

THE CARAVAN

NEWSLETTER OF THE FRIENDS OF LOREN EISELEY

Vol. 8, No. 1

Spring 1994



Loren Corey Eiseley
September 3, 1907 - July 9, 1977

"We have joined the caravan, you might say, at a certain point; we will travel as far as we can, but we cannot in one lifetime see all that we would like to see or learn all that we hunger to know."

-- The Immense Journey

PRESIDENT'S LETTER

Things are happening. At our February Board meeting we approved the officers for the coming year: Jane Smith, President; Darrel Berg, Vice President; Morrie Tuttle, Secretary Treasurer; Kira Gale, Program Chairman; Pat Nefzger, Social Chairman; Naomi Brill, Newsletter Editor. Members of the board include these officers and Bing Chen, Bob Runyon, Bert Schultz, Mike Voorhies with others being considered.

The next three board meetings have been scheduled. On April 16 we will meet at 1:00 PM at the Bennett Martin Library in Lincoln. The next two meetings will be on August 20 in Omaha and January 21 in Lincoln. Members are always welcome to join us at these board meetings. Save October 23 for our annual program in Lincoln which is still in the planning stage.

Then mark your calendars for the Fourth Nebraska Literature Festival to be held in Omaha on Friday, September 23, At UNO and Saturday, September 24, at the Peter Kewitt Conference Center. On Saturday at 9:50 Bing Chen will speak on "Loren Eiseley, A Shaman for Our Time." Then at noon Naomi Brill and I will share thoughts about "Loren Eiseley and Young People."

There will be an awards luncheon at 1:00 PM -- so the days will be filled with good things.

Sincerely yours,

Jane Stillwell Smith, President

DR. BRAGG TALKS TO THE EISELEY FRIENDS

Dr. Thomas Bragg was our speaker for the Annual Program of the Friends of Loren Eiseley last October and his talk was on "How Fire Makes the Prairie." We are very grateful to Dr. Bragg for sharing with us the following text. His presentation was illustrated with an excellent series of color slides.

Dr. Bragg is Professor of Biology at the University of Nebraska - Omaha. He received the 1993 Loren Eiseley Medal awarded by Clarkson College. He is well known as a specialist in native prairies, and has worked in the Omaha area, the Loess Bluffs near Sioux City, and the Niobrara Valley Refuge in the Nebraska Sand Hills studying prairie fire-making.

How Fire Makes Prairies

By Dr. Thomas Bragg

Fire plays a role in the establishment and maintenance of numerous ecosystems and it is more important in some than in others. In many ecosystems, particularly those in the grasslands of the Great Plains, humans have been the cause of a significant number of fires over the thousands of years that they have inhabited the region. It was the role of these early Americans that was the focus of some of Loren Eiseley's works. In the essay "Man the Firemaker" from his book The Star Thrower (page 48), Loren Eiseley quotes Omer Stewart, an anthropologist of the early 1900's, who states:

The number of (native American) tribes reported using fire leads one to the conclusion that burning of vegetation was a universal culture pattern among the Indians of the U. S. Furthermore, the amount of burning leads to the deduction that nearly all vegetation in America at the time of discovery and exploration was what ecologists would call fire vegetation. That is to say, fire was a major factor, along with soil, moisture, temperature, wind, animals, and so forth, in determining the types of plants occurring in any region. It follows then, that the vegetation of the Great Plains was a fire vegetation.

Eiseley then continues:

In short, the so-called primeval wilderness which awed our forefathers had already felt the fire of the Indian hunter. Here, as in many other regions, man's fire altered the ecology of the earth.

When Europeans first arrived, the Great Plains was primarily an extensive grassland although, particularly towards the east, trees did occur along breaks and waterways. Wildlife was abundant including bison, prairie chicken, and a variety of invertebrates. The vegetation itself was diverse with a wide variety of plants flowering throughout the growing season.

