

United States
Department of
Agriculture

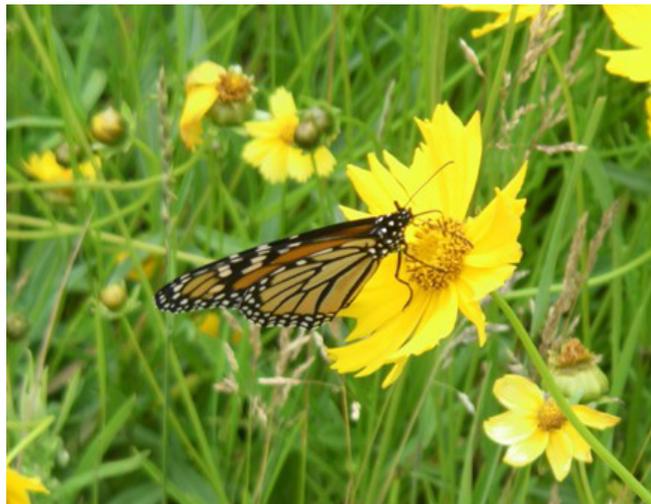


Forest Service
Eastern Region



MONARCH JOINT VENTURE

Eastern Region Program Accomplishments 2011





USDA is an equal opportunity provider and employer.



MONARCH
JOINT VENTURE

Eastern Region, US Forest Service

2011 Accomplishments

Within the Eastern Region our activities to help keep Monarchs floating magically through our gardens, prairies, savannas, and meadows are briefly summarized below:

Restoration & Rehabilitation Projects

Our Forests have worked diligently to make available native seed including several of our milkweed species for our myriad restoration and rehabilitation projects.

- Native plant seed mixes are developed and applied in situations such as: log landings, road edges, after non-native invasive plant control, closed roads, within forest openings and more.
- Prescribed fire (over 15,000 acres this year) has provided large dividends in the restoration of our prairies, savannas, and glades – all of which afford ideal habitats for milkweed and other significant native plant species.
- Several Eastern Region Forests have monitored and tagged Monarchs for many years now.
- Many of our botanists and wildlife biologists regularly offer presentations and workshops about butterflies, bees, pollinators and our native plants for school groups and the general public.
- Each Forest also has a Forest Butterfly Checklist (on the Celebrating Wildflowers /CW website).

Native Plant & Pollinator Gardens

- Our Forests have now established over 60 Native Plant & Pollinator Gardens (NPPG) at administrative office sites.
- Forests have partnered to establish several NPPG at locations outside of the Forests such as local schools, etc.
- Several Rain Gardens have been constructed featuring useful plants such as Swamp Milkweed among others and
- R9 Forests have also established a number of Native Seed and Pollinator Production Areas. These various sites, all planted with locally native species, are signed to interpret our intent for the public. The signs/ images are available on the CW website for all to use.

Partners & Volunteers

Our activities on behalf of the MJV could not have occurred without our many partners and volunteers. A sampling of the cross section of partners across the Eastern Region includes: U of WI Extension Service; Ashland/ Bayfield Master Gardeners; Superior Watershed Partnership; numerous interpretive associations; commercial nurseries; National Wild Turkey Federation; Friends of Sylvania Wilderness; Keweenaw Bay Indian Community; US Fish and Wildlife Service; Garden Clubs of MI; Southern IL Audubon Society; Anna-Jo Garden Club; Quail Unlimited; Ottawa NF Fire Program; Youth Conservation Corps; New England Wildflower Society; El Valor; Universalist Unitarian Church; AmeriCorps; Appalachian Regional Restoration Initiative ; CWMAs; National Garden Club Federation /NW PA Chapter. Many hundreds of volunteers help us each year; their fine work represents thousands of hours of work. We literally could not do this without them!



Regional Contact: Jan Schultz
jschultz@fs.fed.us 414-297-1189



Eastern Region US Forest Service
Renewable Resources Staff
626 E. Wisconsin Ave.
Milwaukee, WI 53202



Native Plant – Pollinator Gardens on Bradford RD Allegheny National Forest 2011 Accomplishments

Program activities in FY2011 focused on the development of the Bradford Ranger District Office Native Plant - Pollinator garden. Work at the Bradford office included a contract to remove turf grass and non-native invasive landscape plants in three areas around the office (approximately 1,700 square feet) and replace with native plants, a rain garden, a water feature and interpretive signs (Figure 1-3). FY11 funding also included the purchase of plant labels and signs for three existing gardens.

Next steps include creating and installing a “What’s Happening Here Sign”, plant labels, Monarch Waystation signs and interpretive signs in the spring of FY12.



Figure 1. Area in front of office prior to invasive plant removal

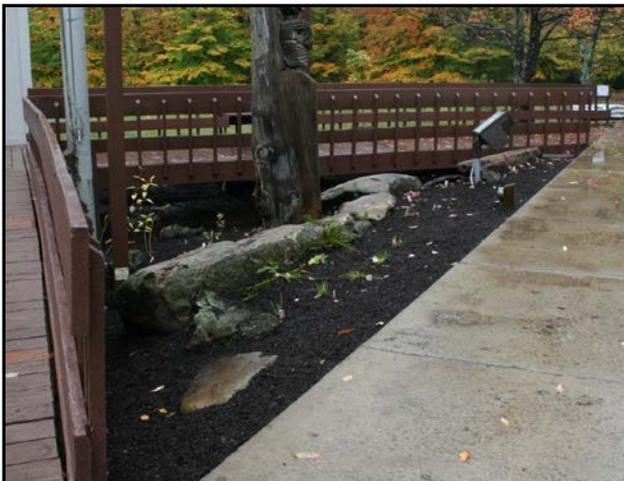


Figure 2. Area in front of office after invasive plant removal



Figure 3. Rain Garden Creation

Year Project Initiated: **FY2011**

Project completion: **FY2012**

Report number: **1 of 1**

FY11 funding: **\$19,000**

Partners/Contractors/Coop:

National Garden Club Federation –NW PA chapter

Contact Person & phone number:

April Moore 814-363-6069



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



MONARCH
JOINT VENTURE

Aldo Leopold Native Seed Orchard Chequamegon-Nicolet National Forest 2011 Accomplishments

The Aldo Leopold Native Seed Orchard was established in 2007 to serve as a future seed collection site for the Lake Superior Clayplain. The first two years consisted of plowing, tilling and seeding winter rye and chemical spray applications to eliminate reed canary grass and other non-native species. Weed barrier was installed in 2009 to smother remaining non-native vegetation in preparation for planting.

The first planting of over 1,500 native plants in 2009 was successful with a 95% survival rate. 4,500 plants were planted in the summer of 2010 by U.S. Forest Service and U.S. Fish & Wildlife YCC Crews. A solar powered fence was installed to protect native plantings from deer browse.

In 2011, volunteers and Forest Service staff planted over 1,000 native plants. National Public Lands Day volunteers rolled up their sleeves to weed, transplant and install weed barrier. Additionally, a seed orchard sign was designed and fabricated for the entrance to the orchard.

Once established, this orchard will produce over 100 lbs. of seed annually for ecosystem restoration projects. Additionally, this orchard is part of the new Northern Great Lakes Visitor Center National Children's Forest. Visitor Center staff use this orchard as a teaching platform for Earth Partnership for Schools experiential education programs.

Right: Students and UW-Extension Certified Master Gardeners planted over 1,000 native plants in 2011.



Below: National Public Lands Day Volunteers weed orchard Sept. 24, 2011.



Top: U.S. Forest Service and US Fish & Wildlife Service YCC crews planted 4,500 native grasses, sedges and wildflowers in 2010



Right: Mark Jaunzems, Botanist, installs weed barrier. Weed barrier allows easy access for tours, programs and maintenance.

Year Awarded: 2011

Project Completion: September 2011

Report Number: 4

Expenditures (through 9/2011): \$1,555.90
NFN313

Genesis Graphics \$378

Greenhouse Mega Store \$670.02

Carlson Building Supplies, Inc. \$125.88

Genesis Graphics \$382

Partners/Contractors/Coop: U.S. Fish & Wildlife Service, Youth Conservation Corps, Ashland/Bayfield County Master Gardener Association, Northwoods Cooperative Weed Management Area, Wildflower Woods Nursery, Genesis Graphics

Contact Persons & phone numbers: Susan B. Nelson (715) 685-9983 and Matt Bushman (715) 373-2667



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



Catwillow Monarch Project

Chequamegon-Nicolet National Forest
Lakewood-Laona Ranger District

2011 Accomplishments

In 2010, we identified this 4.5 mile section of the Catwillow Hiking Trail System as having high potential for butterfly management because of 33 forest openings with Common Milkweed (*Asclepias syriaca*).

In FY11 we did planning, surveying, clearing, seed collecting, and sowing. We conducted a vegetation survey of the entire Catwillow Monarch Area in October, planned future management, and assembled a list of butterfly species and host plants. Cool spring weather hampered non-native invasive species control.

We conducted three butterfly surveys (06/01, 08/11-12, and 09/08) in select openings. In addition to many Monarch caterpillars, chrysalises, and adults, we also found several other butterfly species, including West Virginia White (*Pieris virginiensis*), and many bumblebees and other insects. All trails were cleared of downed trees during summer.

We collected seeds from many local native nectar and host plants including Milkweeds (*Asclepias* spp.), Grass-leaved Goldenrod (*Euthamia graminifolia*), Spotted Joe-Pye Weed (*Eupatorium maculatum*), Great St. John's-wort (*Hypericum pyramidatum*), Wild Bergamot (*Monarda fistulosa*), and Black-eyed Susan (*Rudbeckia hirta*). We sowed seeds in openings to provide more nectar plants, and we added Common Milkweed to all openings that lacked it.



Figure 1. Google Earth satellite photo (06/23/2008) of the Catwillow Monarch Area



Figure 2. Male Monarch Butterfly nectaring on Common Milkweed in a Catwillow Monarch Area wildlife opening during the August 12th butterfly survey

Year Project Initiated : 2010

Project completion: On going

Report number: 2 of 2

Expenditures (through 09/2011): \$5,400

FY11 funding: NFN313

Partners/Contractors/Coop:

Contact Person & phone number:

Scott Anderson @ 715/674-4481 or

Nicole Shutt @ 715/276-6333



Chequamegon-Nicolet National Forest
Lakewood-Laona Ranger District
4978 Hwy 08 West
Laona, WI 54541



**MONARCH
JOINT VENTURE**

Monarchs Welcome!

Northern Great Lakes Visitor Center Chequamegon-Nicolet National Forest

2011 Accomplishments

In 2011, volunteers planted hundreds of common, marsh, and butterfly milkweed along with other native plants in the Aldo Leopold Native Seed Orchard. Established in 2007, this orchard provides a reliable source of native seed for restoration projects on the Chequamegon-Nicolet National Forest and Whittlesey Creek National Wildlife Refuge.

In addition, a hundred common milkweed were planted around the Northern Great Lakes Visitor Center. These milkweed plants and others planted in previous years attract monarchs and other pollinators to the 22 native gardens. Additionally, college intern students presented interpretive programs about the importance of monarchs and other pollinators at the visitor center during the 2011 summer season.



Figure 2. University of Wisconsin Certified Master Gardeners plant butterfly, marsh, and common milkweed in the Aldo Leopold Native Seed Orchard and Northern Great Lakes Visitor Center gardens.

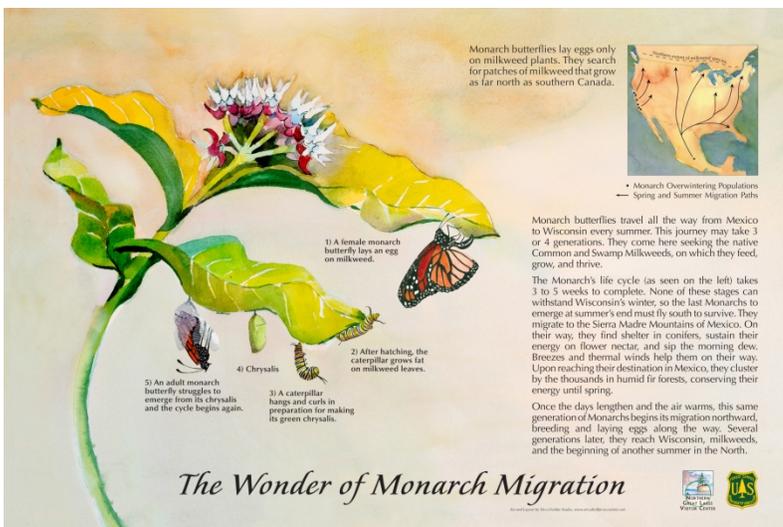


Figure 1. In 2010, four monarch interpretive exhibits were installed at visitor center and administrative office native gardens on the Chequamegon-Nicolet National Forest. It is estimated that over 150,000 visitors view these exhibits each year.

Year Project Initiated: 2011

Project completion: September 2011

Report number: 1

Expenditures (through 10/2011): \$378

FY11 funding

Partners, Contractors, Coop: Wildflower Woods, J.W. Toumey Nursery, University of Wisconsin-Extension, Ashland/Bayfield County Certified Master Gardeners, National Park Service
Volunteers in Parks

Contact Person & phone number:

Susan B. Nelson (715) 685-9983
Matt Bushman (715) 373-2667



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



Native Seed Collection Chequamegon-Nicolet National Forest 2011 Accomplishments

This marks the seventh year that native plant seed was collected on the Chequamegon-Nicolet. This seed will be used for restoration projects and native plant gardens.

The seed came from two distinct ecological zones that occur on the forest: the Northern Highlands and the Bayfield Sand Plain. This ensures we are using a native genotype. Contractors skilled in plant identification targeted a host of native plants for collection throughout the growing season. They try and pick seed at its peak ripeness. This often means several trips to the same location depending on the species.

Seed was collected in forest and sunny areas as well as wetlands and includes: Canada mayflower, wild leek, grasses, blazing star, milkweed, bee balm, asters, sunflower, turtlehead, and joe-pye-weed.

The seed is dried and processed to remove much of the chaff and flower parts. This year we will process it at the Forest Service's JW Toumey Nursery in Watersmeet Michigan since they can do much of the work by machine. It is then sent to the Oconto River Seed Orchard in Wisconsin for cold temperature treatment and storage.

This year seed was used from 2010 and prior to plant at native plant gardens in Florence, Rhinelander, and Park Falls. We also used it for several restoration projects across the forest. Seed from the Northern Highland Zone was planted at the Alvin Creek Impoundment restoration site and at the Florence Natural Resource Center native plant garden. Seed from the Bayfield Sand Plain seed zone helped restore the Mount Valhalla recreation site and augment wildlife openings across the Forest.



Figure 3. (above): Bagged seed and flower heads from the collectors ready to be cleaned

Figures 1 & 2 (bottom): Picking seed is easy, as for Canada anemone (left); but cleaning small seed like this aster (right) is difficult and often the fluff can not be removed from the seed (photos M Brzeskiewicz)

Year Awarded: 2011

Project completion: on-going

Report number: 2

Expenditures: FY11 total funding \$4,0000 NFN3

Partners/Contractors: Dale Soltis, Patrick Goggin, Quan Bahn

Contact: Marjory Brzeskiewicz 715-762-2461



**Chequamegon-Nicolet
National Forest**

500 N. Hanson Lake Road
Rhinelander, WI 54501



Openings for Butterflies Chequamegon-Nicolet National Forest 2011 Accomplishments

This project was initiated to restore 26 overgrown forest openings to benefit butterflies, birds and other wildlife. Many of the forest openings on the Washburn Ranger District of the Chequamegon-Nicolet National Forest are being encroached by trees and shrubs due to fire suppression and natural succession. Selected openings with dense cover were treated in 2010 by cutting most of the saplings and shrubs (Figure 1), primarily leaving scattered cherries and other soft mast producing shrubs.

To date, seven openings have been burned to further set back encroachment, as well as stimulate native species of forbs and grasses. Seed collected from native species on the district was used to restore vegetation on former roads in some openings. In addition, 100 milkweed plants, grown from Chequamegon seed at the J.W. Toumey Seed Orchard in Michigan, were planted along the former roads to re-establish Monarch butterfly habitat in the openings (Figure 2). An additional 150 milkweeds were planted in rain gardens at the Washburn District Office and the Valhalla Recreation Area.



Figure 1. Cutting dense brush to restore opening habitat.



Figure 2. Planting milkweed and seeding native species

Year Project Initiated: 2009

Project completion: Ongoing

Report number: 1

Expenditures (through 10/2011): \$ \$25,000

FY11 funding: NFWF and K-V

Contact Person & phone number:
Scott Posner 715-373-2667



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



Native Seed Collection Chippewa National Forest 2011 Accomplishments

This project was initiated in 2011 to obtain native plant material from local genetic stock on the Chippewa National Forest. The materials will be used to provide foundation material for a production greenhouse garden to be established at Camp Rabideau on the Blackduck Ranger District. The program will eventually produce seed for revegetation of areas where planting of native plant species is called for to achieve revegetation objectives.

Funds were used to hire George-Ann Maxson a local botanist who has extensive experience. George-Ann collected 75 forb and graminoid species. These plants will be planted in 2012 and evaluated for how well they grow, the objective being to understand which species are easily grown.

The project has already provided valuable information about the timing of wild plant seed collection



Figure 2. *Actaea rubra*

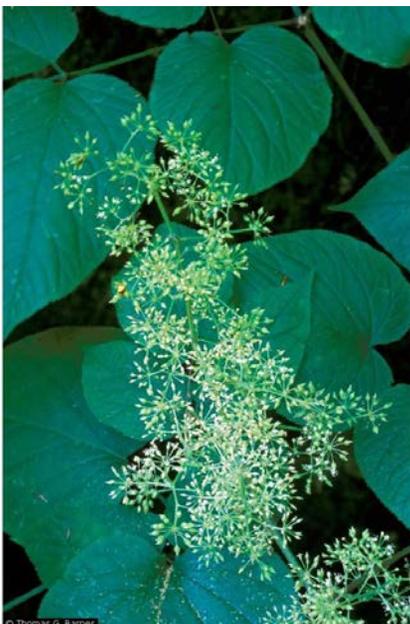


Figure 1. *Aralia racemosa*

Year Awarded: 2011

Project completion: 2011

Report number: 2 of 2

Expenditures (through 10/2011):
FY 11: \$2500.00

▪ **Total funding \$2500, total expend \$2500**

Contact Person & phone number:
Tom Heutte 218-335-8662



Chippewa National Forest
200 Ash Ave NW
Cass Lake, MN 56633

United States
Department of
Agriculture



Forest Service
Eastern Region



MONARCH JOINT VENTURE

Eastern Region Program Accomplishments 2011





USDA is an equal opportunity provider and employer.



MONARCH
JOINT VENTURE

Eastern Region, US Forest Service

2011 Accomplishments

Within the Eastern Region our activities to help keep Monarchs floating magically through our gardens, prairies, savannahs, and meadows are briefly summarized below:

Restoration & Rehabilitation Projects

Our Forests have worked diligently to make available native seed including several of our milkweed species for our myriad restoration and rehabilitation projects.

- Native plant seed mixes are developed and applied in situations such as: log landings, road edges, after non-native invasive plant control, closed roads, within forest openings and more.
- Prescribed fire (over 15,000 acres this year) has provided large dividends in the restoration of our prairies, savannahs, and glades – all of which afford ideal habitats for milkweed and other significant native plant species.
- Several Eastern Region Forests have monitored and tagged Monarchs for many years now.
- Many of our botanists and wildlife biologists regularly offer presentations and workshops about butterflies, bees, pollinators and our native plants for school groups and the general public.
- Each Forest also has a Forest Butterfly Checklist (on the Celebrating Wildflowers /CW website).

Native Plant & Pollinator Gardens

- Our Forests have now established over 60 Native Plant & Pollinator Gardens (NPPG) at administrative office sites.
- Forests have partnered to establish several NPPG at locations outside of the Forests such as local schools, etc.
- Several Rain Gardens have been constructed featuring useful plants such as Swamp Milkweed among others and
- R9 Forests have also established a number of Native Seed and Pollinator Production Areas. These various sites, all planted with locally native species, are signed to interpret our intent for the public. The signs/ images are available on the CW website for all to use.

