



United States Department of Agriculture

# Eastern Region

## Monarch Joint Venture Accomplishments

### 2014





# Allegheny National Forest in partnership with the Garden Club Federation of PA

## 2014 Accomplishments

Work on the ANF native plant pollinator gardens in Fiscal Year 2014 expanded two existing gardens and maintained existing ones across the ANF. The Youth Conservation Corps (YCC) conducted the majority of the work this year with assistance from ANF staff.

Several plant species were used this year which included blackeyed susan (*Rudbeckia hirta*), purple coneflower (*Eupatorium purpurea*), butterfly milkweed (*Asclepias tuberosa*) and tickseed (*Coreopsis* sp.).

Funding for work this year came from obligated funds for the ANF (\$6,000 for materials and salary) and from the Garden Club Federation of PA (\$6,051.00). Work will continue at Kinzua Beach to create a wildflower meadow after the invasive multiflora rose (*Rosa multiflora*) is removed as well as plantings in developed recreation areas in Fiscal Year 2015.

### Example of Garden Work for FY2014

**Location:** Supervisor's Office Nearest town: Warren, PA

**Date established:** 2014

**Approximate size:** 1,200 sq. ft.

**Plant materials produced:** Small amounts of seed.

**Partnerships Volunteer opportunities:** Used as a living classroom for local school students and public.

**Partners/Contractors/Cooperators:** Garden Club Federation of PA \$6,051.00

**Links:** <http://pollinator.org/nappc/index.html>

**Contact:** April Moore, 814-363-6069, [amoore02@fs.fed.us](mailto:amoore02@fs.fed.us)



Fig. 1 BEFORE: Supervisor's Office Garden



Fig. 2. AFTER: Supervisor's Office Garden



Allegheny National Forest  
Forest 4 Farm Colony Dr.  
Warren, PA 16365



# Native Seed Planting and Collecting Chequamegon-Nicolet National Forest Moquah Barrens

## 2014 Accomplishments

This project was initiated in 2010 to restore areas disturbed by timber harvest practices, road improvements, and to improve plant diversity in newly established pine savannas. This project benefits pine barrens restoration work, butterflies, birds and other wildlife on the Moquah Barrens and other areas on the Washburn Ranger District of the Chequamegon-Nicolet National Forest.

In 2014 funding from NFW13, stewardship retained receipts, and Lake Superior Landscape Restoration Partnership was utilized to fund three local contractors and four seasonal employees to collect native plant seed from the Moquah Barrens. Over 90 lbs. of native plant seed was collected, stored, and partially used to restore portions of the Moquah Barrens. Seed collected in 2013 and 2014 was used to re-vegetate over five miles of recently decommissioned roads (figure 2), and was used to re-establish native grasses and forbs over 100 acres in recently harvested pine savanna (figure 3).



Figure 1. Rough blazing star with native forbs, grasses, and woody vegetation in the Moquah Barrens.



Figure 2. Planting native plant seed in the Moquah Barrens using a 6-wheel vehicle and harrow.



Figure 3. Collecting native plant seed in 2014 from an old road in a pine savanna that was planted in 2010.

Year Project Initiated: 2010

Project completion: Ongoing

Report number: 1

Expenditures (through 10/2014): \$10,000

FY14 funding: NFW13, Stewardship, and Lake Superior Landscape Restoration Partnership

Contact Person & phone number:  
Matt Bushman 715-373-2667



**Washburn Ranger District  
Chequamegon-Nicolet NF**  
113 E Bayfield Street  
Washburn WI 54891



# Catwillow Monarch Project

Chequamegon-Nicolet National Forest  
Lakewood-Laona Ranger District

## 2014 Accomplishments

Catwillow Monarch Area (CMA) is a gated system of trails and 41 wildlife openings managed for pollinators by focusing on Monarch butterflies (*Danaus plexippus*) and Common Milkweed (*Asclepias syriaca*).

During FY14, Monarchs, West Virginia White butterflies (*Pieris virginiensis*), Yellow-banded Bumble Bees (*Bombus terricola*), and a variety of other species were documented during the pollinator surveys, including the Three-banded Lady Beetle (*Coccinella trifasciata*) – a native lady bug!

Another late spring delivered a repeat performance of Catwillow's bees and butterflies preferring American Red Raspberry (*Rubus idaeus*) over Common Milkweed flowers.

Several species of native plants have been sown here since 2010 to increase floral diversity. This year, Fireweed (*Epilobium angustifolium*), Wild Bergamot (*Monarda fistulosa*), and Black-eyed Susan (*Rudbeckia hirta*) flowers joined the pollinator party, having finally bloomed from seed. Additional native seeds were collected for future sowings.



**Figure 3.** As Raspberry's bloom finally ended, pollinators (like this Yellow-banded Bumble Bee) began foraging on Common Milkweed flowers.



**Figure 1.** A Monarch caterpillar rests on Common Milkweed flowers during a July survey in the CMA.



**Figure 2.** Three-banded Lady Beetle, a native beneficial insect

**Year Project Initiated :** 2010

**Project completion:** On-going

**Report number:** 5 of 5

**Expenditures (through 09/2014):** \$3,357

**FY14 funding:** NFWF13, NFWV13

**Partners/Contractors/Coop:**

**Contact Name & phone #:** Scott Anderson  
715-674-4481 or Nicole Shutt 715-276-6333



**Chequamegon-Nicolet National Forest**  
Lakewood-Laona Ranger District  
4978 Hwy 8 West  
Laona, WI 54541



**MONARCH**  
JOINT VENTURE

# Northern Great Lakes Visitor Center Chequamegon-Nicolet National Forest

## 2014 Accomplishments

The Northern Great Lakes Visitor Center gardens were established in 2001 to serve as a resource for visitors, conservation education programs, and seed collection site.

