



Fermilab Natural Areas
PO Box 500, MS 444
Batavia, IL 60510-0500
630.840.4845 (phone)
630.840.2108 (fax)
fermilabnaturalareas@gmail.com

November 19th, 2013

Grant Agreement #: 13-006W

Timeframe of Report: July 18th, 2012 to December 31st, 2013

Project Objective: The broad aim of our project is to increase the quality of our oak savanna in terms of the number and amount of native plants which it supports. Maintaining a rich assemblage of native plant species will allow the savanna to continue to support many native birds, mammals, and invertebrates. To achieve this aim we will:

- 1) Treat 13 acres of invasive reed canary grass in our oak savanna.
- 2) Seed the savanna with a locally-collected mix of up to 100 native plant species
- 3) Survey the savanna to measure the success of the project
- 4) Engage a volunteer to become a steward of the savanna within Fermilab Natural Areas Stewardship Program.

This grant requested \$2,000.00 from the IDNR Illinois Wildlife Preservation Fund to perform secondary treatment of reed canary grass throughout the original 13 acre treatment area. The work was completed by a contractor in May of 2013, which is within the spring spraying season for reed canary grass.

Prior to any treatment of reed canary grass, the east and west portions of the savanna were infested, totaling 13 solid acres of the 35 acre remnant. Monies granted to Fermilab Natural Areas (FNA) from different sources (The DuPage Community Foundation and The Weist Foundation) were used in the spring of 2012 to girdle non-oak tree species (cherry, basswood, maple, elm) and perform the initial herbicide treatment to the reed canary grass areas. Photos attached to this report show the effect of the girdling as well as areas treated for reed canary grass in both 2012 and 2013.

Like most large-scale ecology projects, the savanna restoration will take years to complete. We have made substantial progress on the first phase; thinning the canopy and beginning to control the reed canary grass. The next phases have and will continue

JAN 9 2013



to incorporate prescribed burning, invasive species spot treatments, native seed additions and monitoring. Provided in this report is a list of native seed that was sown since the fall of 2012 (Table 2) as well as a plant species list with approximate abundance values found within this savanna (Table 3). Our plan is to continue surveying and enriching with seed every year in order to track the progress and assess the trajectory of the savanna restoration project. This methodology is normal practice at Fermilab, with monitoring and enrichment taking place in over 45 individual prairie, woodland, wetland, and savanna habitat units.

Bird monitoring regularly takes place within this savanna throughout the year. Fermilab has had monitors since 1987 surveying the entire site. Below is a list of bird species that have been seen using this savanna during migration (Table 1). After canopy thinning and herbaceous layer restoration, we hope to find greater numbers of these species, especially regularly-nesting red-headed woodpeckers.

Table 1. List of birds observed using this savanna for migration or nesting

Bay-breasted Warbler	Cape May Warbler	Magnolia Warbler	Swainson's Thrush
Black and White Warbler	Chestnut-sided Warbler	Mourning Warbler	Tennessee Warbler
Blackburnian Warbler	Connecticut Warbler	Nashville Warbler	Veery
Blackpoll Warbler	Fox Sparrow	Northern Waterthrush	White-crowned Sparrow
Black-throated Blue Warbler	Golden-crowned Kinglet	Orange-crowned Warbler	Wilson's Warbler
Black-throated Green Warbler	Golden-winged Warbler	Ovenbird	Winter Wren
Blue-headed Vireo	Gray-cheeked Thrush	Palm Warbler	Yellow-bellied Flycatcher
Blue-winged Warbler	Hermit Thrush	Philadelphia Vireo	Yellow-bellied Sapsucker
Broad-winged Hawk	Hooded Warbler	Red-headed Woodpecker	Yellow-breasted Chat
Brown Thrasher	Least Flycatcher	Ruby-crowned Kinglet	Yellow-rumped Warbler
Canada Warbler	Lincoln's Sparrow	Sharp-shinned Hawk	Yellow-throated Warbler

In the early summer of 2013, we set up snake monitoring boards within the savanna. These boards will stay in place as surveying will continue for years to come. We hope to find smooth green snakes but so far have only recorded Midland Brown and Chicago Garter snakes. Fox snakes have also been seen in the area. Adjacent wetlands regularly have Northern Leopard Frogs, Western Chorus Frogs, Bullfrogs, as well as Painted Turtles and Snapping Turtles.

