

The Prairie Dog

Newsletter of the Native Prairies Association of Texas
Winter 2004 Vol. 17, No. 1



IT RAINED! IT RAINED! IT RAINED!

By Burr Williams

Editor's Note: Burr is a nature writer at the Midland Reporter Telegram and he is active at the Sibley Nature Center in Midland. Here, Burr provides a lively description of the intense activity in a dry prairie, such as the Maddin Ranch Preserve, after a rain.

Did you dance with joy? Did you go for a walk to enjoy the freshly-washed landscape? Did you hear the birds sing as the sun shone for a few minutes at the end of the rainy day? Did you see a toad hopping and plopping along?

It was so amazing - the native grasses turned brilliantly green in a single day! Along one stretch of road southeast of Midland, forty species of wildflowers began blooming within a week of the rain, joining the two lonely species that preceded them.

Later in the year, when the soil temperature is 68 degrees or more, an ephemeral rain ecosystem exists for a few days. The basis of such an ecosystem is the presence of grass root termites. When walking on the prairie, one often notices small mud tubes encasing dead plant matter. Sometimes the



Termite Tubes

mud tubes extend as high as eighteen inches along the upright stalk of a dead plant.

Many insects, arthropods, and birds eat the alates (the winged males and females) when they emerge to mate in the air. Following a thundershower hundreds of thousands of alates per acre fill the sky near sundown. Nighthawks, scissortail flycatchers and king-birds go berserk at the bounty, sweeping and swooping

with mouths wide open, beaks clacking at every gulp.

Tarantulas open their burrows and lurk at the rim of the hole for passing victims. Male tarantulas roam about, hoping to find a female with her door open.

In May and June, giant red mites (known locally as rainbugs) emerge from their burrows, the morning after a rain to feast on the dying male termites that litter the ground. Midland County has approximately thirty species of ants that also swarm the

morning after a rain. The flycatchers go "nuts" again, feasting during the two to three hour madness. Millipedes also come forth after a rain, looking for rain-softened decaying vegetation, their favorite gastronomical delight.

Several species of beetles have similar tastes, joining the millipedes at choice locations. Because many species of arthropods nest underground, after a rain a dozen holes per square foot can be found. Some belong to various species of ground bees. Others belong to beetles, thread-waisted wasps, and several species of wolf spiders. Each type of critter moves dirt in a different way - piling it, spreading it out, or pushing it in one direction.

Fossorial mammals also move the rain-softened soil. Pocket gophers sometimes dig lengthy new tunnels in one night, piling the dirt aboveground at intervals. Ground squirrels open new back doors and dig new hidey-holes within their territories. Mice of several species, cotton rats, and kangaroo rats get busy as well.

After a rain on the arid Llano Estacado, a curious observer can spend hours walking about and wondering which creature has done what, and if lucky, can see one at work. But... after a week without rain the activity dwindles. If sufficient rain has fallen, insect herbivores and pollinators (and their predators) become the most visible signs of animal life.

Native plants and animals of the Llano respond rampantly to rain. Because the moisture will soon evaporate, some plants, such as cactus, store water. Others use the brief shot of rainwater for quick flowering and seed production. Some annual plants need a scant two inches of moisture to complete life spans of only six weeks. Other plants grow at phenomenal rates after a rain - Careless Weed can grow a foot in a week. Our native plants reflect the limitations of the local environment, surviving long dry spells, such as the present eight year drought (and, sadly, two rains in ten days does NOT end a drought). The pluvial ecosystem is a unique feature of the dry prairie.

The Native Prairies Association of Texas
<http://www.texasprairie.org>

**WHO WE ARE AND
WHAT WE DO**

NPAT's purpose is to promote conservation of Texas prairies. We are interested in laypeople and professionals. Our members join:

- to learn how to recognize prairies
- to encourage conservation of prairies
- to restore and manage prairies
- to study and visit prairies
- to meet other people who love prairies!

The Prairie Dog is published quarterly. Submit articles to
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About this Newsletter

Thanks to Mary T. Parker for her excellent longterm dedication in preparing this newsletter. NPAT is now in need of a permanent newsletter editor. Contact Evelyn Merz elmerz@hal-pc.org to volunteer for the position.

NOTE: Please confirm permission of author (s) before submitting information to this newsletter.

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**TEXAS NATURE
CONSERVANCY**

**NEEDS CONSERVATION BUYERS FOR
PROPERTIES LOCATED NEAR THE
CLYMER MEADOW PRESERVE**

Clymer Meadow remains one of the largest and most diverse remnants of the Blackland Prairie and one of the most scenic areas in North Central Texas. The Blackland Prairie is the Texas version of the tallgrass prairie that once stretched from near the Texas Coast to southern Manitoba. Because of the prairie's rich agricultural soils, more than 99 percent has been cultivated, making the tallgrass the most-endangered large ecosystem in North America. Clymer Meadows is located in Northwestern Hunt County, near Greenville, in North Central Texas.