Youth Conservation Corps, students, teachers, certified master gardeners, youth groups, National Park Service VIP's, U.S. Fish & Wildlife Service, UW-Extension and USDA Forest Service personnel have planted nearly 8,000 native plants from 2001–2014.

**Volunteers contributed 82 hours of maintenance in 2014 valued at \$1,849.**



*Figure 2. As a National Children's Forest, Visitor Center staff use these gardens as a teaching platform for Earth Partnership for Schools and Lake Superior Stewardship experiential education programs and teacher institutes.*



*Figure 1. Moving for Monarchs performed at the Northern Great Lakes Visitor Center to raise awareness about the plight of Monarchs, importance of pollinators, and how people can help Monarch recovery.*

**Year Project Initiated:** 2001

**Project Completion:** Weed, planting, seed collection

**Report Number:** 14 of 14

**Expenditures (through 10/2014):** \$250

**Partners/Contractors/Cooperators:**  
Northland College, National Park Service VIP, Ashland/Bayfield County Master Gardener Association

**Contact Person & Phone Number:**  
Susan Nelson, 715-685-2644



**Chequamegon-Nicolet National Forest**  
Northern Great Lakes Visitor Center  
29270 County Highway G  
Ashland, WI 54806



**MONARCH**  
JOINT VENTURE

# Lake Superior Landscape Restoration Chequamegon-Nicolet National Forest

## 2014 Accomplishments

As part of Lake Superior Landscape Restoration Partnership an ambitious native plant restoration project was launched at the Northern Great Lakes Visitor Center in 2014. A 21-acre plot was burned and later planted with 10,500 native tree seedlings. A 3-acre parcel was burned, sprayed, tilled, and planted with native wildflower seed collected from the Aldo Leopold Native Seed Orchard nearby. 70 acres of buckthorn and other non-native invasive plants were treated with herbicide applications.



Figure 4-5. A 3-acre plot was burned, sprayed, and tilled to control reed canary grass. Seed collected from the Aldo Leopold Native Seed Orchard was used to seed the restoration area.

**Year Project Initiated:** 2014

**Project Completion:** Burning, spraying, tilling, planting

**Report Number:** 1 of 1

**Expenditures (through 10/2014):** \$30,000

**Partners/Contractors/Cooperators:**  
Northland College, Ashland/Bayfield Master Gardener Association, Clean Kill pest control, UW-Extension, and Northwoods Forestry

**Contact Person & Phone Number:**  
Matt Bushman, 715-373-2667



Figure 1 & 3. A 21-acre plot was burned and later planted with white cedar, tamarack, and white pine to outcompete reed canary grass. Figure 2. Teachers attending an Earth Partnership for Schools Teacher Institute compare insects found in a burn unit to an unburned area nearby. The burn area had more insect diversity!



**Chequamegon-Nicolet National Forest**  
Northern Great Lakes Visitor Center  
29270 County Highway G  
Ashland, WI 54806



**MONARCH**  
JOINT VENTURE

# Aldo Leopold Native Seed Orchard Chequamegon-Nicolet National Forest

## 2014 Accomplishments

The Aldo Leopold Native Seed Orchard was established in 2007 to serve as a native seed collection site for the Lake Superior Clay-plain.

Youth Conservation Corps, certified master gardeners, youth groups, K-12 students, Red Cliff Tribal youth, U.S. Fish & Wildlife Service, and USDA Forest Service have planted over 12,000 native plants from 2008–2014. Volunteers collected wildflower seeds for a restoration site at the Northern Great Lakes Visitor Center in 2014.

As part of a National Children’s Forest, Visitor Center staff use this orchard as a teaching platform for Earth Partnership for Schools and Lake Superior Stewardship experiential education programs and teacher institutes.

Volunteers contributed 229 hours in 2014 valued at \$5,163.95.



*Figures 5-6. The monarch and hummingbird moth were frequent visitors to blazing stars. Sixteen different butterflies were spotted during one 2014 survey.*



**Year Project Initiated:** 2007

**Project Completion:** Weeding, planting, spray applications, and seed collection

**Report Number:** 8 of 8

**Expenditures (through 10/2014):** \$1,000  
NFVW13

**Partners/Contractors/Cooperators:**  
Northland College, National Park Service VIP, Ashland/Bayfield County Master Gardener Association, Girl Scout Troop 4062, Northwoods Cooperative Weed Management Area

**Contact Person & Phone Number:**  
Susan B. Nelson, (715) 685-9983 or  
Matt Bushman, (715) 373-2667

*Figures 1-4. Volunteers of all ages weed, plant, and collect seed each year.*



**Chequamegon-Nicolet National Forest**  
Northern Great Lakes Visitor Center  
29270 County Highway G  
Ashland, WI 54806



# Native Plant Program Highlights Chequamegon-Nicolet National Forest 2014 Accomplishments

## Highlights:

- Large expansion of Laona Ranger Station native plant and pollinator garden (with a lot of help from our friends)!
- Beautiful interpretive panels installed at seven garden locations
- Locally gathered native seed used to re-vegetate log landings
- More planting of the State Endangered Dwarf Bilberry (host plant for Northern Blue Butterfly)
- A new location for the Yellow-banded Bumble Bee

The Laona Ranger Station's expansion of the Native Plant and Pollinator Program Demonstration Restoration Garden continued in FY14, with 87 students from the Laona School District (the entire Kindergarten through sixth grades) helping to install 35 species of native plants (grown by the FS at the Oconto River Seed Orchard from local-genotype seeds). Two students from Rhinelander High School also helped install plants as part of the *Northwoods Environmental Scholars* program run by the Northern Research Station Institute for Applied Ecosystem Studies.