Although the project is primarily intended to impact the savanna environment, various groups and individuals were served during the grant period, through their participation in the project, or by learning about the savanna and the process of restoration ecology. Five Fermilab summer student employees and three Fermilab Natural Areas interns advanced their education and practical experience through their work, which included surveying and invasive species control within the savanna. Nearly 150 visitors attended our first Discovery Day event (photo attached) where they were taken on walking tours through the savanna restoration and shown the progress while learning about why savannas are important in Illinois. Members of the community who visited the savanna during that event made comments such as: "Boy,

this is really the heart of a very large green space", or "I can almost imagine what this will look like in five to ten years". One long time birdwatcher surmised "this seems like it could possibly be one of the best resting sites for migratory birds in this area." Just to hear the comments of the people who walked through the savanna on that day made it obvious that our efforts were providing a positive experience for all who attended. Similar to Discovery Day, two Fermilab Ecology bus tours were an overwhelming success and participants from four seed harvest events (photo attached) came away with a new appreciation for the restoration potential of the environment, and the restoration process itself.

Fermilab Natural Areas is also working to help Fermilab maintain this savanna ecosystem over the long term. The Fermilab Natural Areas Stewardship Program brings in volunteers who would like to 'adopt' a habitat. These volunteer stewards can help control invasive species, monitor rare plants, collect and spread native seed, or monitor wildlife. We have recently identified several people to fulfill the stewardship role within this savanna. In the meantime, Fermilab staff has vowed to continue the yearly spraying of reed canary grass as well as lead several brush-cutting workdays within the savanna to keep invasive shrubs like buckthorn and bush honeysuckle from producing seeds.

Table 2. List of species that have been seeded into the Main Ring Savanna since 2011 (Note: all hand-collected by volunteers on the Fermilab campus)

Scientific_name	MR Savanna
<i>Agastache scrophulariaefolia</i>	x
<i>Asarum canadense</i>	x
<i>Aster shortii</i>	x
<i>Blephilia hirsuta</i>	x
<i>Cacalia atriplicifolia</i>	x
<i>Carex sprengeii</i>	x
<i>Clematis virginiana</i>	x
<i>Festuca obtusa</i>	x
<i>Geranium maculatum</i>	x
<i>Helianthus strumosus</i>	x
<i>Heliopsis helianthoides</i>	x

<i>Hydrophyllum appendiculatum</i>	x
<i>Hystrix patula</i>	x
<i>Jeffersonia diphylla</i>	x
<i>Osmorhiza longistylis</i>	x
<i>Pedicularis canadensis</i>	x
<i>Phlox divaricata</i>	x
<i>Physostegia virginiana</i>	x
<i>Polemonium reptans</i>	x
<i>Rosa setigera</i>	x
<i>Rudbeckia laciniata</i>	x
<i>Rudbeckia subtomentosa</i>	x
<i>Silene stellata</i>	x
<i>Solidago flexicaulis</i>	x
<i>Solidago ulmifolia</i>	x
<i>Thalictrum dasycarpum</i>	x
<i>Triosteum aurantiacum</i>	x
<i>Triosteum perfoliatum</i>	x
<i>Veronicastrum virginicum</i>	x
<i>Viola pubescens</i>	x

Table 3. Plant Survey List for Main Ring Savanna

Plant Species	COMMON NAME	C	Notes	2010	2011	2012
<i>Acer negundo</i>	box elder	0				
<i>Actinomeris alternifolia</i>	wingstem	5		X	X	
<i>Agastache nepetoides</i>	yellow giant hyssop	5				1
<i>Agastache scrophulariaefolia</i>	purple giant hyssop	5				2
<i>Agrimonia gryposepala</i>	tall agrimony	2				2