Conservation buyers are needed for:
1. Kirkland-Berry tract - about 117 acres, south of hwy 1562, not contiguous to C.M. by a few hundred feet, with a +/- 40 acre prairie remnant.

2. Franklin tract - about 130 acres adjoining Clymer Meadow. It is the link between Clymer Meadow and Austin Moseley's Cacheagua Ranch.

For more information, contact

Jim Eidson, Clymer Meadow Preserve, P.O. Box 26, Celeste, TX 75423, Phone/Fax: (903) 568-4139, E-mail: jeidson@tnc.org.

2003 Contributions to Native Prairies Association of Texas

The Native Prairies Association of Texas gratefully acknowledges contributions received during 2003 from the following individuals and grantors. These contributions enable us to continue our work of conserving and restoring Texas prairies. Please consider joining our list of prairie friends by making an additional donation when you renew your membership.

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Contributions to the Geoffrey Stanford Maddin Ranch Preserve Fund

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International Group Helps Temperate Grassland Restoration

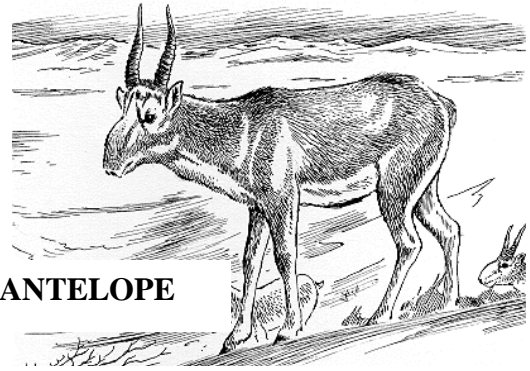
by Lee Stone

In the summer of 2003 the staff at “The Open Country,” a quarterly journal on Russia’s native grasslands that is available in English, hosted an international field seminar on grassland restoration in central Russia. At that seminar, the people of “The Open Country” and the seminar attendees decided - in cooperation with the Russian Committee for the UNESCO Program on Man and the Biosphere- to merge and organize in order to better help temperate grasslands and their wildlife. They have become an International Working Group on Temperate Grassland Restoration, aka “GrassTemper.”

One of GrassTemper’s first actions has been to focus attention on the Saiga, an adorably homely nomadic antelope which once roamed in vast herds across the dry grasslands of Eurasia. Populations of this antelope have declined enormously, primarily as a result of illegal hunting.

The European Saiga, mostly confined to the Republic of Kalmykia in the far southeastern corner European Russian, have declined the most. In 2002 the Saiga Antelope were included in the IUCN Red List as a critically endangered species.

One of the first emergency measures taken to secure its survival in Europe has been the creation of the Kalmykia Republic’s Wildlife Center, intended to raise captive Saiga with the aim of reintroducing them into the wild.



SAIGA ANTELOPE

Picture from <http://www.nature.ca/notebooks/english/saiga.htm>

GrassTemper is supporting the Center’s work with the production of the Saiga calendar, a desk calendar produced in Russian and English which includes photographs, color range maps and interesting factoids about the Saiga Antelope. “The Open Country” had previously issued calendars to call attention to other native grassland issues.

If you would like to help these wonderfully homely antelope to be repopulated, please do make your checks to the Denver Zoological Foundation, noting on the check that it is for the Saiga. Send the money in care of Dr. Richard P. Reading, 2900 East 23rd Ave., Denver, CO 80205. He is the Director of Conservation Biology at the Denver Zoological Foundation and will make sure that it goes into the correct account at the Foundation. Your money will go far and do good things!

SEND EMAIL ADDRESSES TO GEORGIA PRAKASH

NOTE from Georgia Prakash: We will send NPAT event updates by e-mail to members. If you did not write your e-mail address on the membership application, and wish to receive updates, or if your e-mail address has changed, please send it to Georgia Prakash, membership chair, at prakash2@airmail.net

Hey, Texas!

Missouri and Illinois Have a New Exotic Plant Policy

A recent policy in Missouri approves the exclusive use of plants native to Missouri on land owned, leased or managed by the Missouri Dept. of Conservation. The intent is to prevent additional problems caused by introductions of aggressive exotic plants. Additionally, native stock, genetically adapted to a site or region, will be used on natural plant community restorations. *Source: The native Warm-Season Grass newsletter, edited by Steve Clubine, MO Dept. of Conservation, P.O. Box 368, Clinton, MO 64735*

This notice is from the NPAT website (<http://www.texasprairie.org/events/news.htm>)

USDA ANNOUNCES RELEASE OF \$1.5 BILLION FOR VOLUNTARY CONSERVATION PROGRAMS IN FY 2004

WASHINGTON, Jan. 28, 2004 Agriculture Under Secretary for Natural Resources and Environment Mark Rey today announced the release of nearly \$1.5 billion in funding for conservation programs on working lands this fiscal year. The distribution of funds to states makes conservation programs administered by the Natural Resources Conservation Service operational.