Partners & Volunteers

Our activities on behalf of the MJV could not have occurred without our many partners and volunteers. A sampling of the cross section of partners across the Eastern Region includes: U of WI Extension Service; Ashland/ Bayfield Master Gardeners; Superior Watershed Partnership; numerous interpretive associations; commercial nurseries; National Wild Turkey Federation; Friends of Sylvania Wilderness; Keweenaw Bay Indian Community; US Fish and Wildlife Service; Garden Clubs of MI; Southern IL Audubon Society; Anna-Jo Garden Club; Quail Unlimited; Ottawa NF Fire Program; Youth Conservation Corps; New England Wildflower Society; El Valor; Universalist Unitarian Church; AmeriCorps; Appalachian Regional Restoration Initiative ; CWMAs; National Garden Club Federation /NW PA Chapter. Many hundreds of volunteers help us each year; their fine work represents thousands of hours of work. We literally could not do this without them!



Regional Contact: Jan Schultz
jschultz@fs.fed.us 414-297-1189



Eastern Region US Forest Service
Renewable Resources Staff
626 E. Wisconsin Ave.
Milwaukee, WI 53202



Native Plant – Pollinator Gardens on Bradford RD Allegheny National Forest 2011 Accomplishments

Program activities in FY2011 focused on the development of the Bradford Ranger District Office Native Plant - Pollinator garden. Work at the Bradford office included a contract to remove turf grass and non-native invasive landscape plants in three areas around the office (approximately 1,700 square feet) and replace with native plants, a rain garden, a water feature and interpretive signs (Figure 1-3). FY11 funding also included the purchase of plant labels and signs for three existing gardens.

Next steps include creating and installing a “What’s Happening Here Sign”, plant labels, Monarch Waystation signs and interpretive signs in the spring of FY12.



Figure 1. Area in front of office prior to invasive plant removal

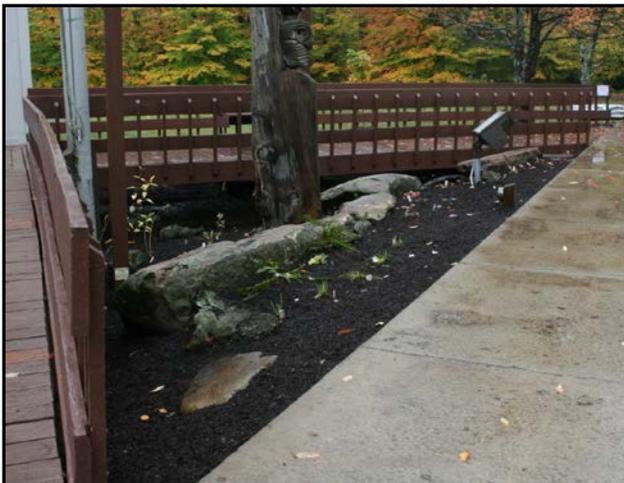


Figure 2. Area in front of office after invasive plant removal



Figure 3. Rain Garden Creation

Year Project Initiated: **FY2011**

Project completion: **FY2012**

Report number: **1 of 1**

FY11 funding: **\$19,000**

Partners/Contractors/Coop:

National Garden Club Federation –NW PA chapter

Contact Person & phone number:

April Moore 814-363-6069



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



MONARCH
JOINT VENTURE

Aldo Leopold Native Seed Orchard Chequamegon-Nicolet National Forest 2011 Accomplishments

The Aldo Leopold Native Seed Orchard was established in 2007 to serve as a future seed collection site for the Lake Superior Clayplain. The first two years consisted of plowing, tilling and seeding winter rye and chemical spray applications to eliminate reed canary grass and other non-native species. Weed barrier was installed in 2009 to smother remaining non- native vegetation in preparation for planting.

The first planting of over 1,500 native plants in 2009 was successful with a 95% survival rate. 4,500 plants were planted in the summer of 2010 by U.S. Forest Service and U.S. Fish & Wildlife YCC Crews. A solar powered fence was installed to protect native plantings from deer browse.

In 2011, volunteers and Forest Service staff planted over 1,000 native plants. National Public Lands Day volunteers rolled up their sleeves to weed, transplant and install weed barrier. Additionally, a seed orchard sign was designed and fabricated for the entrance to the orchard.

Once established, this orchard will produce over 100 lbs. of seed annually for ecosystem restoration projects. Additionally, this orchard is part of the new Northern Great Lakes Visitor Center National Children's Forest. Visitor Center staff use this orchard as a teaching platform for Earth Partnership for Schools experiential education programs.

Right: Students and UW-Extension Certified Master Gardeners planted over 1,000 native plants in 2011.



Below: National Public Lands Day Volunteers weed orchard Sept. 24, 2011.



Top: U.S. Forest Service and US Fish & Wildlife Service YCC crews planted 4,500 native grasses, sedges and wildflowers in 2010



Right: Mark Jaunzems, Botanist, installs weed barrier. Weed barrier allows easy access for tours, programs and maintenance.

Year Awarded: 2011

Project Completion: September 2011

Report Number: 4

Expenditures (through 9/2011): \$1,555.90
NFN313

Genesis Graphics \$378

Greenhouse Mega Store \$670.02

Carlson Building Supplies, Inc. \$125.88

Genesis Graphics \$382

Partners/Contractors/Coop: U.S. Fish & Wildlife Service, Youth Conservation Corps, Ashland/Bayfield County Master Gardener Association, Northwoods Cooperative Weed Management Area, Wildflower Woods Nursery, Genesis Graphics

Contact Persons & phone numbers: Susan B. Nelson (715) 685-9983 and Matt Bushman (715) 373-2667



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



**MONARCH
JOINT VENTURE**

Monarchs Welcome!

Northern Great Lakes Visitor Center Chequamegon-Nicolet National Forest

2011 Accomplishments

In 2011, volunteers planted hundreds of common, marsh, and butterfly milkweed along with other native plants in the Aldo Leopold Native Seed Orchard. Established in 2007, this orchard provides a reliable source of native seed for restoration projects on the Chequamegon-Nicolet National Forest and Whittlesey Creek National Wildlife Refuge.

In addition, a hundred common milkweed were planted around the Northern Great Lakes Visitor Center. These milkweed plants and others planted in previous years attract monarchs and other pollinators to the 22 native gardens. Additionally, college intern students presented interpretive programs about the importance of monarchs and other pollinators at the visitor center during the 2011 summer season.



Figure 2. University of Wisconsin Certified Master Gardeners plant butterfly, marsh, and common milkweed in the Aldo Leopold Native Seed Orchard and Northern Great Lakes Visitor Center gardens.

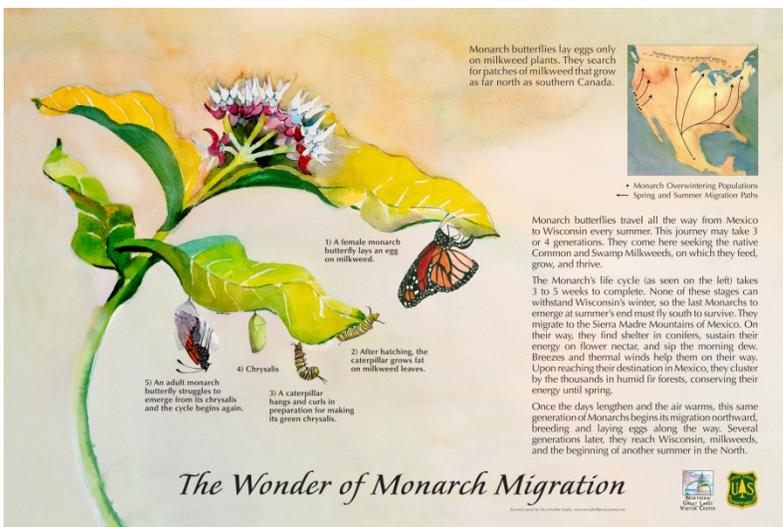


Figure 1. In 2010, four monarch interpretive exhibits were installed at visitor center and administrative office native gardens on the Chequamegon-Nicolet National Forest. It is estimated that over 150,000 visitors view these exhibits each year.

Year Project Initiated: 2011

Project completion: September 2011

Report number: 1

Expenditures (through 10/2011): \$378

FY11 funding

Partners, Contractors, Coop: Wildflower Woods, J.W. Toumey Nursery, University of Wisconsin-Extension, Ashland/Bayfield County Certified Master Gardeners, National Park Service
Volunteers in Parks

Contact Person & phone number:

Susan B. Nelson (715) 685-9983
Matt Bushman (715) 373-2667



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



Native Seed Collection Chequamegon-Nicolet National Forest 2011 Accomplishments

This marks the seventh year that native plant seed was collected on the Chequamegon-Nicolet. This seed will be used for restoration projects and native plant gardens.

The seed came from two distinct ecological zones that occur on the forest: the Northern Highlands and the Bayfield Sand Plain. This ensures we are using a native genotype. Contractors skilled in plant identification targeted a host of native plants for collection throughout the growing season. They try and pick seed at its peak ripeness. This often means several trips to the same location depending on the species.

Seed was collected in forest and sunny areas as well as wetlands and includes: Canada mayflower, wild leek, grasses, blazing star, milkweed, bee balm, asters, sunflower, turtlehead, and joe-pye-weed.

The seed is dried and processed to remove much of the chaff and flower parts. This year we will process it at the Forest Service's JW Toumey Nursery in Watersmeet Michigan since they can do much of the work by machine. It is then sent to the Oconto River Seed Orchard in Wisconsin for cold temperature treatment and storage.

This year seed was used from 2010 and prior to plant at native plant gardens in Florence, Rhinelander, and Park Falls. We also used it for several restoration projects across the forest. Seed from the Northern Highland Zone was planted at the Alvin Creek Impoundment restoration site and at the Florence Natural Resource Center native plant garden. Seed from the Bayfield Sand Plain seed zone helped restore the Mount Valhalla recreation site and augment wildlife openings across the Forest.



Figure 3. (above): Bagged seed and flower heads from the collectors ready to be cleaned

Figures 1 & 2 (bottom): Picking seed is easy, as for Canada anemone (left); but cleaning small seed like this aster (right) is difficult and often the fluff can not be removed from the seed (photos M Brzeskiewicz)

Year Awarded: 2011

Project completion: on-going

Report number: 2

Expenditures: FY11 total funding \$4,000 NFN3

Partners/Contractors: Dale Soltis, Patrick Goggin, Quan Bahn

Contact: Marjory Brzeskiewicz 715-762-2461



**Chequamegon-Nicolet
National Forest**

500 N. Hanson Lake Road
Rhinelander, WI 54501



Openings for Butterflies Chequamegon-Nicolet National Forest 2011 Accomplishments

This project was initiated to restore 26 overgrown forest openings to benefit butterflies, birds and other wildlife. Many of the forest openings on the Washburn Ranger District of the Chequamegon-Nicolet National Forest are being encroached by trees and shrubs due to fire suppression and natural succession. Selected openings with dense cover were treated in 2010 by cutting most of the saplings and shrubs (Figure 1), primarily leaving scattered cherries and other soft mast producing shrubs.

To date, seven openings have been burned to further set back encroachment, as well as stimulate native species of forbs and grasses. Seed collected from native species on the district was used to restore vegetation on former roads in some openings. In addition, 100 milkweed plants, grown from Chequamegon seed at the J.W. Toumey Seed Orchard in Michigan, were planted along the former roads to re-establish Monarch butterfly habitat in the openings (Figure 2). An additional 150 milkweeds were planted in rain gardens at the Washburn District Office and the Valhalla Recreation Area.



Figure 1. Cutting dense brush to restore opening habitat.



Figure 2. Planting milkweed and seeding native species

Year Project Initiated: 2009

Project completion: Ongoing

Report number: 1

Expenditures (through 10/2011): \$ \$25,000

FY11 funding: NFWF and K-V

Contact Person & phone number:
Scott Posner 715-373-2667



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



Native Seed Collection Chippewa National Forest 2011 Accomplishments

This project was initiated in 2011 to obtain native plant material from local genetic stock on the Chippewa National Forest. The materials will be used to provide foundation material for a production greenhouse garden to be established at Camp Rabideau on the Blackduck Ranger District. The program will eventually produce seed for revegetation of areas where planting of native plant species is called for to achieve revegetation objectives.

Funds were used to hire George-Ann Maxson a local botanist who has extensive experience. George-Ann collected 75 forb and graminoid species. These plants will be planted in 2012 and evaluated for how well they grow, the objective being to understand which species are easily grown.

The project has already provided valuable information about the timing of wild plant seed collection



Figure 2. *Actaea rubra*

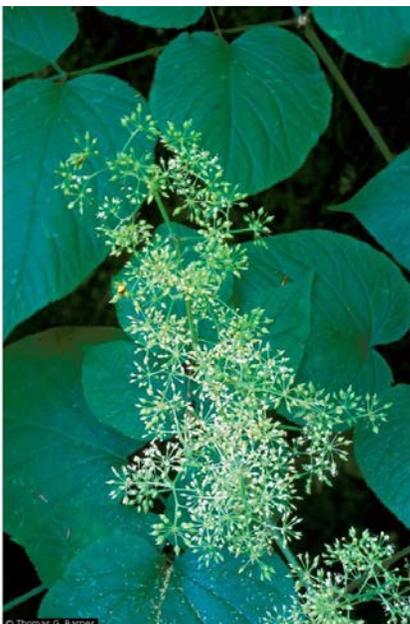


Figure 1. *Aralia racemosa*

Year Awarded: 2011

Project completion: 2011

Report number: 2 of 2

Expenditures (through 10/2011):
FY 11: \$2500.00

▪ **Total funding \$2500, total expend \$2500**

Contact Person & phone number:
Tom Heutte 218-335-8662



Chippewa National Forest
200 Ash Ave NW
Cass Lake, MN 56633



Attracting Monarchs Green Mountain National Forest 2011 Accomplishments

The existing northern hardwoods garden at the Rochester District Office of the Green Mountain National Forest was maintained in 2011. A number of native plant species are thriving there, including many spring ephemerals, ferns, shrubs, and milkweed.

A second native plant garden developed at the Manchester District Office in 2010 continued to thrive in 2011, with milkweed being one of the many native plant species planted there.

A third native plant garden was designed and implemented in 2011 at the Middlebury District Office, and space has been set aside in it to plant additional milkweed in the late autumn or early spring.

Milkweed plants are not uncommon on the Vermont landscape, and it is apparent that they have no trouble finding newly established host plants in nearby native plant gardens.



Figure 1. Seasonal botanist Marllys Eddy planned the Middlebury District Office garden with room for milkweed in one of the sunnier spots. In addition to the garden, landscaping plants were replaced with native species (photo by seasonal botanist Melissa Green).



Figure 2. Milkweed grows along the back edge of the Manchester District Office garden (photo by seasonal botanist Melissa Green).

Year Project Initiated

- Rochester Garden was begun in 2008, moved in 2009, and maintained through 2011
- Manchester Garden was initiated in summer 2010 and maintained in 2011.
- Middlebury Garden was initiated in 2011.

Project completion: Garden maintenance and continued development will be ongoing.

Report number: 2 of 2

Expenditures (through 10/2011):

- Expenditures for gardens include costs of planting and maintaining all species; an estimated cost planting and encouraging milkweed for monarchs is \$50. Overall native plant garden costs are in a separate report.

Contact /phone: MaryBeth Deller, 802-767-4261



Green Mountain & Finger Lakes NF
Rochester Ranger District
99 Ranger Road
Rochester, VT 06767



Native Plant Program Green Mountain & Finger Lakes National Forests 2011 Accomplishments

In 2011, a third native plant garden, this time at the Middlebury District office, was developed, and two existing native plant gardens at other district offices were maintained. At the end of the season, a public presentation was held on how to develop a native plant garden. In addition, fencing was provided for a butternut seed orchard project. Finally, a native plant project that was begun in a previous year, and continued this year, was developing an ongoing supply of seeds of native species with local genotypes. This seed collection project is described in detail below.

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. In 2009 the species list was refined, fact sheets were developed, and a contractor was hired to organize the volunteer seed collection effort. Because it was difficult to find enough volunteers to collect seed (especially outside VT), in 2010 a contract was awarded to the New England Wildflower Society to collect seeds over the next year in New Hampshire and Maine. That contract was expanded to include more locations in those states, plus Vermont, in 2011, and an additional contract was awarded to collect seeds in the Adirondacks of northern New York. The next step is to find a grower interested in producing a sustainable supply of the native species with local genotypes.



Figure 1. Toothwort, critical to the life cycle of the West Virginia White butterfly, was encouraged in the Rochester garden in 2010 and continued to thrive in 2011 (photo by seasonal botanist Melissa Green).



Figure 2. Native plant gardening at the Middlebury District Office involved establishing one new garden site, and replacing some existing landscaping with native plants (photo by seasonal botanist Melissa Green.)

Year Awarded: 2011

Project completion: Gardens Completed;
Seed Collection Ongoing

Report number: 1

Expenditures:

- Salary: \$10,300
- Garden Supplies & Educational Signs: \$1,700
- Fencing for butternut seed orchard: \$5,000
- Contracts for seed collection: \$13,000

Partners: New England Wildflower Society
(Contractor)

David Werier (Local botanical contractor)

Contact Person & phone number:

MaryBeth Deller 802-767-4261 x 524



Green Mountain National Forest
Rochester Ranger District
99 Ranger Road
Rochester, VT 05767



Hiawatha National Forest West Zone

2011 Accomplishments

A number of sites were identified this year for milkweed and associated nectaring plants establishment. As part of planned KV program of work for the West Zone all log landings and closed roads within upland red, jack and white pine stands were seeded with a mix of milkweed seed, warm season grasses and important nectaring native wildflowers for monarchs for approximately 12.2 acres. In addition to direct seeding for monarch habitat, the Forest greenhouse raised approximately 4,700 common milkweed and 200 swamp milkweed plugs in 2011. Nearly 3,000 common milkweed plugs were planted by volunteers at Grand Island NRA farm field restoration site. Sandtown restoration site is a degraded back dune along Lake Michigan near Nahma. In 2011 approximately 1,700 common milkweed plugs were transplanted back into the dune where illegal ATV use was occurring. NPPG on the West Zone also had new plantings occur in order to fill any gaps in the gardens. Contracts were utilized for funding greenhouse support, seed harvesting and District Offices NPPG maintenance.



Female monarch laying her eggs on new milkweed planted 2011.



SWP crew member with MKIW participants watching a monarch larva.



Planting beach grass Trout Bay GINRA

Partners:

USFS Northern Research
Superior Watershed Partnership
MSU Extension Life of Lake Superior
Grand Island Association
Hiawatha Interpretive Association

Contracts:

NFWF \$8,127

NFN \$19,605

Volunteers:

2,348.75 hours donated as of 9.1.11

Contact Person & phone number:

Deb Le Blanc 906-387-2512



Hiawatha National Forest
Munising RD
400 East Munising Ave.
Munising, MI 49862



26 Restoration Sites & Native Seed Harvesting Hiawatha National Forest 2011 Accomplishments

In Summer of 2011 Hiawatha National Forest (HNF) plant program contractors, volunteers and botany-wildlife staff restored nearly 26 acres through plantings and seeding funded by NFN310. At Grand Island National Recreation Area (NRA), restoration planting and seeding activities occurred at 22 sites. The total includes the annual Life of Lake Superior (LOLS) Event, where nearly 100 volunteers from LOLS and Grand Island Association successfully transplanted 5,000 native wildflower plugs at the old farm field restoration site. At Sandtown, Native American volunteers along with Great Lakes Recovery Center volunteers transplanted approximately 3,500 native plants into a 2-acre rehabilitation site. East side native plants were established along Whitefish Bay Scenic Byway (1400 plugs), Castle Rock Rd NCT Trailhead (800), NCT Carp River Bridge (600), and the St. Ignace Office pollinator garden (300). Also in FY11, NFN310 funds were used to collect seed for restoration projects on the Forest. More than 500 pounds of native seed were harvested either by hand or with the use of the HNF seed harvester. Much of the harvested seed was used for continued seed orchard development at closed timber sale sites. Since 2006, HNF personnel have developed small native seed orchards where roads, landings and/or barrow pits were closed after sale operations. Restoration of these sites provides the Forest with native seed sources for future needs and creates important habitats for pollinators.



SWP crew leader Linda Rehorst transplanting native plugs into slopes at a new culvert replacement site- GINRA



Pipe ceremony prior to GLRC volunteers planting at Sandtown



Williams Landing restoration site planted by Cedar Tree Institute volunteers .