Such, however, was not always the condition. Before 65 million years before the present, an extensive sea covered central North America. From 65 to about 2 million years before the present, as the sea receded, extensive geologic processes were at work in North America resulting in many features including the Rocky Mountains and the broad plains to the east now known as the Great Plains. From about 20 thousand to about 8 thousand years ago, the weather of North America changed resulting in a successive period of glacial advances and retreats that included much of eastern Nebraska and the lands to the north and east. Along the front of these glaciers, coniferous and aspen forests developed. As the glaciers receded, most recently around 8 thousand years ago, the climate changed to one that was more arid and that favored grassland development. The prairies of much of the northern Great Plains, then developed since that time. Fires were a natural component of these prairies, fires occurring both from lightning and from the native Americans who had become established in North America well before the retreat of the glaciers. These early Americans, then, affected the development of the prairies that we have today. -- it is to this point that Loren Eiseley wrote.

Prairie fires were commonly observed by early travellers in North America. These fires swept the plains often covering hundreds of miles in length and tens of miles in width. Large animals fled before the flames and small animals sought refuge below ground or in the unburned areas. Many raptors, accustomed to fires, hunted the fire front. Other animals, such as birds, or more specifically, bird eggs in ground nests, and insects, however, were unable to move. Of these some certainly perished although most appear to have escaped in one way or another. Among the invertebrates, the response varied. Ants, for example, living below ground, were not substantially affected by burning and, in fact, actually increased in number and diversity in burned areas. Other invertebrates, such as spiders, are adversely affected by burning. Overall, however, these fires did not kill all life as evidenced by the great diversity of life, both animal and plant, that persists in a prairie environment.

There are four effects of burning on the prairie,

particularly tallgrass prairie, that are important for the maintenance of this ecosystem.

1. Prevention of Woody Plant Invasion. Fires kill many woody species and seriously damage others. They also keep woody plants from getting established in a grassland as seedlings. Without fire, tree and shrub cover increases such that within about 30 years, a grassland is turned into a shrubland/woodland with prairie vegetation largely gone. Data from plants remaining under trees indicates that recovery from a long-term tree cover is virtually impossible due to the absence of prairie plants within a decade or two.

2. Increase in Production and Vitality of Herbaceous Plants. Non-woody (herbaceous) plants are also affected by fire. Some are variously adapted to burning and many, such as big bluestem (a dominant grass of the tallgrass prairie) increase the amount of plant matter produced and also increase the number of flowers produced when burned. As for the ecosystem itself, within a few days following a spring fire, the herbaceous component is "greening up" and the prairie takes on a greenish hue.

3. Increase in Seedling Production. Without burning, a thick litter of dead plants accumulates on the prairie. This accumulation makes it difficult for short statured plants to obtain the needed sunshine for photosynthesis. The litter also makes it difficult for seedlings to reach the soil, establish roots, and obtain enough sunshine to become established. Since plants have a life span, although some may be decades long, it is still necessary that new plants be introduced into the prairie in order to maintain the ecosystem's diversity. Fire removes the litter and many seeds are able to develop into mature plants during the year or so following burning. Prairie phlox is among the species that seem to need fire in order to have a substantial number of seedlings.

4. Create Habitat Heterogeneity. The last of the four important effects of fire on the prairie is the role that it plays in maintaining ecosystem diversity. This aspect of fire, however, employs an additional factor, namely that of grazing. Large herbivores (particularly bison) were a significant component of the prairies of the Great Plains. Bison trample vegetation (affecting fuel available for burning), defecate (creating micropatches for seed germination), create "wallows" in which water can accumulate and in and around which vegetation can differ from that in the surrounding prairie. Most important, however, bison are grazers and, as such, they consume grass thereby reducing fuel available for burning. Since grazing is patchy, they therefore

create patches of high and low fuel so that when a fire occurs not all of the area is burned. The unburned areas are likely to be important refugia for small mammals and invertebrates that, given their high reproductive rates, can expand into the adjacent burned area during the following year(s). The patches also provide some forage for the bison until the burned areas green up. The fire-bison interaction, therefore, is likely to be an important interaction for the maintenance of the tallgrass prairie.