“These funds demonstrate the Bush Administration's commitment to working lands and to maintaining high environmental stewardship in communities across the nation,” Rey said in remarks to the Society for Range Management. “The Department of Agriculture remains committed to providing the conservation tools and resources to ensure that the land remains both healthy and productive.”

With financial and technical assistance from NRCS, farmers, ranchers and other landowners will continue to address resource concerns on agricultural working lands, promote environmental quality, address challenges in water quality and quantity, protect prime farmland and grazing land, and protect valuable wetland ecosystems and wildlife habitat on private lands.

The FY 2004 allocations to states include \$1.2 billion in financial assistance and \$305 million for technical assistance for NRCS Farm Bill programs and other activities. At least \$30 million of the technical assistance funds will be used for technical service providers. “This funding will provide positive applications of sound conservation on the ground ‘at the local level’ on America’s privately-owned farms and ranches,” Rey said.

Now that these funds have been allocated, NRCS state offices will begin writing contracts with farmers and ranchers nationwide. These contracts will help ease the existing backlog in these popular programs improving soil, water, air and at-risk habitat on working lands. Information on conservation programs is available at <http://www.nrcs.usda.gov/programs/farmbill/2002/products.html>. Landowners who want specific information regarding program participation should contact their local USDA Service Center or NRCS office, located at <http://offices.usda.gov> or in the telephone book under Federal Government, U.S. Department of Agriculture.

To see the breakdown by program for fiscal year 2004 visit <http://www.nrcs.usda.gov/programs/farmbill/2002/products.html>

Suzy Friedman, Environmental Defense Staff Scientist/Ag Policy Analyst, sfriedman@environmentaldefense.org
<http://www.privatelandstewardship.org>



Horned Lizard (*Phrynosoma cornutum*)

This particular specimen is a denizen of the Maddin Ranch Preserve. See page 1 article by Burr Williams “*It Rained! It Rained! It Rained!*,” which describes a typical dry prairie.

For more information about Horned Lizards, visit the website:

<http://www.hornedlizards.org>

Horned Lizard Conservation Society
P.O. Box 122
Austin, TX 78767
email: phrynosoma@hornedlizards.org

THE VANISHING PRAIRIE OF MADISON COUNTY

By Jeannine Tinsley

This historical perspective of the prairie lands of Madison County is excerpted from a preliminary report prepared by Jeannine Tinsley for the Native Prairies Association of Texas. NPAT contracted with Ms. Tinsley to do a survey of prairie remnants of Madison County and record the condition of prairie land. At this time, no remnant prairie sites have been found. However, there are a few sites that may have potential for restoration to prairie vegetation.

Geographically, Madison County is located between the Navasota River serving as the western boundary and the Trinity River serving as the eastern boundary. The county is approximately 35 miles wide. The north south measurement is only about 16 miles. The total area is 302,451 acres or about 472 square miles. The major land resource areas are designated as Western Coastal Plain, Texas Claypan, and Texas Blackland Prairie. The two vegetation areas found in this county are Post Oak Savannah and a small portion of Blackland Praire.

Looking at the recent history of Madison County helps to understand the current condition of sites that could have been historically classified as prairie land. When the area was organized in 1853 into Madison County, many of the settlers turned to agriculture as their livelihood. They used the land for both farming and raising cattle. The native grasses provided excellent grazing for cattle and the loamy soils and ample water supplies promoted farming.

The area provided two distinct areas: open prairies and forests with open pockets of prairie. In the late 1920's, the more vast open prairies were used to farm cotton. But the depression of the 1930's changed the agricultural direction of the area.

To help raise the price of cotton, the government paid many of the cotton farmers not to raise this crop. These farmers then began to use their land to graze cattle. By the time the depression was over and cotton could once again be grown, it was no longer profitable in that county. Apparently, cotton farming had continued in adjacent counties and the farmers in Madison County could not compete with the larger cotton fields established in Houston and Brazos Counties.

During the depression, when many of the farmers had started to use their land to graze cattle, an epidemic of cattle disease brought in government regulation again. Many of the cattle were destroyed and this left many people looking for other means of livelihood. Some turned to the forested areas for means of money. Many began to chop down the trees to sell as firewood. This led to the clearing of the "Post Oak Savannah" which in turn provided more grazing land in future years.

When economic prosperity had returned to the region in the late 1940's, the cattle industry was the driving force in land management. By the 1950's, many of the landowners had moved to urban areas but had managed to keep the family homestead. These areas were either leased out as grazing pastures to cattle ranchers or leased to hunters. Previous management had altered the natural ecological landscape. Because of the harvesting of firewood, there were now more potential open areas to be developed as grazing land.