All the CNNF native plant gardens continue to provide habitat for pollinators and other wildlife, as well as a seed source for future restorations and inspiration for the public to landscape with native plants.



The native plant garden at the District Office in Medford is an inviting sight to Forest visitors



Biological Science Technician, Jeff Houdek, plants Dwarf Bilberry in frost pocket habitat on the Lakewood District as part of a propagation program for this State-endangered relative of blueberries.

Contact Person & phone number:  
Linda Parker, Forest Ecologist  
lrparker@fs.fed.us



**Chequamegon-Nicolet NF**  
1170 4<sup>th</sup> Avenue, S.  
Park Falls, WI 54552

- A new **Yellow-banded Bumble Bee location** was discovered on the District in July 2014, when that and several other bumble bee species were observed foraging on American Plantain instead of Common Milkweed, Black-eyed Susan, Common Yarrow, and even White Sweet-Clover (a non-native favored by honey bees). In response, the District added American Plantain to the target species list for seed collection.



A Yellow-banded Bumble Bee (*Bombus terricola*) visits American Plantain (*Plantago rugelii*), a native groundcover with red leaf stalk bases that distinguish it from the totally green European species (*Plantago major*) so common in lawns..

- **Propagation of the State-endangered plant, Dwarf Bilberry (*Vaccinium cespitosum*)** (which is the host plant for Northern Blue Butterfly) continued in FY14 with 87 plants installed into frost pocket habitat on the Lakewood half of the District. The Dwarf Bilberry plants installed in 2013 were monitored and are still surviving.

- **Re-seeding log landings with native species.** In 2014, we began providing west zone sale administrators with a native seed mix which they can use to quickly re-seed log landings when they are “closed”. We will expand this effort to the east zone of the CNNF in 2015, and continue to monitor the success of the re-vegetation effort.



At seven CNNF administrative sites, interpretive signs now afford visitors an opportunity to discover the role of pollinators in the native ecosystems of northern Wisconsin, and find inspiration to plant pollinator-friendly native plants in their own yards and flowerbeds.

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# Native Plant Program on the Green Mountain & Finger Lakes National Forests

## 2014 Accomplishments

In 2014, all GMNF district native plant gardens were maintained. Volunteers helped weed one garden, and were allowed to take home seedlings of native plants that were being thinned. This same garden was expanded this summer, and we were pleased to add the beautiful large yellow lady's slipper to the list of native wildflowers showcased there. In addition, one of the cultivated flower gardens on the Rochester District was converted to native plants, and we also continued not mowing 0.4 acres of lawn at the Rochester office to reduce our carbon footprint and enhance pollinator habitat.

The Northeast Native Seed Initiative (NNSI), formed in 2008 to develop an ongoing supply of seeds of native species of local genotypes, continued to move forward. After refining a species list, developing fact sheets, contracting out seed collection across northern NY and New England, and giving seeds to partners for initial multiplication, in 2014 we had a chance to meet with other interested organizations and see the results of initial successful plantings. We are still searching for long-term growers who can produce a sustainable supply of seeds.

During the 2014 field season, GMNF staff worked cooperatively with the FHP (Forest Health Protection) Division of the Durham Field Office to initiate insect pollinator monitoring on GMNF lands in the towns of Manchester and East Dorset, Vermont. Two permanent upland openings were identified, one in each area, with the objective of collecting baseline information on species presence, species richness, species diversity (Simpson Index), rare species, and abundance. Sampling method was a colored bowl survey based on that used in the National Pollinator Survey coordinated by Sam Droege (USGS Bee monitoring expert). Specimens collected during the 2014 field season are currently being processed and identified to the lowest taxonomical unit possible. We have also begun to summarize existing milkweed data, with the goal of selecting other suitable sites for monitoring and or restoration in future years.

On the FLNF, staff purchased 8 pounds of seed mix specifically designed for attracting pollinators. These seeds, purchased in 2014, are slated to be sown on the banks of a stock pond in one of the FLNF's many grasslands in 2015, after the pond is dredged.



*Figure 1. A pollinator visits Virginia waterleaf flowers in the Rochester District garden (photo by seasonal botanist Melissa Green.)*

### Expenditures & Partners: Gardens:

- Salary to maintain gardens: \$1875

### Pollinators:

- Seed mix: \$585
- Salary to work on pollinator projects: ≈ \$1,000 (botany staff) + ≈ \$2,000 (fish & wildlife staff)

### NNSI partners

- Colonial Seed
- Big Flats Plant Material Center (NRCS)
- Salary to meet with partners: ≈ \$600

Contact Name & phone #: MaryBeth Deller 802-767-4261 x 524



**Green Mountain & Finger Lakes National Forests**  
231 North Main Street  
Rutland, VT 05701



# Pollinator Habitat Restoration West Zone Hiawatha National Forest 2014 Accomplishments

More than 25,000 native plants were raised at the Hiawatha National Forest (HNF) greenhouse in Marquette, Michigan in support of pollinator habitat restoration. It is an ongoing, multi-year, and large scale pollinator habitat improvement plan spanning the entire West Zone of the Forest. Partner collaboration and internal resource integration are part of the success. In 2014 the work included the first time use of native plant restoration with pollinator plants in conjunction with other methods to restore OHV impacts at the historic Nahma sawmill site. Continued pollinator plantings at other heritage sites occurred at Stonington Peninsula monarch openings, Grand Island NRA farm field restoration and Sandtown along with continued pollinator habitat restoration in 3 large openings and use of a pollinator seed mix to restore log landings at closed sales. Youth from HNF YCC, Michigan State University Extension Life of Lake Superior and North Star Academy (NSA) participated in nearly all the plantings. In particular, in 2014, North Star Academy (NSA) students adopted Sandtown and the Forest greenhouse as part of their science outreach program. At the Forest greenhouse NSA students filled more than 35,000 cells with soil, seeded 7,000 common milkweed cells for our Earth Day event, seeded all native grass cells and in September they transplanted nearly 3,000 native common milkweed and black-eyed Susan at Sandtown. HNF YCC transplanted over 14,000 native plants in 2014 for pollinator habitat enhancement. In addition, more than 8,000 native pollinator plants were planted by volunteers and a crew from Superior Watershed Partnership at the monarch openings, Sandtown, and old Nahma sawmill site.