Planting native beach grass in order to restore human impacts on Trout Bay dunes-GINRA.

Total NFN310 awarded for Native Plant Materials: **\$26,000**

NFN310 expenditures for contracts: Forest Greenhouse management and support, native seed harvesting, office NPPG maintenance, = \$19,605
 Forest greenhouse supplies = \$1,500
 Seed storage totes = \$500
 LOLS transportation for GINRA event = \$1000
 Forest staff salary for planning, coordinating, implementation and seed harvesting = \$3,395
Contacts : Deb Le Blanc, 906-387-2512
dleblanc01@fs.fed.us; Stephanie Blumer, 906-643-7900
sblumer@fs.fed.us



Hiawatha National Forest
 Munising Ranger District
 400 East Munising Ave.
 Munising, Michigan 49862



Early Successional Habitat Hoosier National Forest 2011 Accomplishments

Since 2007, the Hoosier National Forest has established several native seed and pollinator resource areas. The project areas have ranged in size from about 10 acres to 100 acres. At the project sites, the Forest has included butterfly milkweed and common milkweed, as well as lesser quantities of two other milkweed species in our native seed mixture or when planting native plant container stock. The inclusion of several other native forbs will increase plant diversity in these areas and provide nectar sources for monarch butterflies. Through 2011, these four areas total about 140 acres of ecosystem restoration and habitat enhancement, providing a valuable resource for monarch butterflies and other native pollinator species.

Additionally, these areas also function as early successional habitat (ESH) areas that benefit many wildlife species. The Forest maintains these areas by using prescribed fire on a 2-4 year rotation, which stimulates native grasses and wildflowers that improves habitat for local species. The Hoosier National Forest has expanded beyond the pollinator areas to include larger projects, which includes activities such as tilling, native seeding and planting, and conducting landscape burns to improve native plant diversity.

Wildflowers are an important source for pollinators such as native bees and butterflies, plus improving habitat for other wildlife species such as quail, turkeys, songbirds, and bats.



Haskins Area – Monarch on *Bidens aristosa*.
Photo by Kirk W. Larson



Haskins Area – Top Left:
September 2011
Bottom Right: July 2011.
Photos by Kirk W. Larson



Year Projects Initiated (NFN3 Native Plants/Pollinator Areas):
Haskins (2007 – 100 acres), Mifflin (2009 – 10 acres), Stillion (2010 – 30 acres), Tincher (2011 – 10 acres)

Other ESH areas: Mifflin (124 ac), Upper Moffatt (13 ac), Oriole Opening (16 ac), Hunter Creek Wetland (30 ac)

Report number: 1 of 1

Expenditures:

- FY11 funding: NFN3 - \$23,000 (native seed, plugs, interpretive sign/kiosk, bee habitat structures, mowing/seeding, partial cost – herbicide spraying)
- NFWV – \$41,790 (native seed, plugs and shrubs, mowing and seeding, herbicide spraying)
- NFWF – \$41,190 (native seed, plugs and shrubs, herbicide spraying)
- WFHF – \$34,875 (prescribed burning)

Partners/Contractors:

Quail Unlimited, National Wild Turkey Federation
Indiana Dept. of Natural Resources - Division of Fish & Wildlife,
Roundstone Native Seed, JFNew Native Plant Nursery, Spence Restoration Nursery, Indiana State Vallonia Nursery, Eco Logic, Knight's Construction, K & K Dirtworks

Contact Person & phone number:

Kirk W. Larson, 812-276-4773



Hoosier National Forest

811 Constitution Avenue
Bedford, Indiana 47421
812-275-5987



Native Seed Production & Pollinator Resource Area Hoosier National Forest 2011 Accomplishments

Background

The Hoosier National Forest intends to establish a 10-acre area of native plant seed source to further ecosystem restoration and habitat enhancement. The project site is a complex of several wildlife openings that would provide a valuable resource for native pollinator species in the area where plant diversity is lacking because of surrounding lands planted to agricultural production or pastures of nonnative species.

The intent is to establish approximately 39 forb, 2 grass, and 6 shrub species that will form the foundation of early successional habitat plantings and restorations on the Forest. Native plant focal species, but not limited to, include native forbs such as sunflowers, coneflowers, mints, asters, obedient plant, beardtongue, black-eyed Susan, blazingstar, and coreopsis. Among the species selected for planting are four species of milkweeds to provide habitat for monarch butterflies.

All of the species selected for inclusion in the areas for spring planting and the fall seeding with the seed mixture are native to southern Indiana and readily used by local pollinator species.

FY2011 Accomplishments

- Herbicide application in summer to remove tall fescue, other exotic grasses, and other undesirable species
- Mowed the fields in preparation for planting and seeding
- Purchased plug-sized container stock of various native plant species for spring 2012 planting
- Purchased native seed for fall 2011 planting by seed drill
- Purchased materials for construction of bee habitat structures and interpretive sign



Pearly crescentspot butterflies on forest edge and common milkweed on periphery of wildlife opening. *Photos by Kirk W. Larsons*



View of southern portion of Tincher Openings following the initial herbicide application to prepare the area for fall 2011 native seeding with seed drill.

Photo by Kirk W. Larson

Year Awarded: FY 2011
Project completion: (2012)
Report number: (1 of 1)

Expenditures:

- FY11 NFN3 funding: \$23,000 (for native seed mixture, native plugs, shrubs, sign, materials for bee habitat structures and kiosks; partial cost of herbicide spraying and mowing/seeding)
- Other NFWF funding: \$3,274 (for partial cost herbicide spraying and mowing/seeding; sign frames)
- Other NFWF funding: \$5,583 (for herbicide spraying)

Contractors:

Roundstone Native Seed
JFNew Native Plant Nursery
Eco Logic, LLC
(herbicide spraying/mowing/seeding)

Contact Person & phone number:
Kirk W. Larson, (812) 276-4773



Hoosier National Forest
811 Constitution Avenue
Bedford, IN 47421
Address line



Huron Manistee National Forest

2011 Accomplishments

This project was initiated in 2003 when the first Monarch Waystation Pollinator Garden was established in a former roadbed on 56th Street just west of Baldwin, MI. Since the project initiation, 3 additional pollinator gardens were created on the Baldwin/White Cloud Ranger District with an emphasis on milkweed plants and monarch habitat. By 2011, all four Pollinator Gardens/Monarch Waystations supported monarch adults and larvae. Additional milkweed seed was added to all of the gardens in the fall of 2011 to keep improving milkweed abundance.

Additional milkweed plant plugs were planted in an endangered Karner Blue Butterfly restoration area with 2 of the 9 species planted being milkweed species. These plantings placed 200 nectar increase beds strategically throughout 60 acres of occupied KBB habitat. Each fenced bed was planted to a total of 28-32 plants composed of 3 – 5 different nectar species. Seasonal staff also weeded the 24 acres of 2010 seeded nectar beds in the same project area.

Four educational talks were presented to the public on pollinator habitat, that specifically targeted Monarchs and Monarch waystations developed in the home landscape. Guided tours were also given to several groups larger than 50 attendees at the Loda Lake Pollinator Garden/Monarch Waystation.

A Native Plants for Pollinators outdoor flipbook is under contract for development that will be placed at pollinator gardens to provide plant identification aid and information about which native plants are beneficial for pollinator gardens. Milkweed species are included in the book.



Figure 1. Monarchs at pollinator garden

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: 7

Expenditures (through 10/2010):2006+-\$67,290; LCRC: 2003 \$6,420-seed cost ;FY10 funding:\$13,100 FY11 funding:GLRI \$30,000; NFN3 \$11,000

Partners/Contractors/Coop:).Lake Co. Road Commission, Garden Clubs of Michigan

Contact Person & phone number:
P.R. McGhan 231-745-4631x3102



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



Pollinator Gardens Huron-Manistee National Forest 2011 Accomplishments

This project was initiated in 2006 to obtain native lupine seed for endangered Karner Blue Butterfly restoration on the Baldwin Ranger District. Five acres of lupine/ nectar plants were planted at the Chittenden Nursery to form a permanent seed production source for restoration seed. The project was expanded to other pollinator gardens in 2007-09, bringing a total of 6 pollinator demonstration sites planted. All sites are doing well as they mature, however one garden is being moved this fall via contract to the Loda Lake Wildflower Sanctuary due to reconstruction of the District Office facility. Plans are to create a new District garden in 2013 or 2014 after facility construction is completed.

In addition to the pollinator garden move, NFN3 funding also funded a contract for collection and propagation of frostweed (*Helianthemum canadense*), an early season nectar species which is prevalent in area savanna habitat. The plant plugs produced will be planted in pollinator gardens and at endangered Karner blue butterfly restoration sites.

Additional plugs of native Michigan nectar species were purchased to continue increasing population size of several important pollinator plants, hoary puccoon (*Lithospermum canadense*), western silvery aster (*Symphotrichum sericeum*), false dandelion (*Krigia biflora*), birdsfoot violet (*Viola pedata*), white goldenrod (*Solidago ptarmicoides*), and smooth pussytoes (*Antennaria parlini*).

Lastly, NFN3 funding was used to develop a "Native Plants for Pollinators" outdoor flipbook. The guidebook is being drafted and future funding will be sought to produce plasticized flipbooks to be placed at our Forest pollinator gardens to further public education about creating pollinator gardens in their landscapes.



Figure 2. M20 motorsport trailhead pollinator garden

Year Awarded: initial award in 2006

Project completion: ongoing

Report number: 6

Expenditures (through 9/2009):

FY06 funding \$28,800, expend. \$11,721 \$17,079 remaining

▪FY07 carryover funding \$17,079, expend \$17,079; \$0 remaining

▪FY08 funding \$10,392, expend. \$10,392; \$0 remaining

▪FY09 funding \$15,000, expend \$15,000; \$0 remaining

▪FY10 funding \$11,000, expend \$11,000; \$0 remaining

▪FY11 funding \$11,000, expend \$11,000; \$0 remaining

▪**Total funding \$76,192, total expend \$76,192;**

▪**\$0 total remaining**

Partners: Michigan Garden Clubs

Contact Person: Pat McGhan 231-745-4631 x 3102



Figure 1. Giant silk moth larvae found in Baldwin District pollinator garden.



Huron-Manistee National Forest
Baldwin/White Cloud Ranger District
P.O. Drawer D
Baldwin, MI 49304



Native Plant & Pollinator Gardens Manistee National Forest

2011 Accomplishments

Installation of native plant and pollinator gardens began on the Cadillac-Manistee Ranger District of the Manistee National Forest in 2008. So far, two gardens have been established at the District office, four gardens have been established at the Chittenden Conference Center, and one garden was established at the Lake Michigan Recreation Area. The Lake Michigan Recreation Area is typically visited by 10,000 people every year, so it is a prime location to teach people about pollinators, native plants, and butterfly-host plant relationships. Each garden contains at least one species of milkweed and a variety of flowering plants to provide nectaring opportunities throughout the spring, summer, and fall. Visitors have been curious about the gardens and are generally very excited to learn about them.

In addition to the gardens, 33 acres of seedbeds have been planted with native grasses and wildflowers to provide habitat and grow seed for restoration efforts across the Forest. Thirteen acres were planted for more intense production of lupine, common milkweed, New England aster, coreopsis, and bee balm. The remaining 20 acres were planted with a combination of 25 species of wildflowers and 6 species of grasses to support a variety of pollinators, including monarchs. This year a "Checklist of the Butterflies and Skippers of the Huron-Manistee National Forests" was printed to encourage interest in the butterflies and skippers that visit the area.



Figure 1. Native plant and pollinator garden in front of the Conifers Conference Center at Chittenden



Figure 2. Native plant and pollinator garden at Cadillac-Manistee Ranger District office

Year Project Initiated: 2008

Project completion: 2011

Report number: 2 of 2

Expenditures (through 10/2011): \$58,008

FY11 funding: \$9,000

Contact Person & phone number:
Carolyn Henne (231) 723-2211



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



Native Plant & Pollinator Gardens Manistee National Forest 2011 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.

In addition to the seed beds, 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. After severe devastation by deer, parts of the gardens at Chittenden and the Lake Michigan Recreation Area were supplemented with new plants during the summer of 2011. 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.

Staff members and visitors alike have been excited about the goldfinches, chipping sparrows, and hummingbirds that visit the gardens, as well as all the butterflies, moths, and skippers. A checklist of the "Butterflies & Skippers of the Huron-Manistee National Forests" was developed to increase awareness of these species on the Forests.

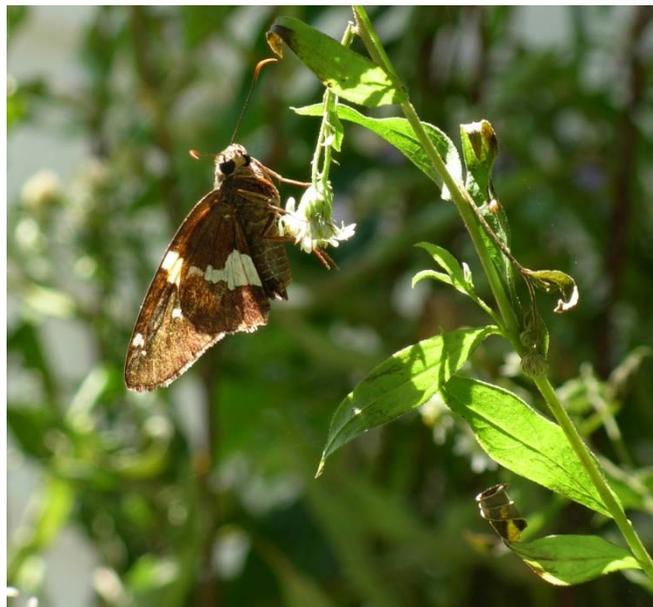


Figure 1 (above): Silver-spotted skipper on tall flat-topped white aster at the Cadillac-Manistee Ranger District office.

Figure 1 (below left): Willow sphinx moth on goldenrod at the Cadillac-Manistee District office

Year Project Initiated: 2007

Project completion: 2011

Report number: 5 of 5

Expenditures (through 10/2011):
 FY08 funding \$20,000, expend. \$17,620, \$2,380 redirected;
 FY09 funding \$11,708, expend. \$11,704.26, \$3.74 remaining;
 FY10 funding \$7,300, expend \$7,300
 FY11 funding \$9,000, expend \$9,000

Funding to date: \$58,008

Partners: Wings Across America, \$10,000 in 2009

Contact Person & phone number:

Carolyn Henne (231) 723-2211



Manistee National Forest
 Manistee Ranger District
 412 Red Apple Road
 Manistee, MI 49660



Potosi Ranger District Native Pollinator Garden Mark Twain National Forest 2011 Accomplishments

This was a continuation of the pollinator garden established at the Potosi Ranger Station in 2010. Funds were used to purchase an interpretive pollinator panel for the garden. Funds also were used to purchase additional native flowering plants for the garden.

Monarchs utilized the milkweeds in the garden for breeding.

Interpretive panel will be erected in late Fall 2011.



Figure 2. Fire pink blooms in the pollinator garden.



Figure 1. Monarchs munch on milkweed in the pollinator garden.

Year Project Initiated: 2010

Project completion: 2011

Report number: 1 of 1

Expenditures (through 09/2011): \$1500.00 panel
\$ 135.00 plants

FY101funding
Partners/Contractors/Coop:): \$0

Contact Person & phone number:
Lynda Mills 573-438-5427



Mark Twain National Forest
Potosi Ranger District
10019 W. Hwy. 8
Potosi, MO 63664



Pollinator & Native Plant Garden

Mark Twain National Forest

2011 Accomplishments

Work on the pollinator and native plant gardens continued at Poplar Bluff, Potosi and Eleven Point Ranger Districts.

This spring there was a bumper crop of monarch caterpillars using *Asclepias tuberosa* at the native garden at the Poplar Bluff Ranger District office. The first graders at Eugene Fields had been studying butterflies and had "grown" a painted lady in the classroom. Approximately 125 students took turns viewing the caterpillars, and many wanted to touch them. Most knew the four life cycle stages of a butterfly, and one knew the differences between the butterfly chrysalis and moth cocoon.

A new interpretive panel has been ordered for the Potosi native garden and new plants were planted.

The Mark Twain used NFN3 monies to enter into a Challenge Cost Share Agreement with Lincoln University Cooperative Extension Native Plants Program to collect seed and propagate native plant material from the Mark Twain National Forest to:

- augment restoration efforts of natural terrestrial plant communities on the MTNF.
- Burned Area Emergency Rehabilitation and other areas of disturbance that may require restoration.
- Native/Pollinator gardens located at administrative site on the Mark Twain National Forest and in the Native Plant Outdoor Laboratory and other native plant demonstration gardens located at the University campus and LU- Experimental Farms.

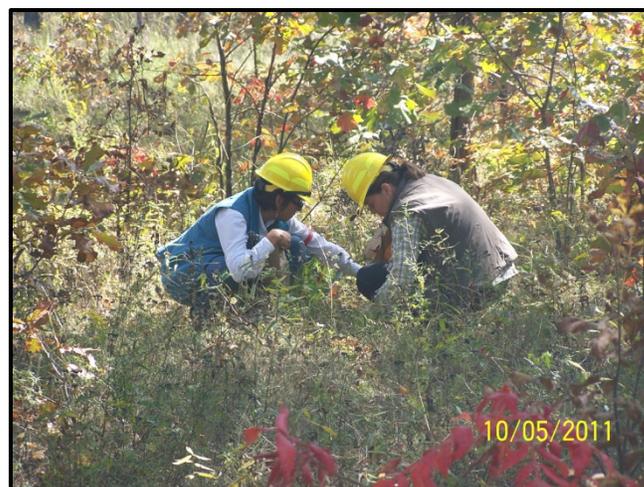


Figure 2. LUCE collecting seed at Western Star Flatwoods Savanna

Year Awarded: 2011

Project completion: 2011

Report Number: 1

Expenditures (through 10/2011):

Interpretive panel: \$1,525.00

CCSA LUCE: \$8,000

Plant Markers for SO garden: \$325.00

Contact Person & phone number:

Brian Davidson 573-341-7414



Figure 1. New interpretive panel at the Potosi Ranger District



Mark Twain National Forest
401 Fairgrounds Road
Rolla, MO 65401



Beneficial Projects for Monarchs on the Mark Twain National Forest 2011 Accomplishments

In 2011, 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.

- Bates Hollow Prescribed Burn – 468 acres of forest, open woodland and openlands burning.
- Upalika Prescribed Burn – 2,177 acres of a variety of habitats that contain important nectar sources.
- Big Creek and Three Sisters Prescribed Burn – 7,831 acres of glades, savanna and open woodlands that support numerous nectar and host plant species.
- Buttler Hollow Prescribed Burn – 380 acres of glade and open woodlands.
- Pruesch Prescribed Burn – 643 acres of savanna and open woodlands.



Figure 2. Monarch butterfly on liatris blossom in the Upalika project area..



Figure 1. Portions of the Upalika project area.

Year Project Initiated: 2011

Project completion: 2011

Report number: 1 of 1

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



Mark Twain National Forest
401 Fairgrounds Road
Rolla, Missouri 65402



Planting for Pollinators Midewin National Tallgrass Prairie

2011 Accomplishments

Funding from this program was used to increase native plant diversity at two sites near existing pollinator gardens. Two groups, the El Valor Science and Technology camp, a nonprofit, community-based youth group, and another partner, the Unitarian Universalist Church group, planted 2000 native plant plugs of 33 different wildflower and grass species this summer. The native plants will provide a long season of bloom for visiting pollinators, from Golden Alexanders in the spring to New England Asters blooming in the fall. Participants from the El Valor camp installed native plant plugs in a wooded area recently cleared of invasive bush honeysuckle. In addition, the Unitarian Universalist camp came to Midewin ready to work one beautiful summer day in August and expanded a native prairie garden through planting species such as Spiderwort, Wild Strawberry and Side Oats Grama Grass.

This award also assisted in providing funding for the Student Temporary Employment Program (STEP) at Midewin this summer. Several of the projects completed by students employed through this program include rejuvenating a native pollinator garden, controlling invasive species, constructing a raised planting bed for native seed production at the Midewin supervisor's office and monitoring threatened and endangered plant species. The restoration program at Midewin relies on the work accomplished by student employees to further its mission of conserving and enhancing native populations of plants and animals.



Participants from the El Valor camp increasing native plant diversity near the Iron Bridge Trailhead at Midewin. Photo courtesy of El Valor.



