America's Lost Landscape: The Tallgrass Prairie

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The story of America's tallgrass prairie is rich and complex. At the time of Euro-American settlement, the 100 million ha tallgrass prairie was a major feature in mid-continent North America. In less than a century, most of the tallgrass prairie was converted to cropland. Nine states and provinces have lost more than 99% of their historic tallgrass prairie. This drastic alteration of the landscape contributed to the removal of the cultural imprint of the native populations who were more attuned to the prairie. A film, America's Lost Landscape: The Tallgrass Prairie is being produced by the author and David O'Shields to tell the story of the tallgrass prairie. The goal of this film is to inform and enlighten the general public and students about the historical, cultural and environmental aspects of the tallgrass prairie landscape and to address questions about the future of tallgrass prairie in an agriculturally dominated landscape. In this paper, aspects of making the film are interwoven with the story of the tallgrass prairie. Discussion topics include: the floral and faunal components, the original prairie landscape, the interaction of Native American and Euro-American cultures with the prairie, the basis for cultural perspectives and how these perspectives changed, individuals and events that are critical to the tallgrass prairie story, prairie settlement and the conversion of the prairie, development of a land ethic, the current perspective of the prairie, prairie restoration and challenges regarding the future of the tallgrass prairie.

INDEX DESCRIPTORS: tallgrass prairie, prairie landscape, film production, cultural perspective, cultural interaction, prairie settlement, Native American, Euro-American, agriculture, land ethic, sustainable agriculture, society, conservation.

I stood on a bluff east of the Little Sioux River; across the river, early morning mist drifted slowly over the glacial relics of Cayler Prairie, one of the last major remnants of tallgrass prairie in Iowa. I had journeyed here before sunup to reflect and contemplate last things. In 1870, the last two bison in Iowa were sighted nearby at a fork of the Little Sioux, one year later, the last elk herd in the state was eliminated in this vicinity. Cayler Prairie was the site of the last state record for the Dakota skipper in 1992. Across the river, mist shrouded the prairie, the tops of knobs and eskers hung suspended above unseen kettles. Behind me, a few rays of the rising sun began to pierce the clouds, highlighting an ethereal land. Before me, my mind's eye surveyed a surreal scene of refracted images, blurred relics of the past, ghostly reflections, and diminishing reality. Normality was arrested as time and place were transcended; I felt the chill of a stray zephyr wafting off ice gone more than ten millennia. In the unnatural stillness, the faint sound of shivering grass drifted down from past centuries carrying the indistinct thuds of hooves of departing bison and the faint haunting bugle of a spirit elk. The tallgrass prairie was a swirling kaleidoscope of incomplete visions, limited consciousness, historical vignettes and ancestral memory. I was peering through a window in time. The prairie of the past was just beyond my grasp, and I yearned to take wing and soar across the river to merge with it.

My revelry was interrupted by the sharp slam of a hog feeder and the ignition of a tractor motor. These abrupt intrusions were reminders that I live in an agriculturally dominated landscape. However, I cherish that fleeting moment when I saw through that brief time warp encapsulated something I have pursued for more than a quarter of a century.

Like John Madson (1972), my feelings are akin to those of "a modern man who has fallen in love with a face in a faded tintype. Only the frame is still real, the rest is illusion and dream. So it is with original prairie. The beautiful face of it had faded before I was born, before I had a chance to touch and feel it, and all that I have known of the prairie is the setting and the mood—a broad sky of pure and intense light, with a sort of loftiness to the days, and the young prairie born winds running past us from open horizons."