<i>Agrimonia pubescens</i>	soft agrimony	5			
<i>Alliaria petiolata</i>	garlic mustard	0			4
<i>Allium canadense</i>	wild onion	2			1
<i>Allium cernuum</i>	nodding wild onion	7			
<i>Allium tricoccum</i>	wild leek	7			1p
<i>Ambrosia artemisiifolia elatior</i>	common ragweed	0			
<i>Ambrosia trifida</i>	giant ragweed	0			
<i>Amelanchier arborea</i>	serviceberry	8			
<i>Amphicarpaea bracteata</i>	upland hog peanut	4	X	X	
<i>Andropogon gerardii</i>	big bluestem grass	5		X	
<i>Anemone cylindrica</i>	thimbleweed	6			
<i>Anemone virginiana</i>	tall anemone	5	X	X	
<i>Apocynum androsaemifolium</i>	spreading dogbane	5			
<i>Apocynum sibiricum</i>	prairie indian hemp	2	X	X	3
<i>Aquilegia canadensis</i>	wild columbine	6			
<i>Arctium minus</i>	common burdock	0			4
<i>Arisaema triphyllum</i>	jack-in-the-pulpit	4			X
<i>Asclepias exaltata</i>	poke milkweed	9	X		
<i>Asclepias syriaca</i>	common milkweed	0			
<i>Aster ericoides</i>	heath aster	5			
<i>Aster laevis</i>	smooth blue aster	9			
<i>Aster lateriflorus</i>	side-flowering aster	4			
<i>Aster sagittifolius drummondii</i>	drummond's aster	2			
<i>Baptisia leucantha</i>	white wild indigo	8	X		
<i>Barbarea vulgaris</i>	yellow rocket	0			
<i>Berberis thunbergii</i>	japanese barberry	0			
<i>Bidens cernua</i>	nodding bur marigold	5			
<i>Bromus inermis</i>	hungarian brome	0		X	

<i>Bromus latiglumis</i>	ear-leaved brome	5			
<i>Cacalia atriplicifolia</i>	pale indian plantain	8	X	X	4
<i>Cacalia plantaginea</i>	prairie indian plantain	10			
<i>Camassia scilloides</i>	wild hyacinth	6			
<i>Campanula americana</i>	tall bellflower	3	X	X	
<i>Carex bicknellii</i>	copper-shouldered oval sedge	10			
<i>Carex hirtifolia</i>	hairy wood sedge	5			1
<i>Carex vulpinoidea</i>	brown fox sedge	2		X	
<i>Celtis occidentalis</i>	hackberry	3		X	
<i>Cichorium intybus</i>	chicory	0			
<i>Circaea lutetiana canadensis</i>	enchanter's nightshade	1			X
<i>Cirsium altissimum</i>	tall thistle	6			
<i>Cirsium arvense</i>	field thistle	0			X
<i>Cirsium discolor</i>	pasture thistle	2		X	1
<i>Claytonia virginica</i>	spring beauty	2			4
<i>Coreopsis palmata</i>	prairie coreopsis	6			X
<i>Coreopsis tripteris</i>	tall coreopsis	5	X	X	3
<i>Cornus racemosa</i>	gray dogwood	1		X	X
<i>Coronilla varia</i>	crown vetch	0			X
<i>Corylus americana</i>	american hazelnut	5			X
<i>Crataegus mollis</i>	downy hawthorn	2			X
<i>Cryptotaenia canadensis</i>	honewort	2			
<i>Dactylis glomerata</i>	orchard grass	0			
<i>Daucus carota</i>	queen anne's lace	0			
<i>Dodecatheon meadia</i>	shooting star	6			X
<i>Elymus villosus</i>	silky wild rye	5		X	
<i>Elymus virginicus</i>	virginia wild rye	4	X	X	
<i>Equisetum arvense</i>	horsetail	0			
<i>Equisetum hyemale</i>	tall scouring rush	3			