The 1950's brought the emergence of "range" science to Texas A&M, located in adjacent Brazos County. Because of its proximity and the formation of the Sidewalk Cattlemen's Association, Madison County was the first to adapt many of the range management practices advocated by Texas A&M. The first of these was the mass planting of Coastal Bermuda grass (*Cynodon dactylon*).

This was the first step in total annihilation of remnant prairie grasses that had so far sustained the cattle industry. The second wave of mass planting came in the 1990's when Bahia grass (*Paspalum notanum*) was introduced as the ultimate pasture grass. This grass reproduces by rhizomes and seeds. It has essentially taken over Madison County and has invaded any potential remnant prairies that may have existed before its introduction.

NEW HRM of TEXAS DISCUSSION FORUM! Holistic Resource Management of Texas has an excellent website with many good features. To find out about Texans practicing holistic management, visit <http://www.hrm-texas.org>.

Conservation and Restoration: Natives and Aliens, Ecotypes and Cultivars

R. H. (Dick) Richardson, Ph.D. Professor, Integrative Biology, Univ. of Texas, Austin

Opinions, including mine, are diverse and strongly held in conservation and restoration circles. This became apparent at the Second Biennial Texas Prairies and Savannahs Conference, "From Soil to Seeds" held in Austin July 11-13, 2003. Native species are held in high esteem while introduced aliens are viewed as undesirable. Ecotypes are valued and recent studies illustrate their central importance in community ecology. New studies have emerged to remind us of some basic principles. The way we use biodiversity and reconstruct communities to approximate mature community dynamics can be compared to those we have disrupted over the past century or so. The main points are as follows:

Native communities are the focus for restoration instead of species, and varieties selected from native ecotypes for "productivity" are often disruptive. Developing and planting varieties selected for harvesting and planting procedures that maximize seed production makes them incompatible with a diverse community. Biodiversity and ecological system objectives generally are not compatible with industrial agronomic systems.

Theoretical and applied ecologists recognize community integrity^{1,2} as a key dynamic of an ecosystem. Preservation of both the genetic integrity and diversity within the communities are essential for community reconstruction. Recent studies³ warn that genetic contamination (crossbreeding) erodes the features that are most valuable in communities and that give ecotypes the ability to exist and stabilize a native community. Excessive use of cultivars from native species threatens existing native communities, and thereby threatens the genetic features that allow community restoration. Either species extinction or genetic erosion can retard or prevent native community restoration.

Assembly of communities is complex and very poorly understood, but numerous examples illustrate that a different sequence of adding species can produce very different community compositions over time.^{4,5}

¹ Woodley, S., James Kay, and George Francis, Editors. 1993. Ecological Integrity and the Management of Ecosystems. St. Lucie Press. (212pp) Note: This is one example of several books on this topic. Many articles, however, are misdirected by simplistic views of the ecological and genetic systems.

² Kolar, C. S. and David M. Lodge. 2002. Ecological Predictions and Risk Assessment for Alien Fishes in North America. Science 298: 1233-1236. (recent, represents a large literature)

³ Haygood, Ralph, A. R. Ives and D. A. Andow. 2003. Consequences of recurrent gene flow from crops to wild relatives. Proc. Royal Society London B – Biol. Sci.: FirstCite e-Publishing, July 25, 2003.

⁴ Fukami, T. and Peter J. Morin. 2003. Productivity-Diversity relationships depend on the history of community assembly. Nature 424:423-426.

Several comments from various presenters focused on individual native species, typically grown in pure culture for seed production. The clear objective in producing seed is that they be inexpensive. Furthermore, the methods of using these seed involve simple communities. The hazards of this approach seemed to be unrecognized or readily dismissed. Both conservation and restoration are local activities, requiring special features of genetic resources and indigenous knowledge. We are losing both of these on a global scale, and the efforts described in this conference illustrate how both are threatened in Texas.

Both knowledge and genetics that are simplified for generalized industrial-like efficiency and uniformity are the antithesis of the stated conservation and restoration objectives.

Economic survival for those skilled at restoration of complex communities must be preserved and propagated with the same vigor as are the genotypes required. In our present economic system, we see research that tends to devalue these skills of maintaining and propagating resource materials and cultural techniques. We find well intentioned efforts that undermine the economic markets for these specialists with well meaning distribution at low cost that cannot support the talents and experience of local experts. It is imperative to "Think globally but act locally" in social, economic and ecological aspects.

Research and implementation programs are directed by objectives and procedures that are compatible with simple communities typical of production-oriented agriculture; a stark contrast to the growth and reproduction dynamics of native communities. None of the presenters acknowledged the need for "indigenous knowledge" in the process of recreating an integrated community. Their objectives focused on obtaining predictable results of growing, harvesting and propagation with machinery that requires uniformity. These features are unlike those needed for creating complex integrated communities with ecological features needed for sustainability. Agronomic success is the antithesis of ecological diversity that maintains complex communities of plants, animals and microbes.