Life of Lake Superior youth planting black-eyed Susan for pollinators at Grand Island NRA "old farm field" site.



HNF YCC planting evening primrose for pollinators and to restore OHV damage at the Sandtown heritage site.



North Star Academy students transplanting milkweed they seeded and are now planting as part of a joint pollinator restoration project on HNF, West Zone.

Year 2014  
 Project completion: Ongoing  
 Report number: 1  
 FY14 funding: NFWF10: \$28,500  
 • Contracts \$13,693  
 • Staff including YCC \$20,505  
 Volunteer Contribution:  
 • Planting: 1,140 hrs. = \$25,707  
 • Greenhouse: 936 = \$21,114  
 Partners/Contractors:  
 • MSU Extension Life of Lake Superior  
 • Superior Watershed Partnership  
 • NMU Charter School – North Star Academy  
 Contact Person & phone number:  
 D. Le Blanc 906-387-2512 ext.20



**Hiawatha National Forest**  
 400 East Munising Ave.  
 Munising, Michigan  
 49862



# Hoosier National Forest

## 2014 Accomplishments

In 2014, the Hoosier National Forest performed several projects to promote native plant diversity.

After three years of controlling Japanese chaff flower at Mano Point, we seeded the 15 acres with shade tolerant forbs and grasses to compete with chaff flower and begin restoration of the site.



*Young volunteers spread native seed during a NWTF work day at the Fleetwood Cemetery wildlife opening.*

Two National Wild Turkey Federation (NWTF) interns worked on the Hoosier during the summer. They inter-seeded warm season grasses and forbs to rehabilitate bare soil along prescribed burn lines at the wildlife openings at Scotts and Maines Ponds. Likewise, they seeded at a wildlife opening at Sundance Lake where bare spots had been created during maintenance. Overtime, these plants will reproduce and increase diversity at these sites.



*Tell City District employees transplant native plants along hillside behind office. Native species planted included rattlesnake master, Indian grass, common milkweed, coreopsis, New England aster and much more.*

Transplants from the native plant interpretive bed at the Tell City District office were used to expand plantings to a slope behind the office. Over time, the intent is to convert this mowed fescue slope to a native garden that supports pollinators and wildlife.

This conversion will reduce mowing costs and the office's carbon footprint. Personnel also collected native seed from the Forest to incorporate into the plantings.

**Year Project Initiated:** 2014

**Project completion:** 2014

**Report number:** 1 of 1

**Expenditures (through 10/2013):**

2014 NFWF funds: \$4,500 for native seed purchase and personnel time to collect local native seed.

**Partners/Contractors/Coop:** National Wild Turkey Federation.

**Contact Person:** Cheryl Coon,  
Forest Botanist, 812-276-4773



**Hoosier National Forest**

811 Constitution Ave.

Bedford, IN 47421

<http://www.fs.usda.gov/hoosier/>



# Huron-Manistee National Forest Monarch & Native Plant Materials 2014 Accomplishments

The Cadillac-Manistee Ranger District's Native Plant & Pollinator Program began in 2007. Since then 33 acres of seedbeds have been planted with native grasses and wildflowers to provide habitat for pollinators and produce seed for restoration efforts across the Forest. So far 25 species of wildflowers and 6 species of grasses have been planted.

Two native plant and pollinator gardens have been established at the Cadillac-Manistee Ranger District office, four gardens at the Chittenden Conference Center, two gardens at the Supervisor's office, and one garden at the Lake Michigan Recreation Area. Between 2008 and 2011, nearly 3,000 plugs of 47 species of native grasses, sedges, and wildflowers have been planted in the various native plant and pollinator gardens. Each garden includes at least one species of milkweed to provide host plants for monarchs.

In addition to the gardens and seedbeds, the Cadillac-Manistee District used native grass and wildflower seed to revegetate 17.8 acres of timber landings and 3 acres of road closures. Wildlife openings were interseeded with wildflower seed to improve floral diversity on 153 acres. The seed mixes are designed to provide nectar plants from spring through fall. Each seed mix includes common milkweed and/or butterfly milkweed to provide host plants for monarchs.



Figure 1. Monarch caterpillar on common milkweed in native plant & pollinator garden at Chittenden.



Figure 2. Monarch on common milkweed in a native plant and pollinator garden at Chittenden.

Year Project Initiated: 2007

Project completion: 2014

Report number: 8 of 8

Expenditures (through 10/2014): \$156,830

FY14 funding: \$13,540 from CWKV for rehabilitating timber landings, \$30,690 from NFWF to improve floristic diversity in wildlife openings, and \$311 from WFHF for road closures.

Contact Person & phone number:

Carolyn Henne (231) 723-2211



**Huron-Manistee National Forest**  
Manistee Ranger District  
412 Red Apple Rd  
Manistee, MI 49660



**MONARCH**  
JOINT VENTURE

# Huron Manistee National Forest Monarch and Native Plant Materials 2014 Accomplishments

The first Monarch Waystation was established for the Baldwin/White Cloud Ranger District in 2003. Since then, 5 additional pollinator gardens were created with an emphasis on milkweed plants. The pollinator habitats were expanded at two of the sites in 2014: the Little O Motorsport Trailhead on M37 and the Loda Lake Wildflower Sanctuary pollinator garden. Expansion at Loda included a second dry site garden and a mesic rain garden. The M37 trailhead garden had additional sowing of nectar seed and planting of containerized plant material, along with intensive invasive plant removal.

