



# PRAIRIE SMOKE

Nachusa Grasslands Newsletter

Issue 29

June 1997

## Measuring Success of Plant Community Restoration

By Bill Kleiman

We are attempting at Nachusa Grasslands to restore and recreate various habitat types. How long does it take to restore a degraded habitat to the approximate quality of a remnant prairie, woodland, or wetland? 25 years? 50 years? 150? At what point in time do we know that we have put enough energy into a particular planting or restoration? Along this journey of restoration how can we tell which restoration techniques are working the best? Questions like these hound us.



*Ryan Hayashi, great-grandson of Doug Wade, jumps with joy on Doug's Knob, June 1996*

To have answers to these questions for our plant communities we have set up monitoring transects to collect long term data. One way we monitor the plant communities at Nachusa is by using a Floristic Quality Assessment as described in Floyd Swink and Gerould Wilhelm's *Plants of the Chicago Region* (1994). What follows is a brief explanation of how we use this method and what it tells us. For a more detailed description of the method refer to Swink and Wilhelm.

We have nineteen permanent monitoring transects located in various habitat types throughout the preserve. The transects are located on different qualities of habitat, from our finest prairies and wetlands to our most ruderal weed patches. Along each transect we note the species and their approximate percent cover.

An important part of this quality assessment is understanding conservative vs. weedy plants. Each species found in the transect has previously been assigned a value called a Coefficient of Conservatism, a value obtained based on the experiences of Swink and Wilhelm and other botanists. The

values range from 0 to 10. Conservative plants are those that occur almost exclusively in high quality remnant habitats, they have high values, say 7 to 10. Some examples of conservative plants in prairies in this area are lead plant, goats rue, and prairie dandelion. You don't usually find these plants on roadsides. A plant with a value of zero is a "weedy" native like ragweed, common milkweed, or tickle grass. Plants with values of one or two are seen in abandoned fields and roadsides, but can also occur in high

quality habitats along with the conservative plants, although usually in lower abundance (black-eyed susan, horseweed).

The table below lists the species found along three transects, their coefficient, and then the average of all the coefficients. The floristic quality index (FQI) is the average of the coefficients multiplied by the square root of the number of native species found along the transect. Doug's Knob is a high quality remnant prairie with an average coefficient value of 6.6, Dot's Knob is another remnant prairie with a good value of 5.0, and the planting between them, which has two seasons of growth, is a low 2.4. Note that Doug's Knob has fewer native plant species than the others, yet they are mostly conservative plants. For the planting between Doug and Dot's Knob we want to see the quality value of the new planting reach that of the remnant Doug's Knob. We don't expect the same species to grow in each place, but we want to achieve around the same level of quality. This may take a long time.

*continued on page 2*

# TABLE OF THREE TRANSECTS

Species listed in order beginning with highest percentage of cover. \* = Non-Native.

Coefficient of Conservatism

DOUG'S KNOB		DOT'S KNOB		PLANTING BETWEEN DOUG AND DOT'S KNOBS	
canada blue grass	*	little bluestem	5	queen anne's lace	*
little bluestem	5	common oak sedge	5	Canada wild rye	4
heath aster	5	Canada blue grass	*	annual fleabane	0
silky aster	10	yarrow	*	Japanese chess	*
porcupine grass	7	purple coneflower	8	common dandelion	*
purple coneflower	8	Indian grass	5	prickly lettuce	*
common oak sedge	5	pussytoes	3	horseweed	0
pr. panic grass	10	heath aster	5	yellow coneflower	4
pr. coreopsis	6	hairy aster	0	red clover	*
lead plant	9	cream wild indigo	10	common ragweed	0
western ragweed	*	whorled milkweed	1	comon milkweed	0
blue-eyed grass	7	side-oats grama	8	yarrow	*
northern dropseed	10	common spidoe wort	2	white clover	*
white-haired panic grass	8	June grass	7	lamb's quarters	*
pussy toes	3	Kentucky blue grass	*	tickle grass	1
pr. smoke	10	field sorrel	*	downy brome	*
big bluestem	5	grass-leaved goldenrod	4	common St. John's wort	*
tickle grass	1	daisy fleabane	5	horse nettle	*
side-oats grama	8	lead plant	9	side-oats grama	8
false toadflax	7	big bluestem	5	Canada wild rye	4
flowering spurge	2	rough blazing star	6	June grass	7
		purple pr. clover	9	Norway cinquefoil	0
		pasture rose	5	box elder	0
		sand violet	6	pr. Indian hemp	2
		three-seeded mercury	0	hairy aster	0
		rough pennyroyal	2	cinnamon willow herb	3
		Dudley's rush	4	common wood sorrel	0
		black medick	*	black eyed susan	1
		lance-leaved ground cherry	4	grass-leaved goldenrod	4
		alkali bulrush	*	rigid goldenrod	4
		small skullcap	7	Indian grass	5
				alsike clover	*