The biotic diversity of grasslands appears to result from a complex array of interactions which includes that between fire and large herbivores (both occurring at various intensities and throughout the year). The result is a heterogeneous environment that, as a whole, maintains ecosystem diversity. The ecosystem is likely to be significantly affected either by the absence or a major component (e.g. fire or large herbivores) or any uniformly applied management. The season during which burns occur and the frequency (number of years between fires) are two variables that are important components in understanding the natural fire conditions before European settlement of the prairie. This information is particularly critical since no ecosystem has the same kind of fire conditions today that they did, say 200 years ago. Fire suppression efforts, roads, crop fields, etc. are barriers to fires that, once ignited, could sweep for miles over the pre-European prairie. Consequently, today, we need to apply fire in what we call "prescribed burns." To do so, we need to know when to burn (season) and how often (frequency). The season of burn can effect birds if, for example, a fire occurs during the nesting season. Similarly, a fire at the "wrong" time of the year could kill the larvae of butterflies that may have recently emerged from protected sites below ground. Fires at the "wrong time of the year," particularly if applied at that same time year after year, can also adversely affect plants that may be flowering at that time. Overall, then, it is important to know that the season of burn is an important consideration in prescribed burns. Historically, however, fires did occur during summers (as observed even to day with the frequency of lightning caused fires during July and August) thus some summer fires may be important in developing prescribed burn plans, particularly since some plant species, such as false sunflower, do better with summer fires than with fires at other times.

THE RUSE OF THE FOX

By Christine Lesiak

I've often wondered how Loren Eiseley would feel about being the subject of a television documentary. A few months ago, when I asked his nephew Jim Hahn that question, he smiled and said, "He'd be horrified. Absolutely horrified."

Of course the dead have little to say about how they are remembered. So, we at Nebraska ETV are forging ahead with our Eiseley program. It's called Reflections of a Bonehunter, and will be finished in the Fall of 1994. It's one of the most difficult productions I've ever worked on. There have been times I've wondered whether we should be doing it at all. But not long ago, in a cemetery in the middle of a blizzard, I saw something so special that I can't help but feel this project was meant to be. First, though, some background.

From the time I first read his books, I've wanted to make a television documentary about Loren Eiseley. I knew it wouldn't be easy. As a writer, Eiseley is free to roam the galaxies. In the words of his friend Rudolph Umland, "He learned to push himself back to the Ice Ages, the Neanderthals, the angry winter. Blizzards raged around him and in him. In the inner galaxy of his mind, he was a wanderer seeking answers to questions propounded by an unexpected universe."

Television, of course, is a little box that shows pictures. It's a simple, literal medium in which the visual element dominates. In no way can it match the freedom of the written word -- especially if the writer is someone with the exquisite skill and precision of Loren Eiseley.

With those limitations in mind, I fashioned the script from a mix of interviews (Eiseley's colleagues at the University of Pennsylvania, biographer Gale Christianson, paleontologist Michael Voorhies and Ray Bradbury, among others) and scenes taken from Eiseley's writing that would be fairly easy to recreate -- like baking heads in Grandma's kitchen, or roaming the Wildcat Hills of Western Nebraska.

The script looked good on paper -- but the real test took place during production. The video camera is an instrument designed primarily to shoot the news -- to sit on the cameraman's shoulder and follow events as they happen. Reflections of a Bonehunter required a different shooting style. Director of Photography Jim Underwood found himself crawling into crevices

for close-ups of fossils, inching his dolly along a table top for an intimate look at skulls and broken mirrors, or trying to figure out how to show a centipede dying on a bathroom rug.

With filters and unusual lighting Jim managed to avoid that hard-edged video look. A skull appears to glow, a silhouette of modern-day paleontologist Rob Skolnick looks like the ghost of Eiseley himself. When you see the South Party in a moonlit scene in the badlands listening to music on a wind-up Victrola, you'll never guess that the scene was shot at a limestone quarry 30 miles from Lincoln. And if you wonder why it is so short -- we had just 25 minutes to get all our shots before a hailstorm hit!

Most of our scenes are now "in the can," as they say in Hollywood. It's still television, but a bit of Eiseley's magic has rubbed off onto the pictures. As I sit in the editing room night after night, I sometimes think we will achieve our end -- but then I have my doubts. Wouldn't it make more sense to curl up under a lamp and simply read one of Eiseley's books?