An arbitrary mixture of native species does not lead to the ecological system dynamics of a self sustaining native prairie, particularly if the genetic makeup has transformed the ecotypes found in an integrated community into cultivars or the ecotypes are from divergent environments with different community dynamics and composition. **Continued on Page 8**

⁵ Prigogine, Ilya. 1996. The End of Certainty: Time, Chaos, and the New Laws of Nature. The Free Press (Div. of Simon & Schuster, Inc.) New York, NY.

continued from page 7

A restoration or biodiversity preservation objective develops an integrated community that functions as a fact simile native remnant if it remains sustainable. To achieve this objective, the genetics, planting and maintenance procedures differ from normal agronomic practices. A prairie contains plants, animals and microbes to be considered. Some taxa are there periodically and all taxa fluctuate in time and space. Without the appropriate microbes the plant community is limited, and without the interaction between plants and animals the food web dynamics are simplified.

Community dynamics, for example, involve different flowering and seed maturation seasons, which require different planting times and procedures for different species that will be repeated at different times in the year. Some plants will produce seed whose germination varies over time, even years. Some ecotypes may be established sparsely in the community and their proportion and distribution allowed to increase with time, as their habitat develops. To encourage such a developing community may require grazing or other local disturbances to be appropriately timed and executed.

Today most genetic resources for restoration and conservation of native prairies are restricted to remnants or their fact simile prairie reconstructions. If these are unavailable, we may attempt to add components that seem similar to the needed component ecotypes and hope that the system evolves into an integrated biological community⁶.

The chances of success are probably reduced, however. Unless we use the genetic diversity that is complexly maintained in gene pools of ecotypes aggregated among the species of a natural (integrated) community, we can only landscape using cultivars or non-natives. As noted above, such “native” landscaping potentially dooms survival of remnants and thereby eliminates future restoration. The dynamics are modified by cultural practices, including irrigation, cultivation, fertilization, etc. They are only a shadow of the normal diversity and dynamic complexity of native communities.

We can do much better than create such cartoons of native communities. There are lessons we can apply from experience, provided we have the proper fitting “pieces.” Unless our social knowledge and ecotype genetics contained in remaining communities are preserved and extended, we no longer can learn and manage from the relevant ecology – communities having histories of evolved dynamics that can educate naturalists. Without the genetic and learning resources, the opportunity loss to our descendants would be a double tragedy, indeed.

⁶ Lens, L. et al. 2002. Avian Persistence in Fragmented Rainforest. *Science* 298: 1236-1238. (recent, represents a large literature)

The concept of an evolved community is part of what Wendell Berry described in his book, *Life is a Miracle*⁷ and cannot be replaced by scientific studies. Contrary to E. O. Wilson⁸ these unique communities cannot be reduced to general theory, nor experimentally derived, nor summarized in generalized “rules” for reconstruction. Prigogine (1977 Nobel Prize in Chemistry and Biochemistry, awarded for his work in complex systems) supports Berry and demonstrates these limitations in his book, *The End of Certainty*.⁹

I can give two examples for learning proper restoration by trial, surprise, and corrective management – experiences by monitoring dynamics of an actual remnant and another monitoring the reconstruction of a prairie in urban landscaping – a tiny fact simile prairie community.

Paul Mezynski is a valuable social resource of experience with native prairie dynamics. Like most of us, he learns much from his mistakes. His prairie remnant in the central Blackland Prairie near Riesel is a treasured resource for the Native Prairies Association of Texas (NPAT). Lacking Eastern Gamma grass and thinking an addition would improve its diversity, he added an ecotype given him by R. C. Mauldin, one of the founders of the NPAT. R. C. brought it from the native plant collection he developed near San Antonio several decades earlier. The plants grew vigorously. However, it became “invasive” after its introduction, shading the neighboring plants and overtaking their space. Then Paul added two other ecotypes, one taken from a neighboring prairie remnant (a fragment of the same original prairie as Paul’s), and the second from a similar remnant in Collins County near Dallas. Paul judged these to be better representatives of similar prairie communities than the one from R.C. – and he was correct. These two ecotypes had fine leaves and grew much shorter. They are genetically adapted to Paul’s prairie remnant community.