Data collected by Gerould Wilhelm and Linda Masters of Conservation Design Forum in Naperville.

Average C = 6.6  
 FQI 6.6 (sq.rt.19) = 28.8  
 (very high, wow!)

Average C = 5.0  
 FQI 5.0 (sq.rt.25) = 25.0 (very high)

Average C = 2.4  
 FQI 2.4 (sq.rt.20) = 10.5  
 (poor, but just a beginning)

There are arguments against this way of monitoring. There are arguments against all ways of monitoring. One concern is that the Coefficients of Conservatism, the 1 through 10 values, are subjectively chosen by a group of botanists based on what they think are habitat sensitive species, i.e., How do we know that lead plant is a 7 and not an 8? My response is that a few plants may have values that

are a little too high or low, but since we are averaging numerous species for each transect, that the average value is close to reality.

In closing, measuring how our restorations are changing over time will help us measure our success, make informed decisions, and add to the base of knowledge in this fledgling field of restoration ecology.

# JOHN SANTUCCI, ADVOCATE FOR NACHUSA GRASSLANDS

BY SALLY BAUMGARDNER & BILL KLEIMAN

Picture the scene: Two little boys roaming the open fields and marshes of a Northern Illinois neighborhood. Hours go by, mud on their clothes, seeds sticking in their hair, ants trying to find the way out of their socks. "What are they doing out there?", some might ask. Prairie Smoke readers know full well what they're doing — they are discovering, having fun, reinforcing their friendship, growing up, catching things. They are finding ephemeral ponds from winter's snow-melt filled with eggs, polliwogs, and fish, and all manner of "things to take home". They build dams and small forts made of sticks. These are some of the musings John Santucci has of his boyhood.

The family legacy of John's grandfather, a working cowboy in the Dakotas, also helped him to appreciate wild places at an early age. Later in life when John had the financial means to do so, he wanted to become a supporter of a conservation organization that would use his donations in an effective and direct manner. His motivation of wanting to "pay back" the world led him to The Nature Conservancy. One day, John phoned the Conservancy and asked, "Are you the ones who buy land?" "Yes," was the answer. The rest is history.

You may have heard the story: About ten years ago, this land (the present heart of the Nachusa Grasslands Preserve) was about to be auctioned off in five to twenty-five acre lots. By chance, John happened to walk into the Conservancy's office that day. Conservancy funds to participate in the auction had not yet come through. John wrote a check to loan the funds needed and our Protection Director at that time, Ralph Burnett, raced out to Dixon with check in hand and was a successful bidder on the entire 125-acre parcel. About this time, John began a decade of donating to The Nature Conservancy, often designating his giving to Nachusa Grasslands. His early donations helped to purchase some of the first tracts of land at Nachusa. "John has been one of the main financial pillars of this project. He has been generous and supportive of us for a decade," says Bill Kleiman.

John has served on the Board of the Illinois Chapter of The Nature Conservancy for ten years. He has brought energy,



*Nachusa supporter John Santucci with his children John Michael, Jill and Lauren. Photo by his wife Mary Rose. (Thanks for the photo Mary Rose!)*

passion and commitment to this volunteer leadership effort. While our stewards spend hours harvesting seed and battling weeds, John spends considerable hours doing work that doesn't get dirt under his nails, but keeps projects like this one on firm ground. He is frequently discussing conservation with fellow board members and staff, planning and running meetings, contacting potential supporters, and going over budgets and strategic plans.

John has chaired the Conservancy's Northern Illinois Committee, which recently thanked John for his leadership over the past several years. His latest project is planning and raising funds for the construction of a manager residence and maintenance barn at the Grasslands.

We hope the work of John Santucci, and others like him, continues to create great places for children to explore the richness of a prairie, wetland, or woodland. Who knows which ones will grow up to remember the wonder of *their own* child's heart.