For 28 years, I have been attempting to know and understand the elusive tallgrass prairie. I have walked and crawled on prairies, laid out transects and sampled quadrats on prairies, burned prairies, observed, studied and read about prairies, planted and transplanted prairie species, helped preserve prairies and cried over destroyed prairies. I have attempted to recreate tallgrass prairie on college campuses, school grounds, cornfields, roadsides, and in my mind. I have tried to tell and retell the story of the tallgrass prairie so that I and others could better understand it. In the process, I have become increasingly convinced we need the prairie because it is part of our past. Much of the biological inheritance of the "naked age" of Desmond Morris (1967) was developed in the forests of Africa, but our cultural inheritance is tied to experiences on the intervening grasslands as our ancestors climbed down from the trees, stood erect, developed stereo vision and expanded their mind.

The story of the tallgrass prairie, its inhabitants and their interrelationships is important. For more than a quarter of a century, I was frustrated by the lack of a film that truly depicted the tallgrass prairie. I finally decided to attempt to tell the story of this lost landscape. To accomplish that task, I teamed with film director David O'Shields of New Light Media to produce the film, America's Lost Landscape: The Tallgrass Prairie. The goal of this film is to inform and enlighten the general public and students about the historical, cultural and environmental aspects of the tallgrass prairie landscape, and to address questions about the future of tallgrass prairie in an agriculturally dominated landscape. This paper is an attempt to convey the content, topics and issues of the subject matter and discuss the challenges and experiences involved in capturing the images needed to visually tell the story.

The tallgrass prairie was immense, encompassing a triangular area west from the Wabash River across the Missouri River into the east-
ern Dakotas, Nebraska and Kansas. The southwest corner of Wisconsin, almost all of Iowa, southwestern Minnesota and northwestern Missouri formed the core. From this core, it extended south across east-central Oklahoma into Texas and north into Manitoba. All in all, it was a 100 million ha swath of tallgrasses that stretched down out of southern Manitoba, broadened to 965 km through the Midwest, and extended more than a 1600 km to the Gulf of Mexico.

What is now the state of Iowa occupied the heart of the tallgrass prairie. Tallgrass prairie dominated Iowa and was an integral part of more than 80% of the landscape. 11.33 million ha in all (Smith 1998). The northern half of the state, except for the northeastern corner, had been modified, directly or indirectly, by the last glacier creating an extensive swell and swale prairie and prairie pothole wetlands. The southern part of the state, except for the eastern edge along the Mississippi, had not been glaciated for 500,000 to 2,500,000 yrs. This older, more dissected landscape was dominated by a mixture of oak savanna and tallgrass prairie (Prior 1991).

In filming the tallgrass prairie, it is essential to capture a sense of its vastness so the viewer can appreciate the extent of the original prairie. John Madson (1982) says that to really be prairie it has to reach to the horizons. In Iowa, you have to cheat a bit and shoot uphill into the sky to capture that feeling. To obtain images of the vastness of the tallgrass prairie we had to travel to South Dakota, the Nebraska Sandhills, the Flint Hills of Kansas and the Osage Hills of Oklahoma. Although open space is important, there are other aspects of prairie. Smaller remnants scattered among the cropfields provided beautiful close up illustrations of plants and animals and their interrelationships.

A good quality prairie contains more than 250 different plant species, each individual plant occupying vertical and horizontal niches both above and below ground for maximum utilization of the space. These plants are both beautiful and utilitarian, and, for me, invoke feelings of awe and wonderment as well as continuity with the past. Nothing is more relaxing than lying on your back on a late summer day and viewing the deep blue sky through the outstretched turkey feet of big bluestem. What can compare to the carpeted beauty of rod after rod of blazing star reaching to the horizon. Words can’t express the feelings that form as one views the rare, white-fringed prairie orchid. The brilliant oranges of the Turk’s cap and prairie lilies are extremely photogenic. The uniqueness of the flowers and fruit of prairie smoke, rattlesnake master and Indian plantain account for at least part of their beauty. The delicate beauty of the exploding floral arrangement of an individual shooting star is equal only to the awesome visual impact in late May of hundreds upon hundreds of them forming a white to lavender in green patchwork quilt. A late September day is brightened by the colorful contrast of the giant blue lobelia, purple gentian, or New England aster against the curing grasses. One has to admire the tenacity of pale purple coneflowers that have reestablished in a roadside or railroad right-of-way as an annual proclamation of once existing prairie. The “prairie birthday” essay by Aldo Leopold (1949) has established the compass plant as a symbol of the vanishing prairie.