<i>Erigeron annuus</i>	annual fleabane	0			
<i>Erigeron strigosus</i>	daisy fleabane	5			
<i>Eryngium yuccifolium</i>	rattlesnake master	9	X		
<i>Erythronium albidum</i>	white trout lily	5			5
<i>Eupatorium purpureum</i>	purple joe pye weed	7	X	X	
<i>Eupatorium rugosum</i>	white snakeroot	4		X	
<i>Eupatorium serotinum</i>	late boneset	0			
<i>Fragaria virginiana</i>	wild strawberry	1		X	3
<i>Fraxinus americana</i>	white ash	5		X	
<i>Galium triflorum</i>	sweet-scented bedstraw	5			3
<i>Gentiana flavida</i>	yellowish gentian	9	X		
<i>Geranium maculatum</i>	wild geranium	4			2
<i>Geum canadense</i>	wood avens	1			2
<i>Glechoma hederacea</i>	creeping charlie	0			X
<i>Helenium autumnale</i>	sneezeweed	5			
<i>Helianthus grosseserratus</i>	sawtooth sunflower	2	X	X	
<i>Heliopsis helianthoides</i>	false sunflower	5		X	
<i>Heracleum maximum</i>	cow parsnip	5	X	X	5
<i>Hydrophyllum virginianum</i>	virginia waterleaf	5			3
<i>Hypericum punctatum</i>	spotted st. john's wort	4			X
<i>Hystrix patula</i>	bottlebrush grass	5	X	X	
<i>Juncus dudleyi</i>	dudley's rush	4	X	X	
<i>Laportea canadensis</i>	wood nettle	3			
<i>Leonurus cardiaca</i>	motherwort	0			X
<i>Liatris pycnostachya</i>	prairie blazing star	8			
<i>Liatris scariosa nieuwlandii</i>	savanna blazing star	5	X	X	4
<i>Lilium michiganense</i>	turk's cap lily	6	X		
<i>Lithospermum latifolium</i>	broad-leaved puccoon	9		X	3
<i>Lobelia siphilitica</i>	great blue lobelia	6			
<i>Lonicera maackii</i>	amur honeysuckle	0			X

<i>Lychnis alba</i>	white campion	0			
<i>Lysimachia quadriflora</i>	narrow-leaved loosestrife	9			
<i>Melilotus alba</i>	white sweet clover	0			X
<i>Menispermum canadense</i>	moonseed	6		X	
<i>Monarda fistulosa</i>	wild bergamot	4	X	X	4
<i>Morus alba</i>	white mulberry	0			
<i>Oxalis violacea</i>	violet wood sorrel	9			
<i>Panicum virgatum</i>	switch grass	5	X	X	
<i>Parthenium integrifolium</i>	wild quinine	8		X	
<i>Parthenocissus quinquefolia</i>	virginia creeper	2		X	
<i>Pedicularis canadensis</i>	wood betony	9	X	X	1p
<i>Penstemon digitalis</i>	foxglove beard tongue	4	X	X	2
<i>Phalaris arundinacea</i>	reed canary grass	0		X	5
<i>Phleum pratense</i>	timothy	0			
<i>Physalis subglabrata</i>	tall ground cherry	0			
<i>Physostegia virginiana</i>	obedient plant	6	X		1
<i>Phytolacca americana</i>	pokeweed	1			
<i>Podophyllum peltatum</i>	may apple	4			1p
<i>Polemonium reptans</i>	jacob's ladder	5			1
<i>Polygonum virginianum</i>	woodland knotweed	2		X	4
<i>Populus deltoides</i>	eastern cottonwood	2		X	
<i>Prunella vulgaris lanceolata</i>	self heal	0			
<i>Prunus americana</i>	wild plum	5		X	
<i>Prunus serotina</i>	wild black cherry	1		X	
<i>Prunus virginiana</i>	choke cherry	3			
<i>Pycnanthemum virginianum</i>	common mountain mint	5	X		2
<i>Quercus alba</i>	white oak	5		X	
<i>Quercus ellipsoidalis</i>	HILL'S OAK	4		X	
<i>Quercus macrocarpa</i>	bur oak	5		X	
<i>Quercus rubra</i>	red oak	7		X	