Then came that snowy day in February. As I said, it happened in a cemetery. Tombstones pop up frequently in this program. Last Fall we taped Darrel Berg reading Eiseley's words at his mother's grave in Wyuka. In Philadelphia, we photographed Loren and Mabel's grave at the posh West Laurel Hills Cemetery. In scouting out his gravesite, Eiseley had watched a squirrel eating a nut in a mausoleum, and we tried for hours to get a decent close-up of a squirrel, but every time we pointed the camera, the gray things ran off. And though we've seen many a crow in Wyuka, they wouldn't sit still for our camera either.

I wanted one more cemetery scene -- this time in the snow -- to go with Eiseley's obsession with the Ice Age. He once said that if he were to awake after death it would be "on the cold, bleak uplands of the Ice Age world, by the fire in the cave and the watching eyes without."

The storm hit on February 22nd. Jim wasn't available, so I cornered Ralph Hammack, our red-bearded videographer (you'll see why that's important in a minute), and talked him into packing our gear and heading into the storm. We drove the icy streets to Wyuka, and wandered around the cemetery for a while. It was bitterly cold, yet beautiful. Carved human figures on tombstones peeked out at us from blankets of snow. The scene was almost without color -- everything painted in

shades of gray and white.

Suddenly, I felt something watching us. I turned my head slowly and saw a beautiful red fox just a few feet away calmly observing our activity. I had never seen a fox that close except in a zoo. His red coat looked shocking against the white snow (it matched Ralph's beard). I said, "Oh my God!" and Ralph looked up and saw him too. The fox trotted away, then came back to look at us. He seemed carefree, and friendly. Ralph turned on the camera as he ran like a little dog among the tombstones.

Later, back at the station, we played back the image of the red fox on our TV monitor. There's a magic moment when he looks directly at the camera -- I thought of Eiseley playing with the innocent baby fox, and of the title of Christianson's biography -- Fox at the Wood's Edge. When I told Naomi Brill the story, she shared with me these lines from Eiseley's poem "Let the Red Fox Run" which Jane Smith quotes.

I will not be running with all that runs
(Its torn breath streaking down the furrow).
I will take my ease while the hunt pounds by,
Safe at last in earth's darkest burrow.

But somewhere still in the brain's gray vault
Where the light grows dim and the owls are
crying
I shall ~~not~~ run with the fox through the leaf
strewn wood.
I shall not be present at my own dying.

Loren, of course, said his ruse was that of the fox. Perhaps he approves of our project after all.

THE CELLARS OF TIME

Once in the Sun-fierce badlands of the west in that strange country of volcanic ash and cones. . . we found a saber tooth, most ancient cat, far down in all those cellars of dead time.

These words from "The Innocent Assassins," introduce the spectacular special issue of the NEBRASKAland Magazine which is entitled, The Cellars of Time: Paleontology and Archaeology in Nebraska. This introduction continues:

The 25 million-year-old cat enthralled a young student on the University of Nebraska paleontology crew. Trapped by the evidence of its own violence, the cat was found with one of its sabers thrust through the upper arm bone of

another of its own species, and both animals obviously died locked together as a result of their combat. The student who later found fame as a naturalist, anthropologist and writer was Loren Eiseley, and the discovery of the ancient cat in Nebraska's Wildcat Ridge was the inspiration for one of his well-known works, "The Innocent Assassins."

For the title of this issue, we adapted Eiseley's image of the earth as time's underground storehouses -- the cellars where its treasures are kept. "The Cellars of Time" seems an appropriate name for a publication that documents the rich historic and prehistoric record of the people, animals and plants that lived here before us.

This double issue of more than 160 pages presents a dazzling collection of photographs and excellent essays. About half of the magazine is devoted to paleontology and these sections have been written by our board member and good friend, Mike Voorhies, the Curator of Vertebrate Paleontology at the University of Nebraska State Museum. His talk, "Hunting Fossils in the Wildcat Hills, Loren Eiseley's Night Country," was a feature presentation in the Caravan a year ago.

John Bozell, Curator of Anthropology for the Nebraska State Historical Society, and others wrote the sections on archaeology and while this review is focused on the paleontological sections of the magazine, the archaeological sections are no less engaging.

In addition to the excellent presentation of the subject, those who are devoted to the State Museum and the Museum of Nebraska History, their collections and their work will be delighted to see cited the individual work of our many friends from both museum staffs.