## Nachusa Grasslands Support



• A big thank you to Mayo "Hook" Larson for another donation, this one in memory of his parents Wilbur and Petra. Mayo gave a generous amount of high-tech stocks to be traded for cash for habitat acquisition at

Nachusa. By choosing us for a donation, Hook affirms his love of wildlife and our work at protecting and restoring habitat.

• **John Santucci** has made an additional donation for barn and house improvements. From the first donation for Nachusa back in 1986 to his present efforts, we thank you John again and again!

### Other support thanks:

• **Dave Scholl** - a slide projector dissolver and tape recorder to make fancy slide shows.

- **Franklin Grove Nursing Center** - worked with Sally Baumgardner on seed preparation.
- **Howard Fox** - moved the stairs in the barn to a better location.
- **Maxine Simpson and Dan Baker** for helping with Prairie Smoke labeling, folding, and sorting.
- **Crest Foods** for making labels for the Prairie Smoke.
- **Mike Nolan** for donating use of his computer to produce the Prairie Smoke.
- **Gene St. Louis** for donating a new bench grinder.

**Wish list:** We are still looking for a used four wheel drive truck, or donate any reasonably used vehicle to us and we will trade it in for a used four wheel drive truck. A travel trailer is also needed, 20' to 30' in good condition, for use by our summer interns. Tax deductible!

## Summary of My Co-op at Nachusa

By Jenna Sanders

I began working at Nachusa in September of 1996 through a Northern Illinois University co-op program. That first semester has become two semesters, and now a summer internship after graduation. I couldn't be happier. My mom says the same three things stand out in my conversations about Nachusa: the prairie, the people, and The Nature Conservancy.

Brush clearing and prescribed burns are my favorite chores so far. I suppose that sounds destructive, but I love seeing the difference from a good days work. I have also worked on harvesting, preparing, and planting seed; repairing and removing old fences and other tasks. Ever since I was a little girl I have loved being outside. Nachusa is beautiful in any season or weather. When I am working on the prairie time flies.



*Jenna Sanders - one of our 1997 Summer Stewardship Technicians, burning in the fen unit this April*

Not only do I enjoy the beauty of the prairie, but also the fellowship of everyone I have worked with. Never have I had such great conversations over a brush pile fire or a soggy sandwich. The commitment to conservation that I have seen has inspired me.

When I went to see about the co-op program, Dr. Sorensen first told me about The Nature Conservancy. I jumped at his offer and have been so pleased with and supportive of its mission. I look forward to much more fellowship, working and learning through Nachusa, and hope to pass on my experiences and love for the prairie.

## Nachusa Happenings

By Bill Kleiman

Lots of acres are being burned with the aid of some new fire equipment and a trained group of stewards who understand fire and know how to use high tech gear. An April first burn of the 90-acre Big Woods Unit will serve as an example. We had Sally Baumgardner driving the Gator vehicle which was holding the new water pump. Walking behind the Gator was Dean Weidman, spray gun in one hand, drip torch in the other. Gene Miller was ahead with the leaf blower clearing oak leaves off the half mile long fire break. A 400 gallon tank on wheels was used to fill up the gator water pump and was a backup fire pump if needed. Bill Kleiman was the burn boss and kept in touch with everyone through the use of two way radios that people carry strapped to their chests.

On the other side of the fire Kevin Kaltenbach was leading Jay Stacy and two NIU co-op students, with traditional backpack sprayers with foam added to the water. The 95-acre burn lasted four hours, the crew was tired but content.

Other people out for several burns this spring: Gerald McDermott, Ron Ingram, Mike Adolph, Dave Breen, Howard Fox, Gene St. Louis, and Max Baumgardner.

Pussytoes lane is looking more like a prairie with Mike Adolph and Bob Schone thinning unwanted brush and leaving the thickets of American plum for shrub-loving birds to enjoy.

Susan Kleiman updated the management plan with assistance from the unit stewards.

Our Fall seed harvest is being planted in all sorts of places throughout the preserve. Stewards like Sally Baumgardner are carefully mapping where the seed will go and raking seed into burned sod.

Shabbona Savanna west of Doug's Knob looks great with removal of about 50 black cherries (*Prunus serotina*) from under the big oaks there. The cherries were growing up through the oaks due to fire suppression and were shade killing them. Gene St. Louis and others.