Members of the Universalist Unitarian Church camp installing native prairie plants at Midewin.. Photo courtesy of A. Cisneros, Nature Conservancy

Year Awarded: 2011

Project completion: 2011

Report number: 1 of 1

Expenditures:

FY10 funding: \$ 21,500

Expenditures: \$ 21,500 Plant plugs and Labor

Remaining: \$0

Partners: El Valor
Universalist Unitarian Church
Midewin volunteers

Contact: Jennifer Durkin, Botanist and
Eric Ulaszek, Horticulturist
(815) 423-6370



Midewin National Tallgrass Prairie
30239 S. State Route 53
Wilmington, IL 60481



Native Plant Pollinator Garden – CMNC Monongahela National Forest 2011 Accomplishments

This project was initiated in 2008 to create a native plant pollinator garden at the Cranberry Mountain Nature Center. The nature center hosts close to 30,000 visitors annually. The garden was planted in a central area of the nature center grounds, which can be viewed from the inside and outside of the building, including an accessible picnic area. Visitors have enjoyed the many butterflies, bees and birds which visit the garden and nearby bird feeders since planting in 2008. With the garden established, the focus in 2009 was on maintenance of the garden and interpretation. In 2010 emphasis was on replacing non-native bushes with two new sections of native plant gardens. Two additional interpretive signs were placed in these new gardens. A split rail fence was also installed to support the bustling plants and enhance the natural look of the garden. A pollinator brochure was designed which explains the purpose of the garden.

In 2011, Americorps member Vince Weeks proposed adding a hoop house to the nature center grounds. This greenhouse was installed in the summer of 2011 and will be used to start our own milkweed seedlings. Americorps members Ashley Blazina and Cynthia Everitt gathered native milkweed seeds in the district. Cynthia is continuing into 2012 with the Americorps program and will enlist other Americorps in helping her grow plants to transplant into the gardens at the nature center and other locations on the district. The hoop house is located along the walkway through the pollinator gardens and will be open to the public to view. Interpretive signs have been ordered and will be installed soon.



Figure 1. YCC crew assists staff member Buzz Hypes with hoop house construction



Figure 2. Syrphid fly perched atop wild yellow indigo.

Year Awarded: initial award in 2008

Project completion: Ongoing

Report number: 4 of 4

Expenditures (through 10/2011):

FY08 funding \$5,759.73, expend. \$5,759.73; \$0 remaining

FY09 funding \$2,834.20, expend. \$2,834.20; \$0 remaining

FY10 funding \$1,880.00, expend. \$1,859.00, \$21 remaining.

FY11 funding \$1,000, expend \$995.41, \$4.59 remaining.

Total funding \$11,473.93, total expend. \$11,448.34
•\$25.59 total remaining

Partner: Pocahontas County Convention and Visitors Bureau, Americorps.

Contact Person & phone number:

Diana L. Stull 304-653-4826



Monongahela National Forest
Gauley Ranger District
Cranberry Mountain Nature Center
932 North Fork Cherry Rd.
Richwood, WV 26261



MONARCH
JOINT VENTURE

Greenbrier RD Native Plant Garden

Monongahela National Forest

2011 Accomplishments

The Greenbrier Ranger District native pollinator garden was created in 2008 to provide habitat for native pollinators as well as to supply a local native seed source for the forest and community. The highlight of this year for the garden was the growth and maturity of the established native plants. Plants are really starting to become the beautiful and spectacular specimens that they are meant to be. Several interested parties stopped in the district office to comment on the flowers in bloom and inquire about the plant species. Many species, including blueberries and raspberries, provided fruit aplenty for forest visitors; two-legged, four-legged and winged alike! A portion of our garden also functions as a nursery to holdover plants though the winter. Approximately 5000 native plants spent their winter here at the garden waiting to be planted at a restoration site on the district, which now has been populated with over 17,000 native plants!

The district employees installed the information sign in the garden this summer to provide an overview of the project. They also had a work day to eliminate weeds in the front portion of the garden.

Numerous species have and continue to provide seed available to the public to encourage the planting and proliferation of native plants in our area. We look forward to watching our plants thrive and are excited to see the numerous pollinators that frequent our area.



Native asters flowering in the garden



Winterberry Holly

Year Awarded: initial award in 2008

Project completion: 2011
Report number: 4 of 4

Expenditures (through 10/2011):
▪FY11 funding \$1,000 expend. \$920; \$80 remaining
▪**Total funding \$49,691; total expend \$49,098**

Partners/Contractors/Coop: Alderson Plant Materials Center (Department of Natural Resources, Division of Agriculture), AmeriCorps.

Contact Person & phone number:
Kent Karriker 304-636-1800



Monongahela National Forest
Greenbrier Ranger District
PO Box 67
Bartow, WV 24920



MONARCH
JOINT VENTURE

Mower Tract Ecological Restoration

Monongahela National Forest

2011 Accomplishments

Over the last year, multiple partners have brought a 100 acre pilot restoration project to fruition. The Barton Bench area was mined for coal in the 1970s prior to becoming part of the National Forest system. This tract is a portion of the 40,856 acres acquired by the US Forest Service in the late 1980s that has become known as the Mower Tract. The federal standards followed by the coal companies for the cleanup operation left the area in a less than desirable condition. Among other things, the area was planted with predominately non-native grass species, resulting in a dense grass mat as the only vegetation, which has inhibited native species colonization. This is a permanent condition referred to as 'arrested succession' and was unlikely to correct itself without intervention. There are approximately 2,500 acres of previously mined land on the Mower Tract and 1,800 acres are in a similar vegetative state as the Barton Bench area. The ultimate goal of this project is to commence ecological restoration efforts on the Mower Tract to restore native flora on previously strip-mined benches that currently are stuck in 'arrested succession' and dominated by a thick, non-native sod layer. The use of native vegetation is expected to reduce maintenance costs and increase the probability of success.

Benefits of this reforestation effort were threefold: provide early successional habitat (e.g. high stem density) in the short term, restore watershed conditions and native red spruce northern hardwood forest in the long term, and use the results of this project to implement restoration projects on more than 1,800 acres of reclaimed mine lands. Restoration efforts included terrestrial and aquatic restoration in that approximately 40 acres of non-native grasslands were deep ripped and 130 wetlands were created. Over 27,000 native plants were planted over the course of the last seven months. Approximately 17,000 plants were purchased from an Arbor Day Foundation grant, and planted on the deep ripped areas thanks to a National Civilian Conservation Crew (NCCC). The NCCC planting crew was awarded to the forest service as a result of our partnership with the Appalachian Regional Restoration Initiative and the Appalachian Coal Country Team. Approximately 10,000 plants were planted around the wetland restoration sites. All of these plants were propagated from local seed source by the Natural Resource Conservation Service's Alderson Plant Material Center (PMC), thanks to past NFN3 funding. The native species priority list was developed in collaboration by our partners with various interests, ranging from native species advocates, to wildlife game managers. Special emphasis was placed on native species most advantageous for pollinators or wildlife. This restoration work will greatly benefit the federally-listed West Virginia northern flying squirrel and Cheat Mountain salamander, and other high-interest species including the snowshoe hare, white-tailed deer, black bear, golden eagles, woodcock, ruffed grouse, saw whet owl and a number of pollinating animals by providing a variety of food sources and niches. Once native species are established, the restoration site will develop into a red spruce-northern hardwood ecosystem, thus providing a native seed source.

As evidenced by the Arbor Day Foundation grant, WVDEP monies (\$330,000) and the NCCC planting crew, this project has catalyzed restoration efforts for the Mower Tract. We have already finished planning for the next area of restoration and have momentum for continued restoration efforts, despite declining forest service budgets.



Figure 1. Successful restoration projects demand collaboration and coordination of many partners.

Year Awarded: initial award in 2009

Project completion: est. 2012

Report number: 3 of 3

Expenditures (through 9/2011):
 FY09 funding \$15,000, spent. \$15,000, \$0 remaining
 FY10 funding \$23,500, spent. \$23,242, \$258 remaining
 FY 11 funding \$20,000, spent \$20,000, \$0 remaining
**•Total funding \$58,500 total spent \$58,242;
 \$258 total remaining**

Partners: Partners: USDA- NRCS Alderson Plant Material Center and Wes-Mon-Ty RCD, Arbor Day Foundation, National Civilian Conservation Corps, Americorps, Appalachian Regional Restoration Initiative and the Appalachian Coal Country Team, Central Appalachian Spruce Restoration Initiative (CASRI), WV Division of Natural Resources, WV Department of Environmental Protection, WV Division of Forestry, USFWS, USDI-Office of Surface Mining, Nature Conservancy, and West Virginia Highlands Conservancy.

Contact Person & phone number: Shane Jones
 Greenbrier Ranger District (304) 456-3335 ext.114



Monongahela National Forest
 Greenbrier Ranger District
 Hwy 250/92, PO Box 67
 Bartow, WV 24920



MONARCH
JOINT VENTURE

Stuart Recreation Area Native Plant Garden

Monongahela National Forest

2011 Accomplishments

The Monongahela National Forest worked on many fronts to improve the 5,500 square foot pollinator garden it established last year at one of the forest's most visited locations, Stuart Recreation Area. This recreation area receives over 20,000 visitors each year making this an ideal location for public outreach and interpretation regarding the importance of pollinators and their ecological needs.

This year, the garden needed many things to increase its value to pollinators. First, several new species of plants were purchased and planted in the garden by AmeriCorps volunteers. Species purchased included *Gentiana andrewsii* (bottle gentian), *Asclepias tuberosa* (butterfly weed), *Asclepias quadrifolia* (Four leafed milkweed), *Lilium sagerbium* (Turk's cap lily), *Chelone glabra* (white turtlehead), and *Symphytotrichum novae-angliae* (New England aster). In addition to planting new species, volunteers also assisted in weeding and mulching the garden resulting in 98 volunteers and \$2,043 of in-kind services.

Another key aspect to improving the native plant garden in 2011 was providing cover and places for bees to raise young. Most native bees are solitary nest makers and build their nests in the ground or in pre-existing cavities. In the past, we had been suppressing weeds and conserving water through the use of wood mulch. Unfortunately, many ground-nesting bees look for garden sites where they can dig small tunnels to lay eggs in individually-made brood cells that are provisioned with pollen and some nectar. Since between 60-70% of the native West Virginia bee species need bare dirt to excavate tunnels for their nest cells, we wanted to find a replacement for wood mulch. Our largest purchase for the Stuart Pollinator Garden was an electric leaf shredder. Volunteers will soon convert the leaves shed by our trees in the fall into a more bee- friendly mulch leaving patches of bare dirt. These bee-friendly practices should encourage use of the garden by native bees.

The final task for the native plant garden in 2011 was protecting it from deer. Although the garden is surrounded by lush forest vegetation, it quickly became obvious that deer favored the plants inside the native plant garden. To protect our investment, the Liquid Fence Deer @ & Rabbit Repellant was purchased and applied to each plant in the garden. This eco-friendly repellent stops deer and rabbits from eating flowers, shrubs, trees, and vines. The product is environmentally safe and biodegradable and is even safe to use on edible crops. Considering that just one deer can get up to ten pounds of food a day, this will be a long-term problem.



Year Awarded: 2011

Garden: Stuart Pollinator Garden

Expenditures: \$1,000

In-Kind Services: \$2,043

Partners: AmeriCorps, Appalachian Forest Heritage Area, Enchanters Garden, & NRCS Alderson Plant Materials



Viceroy Caterpillar in Garden



Monongahela National Forest
200 Sycamore Street
Elkins, WV 26241-3962



MONARCH
JOINT VENTURE

Activities in Support of Monarch Butterfly Joint Venture Ottawa National Forest 2011 Accomplishments

This year, several plantings of nectar plants for monarchs and other butterflies were conducted. Seeds were collected on the Ottawa National Forest and seedlings raised at the Forest Service's JW Toumey Nursery. Species were selected which thrive in open disturbed areas as well as provide for pollinator needs: evening primrose (*Oenothera biennis*), black-eyed susan (*Rudbeckia hirta*), wild bergamot (*Monarda fistulosa*) and common milkweed (*Asclepias syriaca*).

About 900 mixed seedlings were planted by Forest Service staff and volunteers in a meadow at a popular lake-side day use area, next to milkweed planted in 2010. The intent is to reclaim this meadow from non-native invasives including spotted knapweed and smooth brome, and to provide enhanced species diversity and plants for pollinators.

Seedlings of the four target species were planted at a recently vacated administrative site, for pollinators, species diversity, and site restoration. Seedlings were also added to existing native plant/pollinator gardens at three administrative sites and one recreation area, and planted in two new, small, office-front locations. Plant labels on stakes were added for interpretive purposes.

Seedlings of the state threatened/Regional Forester's Sensitive dwarf bilberry (*Vaccinium cespitosum*), the host for the larvae of the similarly listed northern blue butterfly (*Lycaeides idas nabokovi*) were also raised at Toumey Nursery. About 150 of these seedlings were planted at two locations, continuing previous efforts to increase this plant on the landscape.

In addition to planting, a prescribed burn and a mechanical treatment were conducted on 19 acres, to retard succession and maintain an opening with graminoids and flowering plants which will provide enhanced habitat for butterflies and other pollinators.



Figure 1.
Prescribed
fire in
opening

A program was presented on pollinators, including monarchs, at the Forest Visitor Center. Also, at a tribal youth camp session, Forest Service staff led kids in making seed balls containing milkweed and other seeds for distribution in the northern Michigan and Wisconsin area.



Figure 2. Planting area at Black River Harbor (see straw-mulched patch mid-photo)

Year project initiated: 2010

Project completion: Planting of milkweed and other nectar plants is expected to be ongoing for several years.

Report number: 2

FY11 Funding: NFN3 (\$2600); NFWF (\$3733); other NF codes (\$800); WFHF (\$2700); Volunteers (\$320)

Partners/Contractors/Cooperators: JW Toumey Nursery, Ottawa Fire Program, local volunteers.

Contact person & phone number: Sue Trull, Botanist, 906-932-1330 ext. 312



Figure 3.
Seedlings ready
for planting



Ottawa National Forest
E6248 US Hwy.2
Ironwood, MI 49938



Native Plant Materials Program Ottawa National Forest 2011 Accomplishments

The Ottawa Botany Program continued maintenance and enhancement at five native plant/pollinator gardens and one wetland garden. Gardens were weeded and new species added, and some mason bee houses were installed.

Nectar-providing native plants for butterflies were produced, using seed collected on the forest and raised to seedlings at JW Toumey Nursery. Species were selected which thrive in open disturbed areas as well as provide for pollinator needs: evening primrose (*Oenothera biennis*), black-eyed susan (*Rudbeckia hirta*), wild bergamot (*Monarda fistulosa*) and common milkweed (*Asclepias syriaca*). About 900 mixed seedlings were planted by Forest Service staff and volunteers in a meadow alongside Lake Superior at a recreation area. Seedlings also were planted at a recently vacated administrative site and in two small, office-front locations.

Intermittent workers and a contractor collected seeds, to build a cache for Forest revegetation projects and for use in seed production at JW Toumey Nursery. Employees collected 18.2 pounds of green bulrush (*Scirpus atrovirens*) and 13.3 pounds of fringed sedge (*Carex crinita*). The contractor focused on the graminoids big bluestem (*Andropogon gerardii*), fringed sedge, poverty oats (*Danthonia spicata*), fowl mannagrass (*Glyceria striata*), bottlebrush grass (*Elymus hystrix*), and green bulrush; and the forbs common milkweed, swamp milkweed (*Asclepias incarnata*), false sunflower (*Heliopsis helianthoides*), wild bergamot, and evening primrose.

Two 2500 square-foot areas were prepared for future seed production sites. The areas were plowed and covered with black plastic over the summer to kill existing vegetation. They will be seeded with local native seed in late October 2011. Species to be planted include black-eyed susan, evening primrose, false sunflower, wild bergamot and sneezeweed (*Helenium autumnale*).



Figure 2. Planting seedlings in meadow, Black River Harbor, Lake Superior



Figure 2. Planting seedlings in meadow, Black River Harbor, Lake Superior



Figure 1. Collected sneezeweed seed



Figure 3. Black-eyed susan ready to plant

Year Awarded: 2008, additional funds awarded in 2009, 2010, and 2011.

Project completion: ongoing.

Report number: 4.

Expenditures: \$23,000 in 2011.

Partners/Contractors/Cooperators: Friends of Bergland; Friends of Sylvania Wilderness; JW Toumey Nursery; Contractors M. Mason, B. Peacock, C. Germaine, A. Ellsworth

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



Ottawa National Forest
E6248 US Highway 2
Ironwood, MI 49938



Welcome Monarchs! Shawnee National Forest 2011 Accomplishments

This project was continued in 2011 to enhance native plant pollinator gardens with plants that monarchs rely on for food. Plants such as black-eyed Susan, butterfly weed, purple coneflower, and New England aster were obtained from 3 local nurseries as well as dozens of other native plant species targeted for other pollinators. Species will continue to be transplanted from plant rescues and through nursery purchases as they become available. Local nurseries have been stocking more native species during the last 2 years than ever before... perhaps a result of the Forest Service and partners' continuous requests for native species.

The "Welcome Monarchs!" project is an extension of the "Partners and Pollinator Gardens" project that was initiated in 2009 on the Shawnee National Forest. Figure 1 was taken in the 0.1-acre pollinator garden in front of the new office building. Figure 2 was taken in the lower parking lot of the administrative grounds. This is the first year that Monarchs have visited the Vienna garden. Linda Hauser has seen monarchs on milkweeds at the Murphysboro Work Center since at least 2010.



Figure 1. Scales (insects) were found devouring Butterfly Weed, however, they were gently wiped off of plants periodically. Misty McElyea found this caterpillar taking advantage of the newly planted Butterfly Weed.



Figure 2. Misty McElyea caught this butterfly exploring a FS vehicle tire in September. Monarchs have been seen lingering at the District Office/Work Centers as late as Nov 7 feeding on purple coneflower and black-eyed Susan nectar.

Year Project Initiated: 2010

Project completion: 2014

Report number: 2 of 4

Expenditures (through 10/2011): \$4,558.71
FY11: \$1,669.80

FY11 funding – NFN3

Partners/Coop - 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 Person & phone number:
E.L. Shimp 618-658-2111



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



Partners & Pollinator Gardens Shawnee National Forest 2011 Accomplishments

This project was initiated in 2009 to obtain and plant native plant material from local genetic stock and add to the pollinator gardens at 3 administrative sites on the District. Seven partners are participating in a Challenge Cost-share Agreement to help the District Office and Work Centers become educational sources for school groups and other visitors.

This years focus was to remove debris and non-native invasive plant species from an adjacent woodland and planning a woodland wildflower trail for visitors. Prior to opening it to the public, native species are being re-introduced through plant rescues and nursery purchases. Species such as Cinnamon Fern, Royal Fern, Maiden Hair Fern, and Rattlesnake plantain have been planted and will be joined by numerous other native woodland species.

Hundreds of plants were put into two gardens at the District Office. Existing pollinator gardens at the two Work Centers and the Johnson Creek Recreation Area were maintained and enhanced. Suet and feeders for birds, including a hummingbird feeder, have become permanent fixtures in the gardens.



Figure 2. November brings the earthy tones of the prairie drop seed and Indian grass into harmony with the bright colored black-eyed Susan and purple coneflower.



Figure 1. In April, Ruth Kelley (Shawnee Group of the Sierra Club) and Melissa Wilson (Shawnee RC&D) took on the tedious task of digging daffodil bulbs that have come up in the pollinator gardens.

Year Awarded: 2011

Total Project Value of \$184,351.20 has been planned with partners. Forest Service funding with NFN3 dollars came to \$14,000.00 in FY09, \$22,000 in FY10 and \$19,000 in FY11.

Project completion: 2014

Report number: 3

Expenditures: \$16,698.00 (FY11)

Partners: 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 Person & phone number:

E.L. Shimp 618/658-2111



Shawnee National Forest
Hidden Springs/Mississippi
Bluffs Ranger District
602 North 1st Street
Vienna, IL 62995



Common Milkweed Seed Collection and Planting - Superior National Forest 2011 Accomplishments

This project involved collecting seed from the native plant common milkweed (*Asclepias syriaca*) for use in establishing new milkweed populations at five district offices and the Supervisor's Office. During fall 2011, milkweed seed was collected from multiple populations near Aurora, MN. The seed was mixed together and distributed to the five districts and the Supervisor's Office, where it was planted in open, sunny areas. The objective is to start milkweed patches and attract monarchs to administrative sites, to assist with future visitor education efforts about the monarch butterfly.