And very visible are the paintings of Mark Marcuson. A full page display shows his mural of the Ice Age mammoths which dominates the far end of Elephant Hall which we wrote about in our last issue. Another handsome detail from his mural over the entrance of Morrill Hall shows Plesiosaurs and sharks cruising in Nebraska's ancient sea. And then there is a detail from the mural done for the Ashfall State Park visitor's center showing the great cloud of volcanic ash about to preserve for all time the unsuspecting rhinos, camels and horses at a Miocene water hole, a setting which you can now see being excavated at the park in north central Nebraska.

EDITORIAL EXCAVATIONS

Prominent museum fossils are shown in specially lighted photographs and perhaps the most impressive of these is an incredible photo of "Archie," the Imperial Mammoth, the world's largest elephant specimen and the pride of Elephant Hall.

Mike's essays take us from the time that our area was covered by the great inland sea through a time when the seas receded and the area moved through periods of lush tropical forest and evolved to a savanna and grassland, a great age of mammals. Then comes the Ice Age, a period of huge mammoths and bears and the largest true cats that ever lived. The introduction states:

. . . Few areas the size of Nebraska have produced so much of the world's knowledge about how life developed, especially life on the Plains. Our state has a virtually uninterrupted fossil record of the past 35 million years, roughly half the time since dinosaurs became extinct. And we have older fossils -- skeletons of great reptiles that swam the inland seas while dinosaurs were living on land and even more ancient remains of corals and sharks that flourished in tropical seas where Omaha now stands. But Nebraska is noted most for its latest fossil deposits dating from the Age of Mammals.

The exploration of these underground riches by archaeologists and paleontologists has helped us to understand the "Immense Journey" as Eiseley called the progression of life . . .

And then, as if especially for Eiseley readers, there is a gorgeous color photograph of the fossil specimen of the cats from the "Innocent Assassins" shown in a magnificent full page spread.

Nebraskans will be able to find copies of this magazine on the local newsstands for \$12.95, but it appears that the best way to get one would be simply to subscribe to the magazine. They say they will give you this issue with a \$12 subscription if you will just subscribe before June 30, 1994 at which time the rates are going up and this offer closes. Their address and phone are as follows:

NEBRASKAland
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The programs of the Center for Great Plains Studies are always of great interest and the topic this year is especially pertinent to our members particularly in light of our recent program on "How Fire Makes the Prairies." "Great Plains Grasslands" is the title of their 18th Interdisciplinary Symposium coming on April 7-9. In a rich program more than 30 scholars will provide papers on an extraordinary range of topics, from range wars, sagebrush and tallgrass prairies to buffalo, fire, insects and culture. One of the speakers will be Dr. Bragg who gave us the leading article in this issue.

We are also looking forward to a special art exhibit of grassland scenes presented in conjunction with the symposium, "Picturing the Grasslands: Artists' Visions in Painting, Drawing and Photography," to be shown in the Great Plains Art Collection Gallery in Love Library. The announcement flier contains the following descriptive paragraph to introduce the program:

The Great Plains is primarily defined by its status as an enormous natural grassland. Here grasses and mammals have evolved; here mounted peoples have enjoyed expansion and economic growth. This area has been called the Great American Desert and the Garden of the World, the Dust Bowl and the Breadbasket. Today our native eastern grasslands are virtually eliminated; native grasslands in the western Plains remain but their use as cattle ranges generates intense debate. What have we learned about the climate, the people, the animals, and particularly the plants to give us guidance for sustaining Great Plains grassland in to the 21st century?

Information on this program is available by writing:

Center for Great Plains Studies
1213 Oldfather Hall
University of Nebraska-Lincoln
Lincoln, NE 68588-0314.

You are aware that our Eiseley archives are maintained in the Heritage Room of the Bennett Martin Library in Lincoln. Curators Laura Lacy and Vicki Clarke have developed an extensive inventory of the Eiseley materials that are held in their collection and we believe that this resource will make the collection much more user friendly and helpful for Eiseley scholars and readers. These lists are now on the computer which will make it easy to add information to them. The staff has been using these materials to assist the Nebraska Educational

Television Network with their Eiseley documentary. We just can't thank Laura and Vicki enough for the wonderful work they have done. Their good deeds will be of value for many years to come for everyone who is interested in Dr. Eiseley's life and work.