<i>Ranunculus abortivus</i>	small-flowered buttercup	0			2
<i>Ratibida pinnata</i>	yellow coneflower	4			
<i>Rhamnus cathartica</i>	common buckthorn	0			
<i>Rhus radicans</i>	poison ivy	2			X
<i>Rosa multiflora</i>	multiflora rose	0		X	X
<i>Rubus allegheniensis</i>	common blackberry	3		X	4
<i>Rubus occidentalis</i>	black raspberry	2		X	3
<i>Rudbeckia hirta</i>	black-eyed susan	1	X		2
<i>Rudbeckia laciniata</i>	wild golden glow	5			X
<i>Sambucus canadensis</i>	elderberry	1	X	X	3
<i>Sanguinaria canadensis</i>	bloodroot	6			4
<i>Sanicula gregaria</i>	clustered black snakeroot	2			X
<i>Scrophularia marilandica</i>	late figwort	4	X	X	2
<i>Silene stellata</i>	starry campion	6	X	X	2
<i>Silphium integrifolium</i>	rosin weed	5	X	X	2
<i>Silphium laciniatum</i>	compass plant	5	X		
<i>Silphium perfoliatum</i>	cup plant	5			
<i>Silphium terebinthinaceum</i>	prairie dock	5	X		1
<i>Smilacina racemosa</i>	feathery false solomon's seal	3	X		
<i>Smilacina stellata</i>	starry false solomon's seal	5			
<i>Smilax ecirrhata</i>	upright carrion flower	5			1
<i>Smilax lasioneura</i>	common carrion flower	5			
<i>Solidago altissima</i>	tall goldenrod	1		X	4
<i>Solidago rigida</i>	stiff goldenrod	4			
<i>Solidago ulmifolia</i>	elm-leaved goldenrod	5			X
<i>Sorghastrum nutans</i>	indian grass	5			
<i>Thalictrum revolutum</i>	waxy meadow rue	6			X
<i>Tilia americana</i>	american linden	5		X	
<i>Trillium recurvatum</i>	red trillium	5			2p
<i>Triosteum aurantiacum</i>	early horse gentian	5			

Triosteum perfoliatum	late horse gentian	5		10	1
Ulmus americana	american elm	3		X	
Verbascum thapsus	common mullein	0			
Verbena hastata	blue vervain	4			
Verbena urticifolia	hairy white vervain	5		X	
Veronicastrum virginicum	culver's root	7	X		2
Viola palmata	lobed violet	10			2
Viola pubescens	yellow violet	5			3
Viola sororia	common blue violet	3			4
Vitis riparia	riverbank grape	2		X	
Zizia aurea	golden alexanders	7	X		2

1 = 1 - 5 plants

2 = 6 - 25 plants

3 = 26-100 plants

4 = 101 - 1000 plants

5 = > 1000 plants

1p = 1 - 5 patches

2p = 6 - 25 patches etc.

Total species: 35 54 70

Native species: 35 51 60

Adventive species: 0 3 10

Average C Natives: 5.2 4.2 4.2

Natural Area Index (FQI): 31 30 33

Average W Natives: 1.5 1.8 1.9

Average W Total: 1.5 1.9 2.3



Northeast end of savanna with monoculture of reed canary grass (Spring 2012)



Southeast end of savanna with reed canary grass, prior to first spray treatment (Spring 2012)



Fermilab Natural Areas guide leading group through savanna restoration (Summer 2012)



Northeast end of savanna; treated reed canary grass area (Fall 2012)