A second example grows in our front yard in Austin, where Pat and I created a tiny landscape of prairie plants. We have two Eastern Gamma grass ecotypes in our prairie “garden.” One grew from a propagule of a compatible ecotype taken from Paul Mezynski’s prairie remnant. Another is a plant we obtained from David Mahler who rescued it from a prairie remnant near La Grange. It has wide leaves and grows to a mature height more than five feet, similar to R. C. Mauldin’s gift to Paul. In our prairie-ette it tends to encroach and shade out the nearby Big Bluestem. **Continued on page 9**

⁷ Berry, Wendell. 2000. *Life is a Miracle: An Essay Against Modern Superstition*. Counterpoint. Washington, DC. (153pp)

⁸ Wilson, Edward O. 1998. *Consilience: The Unity of Knowledge*. Alfred A. Knopf, Inc. New York.

⁹ See (5) above. Complex systems abound in biology, and predictability is limited to simple conditions over short times. E. O. Wilson was enraptured when he wrote *Consilience*; as literature it is unrealistically optimistic, and the book only can be considered scientifically unjustified. His enthusiasm, however, produces entertaining science fiction.

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The fine leafed ecotype maintains a balance with the other grasses and forbs. Even though Pat “grazes it” with hedge shears periodically, it vigorously expands its range a few inches each year. It is an invasive ecotype as Paul had witnessed. Although it is not a cultivar, in “industrialized agriculture” it would be selected for forage production in monoculture. Our aggressive ecotype clearly disrupts the integrity of our synthetic “micro-prairie”. Less vigorous vegetative growth is “better,” illustrating how symbiosis contributes to diversity and community integrity while inappropriate vigor works against diversity and integrity. One cannot evaluate this critical dynamic community in a pure culture.

Had either of these wide-leafed ecotypes of Eastern Gamma grass been taken from another continent, and had either been recognized as a different species¹⁰, we would have considered them Invasive Exotic Species – clearly an unwanted addition to our assemblage of native species. In fact, such invasive exotic plants, animals, and microbes have created major global ecosystem disruptions. Many are cultivars that are valued when used in industrial agricultural.

Also, it is critical to include the animals of a prairie to restore the characteristic integrated dynamics. The animals that live in a prairie habitat are critical parts of the nutrient cycles and important for dynamics of seeding and balancing growth patterns. The actual prairie community has many forms of life that are integrated into a community – pollinators, herbivores, predators, decomposers—large and small, in the soil, on the ground and in the air—and appropriate plant ecotypes. We must consider how each ecotype of each species will contribute to the community integrity that constitutes the habitat of all species that will live there. For example, if birds and ants feed on seed, they benefit when a food supply extends longer times rather than as a short burst. If the seed do not shatter as normal, the animals may not be able to reach them. If the seed all germinate the following year, the community may lose this ecotype when several successive abnormal years occur. “Hard seed” reduce commercial grades of “viable seed”, yet they may be important in the community functions and survival of the ecotype – and the community. In addition, the animals often are part of the dispersal system of the plant by eating seed or having seed stick to them. Generally, if the seed are modified for harvesting, a variety of important ecological interactions are affected. A community of selected groups of species will have a greatly reduced capacity to

become an integrated community, and it will not be reflecting a native community.

“Saving all the pieces” is an important concept, but preserving the genetic and ecological dynamic nature among the pieces must be part of the process we use in creating new communities. In other words, a community is not a bag of parts. Having all the pieces does not assemble them into a complex functional system. Reconstruction requires much knowledge and skill – probably learned by trial and error with careful observations. This human capacity is what Wes Jackson’s discusses in *Becoming Native to This Place*.¹¹ Restoration is local ecological artistry.

While economics must be part of our plans and programs, the policies and incentives must protect the native local artisans and reward them well. They, indeed, are as essential a part of the restoration process as are the availability of the ecotypes! We must not let industrial agronomic “economies of scale” destroy the artistic remnants of the people with knowledge and experience. Highways are a place where this artistry should be displayed, and diversity among sections of the highway can change as ecological communities changed across the North American Great Plains. Restorative implementation must be recognized as an artistic enterprise, not simple hydromulching “native” species used to cover soil for erosion control. Such artists are as endangered as are the appropriate ecotypes.

We can reverse the industrialized simplified anti-ecological focus by developing technology to manipulate the culture of true ecotypes maintained in their community. The native community remnants themselves should be the source of propagules.

How do we expand the integrated communities of coadapted genotypes represented by the particular species found there? The communities become sources of economic investment, and income when the values are defined in the appropriate ways – natural capital of ecotypes and social capital of restoration artisans. These genetically crafted species for ecologically appropriate community interactions are unique, and uniquely dynamic. Honesty and accuracy prevents us from calling agronomic varieties of seed developed from ecotypes “ecotypes.” None of the presenters made this distinction in describing and justifying their efforts. Rethinking and redesigning the programs seems critical, and urgent before more time, money, and legitimate remnants and restoration artists become extinct!

¹⁰ They may represent two species, since polyploidy is known in the *Tripsicum* genus. We can examine their chromosomes to know. If so, hybrids between them likely will be partially or completely sterile.