As of this printing our new seed harvester is being ordered. It will be pulled by the Gator. Thanks again Nancy Winter for the donation to purchase this machine.

The weekday crew of Gene Miller, Jay Stacy, Gerald McDermott, Ron Ingram and Jenna Sanders have done all sorts of stewardship. They removed an old fenceline of huge red cedars from the Southeast Knob. The logs will be turned into roof shingles. The bur oaks left there look very handsome now. You can see this from Naylor Road. The crew also cleared brush from a few other prairie knobs, cleared boundaries to make fire breaks, posted signs, fixed fences, removed abandoned fences and junk, and other amazing feats.

Ornithologists Scott Robinson and Jim Herkert will have their crews at Nachusa all summer again doing another year

# Nachusa Enthusiast Susan Kleiman

By Thelma Dahlberg

Anyone who visits Nachusa Grasslands soon becomes acquainted with Susan Kleiman, the energetic young woman who tackles prairie restoration with enthusiasm. She is an expert in identifying flora and fauna, harvesting and planting seed, assisting in burns, or analyzing needs and planning improvements. This is the Susan we know, but what about her background, unique attributes, and plans for the future? To satisfy curiosity, an interview was requested.

Susan has a special talent with children. Perhaps it is her appreciation for the training and encouragement that she received as a child that prompts her to promote the love of nature in youngsters. When she was old enough to read, "Ranger Rick" was her favorite magazine, then came books by James Herriott, augmented by talks and walks with an interested grandfather and summer sessions at Campfire Girls Camp. When in the ninth grade, she helped at a recycling center started by her ecology teacher in a Maryland county. Later, while getting a degree in Forestry and Wildlife Management at Virginia Polytechnic Institute and State University, she became involved in the local nature center in the town and was involved in outdoor nature studies with children. A master's degree from Aurora University in Environmental Education completed her formal education.

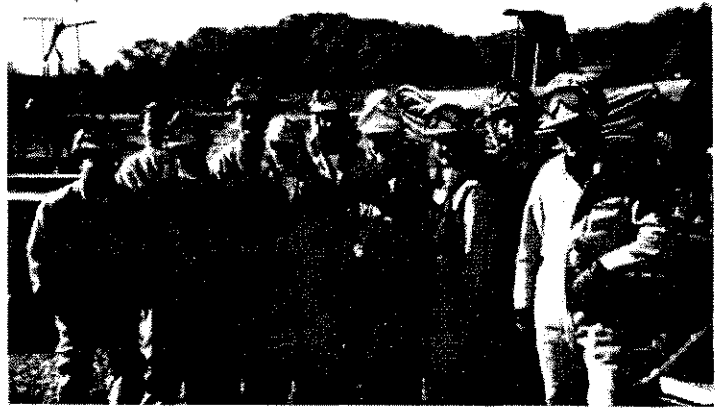
Presently, Susan is applying her skills in a halftime position as Nachusa's Restoration Specialist. Also, for the

of studying grassland bird nesting. Scott Robinson recently gave Nachusa a nice public compliment saying that the grasslands birds are doing very well here because of the restoration work we are doing. He & Jim now want to know why and how the work we are doing benefits birds.

We had four NIU co-op students this semester who gave us good solid stewardship and reported to have learned plenty: Mike Chilson, Chris Miller, Joann Keyes and Jenna Sanders.

Coming this season, we hope to be removing more field tiles to restore more wetlands. Restoring wetlands is important for a number of reasons: 1) It increases the acreage of wet habitat for area sensitive species like the northern harrier and henlow's sparrows. 2) It decreases the flooding and therefore the sediment entering Wade creek which flows through our rare graminoid fen. 3) It allows for a variety of habitat types for those species that need both the wet and dry habitats to be successful, like the federally rare blundings turtle.

Sedge wren numbers are up in the monitoring plots that Ann Haverstock is doing, likely due to the increased sedge habitat. Snipes now common in the restored wetland.



*Susan Kleiman, wearing the radio harness to the right of center, helped out with a group going through prescribed burn training this past fall.*

past two years, she has been conducting a program at Byron Forest Preserve entitled "Earth Keepers". Fourth grades from schools all over the region come for three days of study on questions like "How does the earth work?" and "What does this mean for me each day?".