Figure 2. Common milkweed seed



Figure 1. Common milkweed (*Asclepias syriaca*) fruit at collection site

Year Project Initiated: 2011
Project completion: 2013
Report number: 1 of 3
Expenditures (through 9/30/2011): \$500
FY11 funding: NFWF09
Partners/Contractors/Coop: None
Contact Person & phone number:
Jack Greenlee, 218-229-8817



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

Native Plant and Pollinator Gardens Wayne National Forest



MONARCH
JOINT VENTURE

2011 Accomplishments

The Native Plant and Pollinator Gardens project was initiated in 2008 on the Wayne National Forest to: obtain local native plant materials to create native plant and pollinator beds at administrative offices, provide trails and interpretation about the importance of native plants and pollinators, and create native plant seed production areas for future restoration. All three of the administrative offices have native plant/pollinator gardens, and two of the offices have interpretive trails and shade houses for seedling production.

FY 2011 funds were used to maintain existing native plant gardens for continued pollinator use, public education and landscaping around at the three administrative offices. Maintenance activities included mowing and weed-eating around native garden plantings, weed removal within the garden beds, removal of invasive species (Canada thistle) and transplanting plugs of native species (*Liatris*, *Asclepias*) into the newly weeded areas. Hocking College students put in 72 volunteer hours weeding and transplanting at the Athens district gardens as part of a practicum for their plant class. Other maintenance included replacement and re-enforcement of interpretive signs and holders along the interpretive trail at the Ironton district office.

In addition, FY11 earmark funds were used to prepare 10 acres of reclaimed mineland for native plantings on the Athens district. This involved mowing the existing non-native vegetation (fescue, lespedeza) and then letting it grow back to then be sprayed with herbicide in October. Wildlife funds will then be leveraged in November and March (FY12) to rent a no-till Truax drill to plant warm season grass and prairie forb seeds. Fall and spring plantings will be monitored over-time to determine what species respond best to the different planting times. This data will be used to help determine what methods will be used in upcoming wildlife restoration projects that target converting reclaimed minelands to more biologically diverse plantings of native species for wildlife habitat and foraging. Prescribed burning will also be incorporated for conversion and maintenance; then monitored for adaptive management of these converted openland habitats.



Figure 1. Weeding native plant and pollinator garden.



Figure 2. Replacing signs along interpretive trail.

Year Project Initiated: FY2008

Project completion: FY2011

Report number: 1 of 1 (2011)

Expenditures (through 10/2011):

- FY08 funding \$26,502

- FY09 funding \$30,000

- FY10 funding \$25,000

- FY11 funding \$16,000

Total Funding: \$97,502

FY11 funding (Partners/Contractors/Cooperators):

Hocking College, Northwind Engineering, Athens County Soil and Water District, Shad Salyers, Christina Vaughn, Jennifer Elkins, Travis Kling, Zac Allen, Nick Galentin, Allen Patton, Jaclyn Haynal, Benjamin Reed and Jessica Masters.

Contact Persons:

Cheryl Coon, Forest Botanist 740-753-0558 and

Aurora Roemmich, Ironton District Botanist 740-534-6535



Wayne National Forest

13700 U.S. Hwy 33

Nelsonville, OH 45701



Tagging Monarchs Wayne National Forest 2011 Accomplishments

Mid-September to early-October have the biologists visiting old fields and wildlife openings (e.g. Figure 1) in search of migrating Monarch butterflies. Once caught a small disc “tag” with a 3-letter and 3-number code is adhered to the monarchs hind wing. (Figure 2). Information on the sex of the butterfly and the location of the capture is also recorded. After all is processed the butterfly is then free to continue on its flight south to the mountains of Mexico. The purpose of this project is to record the location of capture to the point of recovery thereby providing information on the migratory route, the influence of encountered weather patterns and survival rates.

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

Since the beginning of the tagging program in 2008 172 butterflies have been tagged (104 in FY11). To date no tags have been recovered....yet!



Figure 1. One third of the monarchs tagged in 2011 were from this small ironweed patch near the highway.



Figure 2. A tagged male monarch

Year Project Initiated: 2008

Project completion: Ongoing

Report number: 1 of 2

Expenditures (through 10/2011): NFWF \$1235.00

FY11 Funding: Wayne National Forest -
Volunteers

Contact Person & phone number:
Lynda Andrews 740-753-0550



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



Propagation of Milkweed and Planting of Nectar Sources Wayne National Forest 2011 Accomplishments

Seeds from milkweed and various nectar producing plants were collected from native regional stock and planted in trays. These seedlings are being grown in the Forest shade house and will be transplanted into prairie areas on the Athens Ranger District around the Nelsonville and Marietta offices this spring. Additionally, seed from native stock was collected and planted around areas that had been disturbed due to oil and gas well plugging.



Figure 2: Starting trays with milkweed seedlings.



Figure 1: Seeds from a milkweed pod

Year Project Initiated: 2011

Project completion: 2012

Report number: 2 of 2

Expenditures (through 10/2011): NFN3 \$300.00

FY11 Funding: Wayne National Forest -
Volunteers

Contact Persons & phone numbers:
Cheryl Coon 740-753-0558
Lynda Andrews 740-753-0550



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



MONARCH
JOINT VENTURE

Lincoln Woods Native Plant Pollinator Garden White Mountain National Forest 2011 Accomplishments

The entrance port to the Pemigewasset Wilderness on the Pemigewasset Ranger District of the White Mountain National Forest is known as Lincoln Woods. This site, located on the Kancamagus National Scenic Byway, is a heavily used year round facility. At the welcome cabin there is no water or wired electricity. All power is supplied by a solar panel and any water must be carried in by hand. For nearly five years, the district has struggled to get plants established in the small garden area in front of this facility. Water has consistently been a challenge.

In 2011, a gutter and rain barrel system were installed to provide a periodic source of irrigation water for the garden beds and a variety of native herbs and shrubs adapted to drier sites were installed. The rain barrel system collects water from the roof of the facility. The resulting plantings have transformed the garden areas from barren weedy patches with some spring daffodil bulbs into an attractive native plant garden highlighting some of the native species visitors are likely to encounter while hiking in the Pemigewasset Wilderness Area.

Over 150 plugs, pots, and balls were installed constituting 20 different species including low-bush blueberry, meadowsweet, Pennsylvania sedge, maple leaved viburnum, flat-topped aster, grass-leaved goldenrod, and New England aster. The planting of these species should keep the local pollinator population content for years to come. The presence of the rain barrel watering system relieves the pressure on the handful of volunteers who staff this facility on a year-round basis. Two of the volunteers provided some of the naturalistic landscaping material in the form of a perfectly rotted stump from their back yard. The presence of this stump and several other rotted logs and rocks give the garden a natural feel and appearance. The changes were immediately noticed by frequent visitors and newcomers alike. Many were impressed with how rapidly the change occurred while others were intrigued with the species planted or the specifics of how the rain barrels worked.



Lincoln Woods with its new rain barrel irrigation system and gardens.



Lincoln Woods Forest Service volunteer talking to visitors about the gardens and giving out information on local hikes.

Year Awarded: 2011
Project completion: 2011
Report number: 2 of 2

Expenditures:
FY 2011 total funding - \$31,000.00
FY 2011 Lincoln Woods Garden – \$13,410.00
Site Prep/Staff - \$3,626.00
Materials – \$9,784.00

Contractors, Partners, Cooperators:
Clements Nursery
Himmer Construction

Contact: Christopher Mattrick
603-536-6225, cmattrick@fs.fed.us
Images by Christopher Mattrick



White Mountain National Forest
71 White Mountain Drive
Campton, NH 03223



MONARCH
JOINT VENTURE

Monarchs & Milkweeds

White Mountain National Forest

2011 Accomplishments

This project was initiated in 2008 with the installation of the native plant garden at the Saco Ranger Station in Conway, New Hampshire.

A conscious effort was made to install native plant materials that would be beneficial to local pollinators, especially the monarch butterfly. Native Plant Gardens now exist at three administrative sites on the White Mountain National Forest (WMAC): the Saco Ranger Station, the Androscoggin Ranger Station and the new White Mountain Administrative Complex (WMAC). The common milkweed at the Saco and Androscoggin Ranger Station gardens has become so abundant that it is being thinned so that it does not choke out other pollinator plants nearby. The thinned stock is then transplanted to wildflower meadows nearby at each site.

In 2011, additional milkweed stock was added to the WMAC gardens and included as a component of the seed production meadow plug plantings taking place in the fall of 2011. All the planting stock was provided by a local nursery and is of local New England genetic type. These plantings total approximately 1 acre.

The WMNF has for many years maintained dozens of wildlife openings on the WMNF through the use of fire and mowing. Despite staffing limitations and problems with our primary mower we were able to maintain approximately 183 acres of land in an open state. These sites a strong component of common milkweed (*Asclepias syriaca*), as well as other milkweed species. These openings are critical to the future of the Monarch butterfly on the WMNF. By maintaining these areas in an open state with a component of common milkweed we are providing habitat and nectar sources for the Monarch and other native butterfly species.



Common milkweed (Asclepias syriaca) beginning to establish in the seed production meadow.



Ripe and dispersing pods of swamp milkweed (Asclepias incarnata) at the White Mountain National Forest seed production meadow.

Year Project Initiated: 2008

Project completion: The project is on-going and variable with actions and funding be utilized to enhance habitat for monarchs as available. The funding listed below is related to the planting of milkweed species in native plant pollinator gardens. Additional funding from multiple appropriated funds was utilized to support the mowing and burning of wildlife openings to achieve multiple targets.

Expenditures (through 10/2011): \$2,456.26
FY11 funding: \$956.26

Partners/Contractors/Coop: Clements Nursery

Contact Person & phone number: Christopher Mattrick, Forest Botanist
603-536-6225 cmattrick@fs.fed.us



White Mountain National Forest
71 White Mountain Drive
Campton, NH 03223



MONARCH
JOINT VENTURE

Native Plant Pollinator Gardens- Administrative Complex White Mountain National Forest 2011 Accomplishments

Since 2009, the White Mountain National Forest has been striving to develop the landscape at its new Supervisor's Office/Pemigewasset Ranger District facility utilizing native plant materials. The overall intention is to develop the entire site as a complex of native plant pollinator gardens. Progress is slow, but steady. In 2009, a wetland native plant pollinator garden was installed in a storm water detention wetland, in 2010 a native shrub thicket garden and entrance gardens were installed not only to serve the local pollinator population, but to serve as a teaching opportunity about native plant landscaping and for the enjoyment of the visitors to this facility. A wildflower meadow and seed production area was also conceived and a local provenance seed mix sown on the site of the facilities leach field in 2009. Despite the application of 6-8 inches of loam to the site, it remains a droughty area and has proved challenging for seeds to germinate. The year 2010 passed with little sign of successful seed germination.

In 2011, the focus was to acquire local provenance plugs of native species and use these to augment the previously sown seed mix. To this end 5,100 plugs of native asters, goldenrods, milkweeds, and a handful of various other species were acquired from a local nursery. Due to the late arrival of this stock they are still being planted in the meadow area and other sites around the White Mountain headquarters facility. However, much to our delight thousands of small seedlings and many first year plants resulting from the seed mix sown in 2009 were found to be happily colonizing the meadow area. Additional shrubs and potted native plants were also acquired to augment the entrance gardens and the shrub thicket area.

Some of the funding was also used to support a portion of a seasonal botanist time to collect seeds of a large variety of native species occurring on the White Mountain National Forest. This year the focus was on collecting a small amount of a large variety of species, to this end seeds were collected from 78 species of shrubs, forbs and graminoids. Shrub seeds were directly sown in flats while other seeds were cleaned, dried, and will be stored for future sowing in a seed production meadow.



Wildflower seed production meadow on leach field of the WMNF Administrative Complex.



A small portion of the native plant seed collected on the WMNF drying in the office.



Rough-stemmed goldenrod (*Solidago rugosa*) with pollinator.



Pollinators on New England aster (*Symphotrichum novae-angliae*)

Project awarded 2011

Report number: 1 of 2

Project expenditures

FY 2011 funding: \$31,000.00

FY2011 WMAC funding: \$12,951.00

Staff/site preparation: \$4,451.00

Materials: \$8,500.00

FY2011 Seed Collection Funding: \$4,324.00

Contractors, Partners, Cooperators

Clements Nursery

Contact:

Christopher Mattrick, Forest Botanist

603-536-6225

cmatrick@fs.fed.us

All images by Christopher Mattrick



White Mountain National Forest

71 White Mountain Drive

Campton, NH 03223



Zaagkii Wings & Seeds Project Eastern Region

2011 Accomplishments

Our Zaagkii Wings & Seeds Project, now in its fourth year, has matured into several different but related segments. We continue our partnership with the Keweenaw Bay Indian Community (KBIC) including the propagation of locally native plants in their greenhouse which are raised for their various restoration and ethnobotanical needs. One important example involving the use of these plants was at the restoration of Sand Point (a brown field site) on the Lake Superior shoreline. Forty-seven youth volunteers also planted over 1500 plant plugs on Lake Superior's Grand Island (Hiawatha NF) and constructed 54 butterfly and bee houses and shelters. During the last two years youth have distributed 58,000 native plant seeds to gardeners and local citizens. Portions of our ethnobotanical partnership work with Northern Michigan's Center for Native American Studies can be viewed at <http://www.learningfromtheearth.org/> Additional ethnobotanical videos will be forthcoming upon completion.

In 2010 a native plant greenhouse was established and dedicated at KBIC and now serves as a training center and model for regional tribal communities. Two botany workshops were completed with regional tribes and a third is scheduled for 2012. Representatives of KBIC and the Sault Ste Marie Band of Chippewa Indians (SSMBCI) attended the second in the series and SSMBCI attended a Monarch Butterfly Workshop offered by Monarch Joint Venture and the University of MN.

More specific information about the various facets of our Wings & Seeds Project can be read at our R9 Success Story site <http://www.fs.fed.us/r9/ssrs/> More detailed and specific information regarding our various Zaagkii activities can be found at <http://wingsandseeds.org/>



Figure 1 Restoration at Sand Point – Keweenaw Bay Indian Community

Year Awarded: initial award in 2011

Project completion: 2011; Report number: 1 of 1
■ Total funding \$50,000.

Partners/Contractors/Coop: Cedar Tree Institute; Northern Michigan University Center for Native American Studies; Keweenaw Bay Indian Community; Sault Ste Marie Band of Chippewa Indians; Marquette County Juvenile Court, Upper Peninsula Children's Museum; USFS International Programs; Hiawatha NF; Ottawa NF.

Contact Person & phone number:
Jan Schultz 414 297 1189 jschultz@fs.fed.us



Eastern Regional Office
626 East Wisconsin Ave.
Milwaukee, WI 53202



Juneau Park Native Plant Pollinator Garden Eastern Region 2011 Accomplishments

The following is a short summary of some of the activities that occurred this past year, our third, at the Juneau Park Native Plant and Pollinator Garden in downtown Milwaukee, WI. This is in addition to all of the foraging pollinators, blooming flowers, and seeds being set!

* The Milwaukee County Parks staff spent seven days from June through September working on the Juneau Park Native Plant & Pollinator Garden for a total of 112 staff hours.

* Grant-Thornton (downtown business) chose the Juneau Park Garden for one of their 2011 community workdays and donated 50 staff hours.

* Activities at the garden revolved around invasive species control.

* The site was also prepared for fall (November) planting of native prairie seeds that will be collected from other Milwaukee County Parks properties.

RadioMilwaukee also interviewed us about our garden during their broadcast entitled "Make a Difference: Learning, Environment, and Volunteerism." We discussed the joy involved with learning about the environment and also discussed a larger theme. How does an organization "make a difference" in Milwaukee regarding learning, environment, and volunteerism? Also - how does it make a difference for us to be a part of the USDA Forest Service? We had a most enjoyable time visiting with Lisa Jo Goldman, Producer at [88Nine RadioMilwaukee](http://88NineRadioMilwaukee.com). Their office is located at 5312 Vliet Street Milwaukee, WI 53208. Lisa's contact information is: lisa@radiomilwaukee.org or 414-475-8552).

Previous Success Stories about our Juneau Park Native Plant and Pollinator Garden can be found at: <http://www.fs.fed.us/r9/ssrs/> A radio interview about this project can be heard at <http://www.fs.fed.us/r9/ssrs/story?id=6319>



Figures 1 & 2 . Volunteers from Grant Thornton work day at Juneau Park

Year Awarded: 2011; Project completion: 2011

Report number: 1

▪**Total funding \$10,000.**

Partners/Contractors/Coop:
Milwaukee Parks and Recreation . Milwaukee, WI & many other great volunteers – thank u!

Contact Person & phone number:
Jan Schultz 414 297 1189 jschultz@fs.fed.us



Eastern Regional Office
626 E. Wisconsin Avenue
Milwaukee, WI 53202



Attracting Monarchs Green Mountain National Forest 2011 Accomplishments

The existing northern hardwoods garden at the Rochester District Office of the Green Mountain National Forest was maintained in 2011. A number of native plant species are thriving there, including many spring ephemerals, ferns, shrubs, and milkweed.

A second native plant garden developed at the Manchester District Office in 2010 continued to thrive in 2011, with milkweed being one of the many native plant species planted there.

A third native plant garden was designed and implemented in 2011 at the Middlebury District Office, and space has been set aside in it to plant additional milkweed in the late autumn or early spring.

Milkweed plants are not uncommon on the Vermont landscape, and it is apparent that they have no trouble finding newly established host plants in nearby native plant gardens.



Figure 2. Milkweed grows along the back edge of the Manchester District Office garden (photo by seasonal botanist Melissa Green).



Figure 1. Seasonal botanist Marllys Eddy planned the Middlebury District Office garden with room for milkweed in one of the sunnier spots. In addition to the garden, landscaping plants were replaced with native species (photo by seasonal botanist Melissa Green).

Year Project Initiated

- Rochester Garden was begun in 2008, moved in 2009, and maintained through 2011
- Manchester Garden was initiated in summer 2010 and maintained in 2011.
- Middlebury Garden was initiated in 2011.

Project completion: Garden maintenance and continued development will be ongoing.

Report number: 2 of 2

Expenditures (through 10/2011):

- Expenditures for gardens include costs of planting and maintaining all species; an estimated cost planting and encouraging milkweed for monarchs is \$50. Overall native plant garden costs are in a separate report.

Contact /phone: MaryBeth Deller, 802-767-4261



Green Mountain & Finger Lakes NF
Rochester Ranger District
99 Ranger Road
Rochester, VT 06767



Native Plant Program Green Mountain & Finger Lakes National Forests 2011 Accomplishments

In 2011, a third native plant garden, this time at the Middlebury District office, was developed, and two existing native plant gardens at other district offices were maintained. At the end of the season, a public presentation was held on how to develop a native plant garden. In addition, fencing was provided for a butternut seed orchard project. Finally, a native plant project that was begun in a previous year, and continued this year, was developing an ongoing supply of seeds of native species with local genotypes. This seed collection project is described in detail below.

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. In 2009 the species list was refined, fact sheets were developed, and a contractor was hired to organize the volunteer seed collection effort. Because it was difficult to find enough volunteers to collect seed (especially outside VT), in 2010 a contract was awarded to the New England Wildflower Society to collect seeds over the next year in New Hampshire and Maine. That contract was expanded to include more locations in those states, plus Vermont, in 2011, and an additional contract was awarded to collect seeds in the Adirondacks of northern New York. The next step is to find a grower interested in producing a sustainable supply of the native species with local genotypes.



Figure 1. Toothwort, critical to the life cycle of the West Virginia White butterfly, was encouraged in the Rochester garden in 2010 and continued to thrive in 2011 (photo by seasonal botanist Melissa Green).



Figure 2. Native plant gardening at the Middlebury District Office involved establishing one new garden site, and replacing some existing landscaping with native plants (photo by seasonal botanist Melissa Green.)