The entire film could consist of shot after shot of the large variety of prairie plants. The challenge is to provide a sufficient variety of grass and wildflower shots to illustrate the astonishing beauty of the individual species and the ever changing panorama of the growing season without visually saturating the audience. Furthermore, the floral display has to be balanced with a depiction of the more elusive animals that interact with the plants to form the dynamic biotic community. The prairie biota, both above and below ground components, is an essential aspect of the tallgrass story.

The extensive root systems and other components of underground prairie are often overlooked even though they are an integral part of tallgrass prairie. It is estimated that the underground portion of prairie plants exceeds 65% of the total vegetative biomass of the plants. The root systems of different species stratch vertically and develop more extensively at specific levels. This reduces competition for water and nutrients and provides for maximum utilization of the underground space. The extensive root systems enable the prairie plants to survive the stress of extreme heat and cold as well as limited moisture. Unlike trees and shrubs, grasses and forbs die back to the ground during winter. Shielded by their blanket of soil and sod, the roots and buds for next year’s growth lie dormant and safe from desiccating winds and winter temperatures as low as —40°C at ground level (Bailey and Anderson 1980). This same feature enables the prairie plants to withstand prairie fire and flourish afterward. In a fire, above ground temperatures may reach 200°C while two to five cm below ground the temperature rises less than 2°C (Bailey and Anderson 1980). In addition, these extensive root systems are largely responsible for the formation of the fertile black soils that underlie the tallgrass prairie region.

The extensive underground prairie is difficult to capture on film. In the past, researchers have excavated large 3–5 m deep trenches to expose the root systems. With the limited amount of prairie remaining, we did not consider that to be an option. Current researchers are using special cameras to record underground activities and minimize disturbance. Valuable information about the interactions of the root systems and associated soil flora and fauna can be derived from these indirect observations.

Fire was an integral part of the prairie landscape, but opinions vary as to whether it was a primary cause in the development of prairie or a factor in maintaining the prairie. As prairies became more extensive, it is likely that fire became more prevalent. Dry lightning storms in summer could ignite fires which could cause extensive burns of continuous grasslands on gentle to rolling terrain when winds and temperatures were high and humidities low. Later, the early American big game hunters increased the frequency of prairie fires and extended the burn season to spring and fall (Anderson 1990).

Fire benefits the prairie by increasing plant diversity, stimulating growth and flowering of individual plants, killing or stunning woody invaders, converting litter to usable nutrients, creating darkened soil that warms quickly in the spring and favors warm-season prairie species over cool season invaders, and delaying or preventing aging of certain prairie plants. Without fire, a prairie will become degraded and overrun with brush (Henderson 1982).

Preventing fires favors forest over prairie. If a tallgrass prairie is not burned for two decades, it will be heavily invaded by woody species and no longer resemble a prairie. Shrubs are the initial woody invaders with gray dogwood and smooth sumac being the most aggressive. These early shrub invaders modify the environment permitting the establishment of trees. These shrubs are often stimulated by spring burns, but they can be curtailed by burns during other seasons.

As indicated, fire is such an integral part of the tallgrass prairie that no film of this ecosystem would be complete without it. We were able to film a number of small prescribed burns, but to fully illustrate the magnitude of fire on the original prairie landscape, we wanted to obtain visuals of a large fire that stretched to the horizon. Some of the large scale prescribed burns on Konza Prairie fit that criterion. However, fire weather doesn’t always adhere to filming schedules, two fire seasons were required to obtain the desired footage. During the first season, we had a film and sound crew on standby for 5 days (a rather expensive undertaking), but the winds were either too strong or from the wrong direction for the prescribed burn, and we couldn’t film. Finally in late March of 2000, we were able to shoot a 400 ha burn on Konza Prairie. The filming of that prescribed burn was one of the high points of the entire project. The
Konza burn crew ignited the fire about 1445 and completed the task about 2100 after sunset. The bright flames against the night landscape and the reflections of fire off the billowing smoke provided a spectacular finale.