Also, 1330 nectar plant plugs (butterflyweed (*Asclepias tuberosa*), horsemint, yarrow, and hairy hawkweed) were planted in fall 2014 in an endangered Karner Blue Butterfly (KBB) restoration area. These plantings supplemented nectar plants previously planted from 2010 through 2012 in 340 fenced 4" x 8" nectar habitat beds located throughout 60 acres of occupied KBB habitat in Oceana and Muskegon Counties. In addition, 69 acres of nectar seed was planted in the KBB management areas and included both common and butterflyweed milkweed (*Asclepias syriaca* and *A. tuberosa*). These habitats also provide habitat for the Monarch and other pollinators.

Lastly, 29 acres of wildlife opening habitat restoration was seeded with a seed mix that included common milkweed for monarch habitat. Restoration seed mixes will continue to feature at least one milkweed species in District projects so as to create as much opportunity as possible for Monarch habitat support.

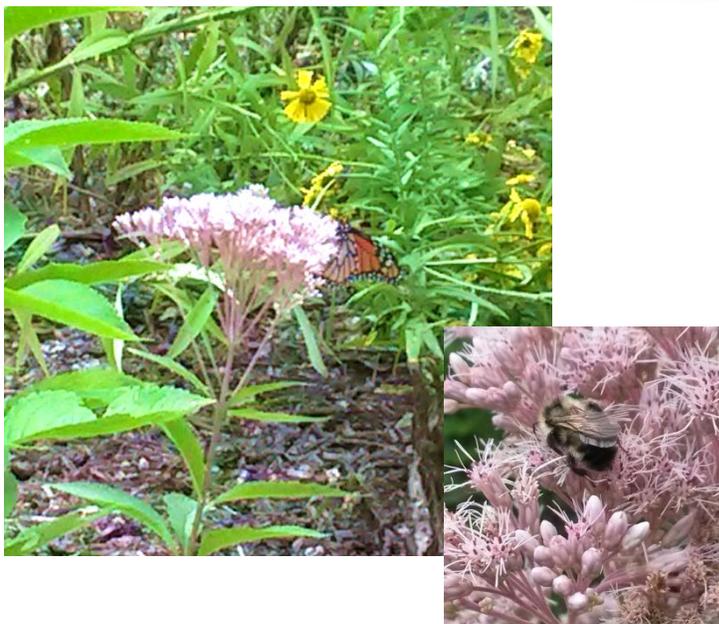


Figure 2. Pollinator Garden at Baldwin Ranger District with Monarch on Joe Pye weed and bees on common milkweed.

Year Project Initiated: 2003 w/ Lake Co. Road Commission (LCRC); FY2006+ USFS native plant funding

Project completion: On-going for maintenance, seed collection, supplemental planting for diversity.

Report number: 10

Expenditures 2014: MDNR \$5510; SSCC \$46,199; NFWW \$810; NFWF-botany \$5900; GLRI-NFXF \$1120

Partners/Contractors/Coop: Lake Co. Road Commission, Michigan Garden Clubs, Great Lakes Restoration Initiative, Michigan DNR

Contact Name & phone #: P.R. McGhan  
231-745-4631x3102



Figure 1. Nectar plug plots for butterfly habitat increase with Butterflyweed plug planting.



**Huron Manistee National Forest**  
Baldwin/White Cloud Ranger District  
650 N. Michigan Ave.  
Baldwin, MI 49304



# Native Plant & Pollinator Gardens On the Huron National Forest 2014 Accomplishments

We have entered the sixth year of the Huron National Forest's Plant & Pollinator Program. Over the years, 7 pollinator gardens have been established with one of the installations being new this year. The gardens all provide a display of native plant species diversity as well as provide nectar and food sources for pollinators.

In FY 2014 our partners, the Iosco County Master Gardeners, have contributed their time towards the continued maintenance of our existing pollinator gardens. The Master Gardeners have also, with funding from the Eastern National Forests Interpretive Association (ENFIA), provided an additional installation at Lumberman's Monument. The new installation is a woodland display which contains a variety of native shade tolerant species. ENFIA has also provided the funding for a fresh cover of mulch as well as some stepping stones for the gardens at Lumberman's Monument. In addition to the gardens, an interpretive center is operating on site for outreach and education regarding our native plants & pollinators.



Figure 2. Jack-in-the-Pulpit (*Arisaema triphyllum*), a shade tolerant species pollinated by flies and gnats!



Figure 1. Lumberman's Monument Pollinator Garden Interpretive Center

#### **Year Project Initiated:**

Huron Shores Ranger Station Garden: 2012  
Mio Ranger Station Garden: 2010  
Lumberman's Monument Garden: 2008

#### **Initial Expenditures:**

Huron Shores Ranger Station Garden: \$750  
Mio Ranger Station Garden: \$3,120  
Lumberman's Monument Garden: \$10,000

#### **FY14 funding:**

LM Garden: \$200 from ENFIA

#### **Partners/Contractors/Coop:**

ENFIA  
Sunrise Side Master Gardeners

#### **Project completion:**

All gardens are on going

#### **Contact Person & Phone Number:**

Justin Tabaka (989)739-0728 ext. 3019



#### **Huron National Forest**

Huron Shores Ranger District  
5761 N. Skeel Rd.  
Oscoda, MI 48750



# Beneficial Projects for Monarchs on the Mark Twain National Forest 2014 Accomplishments

In 2014, The Mark Twain National Forest completed several projects that directly or indirectly benefited breeding and feeding habitat for Monarch Butterflies including viable populations of milkweed species. Prescribed fire was used to maintain natural communities such as glades, savannas and open woodlands that are vital in providing habitat for a variety of pollinator species. Healthy and viable monarch population have been documented in all of the following projects areas and/or valuable nectar sources.

