer work was accomplished on one of the larger fields to create more space and eliminate brush. Everything was then disked and leveled. All native grass seed will be planted using a seed drill. Species planted include: Little Bluestem, Big Bluestem, Yellow Indiangrass, Sideoats Grama, Showy Partridge Pea, Purple Prairie Clover, and Illinois Bundleflower. A total of 630 acres of warm-season grass restoration was completed in 2013.



Figure 1. Prescribe Burning of native warm-season grass fields



Figure 2. Restored native warm-season grass field

Year Project Initiated: 2013

Project completion: 2013

Report number: 6 of 8

FY13 funding

Partners/Contractors/Coop:). Forest Service funding \$38,930, Collaborative Forest Landscape Restoration funding \$71,250.

Contact Person & phone number:

J. Keith Whalen 479-964-7228



**Ozark/St. Francis National
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605 West Main
Russellville, AR 72801



Forest Prescribe Burning Projects Ozark/St. Francis National Forests 2013 Accomplishments

The objective of this project was to prescribe burn at a landscape scale to help restore fire adapted ecosystems. This provides more food for wildlife and creates a greater amount of biodiversity. The work is expected to open up the canopy and lower the basal area moving the area more to woodland/savannah type conditions in combination with tree removal. The Prescribe burning along with the silvicultural treatments that are occurring across the Forest are creating woodland conditions across the Forest that are utilized by all the species. They are really important in the fire adapted ecosystems in the Ozark to bring out native flowering plants that are utilized by pollinators. In 2013 a total of 38,807 acres were accomplished.



Figure 1. Prescribe Burn in hardwood stand



Figure 2. Desired future conditions including fire

Year Project Initiated: 2013

Project completion: 2013

Report number: 7 of 8

FY13 funding
Partners/Contractors/Coop:). Forest Service funding
\$1,254,366; Collaborative Forest Landscape
Restoration Match funding \$841,212

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**Ozark/St. Francis National
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605 West Main
Russellville, AR 72801





Forest NNIS Projects Ozark/St. Francis National Forests

2013 Accomplishments

The objective of this project was to remove non-native invasive plant species from the landscape to allow for recolonization by native plant species. Species treated included kudzu, tree-of-heaven, sericia, multiflora rose, fescue, mimosa, and honeysuckle. In 2013 a total of 3,897 acres were accomplished.



Figure 1. Kudzu eradication



Figure 2. Fescue eradication

Year Project Initiated: 2013

Project completion: 2013

Report number: 8 of 8

FY13 funding
Partners/Contractors/Coop:). Forest Service funding
\$292,963; Collaborative Forest Landscape
Restoration funding \$112,627.

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