Native Americans and the Prairie

While a nature film of the prairie would be satisfying to some, the full story of the tallgrass prairie is more than that. The interactions of the prairie and people who inhabited it are very important. The cultures of the people who came to live on the prairie influenced their perspective of the prairie. Conversely, the prairie affected the people, and they responded by modifying their cultures.

Humans first moved onto the tallgrass prairie as the last glaciers were retreating to the north. These early prairie occupants were probably descendants of the nomads who came down from the Arctic although other possible origins have been suggested. For thousands of years, these people lived primarily by hunting and moving about in small bands. They traveled light, with animal skins for protection against the elements and weapons and tools made of stone and bone for killing and processing game. They developed a culture adapted to their natural environment. As a hunting and gathering society, these early small groups of Native Americans had a limited impact on the tallgrass prairie. According to the classic viewpoint, they did not exhaust or extinguish resources and left them in a usable state for succeeding generations. Living in close contact with the land, they saw themselves as a part of the natural community, one of many species in a complex system on the landscape. They were an integral part of the land where they lived and possessed a "sense of place." In spite of being well-adapted to their environment, their lives were somewhat uncertain as they were largely at the mercy of weather as well as the waxing and waning of game and food plants. They felt a need for assistance from a host of spirits that inhabited the natural world. According to their religious beliefs, the earth was alive and nature was a divine order that was to be respected and disturbed as little as possible. Plants and animals were seen as brotherly manifestations of the Great Spirit; killing them was done carefully, apologetically and ritualistically to meet the basic needs of survival (Krech 1999). The tribes who relied more on agriculture than hunting did little to disturb the tallgrass prairie as they farmed on the margins and were few in number.

In the film, we attempt to convey a realistic picture of the interaction of Native American cultures with the tallgrass prairie. This was no easy task as opinions differ regarding the relationship of Native American cultures to the environment. To many, they lived in harmony with the land, and were, to paraphrase Wes Jackson (1994), native to this place. However, from our modern perspective, we must avoid romanticizing the relationship of Native Americans with the land and bestowing on them conservation motives that they did not possess. It must be kept in mind that they were relatively few in number and hadn't developed the necessary tools and technology to over-exploit the land. Nevertheless, they had much less impact on the tallgrass prairie than the Euro-American settlers.

Advertising campaigns have reinforced a long-held assumption that Native Americans were the first ecologists (Nash 1990). However, bison driven off cliffs in numbers exceeding food needs, excessive localized disturbances, depleted land and forests as well as disappearance of entire populations due to possible over exploitation of limited resources, suggest that Native Americans were not always careful stewards of Mother Earth. Consequently, scholars continue to debate the extent to which they were, in fact, ecologists. The best explanation is that they were not ecologists in the sense of the environmentalists of the 20th century. On the other hand, most of their religions emphasized the need to kill with "reverence" so as not to upset the powerful spirits that inhabited the universe of two-legged and four-legged creatures. In contrast to the biblical book of Genesis, in which God creates man in his own image and gives him dominion over all other creatures, the Native American legends reflect the view that human beings are no more important than any other, whether alive or inanimate. In the eye of the Creator, they believe, man and woman, plant and animal, water and stone, are all equal, and they share the earth as partners—even as family (Kopper 1986, Krech 1999).