We have received the Nebraska Humanities Council's "Humanities Resource Center Catalog" for 1994 through 1996 and are pleased to see that our Jane Smith and Naomi Brill are both listed as being available to give presentations on Loren Eiseley under the program offered by the NCH's Humanities Resource Center. Their catalog lists an extensive number of programs which can be used at public gatherings.

The exhibit, "Facing the Past," of Nineteenth Century Portraits from the collection of the Pennsylvania Academy of the Fine Arts has come and gone from the Joslyn Art Museum in Omaha. It was an impressive show and, as we have mentioned before, these would have been among the more important paintings that would have been the pride of that collection in the days when Mabel Eiseley was associated with the Academy, ultimately serving as its assistant director. The Omaha World Herald called this show "an introduction to the Pennsylvania Academy's abundant holdings" and stated that "because of the academy and its influence, Philadelphia became a key center for American art in the 19th century, and many of the artists represented in this show lived there at some point in their careers."

There is much in Eiseley about dogs.

You may have watched, as we did, the recent episode of the program Nature over PBS, entitled, "The Wild Dogs of Africa." It featured wild life filmmaker Hugo Van Lawick as he explored the relationships within a pack of wild dogs on the plains of the Serengeti. Within the film narrative, we watch the unified operation of the pack, but then suddenly an adolescent male pup loses most of a hind leg and thereby his ability to function within the pack he is left out of the action. Now unable to play the role for which he was designed, we see him fall as a swift victim to the inevitable reality of that harsh life, an easy meal for a fellow predator.

Almost exactly twenty years ago in a review in the March 3, 1974 issue of the Washington Post Book World entitled "The Wounds of Evolution," Dr. Eiseley reviewed Van Lawick's book, Solo: the Story of an African Wild Dog. The book carries an introduction by Van Lawick's wife, anthropologist Jane Goodall, and tells the story of an orphaned female wild dog puppy which the couple rescued and introduced into another family. The book is a

harrowing tale of survival, as Eiseley said, it is "the story of one puppy . . . and how she refused to die."

As is often the case in his book reviews, Dr. Eiseley's reflections on the general subject seem almost to become self contained essays within a larger article. The following, lifted from the context of this lengthy review, seemed by itself to speak a little story for us who have hounded our wolves and other canines into near extinction.

The wild dogs of Africa play a role on the Serengeti Plain similar to the great lobo wolves that clung to the flanks of the bison herds on the grasslands of North America. They are smaller than their American cousins but they are deadly killers capable of bringing down and devouring a full-grown zebra. They are among the most feared predators on the African continent and, until recently, man, himself a killer of loftier pretensions, has seemed bent on their extermination.

Admittedly the dogs present to the outside world the harshest face of a harsh land. They must kill to live and there is nothing very pretty about it. They are among the leanest, toughest, scroungiest looking animals alive. The adults can run almost any creature into collapse. They possess a tireless endurance and are capable of ranging over 1500 square miles as a hunting territory. Hidden in their bodies is a deadly persistence that in times of drought can drive them through obstacles before which almost any other creature would succumb. They have evolved contemporaneously with man out of the predawn darkness of Tertiary time. Through the ice age, when many herd animals became extinct, they have trotted on to confront us in the human morning. They are still intransigent, ears scarred and lifted, eyes attentive, seeming to say amidst all the violence we have wreaked upon them, "We are still here, we have followed you through the ice and the rains. We are your other face. Do not moralize. We have travelled the same road. That is why you hate us, We remind you of what you are."

If both species, man and wild dog together, have survived it is because each group has learned imperfectly to share and protect its own. We have indeed followed the same road, they on four feet, we on two. They are travellers through the intolerable heat and the thirst-provoking soda lakes. Perhaps they will trail us to the end. The eyes gleam a little in triumph and then are gone once more into the swirling dust of the Serengeti plain . . .

DUES REMINDER

1994 dues are now being received and appreciated. Remember, if you paid after September 1, 1993 you are considered paid up for all of 1994.

The dues structure is as follows:

Individual member - \$10.00
Contributing member - \$25.00
Supporting member - \$50.00
Patron - \$100.00

Send checks to: Friends of Loren Eiseley
 P.O. Box 80934
 Lincoln, NE 68501-0934

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