It was while Susan was attending Aurora University that she met Bill Kleiman. Some marriages are said to be "made in Heaven", and this marriage proves that Earth also can be a successful locale for a good marriage. We who are fond of Nachusa Grasslands feel fortunate in having both Bill and Susan living in "the little yellow house" as caretakers of our prairie treasure.

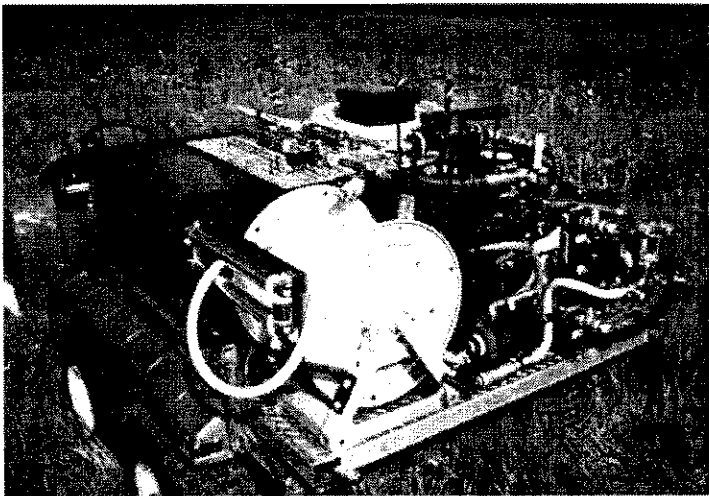
## We Want You!

### Volunteer Stewardship needed.

#### Contact Bill Kleiman:

- **Roadside steward:** We have about four miles of roadside that needs someone to care for them. Flexible hours. Duties include looking for signs of trespassing or poaching, inspecting and repairing minor fence breaks, picking up litter, planting Nachusa flower seed and checking bluebird boxes.
- **Rare plant stewards:** Locate, count and propagate occurrences of rare plants on the preserve and follow their progress over time.
- **The Prairie Smoke editorial team** will accept one more fun person who can write. Computer skills optional. Knowledge of stewardship helpful but ambition will do.
- **Our workdays** can always use an extra hand or two. Coming out just a few times a year can make a difference.
- **We need a logo design** representing Nachusa Grasslands Preserve for a sew-on patch. Send us your creations! We will print the winner's name and photo in this newsletter. Entries due in by August 1, 1997.

# Nachusa Scrapbook



Last fall, a new prescribed burn tool was unveiled. This pumper unit sprays water or foam and fits in the "gator" vehicle.



Last fall also saw the addition of another item to our prescribed burn arsenal, a water tank and pump, dubbed the "water buffalo", donated to Nachusa by the U.S. Army via IDNR.



Surveyors from the McHenry County Conservation District came to Nachusa one day last fall to count the numbers and species of fish inhabiting Franklin Creek.



The digging up and filling in (as above) of a second set of drainage pipe lines last summer will help bring back some of the natural wetlands that once existed here.



The West Chicago Prairie Stewards completed another successful workday this February in the area they are stewards of, the Kittentail Unit. Leader of this energetic group is Mel Hoff on the far left.



Ron Ingram was part of a crew led by Howard Fox that moved the stairs in the Stewards' Barn to a better location.

# NACHUSA GRASSLANDS STEWARDSHIP CALENDAR FOR 1997

## June

- 14 Sat: West Heinkel with Jay Stacy
- 15 Sun: Doug & Dot unit with Gene St. Louis
- 21 Sat: Schafer unit with David Edelbach
- 22 Sun: Fen unit with Kevin Kaltenbach
- 28 Sat: Plant identification tour with Dennis Lubbs and stewardship on Clear Creek Unit with PPSOC

## July

- 5 Sat: East Heinkel unit with Mike Crowe
- 12 Sat: Volunteer potluck gathering and Ice Cream Social,  
**Meeting at 10:30, Potluck at noon. All welcome.**
- 13 Sun: Schafer unit with David Edelbach
- 19 Sat: Prairie tour with Sally Baumgardner
- 26 Sat: Doug & Dot unit with Gene St. Louis

## August

- 1 Fri: Prairie Smoke mailed.
- 2 Sat: Doug & Dot unit with Gene St. Louis
- 9 Sat: West Heinkel unit with Jay Stacy
- 16 Sat: Schafer unit with David Edelbach
- 17 Sun: Second plant identification tour with Dennis Lubbs
- 23 Sat: Rolling thunder unit, seed collecting with Sally Baumgardner