The MTNF completed over 39,000 acres for prescribed fire in oak woodlands, savannas and glades. The Forest attributes 22,000 of these acres to improving native plant communities that are important to native pollinator's. These areas of glades and open woodland habitats with high diversity of flora beneficial to all pollinators, especially to Monarchs.



Figure 1. Watershed Divide Glade Restoration.

## 2014 Highlights:

- Watershed Divide Glade Restoration (248 acres)
- Sugar tree Glade Restoration and Cedar Removal (AmeriCorps, 44 acres)
- GLADE (NWTF/Green Leadership Academy for Diverse Ecosystems Partnership) Dabbs Creek Glade cedar removal (6.7 acres)
- Forest Wide Prescribed Fire for Native Plant and Wildlife Habitat Improvement (22,000 acres)
- Red Bluff Campground Pollinator Garden (0.3 acres)



Figure 2. Great spangled fritillary on purple milkweed, Mark Twain National Forest

Year Project Initiated: 2014

Project completion: 2014

Report number: 1 of 1

Contact Person & phone number:  
Brian Davidson 573-341-7414



**Mark Twain National Forest**  
401 Fairgrounds Road  
Rolla, Missouri 65402



# Emphasizing Milkweeds and nectar plants at The Midwin National Tallgrass Prairie 2014 Accomplishments

Enhancing native populations of plants and animals is part of the mission at the Midwin National Tallgrass Prairie since its inception in 1996. The importance of providing habitat for species such as Monarch Butterflies (*Danaus plexippus*) and nectar sources for other pollinators is always a consideration when planning restoration. Providing seed and plant plugs of native milkweed species are included in restoration projects. Midwin is fortunate to have several milkweed species naturally occur on site, such as Swamp Milkweed (*Asclepias incarnata*), Whorled Milkweed (*Asclepias verticillata*), Sand Milkweed (*Asclepias amplexicaulis*), Prairie Milkweed (*Asclepias sullivantii*), Short Green Milkweed (*Asclepias viridiflora*) and Common Milkweed (*Asclepias syriaca*). Seed is collected from these species for use in future restoration projects. In addition, there are additional milkweed species in production and propagation at the Midwin horticultural facilities, such as Butterfly Milkweed (*Asclepias tuberosa*) and Purple Milkweed (*Asclepias purpurascens*). Midwin works in collaboration with the U.S. Fish and Wildlife Service and the Morton Arboretum in the recovery and propagation of the threatened species, Mead's Milkweed (*Asclepias meadii*). This species has been grown in production at Midwin to aid in its recovery and work towards propagation of this species will continue into the future. Volunteers continue to monitor butterflies and moths at Midwin each year.



Figure 1. Mead's Milkweed in bloom, 2014. Propagation efforts at the Midwin seed production facilities. Photo by Jennifer Durkin



Figure 2. Monarch caterpillar on Swamp Milkweed at the Route 66 Prairie at Midwin. Photo by Laney Widener, Chicago Botanic Garden

Year Project Initiated: 1996

Project completion: Restoration continues on various restoration projects. Efforts at propagation of Mead's Milkweed will continue into the future to aid in recovery

Report number: 1 (2014)

Expenditures (through 10/2014): \$40,000

Funding: NFWW, NFWF, PIPI  
Partners/Contractors/Coop:) U.S. Fish and Wildlife Service, the Morton Arboretum

Contact Person & phone number:  
Jennifer Durkin, 815- 423-6370 x 254



**Midwin National Tallgrass Prairie**  
**30239 South State Route 53**  
**Wilmington, IL 60481**



# Mower Tract Lambert North Restoration & Cranberry Nature Center

## Monongahela National Forest 2014 Accomplishments

The Mower Tract, located on the Greenbrier District, is comprised of almost 40,000 acres of National Forest Land. This area is considered a key red spruce corridor and top priority for conservation efforts.

Through a partnership with the NRCS Appalachian Plant Material Center, native plant material and seeds were collected and some were propagated in a greenhouse for use in restoration activities. The plants collected and propagated have genetic traits making them more adaptive to this site and therefore more likely to succeed.

Throughout the fiscal year, several plantings occurred on this site. In October of 2013, volunteers from US Forest Service, the Nature Conservancy, West Virginia Division of Natural Resources, and AmeriCorps planted 19.2 acre plots of aspen and red spruce. In March of 2014, 72 pounds of native seeds were sown into the restoration site. Among several others, some native plant seeds included American Beech, Black Cherry, Common Milkweed, Red Spruce, Balsam Fir, and Cyprus sedge. Other native plants were collected for future propagation including Swamp Milkweed, Yellow Birch, Flowering Raspberry, and Butterfly Milkweed. In the spring of 2014, a contractor planted 25,575 seedlings including red spruce, bigtooth aspen, and black cherry. In May 2014, volunteers planted a total of 30,000 seedlings in the Mower Tract.

The Cranberry Mountain Nature Center on the Gauley District replaced a grassy area near the parking lot with native plants. The species planted included creeping phlox, tall bellflower, bee balm, hairy wood mint, dwarf crested iris, foxglove beardtongue, bleeding heart, Eastern bergamot, wild bergamot, thimble flower, Goat's beard, pink garden phlox, redbud, and mountain ash.