¹¹ Jackson, Wes. *Becoming Native to This Place*. The University Press of Kentucky. Lexington, KY (121pp)

2003 NPAT Treasurer's Report

Fund Balances as of December 31, 2004

Unrestricted

General Fund	7,592.88
Maddin Ranch Preserve	1,833.58
Total Unrestricted	9,426.46

Restricted

NPAT Endowment	17,414.55
Easement & Fee Acquisition	18,420.43
Property Acquisition & Management	1,334.80
Prairie Surveys	4,088.10
Maddin Ranch Preserve	
TCEQ	11,683.28
Stanford Fund	7,301.51
Total Maddin Ranch Preserve	18,984.79
Total Prairie Seed/Gene Banks	3,099.11
Total Restricted	63,341.78

TOTAL **72,768.24**

The NPAT's liquid assets are held within a checking account, a savings account, a money market account, and a CD. Within our internal accounting system, these assets are distributed among several unrestricted and restricted accounts. The Unrestricted General Fund can be used for any purpose, while the Unrestricted Maddin Ranch Preserve Fund is limited to operating the Maddin Ranch Preserve.

All restricted account monies have donor or grantor restrictions attached. The Endowment Fund is increased by Life Membership contributions, contributions specifying the fund, and transfers from the General Fund authorized by the Board. In 2004, we welcomed two new Life members. At year-end 2003, our financial condition allowed the Board to transfer \$2,500 to the Endowment Fund, with an effective date of January 1, 2004. Since there were no easement or fee acquisitions this year requiring a monetary expenditure, the Easement & Fee Acquisition Fund balance is essentially the same as last year's. Because the Board recognizes the necessity of providing funds to manage our fee properties and easements, the Property Acquisition & Management Fund (aka, the PAM Fund) was established last year. The balance has increased through income generated by prairie workshops. The Prairie

Survey Fund, funded by donations, has allowed NPAT to fund contract surveys for prairie remnants. Surveys in Madison and Bastrop Counties are nearing completion. There are two restricted accounts dedicated to the Maddin Ranch Preserve in Mitchell County. Restoration work involving brush control, replanting of prairie, and establishment of an on-site genebank utilizing locally collected seed is funded by a contract grant from the Texas Commission on Environmental Quality (TCEQ). The Stanford Fund, also dedicated to use at the Maddin Ranch Preserve, was established in honor of the late Geoffrey Stanford, an NPAT founder and long-time board member. Geoffrey was a staunch supporter of the preserve. The Prairie

Seed/Gene Bank Fund funds our five-year contract with the NRCS East Texas Plant Materials Center in Nacogdoches to increase the availability of local ecotypes of native prairie grasses in the Houston region.

Our negative net income of \$7,721.96 was planned by the Board. NPAT has actively pursued the completion of several projects, which are funded by donated funds held in restricted accounts. The donations were made prior to 2003 and thus substantially increased the income stream in those years without a matching expenditure. In particular, there were large expenditures at Maddin Ranch Preserve from the TCEQ contract grant. There was also a major expenditure from the Unrestricted Maddin Ranch Preserve Fund, since we replaced 1.2 miles of the perimeter fencing.

Statement of Income Jan. 1 through Dec. 31, 2004

Income

MEMBERSHIP DUES	3,150.00
CONTRIBUTIONS	3,924.66
GRANTS	1,350.00
PROGRAM REVENUE	7,153.00
GOVERNMENT FEES	2,941.00
Total Income	18,518.66

Expense

Total MGMT. & GENERAL EXPENSES	3,568.29
Total PROGRAM SERVICES EXPENSES	24,153.53
Total Expense	27,721.82

Net Ordinary Income	-9,203.16
Net Other Income	1,481.20
Net Income	-7,721.96

2004 EVENTS

Past Events

1/17-18 NPAT Board meeting #1 and retreat, Mo Ranch, Hunt, Texas

2/7 Peters Prairie Workday #1, Peters Prairie, Collin County, Jeff Quayle 817-738-1322, prairielover@ev1.net

2/21 Visit Tanglewood Prairie for conservation easement monitoring, Lee County

2/21 Wildlife Habitat Evaluation Program, Bonham SP, Fannin County fannin-tx@tamu.edu

2/22 Visit Spitzer's, Washington County

2/27-28 2004 Statewide Land Trust Conference, Austin <http://www.tpwd.state.tx.us/conserve/tltc>

3/5 Land Stewardship and Watershed Management by Sid Goodloe, U. of N. Texas, Denton, infojevvarnum@aol.com

March 11, 2004 Reconnecting Food Systems with Ecosystems: A Workshop on Enhancing Biodiversity Center for Environmental Research, Austin, TX. Learn about: National efforts and resources for integrating food, production, wildlife conservation, and ecosystem health; Texas-based examples of enhanced biodiversity and, sustainable agriculture; Conservation management techniques for landowners, farmers, and ranchers. For registration contact: The Center for Environmental Research, 512-972-1960 or Kevin.Anderson@ci.austin.tx.us

March 13, 2004 Saturday NPAT planting at Maddin Prairie – Mitchell County, Colorado City Sponsored by NPAT. Tasks include planting propagated native plants and installing an irrigation system in the seed increase plot. Meet at Dairy Queen in Colorado City at 6:00 a.m. or at Maddin Ranch at 7:30 a.m. or later. For more information and carpooling, contact Marcia Hermann at 512 / 292-4200 ext. 103 or hermann@wildflower.org. There will also be set up activities on March 12.