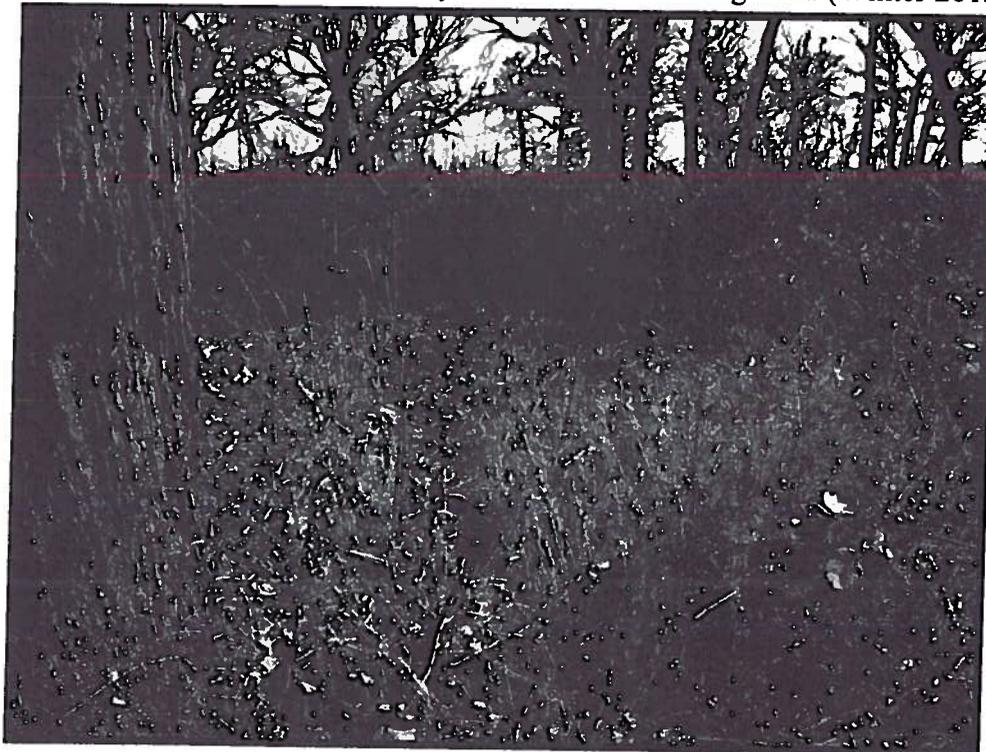
Girdled basswood trees after one season (Fall 2012)



Annual Volunteer Prairie Seed Harvest Event; east end of savanna (Fall 2012)



Middle of savanna, girdled cherry and basswood in foreground (Winter 2012)



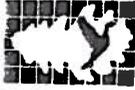
Reed canary grass sprayed in spring of 2013 (taken Fall 2013)



Foreground showing dead reed canary (blonde color) and resprouts (Fall 2013)



Recovering understory where formerly reed canary monoculture, green resprouts highlighting the need to continue the work for years to come (Fall 2013)



Applied Ecological Services, Inc.

17921 Smith Road, Brodhead, WI 53520

CHANGE ORDER #1

Fermilab Savanna (AES# 12-0274)

May 13, 2013

Attn: Fermilab Natural Areas
P.O. Box 500, MS 444
Batavia, IL 60510-5011

Dear Ryan,

With your approval, this change order proposal amends our previous contract with the additional herbicide work as defined below:

Item	Qty	Unit	Unit Cost	Total
Herbicide Reed Canary Grass – Spring 2013	1	LS	\$ 2,000.00	\$ 2,000.00
TOTAL				\$ 2,000.00

Original Contract Amount	\$	8,950.00
Previous Change Orders	\$	-
Total This Change Order	\$	2,000.00
Revised Contract Amount	\$	10,950.00

V# 2636
9/23/13

Notes:

- This quote is valid for 60 days
- Sales tax if applicable will be added upon invoicing.
- AES is a non-union shop. "Prevailing wage" rates have not been included in the above price.

Aaron Kubichka, Project Manager
Applied Ecological Services

Chuck Campbell, Project Estimator
Applied Ecological Services

Bill for services; \$2,000.00


Fermilab Natural Areas
 P.O. Box 618 18044
 South El, IL 60170
 630-99-2100
 www.fermilab.com/nra

2838
 Date 23 Sep 2013

PAY TO THE ORDER OF Applied Ecological Services \$ 2000.00
two thousand & no/100

DEPOSIT ONLY
 MICR LINE: ⑆002636⑆ 007190780⑆ 1140⑆100⑆6561⑆


 Dan Kelly

2636 09/27/2013 2000.00

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Monday, Nov. 25

2:30 p.m.

[Particle Astrophysics Seminar](#) - WH6V[Speaker: Chris Tully](#)

Princeton University
 Title: Challenges of Relic Neutrino Detection and the Status of the PTOLEMY Experiment

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

4 p.m.