*Native Plant Garden located at CMNC*

**Location:** Lambert North Project Area (Greenbrier District); CMNC garden (Gauley District)

**Approximate size:** 181 acres (Lambert North); <0.25 acre (CMNC garden)

**Partners/Contractors/Cooperators:** Appalachian Forest Heritage Area, NRCS Appalachian Plant Material Center, WV DNR, WV TNC, and AmeriCorps

**Contact:** Kent Karriker, 304-636-1800 ext. 206



**Monongahela National Forest**  
200 Sycamore Street  
Elkins, WV 26241



**MONARCH**  
JOINT VENTURE

# Native Plant and Pollinator Projects Ottawa National Forest

## 2014 Accomplishments

We continued work at Black River Harbor day use area, to decrease invasive plants and increase native wildflowers with benefit to pollinators. We hand pulled invasives in areas planted in 2010-11, where native plant establishment was spotty and compost and mulch had not been added. We turned over the soil and covered the work areas for 4-5 weeks. In early September, we uncovered the plots and spread composted manure and wood chips. We planted about 750 seedlings of native herbs, grown at a Forest Service Nursery. Species included milkweed (*Asclepias syriaca*), little bluestem (*Andropogon scoparius*), and black-eyed susan (*Rudbeckia hirta*).

We awarded contracts to local gardeners to maintain and enhance three upland and one wetland native plant/pollinator gardens and part of the meadow restoration area.

We worked with the National Wild Turkey Federation to retard succession in upland openings to benefit wildlife including pollinators. Encroaching trees such as spruce, fir, and cherry were cut down. About 403 acres in 46 openings were treated.

We awarded a contract for monitoring two transects for the state threatened northern blue butterfly (*Plebejus idas nabokovi*). Nineteen butterfly species were recorded but only one northern blue was observed, in contrast to the large population seen in 2001.

We held a June workshop, one of two pilot trainings sponsored by the Eastern Region and the Pollinator Partnership. Sessions included an overview of pollination, pollinator enhancement practices, bumble bee identification and collection. The 24 participants practiced netting insects and received pollinator identification and management materials.

We continued seed collection for pollinator-friendly herbs such as fireweed, false sunflower, pearly everlasting, sneezeweed, blue vervain, and evening primrose.

We provided pollination classroom presentations for four schools, including 215 students, and field trips on pollination for 159 students.



Figure 2. Blooming black-eyed susan at restoration meadow



Figure 3. Workshop participant studies captured bee

Year project initiated: varies, 1999 through 2014

Project completion: ongoing

Multiple job codes contributed to these projects, which were partially to benefit pollinators and partially for other purposes. Contracts were funded as: northern blue contract: \$6250 (NFXF5N). Openings contract: \$103,000 (Stewardship). Gardener contracts: \$2000 (NFVW). Seedlings for harbor area: \$318 (NFXF5N).

Partners/Contractors/Cooperators: J.W. Toumey Nursery; Pollinator Partnership; National Wild Turkey Federation; Ottawa Youth Conservation Corps; Biophilia, LLC.

Contact: Sue Trull, Botanist, 906-932-1330 ext. 312.



Figure 1. The single male northern blue observed along transects



**Ottawa National Forest**  
E6248 US Highway 2  
Ironwood, MI 49938



# Welcome Monarchs!

## Shawnee National Forest

### 2014 Accomplishments

Pollinator gardens were completed in 2014 at the Jonesboro and Vienna Administrative Sites with an emphasis to plant species that encourage monarch butterflies to visit. Hundreds of plants, including numerous milkweeds, were transplanted into our gardens from a Forest Service office that recently closed. Numerous flowering plants were purchased from local nurseries, and hand tools and equipment (mower, weed eater, leaf blower) were also obtained to help with garden and native woodland maintenance. Visits from monarch butterflies have reduced visibly in numbers, but we are hopeful that our additional colorful display and new food sources will once again bring back these rare beauties.

This project is an extension of the “Partners and Pollinator Gardens” educational project that was initiated in 2009 as a Participating Agreement with 7 partners. A bike path was constructed by the city of Vienna that leads riders, walkers, and joggers to our Hidden Springs Administrative Site where they can explore our pollinator gardens. Plants have been labeled so that visitors can recognize different species during any season. A beautiful native sandstone border has been placed around two gardens and “Pollinator Garden” and “Monarch Butterfly” interpretive signs have been erected catching the eye of nearly every visitor.



Figure 1. RC&D partners, Shay Chess and John B. Jones during early spring plantings. Figure 2. RC&D partner, Robbie Farrow preparing to transplant milkweeds during a plant rescue.



Figure 3. YCC students help with the placement of sandstone borders around the pollinator gardens.

Year Project Initiated: 2010  
 Project completion: 2014  
 Report number: 5 of 5  
 Expenditures (through 10/2014): \$39,638  
 FY14 funding – NFWV: \$1,984

Partners/Cooperators - Partners include Shawnee Resource Conservation and Development Area, Inc., Shawnee Audubon Society, Shawnee Group of the Sierra Club, Southern Illinois Audubon Society, Southern Illinois University Restoration Club, Vienna High School, and Anna-Jo Garden Club.

Contact Name & Phone #: E.L. Shimp 618-658-2111



**Shawnee National Forest**  
 Hidden Springs/Mississippi Bluffs  
 Ranger Districts  
 Vienna, IL 62995



# Monarch Butterfly Projects - Superior National Forest

## 2014 Accomplishments

Northeast Minnesota is marginal habitat for monarch butterflies, and in 2014 very few monarchs were observed on the Superior National Forest. At some of the larger common milkweed populations that were monitored, there was very little evidence of any herbivory on milkweed leaves and very few monarch caterpillars observed..