March 13, Saturday, 2004 NPAT Board Meeting #2 Colorado City, Best Value Inn (after Maddin Ranch planting)

March 20, 2004 Peters Prairie Workday #2 (10 am-2 pm), Peters Prairie, Collin County, Texas. Sponsored by NPAT. Meet at 9:45 a.m. at Dairy Queen on US 78 in Farmersville, east of McKinney. Wear appropriate attire & gloves. Bring water & lunch. Contact Jeff Quayle at 817 / 738-1322 or prairielover@ev1.net to RSVP.

April 15-17, 2004, Thursday through Saturday Southwestern Association of Naturalists 51st Annual Meeting, Juniper Symposium, San Antonio Radisson Hotel, Downtown Market Square. Pre-registration deadline 21 March 2004. For information, go to http://www.biosurvey.ou.edu/swan/meet04/Call_for_Papers.html

April 16-17, 2004, Friday and Saturday, "Insect Biodiversity on the Prairies" 80th annual meeting in Lincoln, NE of the Central States Entomological Society. <http://www-museum.unl.edu/research/entomology/CSE/CSE2004.html>

May 8, 2004, Saturday Survey Falls County conservation easements, Falls County, Meet in Marlin: location tba.

May 15, 2004, Saturday, Clymer Meadow Wildflower Tour. Sponsored by Texas Nature Conservancy. Led by Jim Eidson of TNC. Tour also visits Parkhill Prairie and Paul Mathews Prairie in Hunt and Collin Co. 10-2. Meet at Clymer Meadow Preserve. Bring water and lunch. Free. For info, dir. & registration, contact Jim Eidson at 903-568-4139 or jeidson@tnc.org. Also visit web site <http://nature.org/wherewework/northamerica/states/texas/>.

May 22, 2004, Saturday, NPAT tour of Peters Prairie and board meeting #3 at Varnum's ranch, Collin Co., Hunt Co.

8/8-12 North American Prairies Conference, Madison, WI, www.prairies.org & <http://www.napc2004.org/>

10/2-3 NPAT Annual Members Meeting and Board Meeting #4, McKinney Roughs, outside Austin

10/tba Fall Prairie Tour led by Jim & Stephanie Varnum, Clymer Meadow and other locations, Details tba

10/28-31 Land Trust Alliance Rally, Providence RI <http://www.lta>

2004 Events to be scheduled: Visit to Riesel Prairie; Survey of Williams Prairie conservation easement; Workshop to train prairie remnant searchers – PAM; Workshop (prairie remnant recognition) for the public, Workshop (restoration techniques)

KNOW YOUR GRASSES

The Texas Cooperative Extension has revised and republished "*KNOW YOUR GRASSES*". Purchase this book online at <http://tcebookstore.org>. Author Barron Rector has updated much of the material.

Seed Production for Houston Region Ecotypes

The production of seed for the Native Prairies Association of Texas under our five-year contract with the Natural Resource Conservation Service is continuing. The production fields are located near Nacogdoches at the East Texas Plant Materials Center, one of three centers operated by the NRCS in Texas. All the seed produced at the ETPMC is from plants that were grown from seed originally collected in the Houston area local volunteers. This has been a learning experience for all concerned, especially when dealing with seeds that appear to have a low germination rate (like Big Bluestem) or require special handling (like Gulf Coast muhly).

Here is a summary of the seed production to date:

Species	2002 Seed Production	2003 Seed Production
Gulf Coast muhly	5 oz	2 lb 1 oz
Little bluestem	27 lb 12 oz	9 lb 12 oz
Switchgrass	19 lb 6 oz	22 lb 8 oz
Yellow Indiangrass	20 lb 4 oz	8 lb (estimate)
Big Bluestem		14 oz
Longspike tridens		13 oz



The Eastern gamagrass propagules are growing well and increasing in size, also.

We appreciate the attention that the staff at ETPMC has given to our project, especially Melinda Brakie and Jim Stevens. Melinda supplied us with the picture of NPAT's seed treasure being stored at ETPMC. It is an impressive sight!

Native Prairies Association of Texas

P.O. Box 210
Georgetown, Texas 78627
<http://www.texasprairie.org>

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