Year Awarded: 2011

Project completion: Gardens Completed;
Seed Collection Ongoing

Report number: 1

Expenditures:

- Salary: \$10,300
- Garden Supplies & Educational Signs: \$1,700
- Fencing for butternut seed orchard: \$5,000
- Contracts for seed collection: \$13,000

Partners: New England Wildflower Society
(Contractor)

David Werier (Local botanical contractor)

Contact Person & phone number:

MaryBeth Deller 802-767-4261 x 524



Green Mountain National Forest
Rochester Ranger District
99 Ranger Road
Rochester, VT 05767



Hiawatha National Forest West Zone

2011 Accomplishments

A number of sites were identified this year for milkweed and associated nectaring plants establishment. As part of planned KV program of work for the West Zone all log landings and closed roads within upland red, jack and white pine stands were seeded with a mix of milkweed seed, warm season grasses and important nectaring native wildflowers for monarchs for approximately 12.2 acres. In addition to direct seeding for monarch habitat, the Forest greenhouse raised approximately 4,700 common milkweed and 200 swamp milkweed plugs in 2011. Nearly 3,000 common milkweed plugs were planted by volunteers at Grand Island NRA farm field restoration site. Sandtown restoration site is a degraded back dune along Lake Michigan near Nahma. In 2011 approximately 1,700 common milkweed plugs were transplanted back into the dune where illegal ATV use was occurring. NPPG on the West Zone also had new plantings occur in order to fill any gaps in the gardens. Contracts were utilized for funding greenhouse support, seed harvesting and District Offices NPPG maintenance.



Female monarch laying her eggs on new milkweed planted 2011.



SWP crew member with MKIW participants watching a monarch larva.



Planting beach grass Trout Bay GINRA

Partners:
 USFS Northern Research
 Superior Watershed Partnership
 MSU Extension Life of Lake Superior
 Grand Island Association
 Hiawatha Interpretive Association
Contracts:
 NFWF \$8,127
 NFN \$19,605
Volunteers:
 2,348.75 hours donated as of 9.1.11
Contact Person & phone number:
 Deb Le Blanc 906-387-2512



Hiawatha National Forest
 Munising RD
 400 East Munising Ave.
 Munising, MI 49862



26 Restoration Sites & Native Seed Harvesting Hiawatha National Forest 2011 Accomplishments

In Summer of 2011 Hiawatha National Forest (HNF) plant program contractors, volunteers and botany-wildlife staff restored nearly 26 acres through plantings and seeding funded by NFN310. At Grand Island National Recreation Area (NRA), restoration planting and seeding activities occurred at 22 sites. The total includes the annual Life of Lake Superior (LOLS) Event, where nearly 100 volunteers from LOLS and Grand Island Association successfully transplanted 5,000 native wildflower plugs at the old farm field restoration site. At Sandtown, Native American volunteers along with Great Lakes Recovery Center volunteers transplanted approximately 3,500 native plants into a 2-acre rehabilitation site. East side native plants were established along Whitefish Bay Scenic Byway (1400 plugs), Castle Rock Rd NCT Trailhead (800), NCT Carp River Bridge (600), and the St. Ignace Office pollinator garden (300). Also in FY11, NFN310 funds were used to collect seed for restoration projects on the Forest. More than 500 pounds of native seed were harvested either by hand or with the use of the HNF seed harvester. Much of the harvested seed was used for continued seed orchard development at closed timber sale sites. Since 2006, HNF personnel have developed small native seed orchards where roads, landings and/or barrow pits were closed after sale operations. Restoration of these sites provides the Forest with native seed sources for future needs and creates important habitats for pollinators.



SWP crew leader Linda Rehorst transplanting native plugs into slopes at a new culvert replacement site- GINRA



Pipe ceremony prior to GLRC volunteers planting at Sandtown



Planting native beach grass in order to restore human impacts on Trout Bay dunes-GINRA.



Williams Landing restoration site planted by Cedar Tree Institute volunteers .

Total NFN310 awarded for Native Plant Materials: **\$26,000**

NFN310 expenditures for contracts: Forest Greenhouse management and support, native seed harvesting, office NPPG maintenance, = \$19,605

Forest greenhouse supplies = \$1,500

Seed storage totes = \$500

LOLS transportation for GINRA event = \$1000

Forest staff salary for planning, coordinating, implementation and seed harvesting = \$3,395

Contacts : Deb Le Blanc, 906-387-2512

dleblanc01@fs.fed.us; Stephanie Blumer, 906-643-7900

sblumer@fs.fed.us



Hiawatha National Forest
Munising Ranger District
400 East Munising Ave.
Munising, Michigan 49862

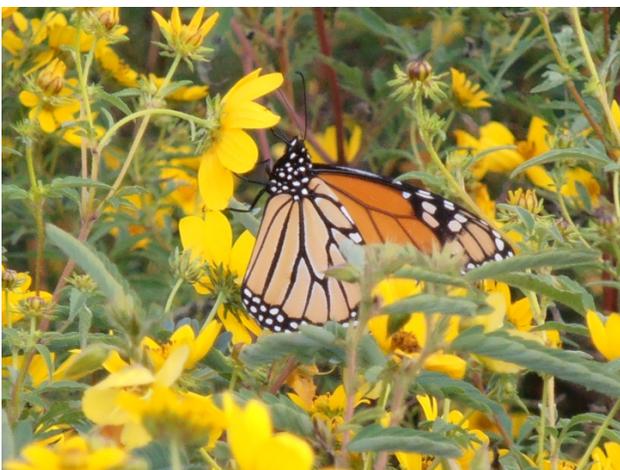


Early Successional Habitat Hoosier National Forest 2011 Accomplishments

Since 2007, the Hoosier National Forest has established several native seed and pollinator resource areas. The project areas have ranged in size from about 10 acres to 100 acres. At the project sites, the Forest has included butterfly milkweed and common milkweed, as well as lesser quantities of two other milkweed species in our native seed mixture or when planting native plant container stock. The inclusion of several other native forbs will increase plant diversity in these areas and provide nectar sources for monarch butterflies. Through 2011, these four areas total about 140 acres of ecosystem restoration and habitat enhancement, providing a valuable resource for monarch butterflies and other native pollinator species.

Additionally, these areas also function as early successional habitat (ESH) areas that benefit many wildlife species. The Forest maintains these areas by using prescribed fire on a 2-4 year rotation, which stimulates native grasses and wildflowers that improves habitat for local species. The Hoosier National Forest has expanded beyond the pollinator areas to include larger projects, which includes activities such as tilling, native seeding and planting, and conducting landscape burns to improve native plant diversity.

Wildflowers are an important source for pollinators such as native bees and butterflies, plus improving habitat for other wildlife species such as quail, turkeys, songbirds, and bats.



Haskins Area – Monarch on *Bidens aristosa*.
Photo by Kirk W. Larson



Haskins Area – Top Left:
September 2011
Bottom Right: July 2011.
Photos by Kirk W. Larson



Year Projects Initiated (NFN3 Native Plants/Pollinator Areas):
Haskins (2007 – 100 acres), Mifflin (2009 – 10 acres), Stillion (2010 – 30 acres), Tincher (2011 – 10 acres)

Other ESH areas: Mifflin (124 ac), Upper Moffatt (13 ac), Oriole Opening (16 ac), Hunter Creek Wetland (30 ac)

Report number: 1 of 1

Expenditures:

- FY11 funding: NFN3 - \$23,000 (native seed, plugs, interpretive sign/kiosk, bee habitat structures, mowing/seeding, partial cost – herbicide spraying)
- NFWV – \$41,790 (native seed, plugs and shrubs, mowing and seeding, herbicide spraying)
- NFWF – \$41,190 (native seed, plugs and shrubs, herbicide spraying)
- WFHF – \$34,875 (prescribed burning)

Partners/Contractors:

Quail Unlimited, National Wild Turkey Federation
Indiana Dept. of Natural Resources - Division of Fish & Wildlife,
Roundstone Native Seed, JFNew Native Plant Nursery, Spence Restoration Nursery, Indiana State Vallonia Nursery, Eco Logic, Knight's Construction, K & K Dirtworks

Contact Person & phone number:

Kirk W. Larson, 812-276-4773



Hoosier National Forest
811 Constitution Avenue
Bedford, Indiana 47421
812-275-5987



Native Seed Production & Pollinator Resource Area Hoosier National Forest

2011 Accomplishments

Background

The Hoosier National Forest intends to establish a 10-acre area of native plant seed source to further ecosystem restoration and habitat enhancement. The project site is a complex of several wildlife openings that would provide a valuable resource for native pollinator species in the area where plant diversity is lacking because of surrounding lands planted to agricultural production or pastures of nonnative species.

The intent is to establish approximately 39 forb, 2 grass, and 6 shrub species that will form the foundation of early successional habitat plantings and restorations on the Forest. Native plant focal species, but not limited to, include native forbs such as sunflowers, coneflowers, mints, asters, obedient plant, beardtongue, black-eyed Susan, blazingstar, and coreopsis. Among the species selected for planting are four species of milkweeds to provide habitat for monarch butterflies.

All of the species selected for inclusion in the areas for spring planting and the fall seeding with the seed mixture are native to southern Indiana and readily used by local pollinator species.

FY2011 Accomplishments

- Herbicide application in summer to remove tall fescue, other exotic grasses, and other undesirable species
- Mowed the fields in preparation for planting and seeding
- Purchased plug-sized container stock of various native plant species for spring 2012 planting
- Purchased native seed for fall 2011 planting by seed drill
- Purchased materials for construction of bee habitat structures and interpretive sign



View of southern portion of Tincher Openings following the initial herbicide application to prepare the area for fall 2011 native seeding with seed drill.

Photo by Kirk W. Larson

Year Awarded: FY 2011
Project completion: (2012)
Report number: (1 of 1)

Expenditures:

- FY11 NFN3 funding: \$23,000 (for native seed mixture, native plugs, shrubs, sign, materials for bee habitat structures and kiosks; partial cost of herbicide spraying and mowing/seeding)
- Other NFWF funding: \$3,274 (for partial cost herbicide spraying and mowing/seeding; sign frames)
- Other NFWF funding: \$5,583 (for herbicide spraying)

Contractors:

Roundstone Native Seed
JFNew Native Plant Nursery
Eco Logic, LLC
(herbicide spraying/mowing/seeding)

Contact Person & phone number:
Kirk W. Larson, (812) 276-4773



Pearly crescentspot butterflies on forest edge and common milkweed on periphery of wildlife opening. *Photos by Kirk W. Larsons*



Hoosier National Forest
811 Constitution Avenue
Bedford, IN 47421
Address line



Huron Manistee National Forest

2011 Accomplishments

This project was initiated in 2003 when the first Monarch Waystation Pollinator Garden was established in a former roadbed on 56th Street just west of Baldwin, MI. Since the project initiation, 3 additional pollinator gardens were created on the Baldwin/White Cloud Ranger District with an emphasis on milkweed plants and monarch habitat. By 2011, all four Pollinator Gardens/Monarch Waystations supported monarch adults and larvae. Additional milkweed seed was added to all of the gardens in the fall of 2011 to keep improving milkweed abundance.

Additional milkweed plant plugs were planted in an endangered Karner Blue Butterfly restoration area with 2 of the 9 species planted being milkweed species. These plantings placed 200 nectar increase beds strategically throughout 60 acres of occupied KBB habitat. Each fenced bed was planted to a total of 28-32 plants composed of 3 – 5 different nectar species. Seasonal staff also weeded the 24 acres of 2010 seeded nectar beds in the same project area.

Four educational talks were presented to the public on pollinator habitat, that specifically targeted Monarchs and Monarch waystations developed in the home landscape. Guided tours were also given to several groups larger than 50 attendees at the Loda Lake Pollinator Garden/Monarch Waystation.

A Native Plants for Pollinators outdoor flipbook is under contract for development that will be placed at pollinator gardens to provide plant identification aid and information about which native plants are beneficial for pollinator gardens. Milkweed species are included in the book.



Figure 1. Monarchs at pollinator garden

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: 7

Expenditures (through 10/2010):2006+-\$67,290; LCRC: 2003 \$6,420-seed cost ;FY10 funding:\$13,100 FY11 funding:GLRI \$30,000; NFN3 \$11,000

Partners/Contractors/Coop:).Lake Co. Road Commission, Garden Clubs of Michigan

Contact Person & phone number:
P.R. McGhan 231-745-4631x3102



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



Pollinator Gardens Huron-Manistee National Forest 2011 Accomplishments

This project was initiated in 2006 to obtain native lupine seed for endangered Karner Blue Butterfly restoration on the Baldwin Ranger District. Five acres of lupine/ nectar plants were planted at the Chittenden Nursery to form a permanent seed production source for restoration seed. The project was expanded to other pollinator gardens in 2007-09, bringing a total of 6 pollinator demonstration sites planted. All sites are doing well as they mature, however one garden is being moved this fall via contract to the Loda Lake Wildflower Sanctuary due to reconstruction of the District Office facility. Plans are to create a new District garden in 2013 or 2014 after facility construction is completed.

In addition to the pollinator garden move, NFN3 funding also funded a contract for collection and propagation of frostweed (*Helianthemum canadense*), an early season nectar species which is prevalent in area savanna habitat. The plant plugs produced will be planted in pollinator gardens and at endangered Karner blue butterfly restoration sites.

Additional plugs of native Michigan nectar species were purchased to continue increasing population size of several important pollinator plants, hoary puccoon (*Lithospermum canadense*), western silvery aster (*Symphotrichum sericeum*), false dandelion (*Krigia biflora*), birdsfoot violet (*Viola pedata*), white goldenrod (*Solidago ptarmicoides*), and smooth pussytoes (*Antennaria parlini*).

Lastly, NFN3 funding was used to develop a "Native Plants for Pollinators" outdoor flipbook. The guidebook is being drafted and future funding will be sought to produce plasticized flipbooks to be placed at our Forest pollinator gardens to further public education about creating pollinator gardens in their landscapes.



Figure 2. M20 motorsport trailhead pollinator garden

Year Awarded: initial award in 2006

Project completion: ongoing

Report number: 6

Expenditures (through 9/2009):

FY06 funding \$28,800, expend. \$11,721 \$17,079 remaining

▪FY07 carryover funding \$17,079, expend \$17,079; \$0 remaining

▪FY08 funding \$10,392, expend. \$10,392; \$0 remaining

▪FY09 funding \$15,000, expend \$15,000; \$0 remaining

▪FY10 funding \$11,000, expend \$11,000; \$0 remaining

▪FY11 funding \$11,000, expend \$11,000; \$0 remaining

▪**Total funding \$76,192, total expend \$76,192;**

▪**\$0 total remaining**

Partners: Michigan Garden Clubs

Contact Person: Pat McGhan 231-745-4631 x 3102



Figure 1. Giant silk moth larvae found in Baldwin District pollinator garden.



Huron-Manistee National Forest
Baldwin/White Cloud Ranger District
P.O. Drawer D
Baldwin, MI 49304



Native Plant & Pollinator Gardens Manistee National Forest

2011 Accomplishments

Installation of native plant and pollinator gardens began on the Cadillac-Manistee Ranger District of the Manistee National Forest in 2008. So far, two gardens have been established at the District office, four gardens have been established at the Chittenden Conference Center, and one garden was established at the Lake Michigan Recreation Area. The Lake Michigan Recreation Area is typically visited by 10,000 people every year, so it is a prime location to teach people about pollinators, native plants, and butterfly-host plant relationships. Each garden contains at least one species of milkweed and a variety of flowering plants to provide nectaring opportunities throughout the spring, summer, and fall. Visitors have been curious about the gardens and are generally very excited to learn about them.

In addition to the gardens, 33 acres of seedbeds have been planted with native grasses and wildflowers to provide habitat and grow seed for restoration efforts across the Forest. Thirteen acres were planted for more intense production of lupine, common milkweed, New England aster, coreopsis, and bee balm. The remaining 20 acres were planted with a combination of 25 species of wildflowers and 6 species of grasses to support a variety of pollinators, including monarchs. This year a "Checklist of the Butterflies and Skippers of the Huron-Manistee National Forests" was printed to encourage interest in the butterflies and skippers that visit the area.



Figure 1. Native plant and pollinator garden in front of the Conifers Conference Center at Chittenden



Figure 2. Native plant and pollinator garden at Cadillac-Manistee Ranger District office

Year Project Initiated: 2008

Project completion: 2011

Report number: 2 of 2

Expenditures (through 10/2011): \$58,008

FY11 funding: \$9,000

Contact Person & phone number:
Carolyn Henne (231) 723-2211



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



Native Plant & Pollinator Gardens Manistee National Forest 2011 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.

In addition to the seed beds, 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. After severe devastation by deer, parts of the gardens at Chittenden and the Lake Michigan Recreation Area were supplemented with new plants during the summer of 2011. 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.

Staff members and visitors alike have been excited about the goldfinches, chipping sparrows, and hummingbirds that visit the gardens, as well as all the butterflies, moths, and skippers. A checklist of the "Butterflies & Skippers of the Huron-Manistee National Forests" was developed to increase awareness of these species on the Forests.

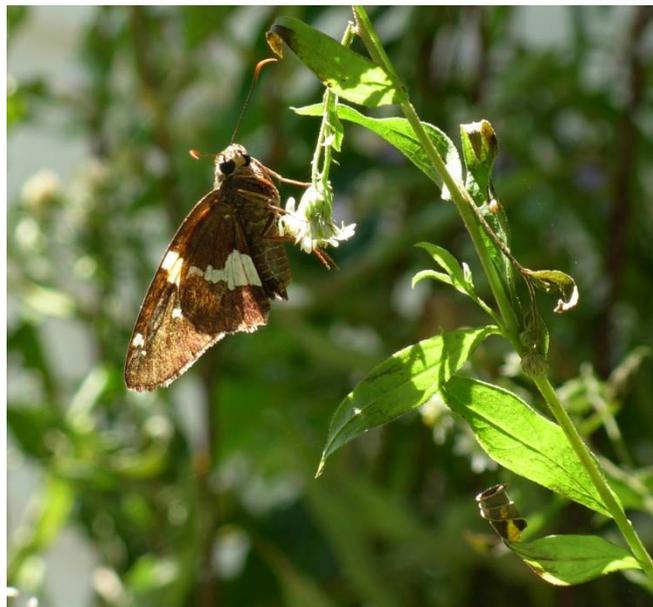


Figure 1 (above): Silver-spotted skipper on tall flat-topped white aster at the Cadillac-Manistee Ranger District office.

Figure 1 (below left): Willow sphinx moth on goldenrod at the Cadillac-Manistee District office

Year Project Initiated: 2007

Project completion: 2011

Report number: 5 of 5

Expenditures (through 10/2011):
FY08 funding \$20,000, expend. \$17,620, \$2,380 redirected;
FY09 funding \$11,708, expend. \$11,704.26, \$3.74 remaining;
FY10 funding \$7,300, expend \$7,300
FY11 funding \$9,000, expend \$9,000

Funding to date: \$58,008

Partners: Wings Across America, \$10,000 in 2009

Contact Person & phone number:
Carolyn Henne (231) 723-2211



Manistee National Forest
Manistee Ranger District
412 Red Apple Road
Manistee, MI 49660



Potosi Ranger District Native Pollinator Garden Mark Twain National Forest 2011 Accomplishments

This was a continuation of the pollinator garden established at the Potosi Ranger Station in 2010. Funds were used to purchase an interpretive pollinator panel for the garden. Funds also were used to purchase additional native flowering plants for the garden.

Monarchs utilized the milkweeds in the garden for breeding.

Interpretive panel will be erected in late Fall 2011.



Figure 2. Fire pink blooms in the pollinator garden.



Figure 1. Monarchs munch on milkweed in the pollinator garden.

Year Project Initiated: 2010

Project completion: 2011

Report number: 1 of 1

Expenditures (through 09/2011): \$1500.00 panel
\$ 135.00 plants

FY101funding
Partners/Contractors/Coop:): \$0

Contact Person & phone number:
Lynda Mills 573-438-5427



Mark Twain National Forest
Potosi Ranger District
10019 W. Hwy. 8
Potosi, MO 63664



MONARCH
JOINT VENTURE

Pollinator & Native Plant Garden

Mark Twain National Forest

2011 Accomplishments

Work on the pollinator and native plant gardens continued at Popular Bluff, Potosi and Eleven Point Ranger Districts.

This spring there was a bumper crop of monarch caterpillars using *Asclepias tuberosa* at the native garden at the Poplar Bluff Ranger District office. The first graders at Eugene Fields had been studying butterflies and had "grown" a painted lady in the classroom. Approximately 125 students took turns viewing the caterpillars, and many wanted to touch them. Most knew the four life cycle stages of a butterfly, and one knew the differences between the butterfly chrysalis and moth cocoon.