Native American use of fire is an important feature of the story of the tallgrass prairie. These early Americans found fire to be an effective tool. To create islands of fresh grass and attract herbivores, they used fire to remove dead plant material and stimulate plant growth in the early spring. Fire was also used to control animal movement while hunting, to clear areas around campsites, and to remove trees along streams to create garden plots. Accidental fires were started when signaling or leaving cooking fires burning in abandoned camps. Early explorers often encountered burned areas or areas being burned by natives. Frontier artists such as Catlin, Miller, Ranney, Tait and Deas commonly depicted fire in their paintings. The use of fire by Native Americans was so extensive that it apparently altered the landscape. It is generally assumed that their burning expanded and maintained the eastern portion of the tallgrass prairie and checked the spread of the forest vegetation (Anderson 1990, Pyne 1982).

Euro-Americans and the Prairie

How people interact with nature and the land is primarily determined by the culture of their society. In the film, we illustrate how the societies perceived the prairie to help audiences understand and appreciate the interaction of cultures with the prairie. A comparison of the Native American and Euro-American cultures is inevitable as there were definite differences in their attitudes toward nature and the land. The Euro-Americans clearly have been the more exploitative of the two cultures. It is difficult to discern whether this was due to inherent cultural differences, differences in numbers of people or differences in technological tools.

The European immigrants came to North America from a society that had much earlier made the transition from hunting/gathering to agriculture. In the transition, their culture changed as their society began to lose contact with nature. Later, a renaissance in science and technology created an industrialized society that was even more removed from nature. The separation from nature increased early in the 17th century with the acceptance of Francis Bacon's opinion that it was necessary for society to conquer and subdue nature and wrench her secrets from her. To squelch "nature worship" in those formative times, science and the church allied to create a dichotomy of "knowledge as good" and "nature as evil" (Keller 1985). As a result, European immigrants arrived in the new world with the belief that nature was hostile, evil and chaotic. Unfortunately, their experiences often confirmed their worst fears. Therefore, from their first arrival, they behaved as though nature must be either subdued or ignored. In New England, the Puritans drew on scriptural passages to support the drive to subjugate nature and to labor for profit. Their cultural perspective was fused with the belief that they were a special people and that people who differed from them were "aliens."

While the European immigrants were establishing themselves in America and becoming Euro-Americans, John Locke was developing a new definition of land value. According to his thesis, the value of land was derived from the labor done on it and the benefits that resulted from this labor. The right of use and ownership was determined by the farmer's labor. As a corollary, Locke considered wilderness or uncultivated land synonymous with waste (Hargrove
Locke’s philosophy appealed to the Euro-American settlers and was easily incorporated into their culture.

Thomas Jefferson was attracted to Locke’s ideas and envisioned the yeoman farmer as the backbone of a republic stretching from the Atlantic to the Pacific. Early in the 19th century, President Jefferson dispatched Lewis and Clark to investigate the newly-acquired Louisiana Territory with the hope of opening a new land west of the Mississippi. The westward moving settlers who followed in the wake of Lewis and Clark carried the banner of Manifest Destiny with them. They felt it was ordained that this was to be their land from sea to shining sea (Billington 1965).

Evidence of how well Locke’s philosophy was incorporated into the culture of the Euro-Americans was illustrated in 1858 at the 25th “old settlers” reunion in Burlington, Iowa. Speaker after speaker reflected on the accomplishments of the past quarter century of settlement and boasted of making the wasteland around them productive (Antrobus 1915). Modern land use decisions often reflect the persistence of this cultural perspective.

Clash of Cultures and Settlement of the Tallgrass Prairie

As the North American continent was settled, there were numerous clashes of Native American and Euro-American cultures. As noted in the film, Black Hawk, a Sauk war chief, was a pivotal person in the settlement of the tallgrass prairie. In part, he is representative of the many Native Americans who unsuccessfully resisted the westward push of the Euro-Americans, but more important, his actions resulted in the Black Hawk War and the subsequent Black Hawk Treaty of 1832, which opened the tallgrass prairie for settlement. The archives of the Iowa and Wisconsin historical societies provided excellent images depicting this period.