In 2014 the Superior National Forest burned 10 acres of wildlife openings to maintain the openings and benefit early successional species. These prescribed burns indirectly benefited any nectar-gathering pollinators including monarchs by helping to maintain the openings and maintain nectar-producing wildflowers like flowering dogbane, black-eyed susan, and evening primrose.



Figure 2. Wildlife opening prescribed burn



Figure 1. Common milkweed (*Asclepias syriaca*) fruit

Year Project Initiated: 2011

Project completion: Ongoing

Report number: 1 of 1

FY13 Expenditures(through 9/30/2014): \$3,000

FY13 funding: WFHF09

Partners/Contractors/Coop: None

Contact Person & phone number:  
Jack Greenlee, 218-229-8817



**Superior National Forest**  
8901 Grand Ave. Place  
Duluth, MN 55808



# Tagging Monarchs Wayne National Forest 2014 Accomplishments

Tagging Monarch butterflies began on the Wayne National Forest in 2008. Requested information is collected on the butterflies and sent to the Monarch Watch program at the University of Kansas.

Tagging activities are conducted usually from September to October by visiting appropriate habitat. In 2014, a total of 14 monarchs were tagged which was up significantly from the 3 tagged in 2013. The majority of monarchs tagged in 2014 occurred at the Wayne National Forest Headquarters where flats of milkweed were being grown in the resident shade house (see accompanying report). Eight monarchs were fitted with a tag soon after emerging from the chrysalis allowing us to report them as reared (knowing that they developed, emerged and began their migration from the Wayne) rather than reported as wild where we catch them migrating thru the area unaware of where their journey began.

To date 199 monarch butterflies have been tagged. No tags have been reported as recovered.



Figure 1. A monarch butterfly emerging from its chrysalis



Figure 2. One of eight monarchs that emerged at the Wayne shade house. All eight were tagged after the wings had dried.

**Year Project Initiated:** 2008

**Project completion:** Ongoing

**Report number:** 1 of 2

**Expenditures (2008 thru 10/2014):** NFWF \$3160.00

**FY14 Funding:** Wayne National Forest

**Contact Person & phone number:**

Lynda Andrews 740-753-0550



**Wayne National Forest**  
13700 U.S. Hwy. 33  
Nelsonville, Ohio 45764



# Native Plant & Pollinator Projects on the Wayne National Forest 2014 Accomplishments

In 2008 the Wayne National Forest's Supervisor's Office and Athens Ranger District constructed a large shade house for the propagation of collected native plant seed. Plants propagated have been used in restoration projects, in pollinator gardens, and for seed collection. In the summer of 2014, these plants became home to more than 23 monarch caterpillars!

In the fall of 2013, seasonal staff and volunteers collected seed from butterfly milkweed (*Asclepias tuberosa*). Over 60 seeds were sown in pots residing in the shade house to overwinter. By the summer of 2014, plants had grown substantially. Monarch caterpillars had emerged from eggs and were seen feasting on the host plant.

Following butterfly emergence, butterflies were tagged by biologists on the Wayne (see previous report). Senesced potted butterfly milkweed plants were planted in openlands on Forest to encourage pollinator species in these habitats.



Figure 2. Butterfly milkweed (*Asclepias tuberosa*)



Figure 3. Monarch larva on planted butterfly milkweed (*Asclepias tuberosa*)



Figure 1. Monarch chrysalis

**Year Project Initiated:** Shade house construction 2008  
**Project completion:** On going  
**Report number:** 1 of 2  
**Expenditures to date:** \$2,500  
**FY14 Funding:** \$500 seasonal time for seed collection and watering

**Contact Person & Phone Number:**  
Sierra Patterson, 740-753-0558



**Wayne National Forest**  
13700 US HWY 33  
Nelsonville, OH 45764



# Maintaining Milkweeds White Mountain National Forest

## 2014 Accomplishments

White Mountain National Forest (WMNF) staff continue to create, maintain, and enhance permanent wildlife openings on the Forest, serving the habitat needs of many wildlife and plant species. Managers maintain approximately 800 acres of openings across the Forest. These range from permanent large fields to small openings, such as the native plant gardens and seed production areas at the Saco and Androscoggin Ranger District offices, Lincoln Woods Visitor Center, and at the Administrative Complex. Depending on habitat and site conditions, prescribed burning or mechanical mowing (or both) are employed to maintain openings. In fiscal year 2014, the Forest treated a total of 84 acres to perpetuate this habitat.

The primary objective in maintaining these openings is to perpetuate a range of herbaceous and shrubby vegetation, and an associated diversity of wildlife species. Monarch butterflies and other pollinators require a diversity of species that flower at various times of year, and Monarchs specifically require milkweed species. Milkweeds are present in many of these openings in healthy numbers as a result of both natural propagation and, at the Administrative Complex, supplemental seeding with New England genetic stock. Without these maintained habitats, milkweeds would be much less common on the Forest.



Swamp milkweed (*Asclepias incarnata*) in the White Mountain Administrative Complex native plant garden



A typical wildlife opening on the WMNF

In addition, there are many natural openings on the WMNF, including meadows along rivers and streams, wet meadows and peatlands, and rocky ridges and alpine areas. Some of these habitats contain native milkweed species. Ongoing planning and protection of each of these natural communities provides unique habitat for a host of native plants, their pollinators, and other wildlife species.

Year Project Initiated: 2008

Project completion: ongoing – continued maintenance

Expenditures (FY 14): \$40,000

Contact Person & phone number:

Dan Sperduto, Forest Botanist  
603-536-6225;  
danielsperduto@fs.fed.us



**White Mountain National Forest**  
71 White Mountain Drive  
Campton, NH 03220

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