A new interpretive panel has been ordered for the Potosi native garden and new plants were planted.

The Mark Twain used NFN3 monies to enter into a Challenge Cost Share Agreement with Lincoln University Cooperative Extension Native Plants Program to collect seed and propagate native plant material from the Mark Twain National Forest to:

- augment restoration efforts of natural terrestrial plant communities on the MTNF.
- Burned Area Emergency Rehabilitation and other areas of disturbance that may require restoration.
- Native/Pollinator gardens located at administrative site on the Mark Twain National Forest and in the Native Plant Outdoor Laboratory and other native plant demonstration gardens located at the University campus and LU- Experimental Farms.



Figure 1. New interpretive panel at the Potosi Ranger District



Figure 2. LUCE collecting seed at Western Star Flatwoods Savanna

Year Awarded: 2011

Project completion: 2011

Report Number: 1

Expenditures (through 10/2011):

Interpretive panel: \$1,525.00

CCSA LUCE: \$8,000

Plant Markers for SO garden: \$325.00

Contact Person & phone number:

Brian Davidson 573-341-7414



Mark Twain National Forest
401 Fairgrounds Road
Rolla, MO 65401



Beneficial Projects for Monarchs on the Mark Twain National Forest 2011 Accomplishments

In 2011, 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.

- Bates Hollow Prescribed Burn – 468 acres of forest, open woodland and openlands burning.
- Upalika Prescribed Burn – 2,177 acres of a variety of habitats that contain important nectar sources.
- Big Creek and Three Sisters Prescribed Burn – 7,831 acres of glades, savanna and open woodlands that support numerous nectar and host plant species.
- Buttler Hollow Prescribed Burn – 380 acres of glade and open woodlands.
- Pruesch Prescribed Burn – 643 acres of savanna and open woodlands.



Figure 2. Monarch butterfly on liatris blossom in the Upalika project area..

Year Project Initiated: 2011

Project completion: 2011

Report number: 1 of 1

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



Figure 1. Portions of the Upalika project area.



Mark Twain National Forest
401 Fairgrounds Road
Rolla, Missouri 65402



Planting for Pollinators Midewin National Tallgrass Prairie

2011 Accomplishments

Funding from this program was used to increase native plant diversity at two sites near existing pollinator gardens. Two groups, the El Valor Science and Technology camp, a nonprofit, community-based youth group, and another partner, the Unitarian Universalist Church group, planted 2000 native plant plugs of 33 different wildflower and grass species this summer. The native plants will provide a long season of bloom for visiting pollinators, from Golden Alexanders in the spring to New England Asters blooming in the fall. Participants from the El Valor camp installed native plant plugs in a wooded area recently cleared of invasive bush honeysuckle. In addition, the Unitarian Universalist camp came to Midewin ready to work one beautiful summer day in August and expanded a native prairie garden through planting species such as Spiderwort, Wild Strawberry and Side Oats Grama Grass.

This award also assisted in providing funding for the Student Temporary Employment Program (STEP) at Midewin this summer. Several of the projects completed by students employed through this program include rejuvenating a native pollinator garden, controlling invasive species, constructing a raised planting bed for native seed production at the Midewin supervisor's office and monitoring threatened and endangered plant species. The restoration program at Midewin relies on the work accomplished by student employees to further its mission of conserving and enhancing native populations of plants and animals.



Participants from the El Valor camp increasing native plant diversity near the Iron Bridge Trailhead at Midewin. Photo courtesy of El Valor.



Members of the Universalist Unitarian Church camp installing native prairie plants at Midewin.. Photo courtesy of A. Cisneros, Nature Conservancy

Year Awarded: 2011

Project completion: 2011

Report number: 1 of 1

Expenditures:

FY10 funding: \$ 21,500

Expenditures: \$ 21,500 Plant plugs and Labor

Remaining: \$0

Partners: El Valor
Universalist Unitarian Church
Midewin volunteers

Contact: Jennifer Durkin, Botanist and
Eric Ulaszek, Horticulturist
(815) 423-6370



Midewin National Tallgrass Prairie
30239 S. State Route 53
Wilmington, IL 60481



Native Plant Pollinator Garden – CMNC Monongahela National Forest 2011 Accomplishments

This project was initiated in 2008 to create a native plant pollinator garden at the Cranberry Mountain Nature Center. The nature center hosts close to 30,000 visitors annually. The garden was planted in a central area of the nature center grounds, which can be viewed from the inside and outside of the building, including an accessible picnic area. Visitors have enjoyed the many butterflies, bees and birds which visit the garden and nearby bird feeders since planting in 2008. With the garden established, the focus in 2009 was on maintenance of the garden and interpretation. In 2010 emphasis was on replacing non-native bushes with two new sections of native plant gardens. Two additional interpretive signs were placed in these new gardens. A split rail fence was also installed to support the bustling plants and enhance the natural look of the garden. A pollinator brochure was designed which explains the purpose of the garden.



Figure 2. Syrphid fly perched atop wild yellow indigo.

In 2011, Americorps member Vince Weeks proposed adding a hoop house to the nature center grounds. This greenhouse was installed in the summer of 2011 and will be used to start our own milkweed seedlings. Americorps members Ashley Blazina and Cynthia Everitt gathered native milkweed seeds in the district. Cynthia is continuing into 2012 with the Americorps program and will enlist other Americorps in helping her grow plants to transplant into the gardens at the nature center and other locations on the district. The hoop house is located along the walkway through the pollinator gardens and will be open to the public to view. Interpretive signs have been ordered and will be installed soon.



Figure 1. YCC crew assists staff member Buzz Hypes with hoop house construction

Year Awarded: initial award in 2008

Project completion: Ongoing

Report number: 4 of 4

Expenditures (through 10/2011):
FY08 funding \$5,759.73, expend. \$5,759.73; \$0 remaining
FY09 funding \$2,834.20, expend. \$2,834.20; \$0 remaining
FY10 funding \$1,880.00, expend. \$1,859.00, \$21 remaining.
FY11 funding \$1,000, expend \$995.41, \$4.59 remaining.

Total funding \$11,473.93, total expend. \$11,448.34
•\$25.59 total remaining

Partner: Pocahontas County Convention and Visitors Bureau, Americorps.

Contact Person & phone number:
Diana L. Stull 304-653-4826



Monongahela National Forest
Gauley Ranger District
Cranberry Mountain Nature Center
932 North Fork Cherry Rd.
Richwood, WV 26261



MONARCH
JOINT VENTURE

Greenbrier RD Native Plant Garden

Monongahela National Forest

2011 Accomplishments

The Greenbrier Ranger District native pollinator garden was created in 2008 to provide habitat for native pollinators as well as to supply a local native seed source for the forest and community. The highlight of this year for the garden was the growth and maturity of the established native plants. Plants are really starting to become the beautiful and spectacular specimens that they are meant to be. Several interested parties stopped in the district office to comment on the flowers in bloom and inquire about the plant species. Many species, including blueberries and raspberries, provided fruit aplenty for forest visitors; two-legged, four-legged and winged alike! A portion of our garden also functions as a nursery to holdover plants though the winter. Approximately 5000 native plants spent their winter here at the garden waiting to be planted at a restoration site on the district, which now has been populated with over 17,000 native plants!

The district employees installed the information sign in the garden this summer to provide an overview of the project. They also had a work day to eliminate weeds in the front portion of the garden.

Numerous species have and continue to provide seed available to the public to encourage the planting and proliferation of native plants in our area. We look forward to watching our plants thrive and are excited to see the numerous pollinators that frequent our area.



Native asters flowering in the garden



Winterberry Holly

Year Awarded: initial award in 2008

Project completion: 2011
Report number: 4 of 4

Expenditures (through 10/2011):

- FY11 funding \$1,000 expend. \$920; \$80 remaining
- Total funding \$49,691; total expend \$49,098**

Partners/Contractors/Coop: Alderson Plant Materials Center (Department of Natural Resources, Division of Agriculture), AmeriCorps.

Contact Person & phone number:
Kent Karriker 304-636-1800



Monongahela National Forest
Greenbrier Ranger District
PO Box 67
Bartow, WV 24920



MONARCH
JOINT VENTURE

Mower Tract Ecological Restoration

Monongahela National Forest

2011 Accomplishments

Over the last year, multiple partners have brought a 100 acre pilot restoration project to fruition. The Barton Bench area was mined for coal in the 1970s prior to becoming part of the National Forest system. This tract is a portion of the 40,856 acres acquired by the US Forest Service in the late 1980s that has become known as the Mower Tract. The federal standards followed by the coal companies for the cleanup operation left the area in a less than desirable condition. Among other things, the area was planted with predominately non-native grass species, resulting in a dense grass mat as the only vegetation, which has inhibited native species colonization. This is a permanent condition referred to as 'arrested succession' and was unlikely to correct itself without intervention. There are approximately 2,500 acres of previously mined land on the Mower Tract and 1,800 acres are in a similar vegetative state as the Barton Bench area. The ultimate goal of this project is to commence ecological restoration efforts on the Mower Tract to restore native flora on previously strip-mined benches that currently are stuck in 'arrested succession' and dominated by a thick, non-native sod layer. The use of native vegetation is expected to reduce maintenance costs and increase the probability of success.

Benefits of this reforestation effort were threefold: provide early successional habitat (e.g. high stem density) in the short term, restore watershed conditions and native red spruce northern hardwood forest in the long term, and use the results of this project to implement restoration projects on more than 1,800 acres of reclaimed mine lands. Restoration efforts included terrestrial and aquatic restoration in that approximately 40 acres of non-native grasslands were deep ripped and 130 wetlands were created. Over 27,000 native plants were planted over the course of the last seven months. Approximately 17,000 plants were purchased from an Arbor Day Foundation grant, and planted on the deep ripped areas thanks to a National Civilian Conservation Crew (NCCC). The NCCC planting crew was awarded to the forest service as a result of our partnership with the Appalachian Regional Restoration Initiative and the Appalachian Coal Country Team. Approximately 10,000 plants were planted around the wetland restoration sites. All of these plants were propagated from local seed source by the Natural Resource Conservation Service's Alderson Plant Material Center (PMC), thanks to past NFN3 funding. The native species priority list was developed in collaboration by our partners with various interests, ranging from native species advocates, to wildlife game managers. Special emphasis was placed on native species most advantageous for pollinators or wildlife. This restoration work will greatly benefit the federally-listed West Virginia northern flying squirrel and Cheat Mountain salamander, and other high-interest species including the snowshoe hare, white-tailed deer, black bear, golden eagles, woodcock, ruffed grouse, saw whet owl and a number of pollinating animals by providing a variety of food sources and niches. Once native species are established, the restoration site will develop into a red spruce-northern hardwood ecosystem, thus providing a native seed source.

As evidenced by the Arbor Day Foundation grant, WVDEP monies (\$330,000) and the NCCC planting crew, this project has catalyzed restoration efforts for the Mower Tract. We have already finished planning for the next area of restoration and have momentum for continued restoration efforts, despite declining forest service budgets.



Figure 1. Successful restoration projects demand collaboration and coordination of many partners.

Year Awarded: initial award in 2009

Project completion: est. 2012

Report number: 3 of 3

Expenditures (through 9/2011):
 FY09 funding \$15,000, spent. \$15,000, \$0 remaining
 FY10 funding \$23,500, spent. \$23,242, \$258 remaining
 FY 11 funding \$20,000, spent \$20,000, \$0 remaining
**•Total funding \$58,500 total spent \$58,242;
 \$258 total remaining**

Partners: Partners: USDA- NRCS Alderson Plant Material Center and Wes-Mon-Ty RCD, Arbor Day Foundation, National Civilian Conservation Corps, Americorps, Appalachian Regional Restoration Initiative and the Appalachian Coal Country Team, Central Appalachian Spruce Restoration Initiative (CASRI), WV Division of Natural Resources, WV Department of Environmental Protection, WV Division of Forestry, USFWS, USDI-Office of Surface Mining, Nature Conservancy, and West Virginia Highlands Conservancy.

Contact Person & phone number: Shane Jones
 Greenbrier Ranger District (304) 456-3335 ext.114



Monongahela National Forest
 Greenbrier Ranger District
 Hwy 250/92, PO Box 67
 Bartow, WV 24920



MONARCH
JOINT VENTURE

Stuart Recreation Area Native Plant Garden

Monongahela National Forest

2011 Accomplishments

The Monongahela National Forest worked on many fronts to improve the 5,500 square foot pollinator garden it established last year at one of the forest's most visited locations, Stuart Recreation Area. This recreation area receives over 20,000 visitors each year making this an ideal location for public outreach and interpretation regarding the importance of pollinators and their ecological needs.

This year, the garden needed many things to increase its value to pollinators. First, several new species of plants were purchased and planted in the garden by AmeriCorps volunteers. Species purchased included *Gentiana andrewsii* (bottle gentian), *Asclepias tuberosa* (butterfly weed), *Asclepias quadrifolia* (Four leafed milkweed), *Lilium sugarbum* (Turk's cap lily), *Chelone glabra* (white turtlehead), and *Symphytotrichum novae-angliea* (New England aster). In addition to planting new species, volunteers also assisted in weeding and mulching the garden resulting in 98 volunteers and \$2,043 of in-kind services.

Another key aspect to improving the native plant garden in 2011 was providing cover and places for bees to raise young. Most native bees are solitary nest makers and build their nests in the ground or in pre-existing cavities. In the past, we had been suppressing weeds and conserving water through the use of wood mulch. Unfortunately, many ground-nesting bees look for garden sites where they can dig small tunnels to lay eggs in individually-made brood cells that are provisioned with pollen and some nectar. Since between 60-70% of the native West Virginia bee species need bare dirt to excavate tunnels for their nest cells, we wanted to find a replacement for wood mulch. Our largest purchase for the Stuart Pollinator Garden was an electric leaf shredder. Volunteers will soon convert the leaves shed by our trees in the fall into a more bee- friendly mulch leaving patches of bare dirt. These bee-friendly practices should encourage use of the garden by native bees.

The final task for the native plant garden in 2011 was protecting it from deer. Although the garden is surrounded by lush forest vegetation, it quickly became obvious that deer favored the plants inside the native plant garden. To protect our investment, the Liquid Fence Deer @ & Rabbit Repellant was purchased and applied to each plant in the garden. This eco-friendly repellent stops deer and rabbits from eating flowers, shrubs, trees, and vines. The product is environmentally safe and biodegradable and is even safe to use on edible crops. Considering that just one deer can get up to ten pounds of food a day, this will be a long-term problem.



Year Awarded: 2011

Garden: Stuart Pollinator Garden

Expenditures: \$1,000

In-Kind Services: \$2,043

Partners: AmeriCorps, Appalachian Forest Heritage Area, Enchanters Garden, & NRCS Alderson Plant Materials



Viceroy Caterpillar in Garden



Monongahela National Forest
200 Sycamore Street
Elkins, WV 26241-3962



Activities in Support of Monarch Butterfly Joint Venture Ottawa National Forest 2011 Accomplishments

This year, several plantings of nectar plants for monarchs and other butterflies were conducted. Seeds were collected on the Ottawa National Forest and seedlings raised at the Forest Service's JW Toumey Nursery. Species were selected which thrive in open disturbed areas as well as provide for pollinator needs: evening primrose (*Oenothera biennis*), black-eyed susan (*Rudbeckia hirta*), wild bergamot (*Monarda fistulosa*) and common milkweed (*Asclepias syriaca*).

About 900 mixed seedlings were planted by Forest Service staff and volunteers in a meadow at a popular lake-side day use area, next to milkweed planted in 2010. The intent is to reclaim this meadow from non-native invasives including spotted knapweed and smooth brome, and to provide enhanced species diversity and plants for pollinators.

Seedlings of the four target species were planted at a recently vacated administrative site, for pollinators, species diversity, and site restoration. Seedlings were also added to existing native plant/pollinator gardens at three administrative sites and one recreation area, and planted in two new, small, office-front locations. Plant labels on stakes were added for interpretive purposes.

Seedlings of the state threatened/Regional Forester's Sensitive dwarf bilberry (*Vaccinium cespitosum*), the host for the larvae of the similarly listed northern blue butterfly (*Lycaeides idas nabokovi*) were also raised at Toumey Nursery. About 150 of these seedlings were planted at two locations, continuing previous efforts to increase this plant on the landscape.

In addition to planting, a prescribed burn and a mechanical treatment were conducted on 19 acres, to retard succession and maintain an opening with graminoids and flowering plants which will provide enhanced habitat for butterflies and other pollinators.



Figure 1. Prescribed fire in opening

A program was presented on pollinators, including monarchs, at the Forest Visitor Center. Also, at a tribal youth camp session, Forest Service staff led kids in making seed balls containing milkweed and other seeds for distribution in the northern Michigan and Wisconsin area.



Figure 2. Planting area at Black River Harbor (see straw-mulched patch mid-photo)

Year project initiated: 2010

Project completion: Planting of milkweed and other nectar plants is expected to be ongoing for several years.

Report number: 2

FY11 Funding: NFN3 (\$2600); NFWF (\$3733); other NF codes (\$800); WFHF (\$2700); Volunteers (\$320)

Partners/Contractors/Cooperators: JW Toumey Nursery, Ottawa Fire Program, local volunteers.

Contact person & phone number: Sue Trull, Botanist, 906-932-1330 ext. 312



Figure 3. Seedlings ready for planting



Ottawa National Forest
E6248 US Hwy.2
Ironwood, MI 49938



Native Plant Materials Program Ottawa National Forest 2011 Accomplishments

The Ottawa Botany Program continued maintenance and enhancement at five native plant/pollinator gardens and one wetland garden. Gardens were weeded and new species added, and some mason bee houses were installed.

Nectar-providing native plants for butterflies were produced, using seed collected on the forest and raised to seedlings at JW Toumey Nursery. Species were selected which thrive in open disturbed areas as well as provide for pollinator needs: evening primrose (*Oenothera biennis*), black-eyed susan (*Rudbeckia hirta*), wild bergamot (*Monarda fistulosa*) and common milkweed (*Asclepias syriaca*). About 900 mixed seedlings were planted by Forest Service staff and volunteers in a meadow alongside Lake Superior at a recreation area. Seedlings also were planted at a recently vacated administrative site and in two small, office-front locations.

Intermittent workers and a contractor collected seeds, to build a cache for Forest revegetation projects and for use in seed production at JW Toumey Nursery. Employees collected 18.2 pounds of green bulrush (*Scirpus atrovirens*) and 13.3 pounds of fringed sedge (*Carex crinita*). The contractor focused on the graminoids big bluestem (*Andropogon gerardii*), fringed sedge, poverty oats (*Danthonia spicata*), fowl mannagrass (*Glyceria striata*), bottlebrush grass (*Elymus hystrix*), and green bulrush; and the forbs common milkweed, swamp milkweed (*Asclepias incarnata*), false sunflower (*Heliopsis helianthoides*), wild bergamot, and evening primrose.

Two 2500 square-foot areas were prepared for future seed production sites. The areas were plowed and covered with black plastic over the summer to kill existing vegetation. They will be seeded with local native seed in late October 2011. Species to be planted include black-eyed susan, evening primrose, false sunflower, wild bergamot and sneezeweed (*Helenium autumnale*).



Figure 2. Planting seedlings in meadow, Black River Harbor, Lake Superior



Figure 2. Planting seedlings in meadow, Black River Harbor, Lake Superior



Figure 1.
Collected
sneezeweed seed



Figure 3. Black-eyed susan ready to plant

Year Awarded: 2008, additional funds awarded in 2009, 2010, and 2011.

Project completion: ongoing.

Report number: 4.

Expenditures: \$23,000 in 2011.

Partners/Contractors/Cooperators: Friends of Bergland; Friends of Sylvania Wilderness; JW Toumey Nursery; Contractors M. Mason, B. Peacock, C. Germaine, A. Ellsworth

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



Ottawa National Forest
E6248 US Highway 2
Ironwood, MI 49938



Welcome Monarchs! Shawnee National Forest 2011 Accomplishments

This project was continued in 2011 to enhance native plant pollinator gardens with plants that monarchs rely on for food. Plants such as black-eyed Susan, butterfly weed, purple coneflower, and New England aster were obtained from 3 local nurseries as well as dozens of other native plant species targeted for other pollinators. Species will continue to be transplanted from plant rescues and through nursery purchases as they become available. Local nurseries have been stocking more native species during the last 2 years than ever before... perhaps a result of the Forest Service and partners' continuous requests for native species.