For a time after the turn of the 19th century, Euro-American settlement of the tallgrass prairie was halted at the Mississippi River. The prairie of northwest Illinois and northern Illinois was settled, but the ancestral Ioway territory west of the river belonged by treaty to the Sioux, Sauk and Fox. This fragile line of demarcation began to crumble with Black Hawk’s ill-advised decision to cross the Mississippi River into Illinois to return to his ancestral village near the mouth of the Rock River. When the Sauk band crossed the river, fear of an Indian attack spread throughout the Euro-American settlements of Illinois. An army of regular soldiers and volunteers was quickly formed to meet the perceived threat. Black Hawk refused an order to move to the Iowa side of the Mississippi River and retreated north in the hope of gaining support from allies. For 15 weeks, the army pursued Black Hawk and his supporters across Illinois and Wisconsin. They were finally trapped against the Mississippi River and crushed in a battle near the mouth of the Bad Axe River in southwest Wisconsin. Approximately 150 Sauk men, women, and children were ruthlessly massacred. To save the lives of the rest of his people, Black Hawk surrendered to the United States government and signed the Black Hawk Treaty of 1832. The treaty opened part of Iowa for settlement and was the first of several Indian cessions that cleared the way for the Euro-American settlement of the tallgrass prairie (Sage 1974). The brutal treatment of Black Hawk’s band in the battle at the Bad Axe River may have discouraged Indian resistance to future cessions of land. The response to the opening of the tallgrass prairie for settlement was swift as settlers from adjoining areas and distant locations poured into the Iowa Territory and beyond. Within the next 70 years almost all of the tallgrass prairie was settled.

The Euro-Americans who settled the tallgrass prairie did not coexist with the land, they waged a war with it. To provide for their families, they had to subdue the prairie and convert it to cropland. They were fighting for survival in a hostile environment that could easily overwhelm any civilized gain. Initial motivation to make the wasteland productive was provided by cultural forces. Later, society provided the technology needed to accelerate the conversion of prairie to cropland and justified the conversion with a self-ordained mandate to feed the world. As a consequence, the tallgrass prairie was plowed and planted into oblivion in less than a century.

Edwards (1948) conjectured that the westward moving pioneers had an impression of everlasting immensity when they first viewed the tallgrass prairie in northwest Indiana and northeast Illinois, “... the pioneers hesitated on the edge of the large prairies with their seemingly endless expanse of thick grass. There was a sense of vastness about them that seemed overpowering, an impression of greatness that could not be subdued.” However, the Western culture of the Euro-Americans prevailed. They considered the tallgrass prairie a place to be conquered or a vessel to be improved by making it productive. They proceeded to carve farmsteads out of the prairies and savannas. Their endeavors were accelerated by a technological revolution which continually expanded the mechanization of agriculture. Tallgrass prairie was converted to cropland at an incredible rate. As an area was settled, the prairie and the prairie animals were eliminated in less than a decade. According to Dinsmore (1994), the mean interval between the first permanent settlement in a county and the last record of a bison was six years.

The rich, black soil created by the extensive roots and rhizomes of the underground tallgrass prairie provided the foundation for an extensive agricultural economy. The soil of the tallgrass prairie of Iowa, northern Illinois, southwest Minnesota, northwest Missouri is exceedingly productive, accounting for almost all of the high-quality agriculture land in the United States. Iowa, alone, contains 25% of all the Grade A land in the contiguous 48 states (Marbut 1934). The development of this fertile prairie land provided for the emergence of the United States as a world leader in agriculture.