## September

- Prairie Smoke editors meet this week.
- 6 Sat: West Heinkel unit with Jay Stacy.
- 7 Sun: Schaefer unit with David Edelbach
- 13 Sat: 9:30 - Volunteer potluck gathering and AOTP last minute work
- 20 Sat: **AUTUMN ON THE PRAIRIE**
- 27 Sat: Main unit with Mike Adolph
- 28 Sun: Doug & Dot unit with Gene St. Louis

## October

- 4 Sat: West Heinkel unit with Jay Stacy
- 11 Sat: Schafer unit with David Edelbach
- 18 Sat: Main unit with Mike Adolph and East Heinkel unit with Mike Crowe
- 19 Sun: Doug & Dot unit with Gene St. Louis
- 25 Sat: Rolling thunder unit, seed collecting on Make A Difference Day with Sally Baumgardner. Or Kittentail unit with West Chicago Prairie Stewards, all welcome.
- 26 Sun: 11:00 - Prescribed Burning workshop with Bill Kleiman

## November

- 8 Sat: 9:30 - Volunteer potluck gathering
- 9 Sun: Schafer unit with David Edelbach
- 15 Sat: Doug & Dot unit with Gene St. Louis
- 22 Sat: **Stone Soup** seed processing party. All are welcome.

## December

Prairie Smoke mailed this week.

- 6 Sat: Doug & Dot unit with Gene St. Louis
- 13 Sat: Schafer unit with David Edelbach

All workdays and events start at 9:30 and end at 1:30 unless stated otherwise. Feel free to bring a lunch or snack.

Workgroups meet at the Steward's Barn at 2055 Lowden, and field trips leave from the main entrance on Lowden. Extreme weather conditions will sometimes cause a steward to cancel a workday.

We have on-going stewardship crews all week long during the summer and Monday and Wednesday mornings throughout the year. Call Bill Kleiman for details.