All Experimenters' Meeting - Curia II

Tuesday, Nov. 26

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR THIS WEEK

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[Campaigns](#)[Take Five](#)[Weather](#)

Snow
31°/23°

[Extended forecast](#)
[Weather at Fermilab](#)

Full house for Fermilab's 2013 Physics Slam



Physics slammers entertained a packed house in Ramsey Auditorium at Fermilab's second physics slam. From left, Don Lincoln, Tia Miceli, Hugh Lippincott, Chris Polly, Brian Nord. *Photo: Reidar Hahn*

Picture it. It's Friday evening, 8 p.m., and more than 800 people — many of them under the age of 20 — have trekked out to a particle physics laboratory to learn about science. They're as excited as a bunch of football fans before a Bears game.

That was the scene on Nov. 15 as Fermilab's Arts and Lecture Series presented its second annual Physics Slam to a packed house in Ramsey Auditorium. A physics slam is more than just a science talk: It's a competition between communicators.

Each of five contestants was given 10 minutes to discuss a topic in physics. The catch: They had to make it as exciting and enjoyable as possible. Contestants could use props, music, video — anything they chose. The five physicists took that to heart.

Don Lincoln kicked off the show by entering to Gary Glitter's "Rock and Roll Part 2," getting the audience to clap along. His presentation focused on the CMS experiment at the Large Hadron Collider and the discovery of the Higgs boson.

Tia Miceli, a postdoc on the MicroBooNE experiment, delved into the "Case Files of the Neutrino" in the guise of an old-time detective.

Return of the savanna



Savannas are characterized by widely spaced trees, mostly oaks. The savanna in the Tevatron ring is dominated by reed canary grass, soon to be replaced by dozens of native flowering species common in natural savannas. *Photo: Ryan Campbell, FESS*

In 1975, with the creation of a few acres of restored prairie, Fermilab became a center for ecological renewal and conservation. Nearly 40 years later, a network of volunteers and dedicated ecologists remains committed to preserving rare plant communities and the rich biodiversity they support. Since 2006, Fermilab Natural Areas (FNA), a not-for-profit corporation based at Fermilab, has been engaged in restoring one of the most endangered habitats in the Midwest — oak savanna.

The Fermilab campus is blessed with several acres of remnant savannas, most of which are degraded to some level. Since the beginning of FNA, its keystone project has been the restoration of the 35-acre oak savanna remnant in the center of the Tevatron ring. Over one third of the area of the savanna remnant has been choked with unwanted species of brush and trees. Beginning in 2012, funding obtained by FNA from The DuPage Community Foundation and The Weist Foundation was used in the spring of 2012 to begin clearing the savanna of tree species not characteristic of oak savanna, such as cherry, basswood, maple and elm.

Last year, an additional grant of \$2,000

[Current Security Status](#)

[Secou Level 3](#)

[Current Flag Status](#)

[Flags at full staff](#)

[Wilson Hall Cafe](#)

Monday, Nov. 25

- Breakfast: pancake sandwich
- Breakfast: sausage, egg and cheese croissant
- Philly chicken sandwich
- Smart cuisine: herb pot roast
- Spaghetti and meatballs
- Garden beef wrap
- Baked-potato bar
- Minestrone soup
- Texas-style chili
- Assorted pizza by the slice

[Wilson Hall Cafe menu](#)

[Chez Leon](#)

**Wednesday, Nov. 27
Lunch**

- Cheese fondue
- Mixed green salad
- Cold lemon souffle

Friday, Nov. 29

**Dinner
Closed**

[Chez Leon menu](#)

Call x3524 to make your reservation.

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www.fnal.gov/today/

Hugh Lippincott, postdoc on the COUPP experiment, discussed the search for dark matter, with an audience participation twist. He brought a young volunteer onto the stage and asked her to find one person in the audience, using stricter and stricter criteria, the way dark-matter experiments narrow the hunt for the elusive particles.

Chris Polly, project manager of the Muon g-2 experiment, wowed the crowd with tales of moving a giant magnet from New York and related the short-lived, gyrating particle it will study to Elvis Presley.

Finally, Brian Nord, postdoc on the Dark Energy Survey, presented an elaborate parody of "The Colbert Report," taking on the persona of a newscaster from the year 3031 railing against dark energy and its expansion of the universe.