In The Unsettling of America, Wendell Berry (1977) wrote that “we came with vision, but not with sight. We came with visions of former places, but not the sight to see where we are.” In retrospect, the magnitude and rate of the loss of the tallgrass prairie is unbelievable. It seems that once the Euro-Americans acquired the technological equipment needed to convert prairie to cropland they couldn’t stop until it was gone. Leopold (1949) pessimistically observed, “Man always kills the things he loves, and so we the pioneers have killed our wilderness. Some say we had to. Be that as it may, I am glad I shall never be young without wild country to be young in.” John Madson (1972) eloquently summarized the process, “We spent our tallgrass prairie with a prodigal hand and it probably had to be that way, for these are the richest farm soils in the world. There were certain wilderness things that were fated to be spent almost to the vanishing point: bison in the shortgrass plains, lobos and grizzlies in the settled cattle country—and the vistas of true prairie.”

Most of the original tall grass prairie landscape has vanished. Nine states and provinces have lost more than 99% of their historic prairie. Fragments of the remaining prairie remnants are widely scattered across their former range—isolated islands awash in an agricultural sea. The blacksoil prairies were the hardest hit; Manitoba, North Dakota, Illinois, Indiana, Wisconsin, Illinois and Iowa lost more than 99.9% of their original prairie while Minnesota and Missouri lost 99.6% and 99.5% respectively. The greatest quantity of prairie was lost in Iowa with 11.35 million ha reduced to less than 11,330 ha.

An analogy of a “prairie puzzle” may be helpful for developing an understanding of the loss of 99.9% of an ecosystem. For example, if the original Iowa prairie were a 1000 piece puzzle, only one piece of the entire puzzle would remain. Furthermore, that single piece would be fragmented into hundreds of smaller pieces. To continue the analogy, the scattered remnants have been degraded so the frag-
mented pieces would be damaged. Perhaps a dog chewed the fragments or they went through the wash in a jeans pocket.

A Land Ethic

By the middle of the 20th century, the Euro-American view that land must be conquered and made productive had resulted in a greatly diminished, fragmented tallgrass prairie ecosystem. If there was any hope for this rapidly vanishing landscape, society needed a different cultural perspective.

Two generations after the tallgrass prairie was considered settled, Aldo Leopold proposed a “Land Ethic” as an alternative to human subjugation of the land. According to Leopold (1949), “The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land ... In short, a land ethic changes the role of Homo sapiens from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such.”

The film portrays Aldo Leopold as another pivotal person in the story of the tallgrass prairie. His “Land Ethic” (1949) provided a new paradigm for the reassessment of our relationship to the natural world. To comprehend this view of land as a community, and man as a too often, unaware member of it, Leopold suggested that we look upon history not as a story of human enterprise alone, but as a complex tale of interaction of humanity’s ambition and techniques with the land’s natural diversity and dynamism.

The film interviews of the Leopold children, Nina and Carl, and the filming of the Leopold shack stirred memories and emotions. The writings of “Sand County Almanac” came alive. We discovered that the shack is more than a symbol for conservation and the environmental movement. Both Nina and Carl were adamant that the shack and the family experiences associated with it were cherished by the Leopold family.

Current Perspective of the Prairie

Prairie remnants are preserved as examples of our biological heritage and no longer have to be productive to be of value. The legacy of Leopold and others who labored to increase awareness of the value of natural systems has borne fruit. Interest in prairie has steadily increased in the past 40-50 years. Hundreds of prairie enthusiasts have been meeting biennially since 1968 to discuss prairie preservation, restoration, management, research, interpretation, flora and fauna. Groups interested in prairie have formed across the Midwest to share prairie experiences and to promote prairie. It is unfortunate that the prairie ecosystem had to decline almost to the vanishing point before there was an awareness of what was being lost.

Private organizations such as The Nature Conservancy and governmental agencies continue prairie preservation activities while implementing programs to restore the tallgrass prairie. Large scale tallgrass prairie ecosystem preservation and restoration projects are well underway at Konza Prairie in the Flint Hills of Kansas, the Tallgrass Prairie Preserve in Osage County, Oklahoma, and the Niobrara Valley Refuge in the Nebraska Sandhills. Large scale attempts are underway to restore or reconstruct tallgrass prairie and savanna ecosystems on agricultural land at the Neal Smith (Walnut Creek) National Wildlife Refuge and Prairie Learning Center near Prairie City, Iowa and at the Midewin Tallgrass Prairie and the Fermi Laboratory Prairie in northern Illinois. In addition, many local prairie enthusiasts and land owners are personally reconstructing or restoring native prairie.