## NACHUSA GRASSLANDS UNIT STEWARDS

### Jay Meiners Wetland Unit

Jeff Meiners

Steve Meiners

### Fen Unit

Kevin Kaltenbach

Todd Bittner

### Big Woods Unit

Earl Thomas

Jim Lahman

### Dot & Doug Unit

Gene St. Louis

### Rolling Thunder Unit

Sally Baumgardner

Max Baumgardner

### Main Unit

Mike Adolph

Bob Shone

### East Heinkel Unit

Mike Crowe

### West Heinkel Unit

Jay Stacy

Gene Miller, Ron Ingram

### Clearcreek Unit

Prairie Preservation Society  
of Ogle County

Mary Blackmore  
Terri Clark

### Kittentail Unit

West Chicago  
Prairie Stewards

Mel Hoff

### Schafer Unit

David Edelbach

Gerald McDermott

### Science Stewards:

#### **Butterfly Monitoring**

Mike Adolph

#### **Bird Monitoring**

Ann Haverstock

#### **Project Ecologist**

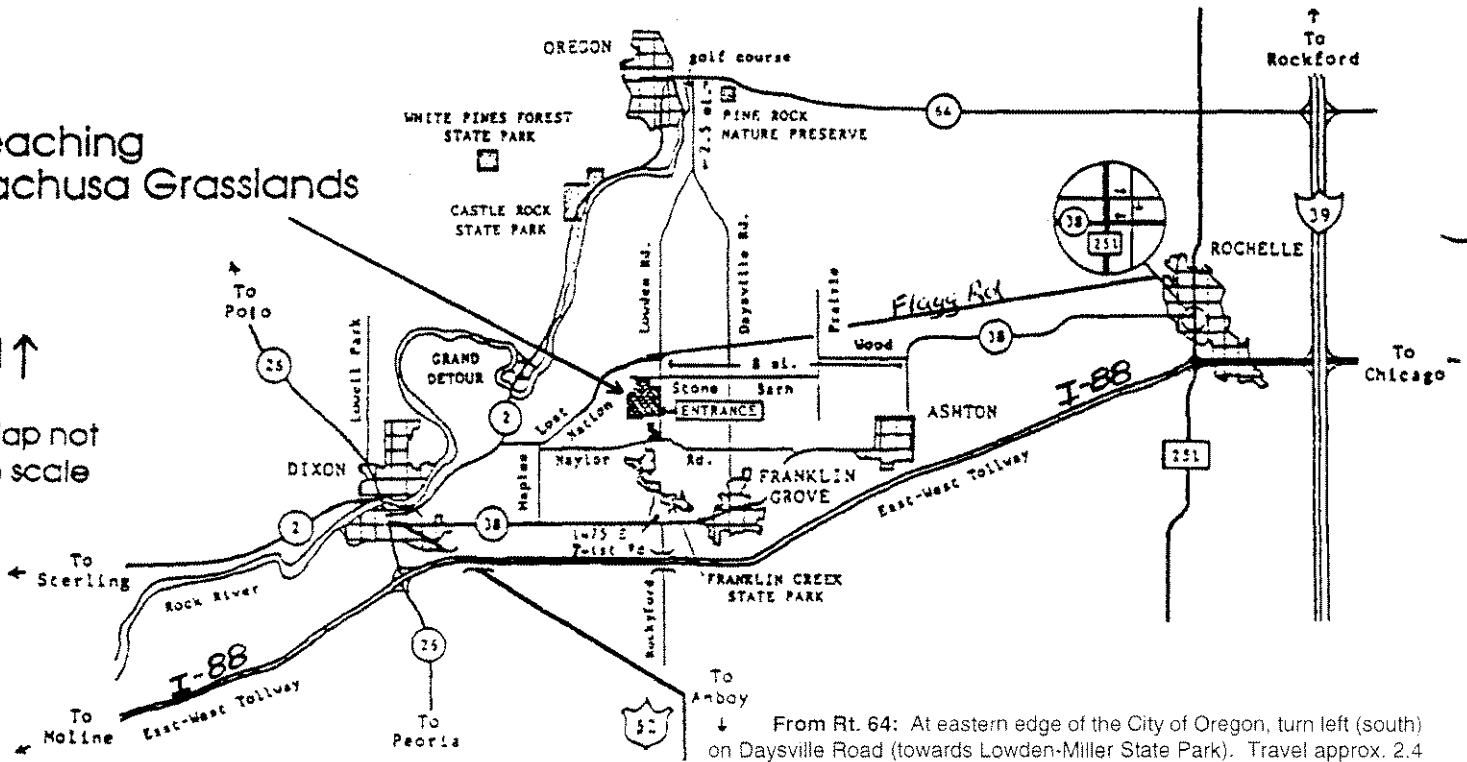
Dennis Lubbs

Editor-Publisher	Laura Busch
Associate Editor	Dot Wade
Associate Editor	Bill Kleiman
Associate Editor	Thelma Dahlberg
Manager of Mailing	Ellen Baker

# Reaching Nachusa Grasslands

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Map not to scale



**From I-88 (East-West Tollway):** Option 1: Exit at Rt. 251 North (Rochelle), to Rt. 38 West. Travel through Ashton and into Franklin Grove. (approx. 16.5 miles), turn right (north) at Daysville Road (sign: "Franklin Creek State Park"). Travel 1.5 miles north to Naylor Road, turn left (west). Then follow the signs leading to the Grasslands. Option 2: Exit at Rt. 251 North (Rochelle), past Rt. 38 to Flagg Road, (sign: "Flagg Center 3 miles"). Travel approx. 14.8 miles to 4-way stop sign at Lowden Road, turn left (south). Approx. 2 miles down the road on the west side of the road will be the Grasslands.

**From Rt. 64:** At eastern edge of the City of Oregon, turn left (south) on Daysville Road (towards Lowden-Miller State Park). Travel approx. 2.4 miles to Lowden Road, turn right, (still following State Park sign). Travel south approx. 5.3 miles (past the State Park) to a 4-way stop at Flagg Road. Continue south another 2 miles, the Grasslands will be on the righthand (west) side of the road.

**From Dixon:** Option 1: Take Rt. 38 eastbound into Franklin Grove, turn left (north) on Daysville Road (sign: Franklin Creek State Park). Travel 1.5 miles north to Naylor Road, turn left (west). Then follow the signs leading to the Grasslands. Option 2: Take Rt. 2 north out of Dixon, approx. 2 miles, turn right on Lost Nation Road. Go one mile to Maples Road, turn right, then left almost immediately and follow the signs to the Grasslands.



Nachusa Grasslands is owned and operated by The Nature Conservancy, a private non-profit group whose mission is to protect plants and animals by protecting the land and water they need to survive.

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