The "Welcome Monarchs!" project is an extension of the "Partners and Pollinator Gardens" project that was initiated in 2009 on the Shawnee National Forest. Figure 1 was taken in the 0.1-acre pollinator garden in front of the new office building. Figure 2 was taken in the lower parking lot of the administrative grounds. This is the first year that Monarchs have visited the Vienna garden. Linda Hauser has seen monarchs on milkweeds at the Murphysboro Work Center since at least 2010.



Figure 1. Scales (insects) were found devouring Butterfly Weed, however, they were gently wiped off of plants periodically. Misty McElyea found this caterpillar taking advantage of the newly planted Butterfly Weed.



Figure 2. Misty McElyea caught this butterfly exploring a FS vehicle tire in September. Monarchs have been seen lingering at the District Office/Work Centers as late as Nov 7 feeding on purple coneflower and black-eyed Susan nectar.

Year Project Initiated: 2010

Project completion: 2014

Report number: 2 of 4

Expenditures (through 10/2011): \$4,558.71
FY11: \$1,669.80

FY11 funding – NFN3

Partners/Coop - 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 Person & phone number:
E.L. Shimp 618-658-2111



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



Partners & Pollinator Gardens Shawnee National Forest 2011 Accomplishments

This project was initiated in 2009 to obtain and plant native plant material from local genetic stock and add to the pollinator gardens at 3 administrative sites on the District. Seven partners are participating in a Challenge Cost-share Agreement to help the District Office and Work Centers become educational sources for school groups and other visitors.

This years focus was to remove debris and non-native invasive plant species from an adjacent woodland and planning a woodland wildflower trail for visitors. Prior to opening it to the public, native species are being re-introduced through plant rescues and nursery purchases. Species such as Cinnamon Fern, Royal Fern, Maiden Hair Fern, and Rattlesnake plantain have been planted and will be joined by numerous other native woodland species.

Hundreds of plants were put into two gardens at the District Office. Existing pollinator gardens at the two Work Centers and the Johnson Creek Recreation Area were maintained and enhanced. Suet and feeders for birds, including a hummingbird feeder, have become permanent fixtures in the gardens.



Figure 2. November brings the earthy tones of the prairie drop seed and Indian grass into harmony with the bright colored black-eyed Susan and purple coneflower.



Figure 1. In April, Ruth Kelley (Shawnee Group of the Sierra Club) and Melissa Wilson (Shawnee RC&D) took on the tedious task of digging daffodil bulbs that have come up in the pollinator gardens.

Year Awarded: 2011

Total Project Value of \$184,351.20 has been planned with partners. Forest Service funding with NFN3 dollars came to \$14,000.00 in FY09, \$22,000 in FY10 and \$19,000 in FY11.

Project completion: 2014

Report number: 3

Expenditures: \$16,698.00 (FY11)

Partners: 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 Person & phone number:

E.L. Shimp 618/658-2111



Shawnee National Forest
Hidden Springs/Mississippi
Bluffs Ranger District
602 North 1st Street
Vienna, IL 62995



Common Milkweed Seed Collection and Planting - Superior National Forest 2011 Accomplishments

This project involved collecting seed from the native plant common milkweed (*Asclepias syriaca*) for use in establishing new milkweed populations at five district offices and the Supervisor's Office. During fall 2011, milkweed seed was collected from multiple populations near Aurora, MN. The seed was mixed together and distributed to the five districts and the Supervisor's Office, where it was planted in open, sunny areas. The objective is to start milkweed patches and attract monarchs to administrative sites, to assist with future visitor education efforts about the monarch butterfly.



Figure 2. Common milkweed seed



Figure 1. Common milkweed (*Asclepias syriaca*) fruit at collection site

Year Project Initiated: 2011
Project completion: 2013
Report number: 1 of 3
Expenditures (through 9/30/2011): \$500
FY11 funding: NFWF09
Partners/Contractors/Coop: None
Contact Person & phone number:
Jack Greenlee, 218-229-8817



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

Native Plant and Pollinator Gardens Wayne National Forest



MONARCH
JOINT VENTURE

2011 Accomplishments

The Native Plant and Pollinator Gardens project was initiated in 2008 on the Wayne National Forest to: obtain local native plant materials to create native plant and pollinator beds at administrative offices, provide trails and interpretation about the importance of native plants and pollinators, and create native plant seed production areas for future restoration. All three of the administrative offices have native plant/pollinator gardens, and two of the offices have interpretive trails and shade houses for seedling production.

FY 2011 funds were used to maintain existing native plant gardens for continued pollinator use, public education and landscaping around at the three administrative offices. Maintenance activities included mowing and weed-eating around native garden plantings, weed removal within the garden beds, removal of invasive species (Canada thistle) and transplanting plugs of native species (*Liatris*, *Asclepias*) into the newly weeded areas. Hocking College students put in 72 volunteer hours weeding and transplanting at the Athens district gardens as part of a practicum for their plant class. Other maintenance included replacement and re-enforcement of interpretive signs and holders along the interpretive trail at the Ironton district office.

In addition, FY11 earmark funds were used to prepare 10 acres of reclaimed mineland for native plantings on the Athens district. This involved mowing the existing non-native vegetation (fescue, lespedeza) and then letting it grow back to then be sprayed with herbicide in October. Wildlife funds will then be leveraged in November and March (FY12) to rent a no-till Truax drill to plant warm season grass and prairie forb seeds. Fall and spring plantings will be monitored over-time to determine what species respond best to the different planting times. This data will be used to help determine what methods will be used in upcoming wildlife restoration projects that target converting reclaimed minelands to more biologically diverse plantings of native species for wildlife habitat and foraging. Prescribed burning will also be incorporated for conversion and maintenance; then monitored for adaptive management of these converted openland habitats.



Figure 1. Weeding native plant and pollinator garden.



Figure 2. Replacing signs along interpretive trail.

Year Project Initiated: FY2008

Project completion: FY2011

Report number: 1 of 1 (2011)

Expenditures (through 10/2011):

▪FY08 funding \$26,502

▪FY09 funding \$30,000

▪FY10 funding \$25,000

▪FY11 funding \$16,000

Total Funding: \$97,502

FY11 funding (Partners/Contractors/Cooperators):

Hocking College, Northwind Engineering, Athens County Soil and Water District, Shad Salyers, Christina Vaughn, Jennifer Elkins, Travis Kling, Zac Allen, Nick Galentin, Allen Patton, Jaclyn Haynal, Benjamin Reed and Jessica Masters.

Contact Persons:

Cheryl Coon, Forest Botanist 740-753-0558 and

Aurora Roemmich, Ironton District Botanist 740-534-6535



Wayne National Forest

13700 U.S. Hwy 33

Nelsonville, OH 45701



Tagging Monarchs Wayne National Forest 2011 Accomplishments

Mid-September to early-October have the biologists visiting old fields and wildlife openings (e.g. Figure 1) in search of migrating Monarch butterflies. Once caught a small disc “tag” with a 3-letter and 3-number code is adhered to the monarchs hind wing. (Figure 2). Information on the sex of the butterfly and the location of the capture is also recorded. After all is processed the butterfly is then free to continue on its flight south to the mountains of Mexico. The purpose of this project is to record the location of capture to the point of recovery thereby providing information on the migratory route, the influence of encountered weather patterns and survival rates.

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

Since the beginning of the tagging program in 2008 172 butterflies have been tagged (104 in FY11). To date no tags have been recovered....yet!



Figure 1. One third of the monarchs tagged in 2011 were from this small ironweed patch near the highway.



Figure 2. A tagged male monarch

Year Project Initiated: 2008

Project completion: Ongoing

Report number: 1 of 2

Expenditures (through 10/2011): NFWF \$1235.00

FY11 Funding: Wayne National Forest -
Volunteers

Contact Person & phone number:
Lynda Andrews 740-753-0550



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



Propagation of Milkweed and Planting of Nectar Sources Wayne National Forest 2011 Accomplishments

Seeds from milkweed and various nectar producing plants were collected from native regional stock and planted in trays. These seedlings are being grown in the Forest shade house and will be transplanted into prairie areas on the Athens Ranger District around the Nelsonville and Marietta offices this spring. Additionally, seed from native stock was collected and planted around areas that had been disturbed due to oil and gas well plugging.



Figure 2: Starting trays with milkweed seedlings.



Figure 1: Seeds from a milkweed pod

Year Project Initiated: 2011

Project completion: 2012

Report number: 2 of 2

Expenditures (through 10/2011): NFN3 \$300.00

FY11 Funding: Wayne National Forest -
Volunteers

Contact Persons & phone numbers:

Cheryl Coon 740-753-0558

Lynda Andrews 740-753-0550



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



MONARCH
JOINT VENTURE

Native Plant Pollinator Gardens- Administrative Complex White Mountain National Forest 2011 Accomplishments

Since 2009, the White Mountain National Forest has been striving to develop the landscape at its new Supervisor's Office/Pemigewasset Ranger District facility utilizing native plant materials. The overall intention is to develop the entire site as a complex of native plant pollinator gardens. Progress is slow, but steady. In 2009, a wetland native plant pollinator garden was installed in a storm water detention wetland, in 2010 a native shrub thicket garden and entrance gardens were installed not only to serve the local pollinator population, but to serve as a teaching opportunity about native plant landscaping and for the enjoyment of the visitors to this facility. A wildflower meadow and seed production area was also conceived and a local provenance seed mix sown on the site of the facilities leach field in 2009. Despite the application of 6-8 inches of loam to the site, it remains a droughty area and has proved challenging for seeds to germinate. The year 2010 passed with little sign of successful seed germination.

In 2011, the focus was to acquire local provenance plugs of native species and use these to augment the previously sown seed mix. To this end 5,100 plugs of native asters, goldenrods, milkweeds, and a handful of various other species were acquired from a local nursery. Due to the late arrival of this stock they are still being planted in the meadow area and other sites around the White Mountain headquarters facility. However, much to our delight thousands of small seedlings and many first year plants resulting from the seed mix sown in 2009 were found to be happily colonizing the meadow area. Additional shrubs and potted native plants were also acquired to augment the entrance gardens and the shrub thicket area.

Some of the funding was also used to support a portion of a seasonal botanist time to collect seeds of a large variety of native species occurring on the White Mountain National Forest. This year the focus was on collecting a small amount of a large variety of species, to this end seeds were collected from 78 species of shrubs, forbs and graminoids. Shrub seeds were directly sown in flats while other seeds were cleaned, dried, and will be stored for future sowing in a seed production meadow.



Wildflower seed production meadow on leach field of the WMNF Administrative Complex.



A small portion of the native plant seed collected on the WMNF drying in the office.



Rough-stemmed goldenrod (*Solidago rugosa*) with pollinator.



Pollinators on New England aster (*Symphotrichum novae-angliae*)

Project awarded 2011

Report number: 1 of 2

Project expenditures

FY 2011 funding: \$31,000.00

FY2011 WMAC funding: \$12,951.00

Staff/site preparation: \$4,451.00

Materials: \$8,500.00

FY2011 Seed Collection Funding: \$4,324.00

Contractors, Partners, Cooperators

Clements Nursery

Contact:

Christopher Mattrick, Forest Botanist

603-536-6225

cmatrick@fs.fed.us

All images by Christopher Mattrick



White Mountain National Forest

71 White Mountain Drive

Campton, NH 03223



MONARCH
JOINT VENTURE

Lincoln Woods Native Plant Pollinator Garden White Mountain National Forest 2011 Accomplishments

The entrance port to the Pemigewasset Wilderness on the Pemigewasset Ranger District of the White Mountain National Forest is known as Lincoln Woods. This site, located on the Kancamagus National Scenic Byway, is a heavily used year round facility. At the welcome cabin there is no water or wired electricity. All power is supplied by a solar panel and any water must be carried in by hand. For nearly five years, the district has struggled to get plants established in the small garden area in front of this facility. Water has consistently been a challenge.

In 2011, a gutter and rain barrel system were installed to provide a periodic source of irrigation water for the garden beds and a variety of native herbs and shrubs adapted to drier sites were installed. The rain barrel system collects water from the roof of the facility. The resulting plantings have transformed the garden areas from barren weedy patches with some spring daffodil bulbs into an attractive native plant garden highlighting some of the native species visitors are likely to encounter while hiking in the Pemigewasset Wilderness Area.

Over 150 plugs, pots, and balls were installed constituting 20 different species including low-bush blueberry, meadowsweet, Pennsylvania sedge, maple leaved viburnum, flat-topped aster, grass-leaved goldenrod, and New England aster. The planting of these species should keep the local pollinator population content for years to come. The presence of the rain barrel watering system relieves the pressure on the handful of volunteers who staff this facility on a year-round basis. Two of the volunteers provided some of the naturalistic landscaping material in the form of a perfectly rotted stump from their back yard. The presence of this stump and several other rotted logs and rocks give the garden a natural feel and appearance. The changes were immediately noticed by frequent visitors and newcomers alike. Many were impressed with how rapidly the change occurred while others were intrigued with the species planted or the specifics of how the rain barrels worked.



Lincoln Woods with its new rain barrel irrigation system and gardens.



Lincoln Woods Forest Service volunteer talking to visitors about the gardens and giving out information on local hikes.

Year Awarded: 2011
Project completion: 2011
Report number: 2 of 2

Expenditures:
FY 2011 total funding - \$31,000.00
FY 2011 Lincoln Woods Garden – \$13,410.00
Site Prep/Staff - \$3,626.00
Materials – \$9,784.00

Contractors, Partners, Cooperators:
Clements Nursery
Himmer Construction

Contact: Christopher Mattrick
603-536-6225, cmattrick@fs.fed.us
Images by Christopher Mattrick



White Mountain National Forest
71 White Mountain Drive
Campton, NH 03223



MONARCH
JOINT VENTURE

Monarchs & Milkweeds

White Mountain National Forest

2011 Accomplishments

This project was initiated in 2008 with the installation of the native plant garden at the Saco Ranger Station in Conway, New Hampshire.

A conscious effort was made to install native plant materials that would be beneficial to local pollinators, especially the monarch butterfly. Native Plant Gardens now exist at three administrative sites on the White Mountain National Forest (WMAC): the Saco Ranger Station, the Androscoggin Ranger Station and the new White Mountain Administrative Complex (WMAC). The common milkweed at the Saco and Androscoggin Ranger Station gardens has become so abundant that it is being thinned so that it does not choke out other pollinator plants nearby. The thinned stock is then transplanted to wildflower meadows nearby at each site.

In 2011, additional milkweed stock was added to the WMAC gardens and included as a component of the seed production meadow plug plantings taking place in the fall of 2011. All the planting stock was provided by a local nursery and is of local New England genetic type. These plantings total approximately 1 acre.

The WMNF has for many years maintained dozens of wildlife openings on the WMNF through the use of fire and mowing. Despite staffing limitations and problems with our primary mower we were able to maintain approximately 183 acres of land in an open state. These sites a strong component of common milkweed (*Asclepias syriaca*), as well as other milkweed species. These openings are critical to the future of the Monarch butterfly on the WMNF. By maintaining these areas in an open state with a component of common milkweed we are providing habitat and nectar sources for the Monarch and other native butterfly species.



Common milkweed (*Asclepias syriaca*) beginning to establish in the seed production meadow.



Ripe and dispersing pods of swamp milkweed (*Asclepias incarnata*) at the White Mountain National Forest seed production meadow.

Year Project Initiated: 2008

Project completion: The project is on-going and variable with actions and funding be utilized to enhance habitat for monarchs as available. The funding listed below is related to the planting of milkweed species in native plant pollinator gardens. Additional funding from multiple appropriated funds was utilized to support the mowing and burning of wildlife openings to achieve multiple targets.

Expenditures (through 10/2011): \$2,456.26
FY11 funding: \$956.26

Partners/Contractors/Coop: Clements Nursery

Contact Person & phone number: Christopher Mattrick, Forest Botanist
603-536-6225 cmattrick@fs.fed.us



White Mountain National Forest
71 White Mountain Drive
Campton, NH 03223



Zaagkii Wings & Seeds Project Eastern Region

2011 Accomplishments

Our Zaagkii Wings & Seeds Project, now in its fourth year, has matured into several different but related segments. We continue our partnership with the Keweenaw Bay Indian Community (KBIC) including the propagation of locally native plants in their greenhouse which are raised for their various restoration and ethnobotanical needs. One important example involving the use of these plants was at the restoration of Sand Point (a brown field site) on the Lake Superior shoreline. Forty-seven youth volunteers also planted over 1500 plant plugs on Lake Superior's Grand Island (Hiawatha NF) and constructed 54 butterfly and bee houses and shelters. During the last two years youth have distributed 58,000 native plant seeds to gardeners and local citizens. Portions of our ethnobotanical partnership work with Northern Michigan's Center for Native American Studies can be viewed at <http://www.learningfromtheearth.org/> Additional ethnobotanical videos will be forthcoming upon completion.

In 2010 a native plant greenhouse was established and dedicated at KBIC and now serves as a training center and model for regional tribal communities. Two botany workshops were completed with regional tribes and a third is scheduled for 2012. Representatives of KBIC and the Sault Ste Marie Band of Chippewa Indians (SSMBCI) attended the second in the series and SSMBCI attended a Monarch Butterfly Workshop offered by Monarch Joint Venture and the University of MN.

More specific information about the various facets of our Wings & Seeds Project can be read at our R9 Success Story site <http://www.fs.fed.us/r9/ssrs/> More detailed and specific information regarding our various Zaagkii activities can be found at <http://wingsandseeds.org/>



Figure 1 Restoration at Sand Point – Keweenaw Bay Indian Community

Year Awarded: initial award in 2011

Project completion: 2011; Report number: 1 of 1
■ Total funding \$50,000.

Partners/Contractors/Coop: Cedar Tree Institute; Northern Michigan University Center for Native American Studies; Keweenaw Bay Indian Community; Sault Ste Marie Band of Chippewa Indians; Marquette County Juvenile Court, Upper Peninsula Children's Museum; USFS International Programs; Hiawatha NF; Ottawa NF.

Contact Person & phone number:
Jan Schultz 414 297 1189 jschultz@fs.fed.us



Eastern Regional Office
626 East Wisconsin Ave.
Milwaukee, WI 53202



Juneau Park Native Plant Pollinator Garden Eastern Region 2011 Accomplishments

The following is a short summary of some of the activities that occurred this past year, our third, at the Juneau Park Native Plant and Pollinator Garden in downtown Milwaukee, WI. This is in addition to all of the foraging pollinators, blooming flowers, and seeds being set!

* The Milwaukee County Parks staff spent seven days from June through September working on the Juneau Park Native Plant & Pollinator Garden for a total of 112 staff hours.

* Grant-Thornton (downtown business) chose the Juneau Park Garden for one of their 2011 community workdays and donated 50 staff hours.

* Activities at the garden revolved around invasive species control.

* The site was also prepared for fall (November) planting of native prairie seeds that will be collected from other Milwaukee County Parks properties.

RadioMilwaukee also interviewed us about our garden during their broadcast entitled "Make a Difference: Learning, Environment, and Volunteerism." We discussed the joy involved with learning about the environment and also discussed a larger theme. How does an organization "make a difference" in Milwaukee regarding learning, environment, and volunteerism? Also - how does it make a difference for us to be a part of the USDA Forest Service? We had a most enjoyable time visiting with Lisa Jo Goldman, Producer at [88Nine RadioMilwaukee](http://88NineRadioMilwaukee.com). Their office is located at 5312 Vliet Street Milwaukee, WI 53208. Lisa's contact information is: lisa@radiomilwaukee.org or 414-475-8552).

Previous Success Stories about our Juneau Park Native Plant and Pollinator Garden can be found at: <http://www.fs.fed.us/r9/ssrs/> A radio interview about this project can be heard at <http://www.fs.fed.us/r9/ssrs/story?id=6319>



Figures 1 & 2 . Volunteers from Grant Thornton work day at Juneau Park

Year Awarded: 2011; Project completion: 2011

Report number: 1

▪**Total funding \$10,000.**

Partners/Contractors/Coop:
Milwaukee Parks and Recreation . Milwaukee, WI & many other great volunteers – thank u!

Contact Person & phone number:
Jan Schultz 414 297 1189 jschultz@fs.fed.us



Eastern Regional Office
626 E. Wisconsin Avenue
Milwaukee, WI 53202