The concept of using native vegetation in roadways to control weeds and beautify the landscape is gaining acceptance across the United States and in many other parts of the Western World. Because prairie is the native vegetation in mid-continent North America, it is logical for the Integrated Roadside Vegetation Management (IRVM) Programs of Iowa, Minnesota and surrounding states to utilize native prairie in roadways to control weeds and woody species. Roadways for prairie establishment are an extensive resource. In Iowa alone, there are 243,000 ha of roadways, most of which were, and could be again, prairie. States within the tallgrass prairie region could unite to form an extensive multi-state roadside prairie network.

It was heartening that so many foundations, governmental agencies, private organizations, companies and individuals were willing to support the telling of the story of America’s Lost Landscape: The Tallgrass Prairie by contributing almost one-half million dollars to the production of the film. This reflects a change in our society’s cultural perception of tallgrass prairie.

Tallgrass Prairie of the Future

Part of the film involved conjuring up nostalgic memories of the tallgrass prairie of the past, a relatively easy task. However, ascertaining the tallgrass prairie of the future presented a real challenge. Will it have a place in the modern agriculture and urban landscape, will it be completely obliterated and memorialized only in names of towns, streets and developments, or will our society learn from the past and include tallgrass prairie in our future? Is it possible to recover the tallgrass prairie? Much depends upon how tallgrass prairie is valued in our culture. Wes Jackson (1994) asserts that we must “become native to this place, to base our culture and agriculture on nature’s principles.” This has become increasingly more difficult as so much cultural information has been lost and continues to be lost.

To a large extent, the future of the tallgrass prairie and agriculture are intertwined. When considering the question regarding the prairie of the future, it might be well to review conditions of our agriculturally-dominated landscape. There is: (1) a need for sustainability, (2) a high use of energy and chemicals in crop production, (3) a loss of 25 billion tons of topsoil annually, (4) flooding and silting of streams, (5) an ever increasing “dead zone” in the Gulf of Mexico, (6) a loss of natural beauty, and (7) a decline in spirit. Our society emphasizes production, profit and economic growth over all else. We focus on product at the expense of process. In a sense, we have unknowingly robbed ourselves of our natural environment and heritage. It has been suggested that our society exists within a natural world of oozing wounds. Is it our destiny that the tallgrass prairie ecosystem will slowly expire from these wounds on our watch?

Thomas Berry (1999) suggests, “we may be experiencing a moment of significance far beyond what any of us can imagine.” He thinks the distorted dream of an industrial technological paradise can be replaced by a mutually enhancing human presence within an ever-renewing Earth community. Recently, William Witt (1999) chronicled the efforts of concerned prairie enthusiasts who are aiding the “return of the prairie.” Perhaps the current diminished condition of the tallgrass prairie is a blessing, an opportunity to come together to staunch those seeping wounds, cauterize them, and begin the healing process.

The tallgrass prairie may be waiting for us to begin the restoration process. Native Americans believe that the prairie continues to exist beneath layers of agriculture and urbanization and will emerge when these layers are stripped away. Sometimes when an apparently degraded prairie remnant is burned or cleared, a striking, diverse prairie appears, almost miraculously, as though it had been awaiting release from a suspended state. Perhaps the Native American belief is correct, and there is a long-term memory of the prairie community etched into the land. The challenge to our society is to nurture a cultural perspective that will enable the reemergence and reestab-
lishment of the tallgrass prairie ecosystem. The future of humanity may well hang in the balance.

LITERATURE CITED