The winner was determined by audience applause. Fermilab Director Nigel Lockyer presented to Miceli the top prize: a copy of "The Physics of Superheroes," by James Kakalios, who will give a talk of the same title at Fermilab on Dec. 6. After the show, a tabulation error was discovered, and Nord, who attained the highest score, was also awarded a championship certificate.

As it was last year, the 2013 Physics Slam was hosted by Chris Miller, speech professor at the College of DuPage. Miller opened the show with words of praise for the young people in the audience.

"Young people under 18, I'm telling you right now, you're going to save my planet. You're going to explain human existence. You're here at Fermilab at 8 o'clock on a Friday night. You're going to save the world. That's something amazing, and I don't want you to forget that," Miller said.

[Watch the video](#) of the 2013 Physics Slam.

—Andre Salles

[Photo of the Day](#)

Nigel Lockyer visits CMS

from the [Illinois Department of Natural Resources Wildlife Preservation Fund](#) enabled contractors to make significant progress in eradicating reed canary grass, a non-native invasive species that displaces the native species that were common to the savannas more than 200 years ago. The next phases of this restoration will incorporate prescribed burning, enrichment of the plant community by reintroducing savanna-adapted species and monitoring to see whether the savanna community is flourishing.

As an example, bird monitoring takes place within the savanna throughout the year. More than 40 species of birds have been observed using it, and the hope is that the numbers of rare species that use savannas, such as the red-headed woodpecker, will discover this site and return to use it. Other species, including mammals, reptiles, amphibians and invertebrates, will eventually find their way here to use this restored habitat.

—Rod Walton

[Milestone](#)

Employees receive degrees through Fermilab Tuition Assistance Program



Fermilab supports the continuous educational development of employees through the Tuition Assistance Program.

Three Fermilab employees recently received degrees through the Fermilab Tuition Assistance Program. They are, from left: Jose De La O, PPD/ESH&Q, associate degree in liberal studies; Charles Grimm, TD, Bachelor of Science in industrial management and technology; Katie Kosirog, ESH&Q, Master of Science in environmental management and sustainability.

[Special Announcement](#)

Wilson Street entrance closed beginning Dec. 2

IDNR grant helps Fermilab sustain wildlife habitat

Fermi National Accelerator Laboratory's Batavia site contains hundreds of acres of naturalized prairie, home to dozens of species of native plants and wildlife. Maintaining that savanna is a long-ranging effort managed by Fermilab's staff, and thanks to a 2012 grant by the Illinois Department of Natural Resources, part of that effort has been successfully completed.

The \$2,000 grant, part of the Illinois Wildlife Preservation Fund, funded part of the restoration of Fermilab's Oak Savanna. The grant was awarded to Fermilab Natural Areas, a not-for-profit organization dedicated to preserving the naturalized portions of Fermilab's 6,800-acre site. The grant was awarded in June of 2012, and the work completed in the summer of 2013.

That work included:

- Treating 13 acres of invasive reed canary grass in Fermilab's Oak Savanna.
- Seeding the savanna with a locally collected mix of native plant species.
- Surveying the savanna to measure the success of the project.

"This work is part of a larger, ongoing process to help provide suitable habitat for Illinois wildlife, including migratory birds," said Ryan Campbell, an ecologist at Fermilab. "Like most ecology projects of this scope, the full restoration will take years to complete, but we've made real progress on this first stage."

The next step will be to appoint a volunteer steward for the Oak Savanna. The Fermilab Natural Areas Stewardship Program brings in volunteers who would like to "adopt" a habitat, helping control invasive species, monitor rare plants and collecting and spreading native seeds. The process of locating a steward for this savanna is underway.

Fermilab, which is owned by the U.S. Department of Energy, contains more than 45 individual prairie, woodland, wetland and savanna habitat areas. Less than one-tenth of one percent of native prairies in Illinois remains intact, and Fermilab's restored grassland is one of the largest prairies in the state. Fermilab Natural Areas hosts volunteer events each month to help maintain the environment, and the laboratory holds a prairie harvest each year, during which volunteers help diversify the plant life around the site.

For more information on Fermilab Natural Areas, visit www.fermilabnaturalareas.org.

Copy of press release highlighting the Illinois Department of Natural Resources grant received via funding through the Illinois Wildlife Preservation Fund.