

Final Report - Wildlife Diversity Small Grants Program

Submitted by: Indigenous Diabetes Education Alliance

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Project Summary:

The Indigenous Diabetes Education Alliance (IDEA) was awarded a Wildlife Diversity Grant to provide field trips to four after-school programs in Rapid City. The goals of the project included:

- Provide urban youth with an up close wildlife learning experience
- Educate youth about Native wildlife species
- Educate youth about the various wildlife career opportunities
- Distribution of a wildlife newsletter that describes the various species of Native wildlife and plants in their area
- Encourage wildlife conservation for future generations
- Encourage the benefits of a native diet
- Explain the inter-relationship of the prairie ecosystem

IDEA conducted a total of five field trips for four after-school programs and one Sunday school program in Rapid City. There were two more requests for field trips (Boys Club of Rapid City and Ateyapi Program) which IDEA will conduct later on this summer. There was more of a demand for this program than we had first anticipated. One of the main programs that IDEA has worked with is the Ateyapi Program, an after-school program for low income Native American children in Rapid City. Sadly, the program lost its funding in the fall and was not fully operational. However, they did re-group into a smaller program for the summer and have requested a site visit which IDEA will provide. Although the field trips for this grant were for children, a representative from the Black Hills Unitarian Fellowship Church requested a field trip for 30-40 adult members of their congregation for some time in August.

Girls Incorporated was the primary after-school program that participated in four of our field trips. IDEA felt it was very important to give these girls encouragement and knowledge about careers in wildlife biology, ecology and restoration because there are not as many women in these fields. Dr. Trudy Ecoffey, Senior Wildlife Biologist for Oglala Sioux Parks and Recreation was one of the main presenters as well as Rob Goodman, Wildlife Biologist for OST Parks and Rec. They demonstrated the use of tracking devices for mountain lions, swift fox, etc. They showed the girls what kind of gear is used to do field work and sent them on a mock tracking mission to locate the collars. They discussed all of the various species of wildlife that co-exists on the prairie such as buffalo, prairie dogs, burrowing owl and black footed ferrets. Since the field trips took place on the IDEA ranch, the girls were able to see buffalo and buffalo calves up close, which was one of the highlights for them. IDEA also had a video of one of the calves being born and the girls were fascinated by birth and the fact that the baby could walk less than an hour after its born. We focused a lot of the presentation on the buffalo – the history of the animal and its amazing comeback from near distinction. Mike Fox, manager of the Fort Belknap Indian Community's tribal buffalo herd, was also on hand for each presentation to offer his viewpoint on the importance of buffalo to Native American tribes and how all of the prairie species are interconnected.

Susan Ricci, project director, gave a buffalo box presentation in which the kids learned about all the traditional parts of the buffalo used by the Plains tribes. The groups were then given a tour of the pasture and learned about some of the most common species of plants, what their traditional uses were and their value as forage today. They children did a scavenger hunt to find a certain species of flower and each winner received a wildlife book. All the children who attended the

field trips received a wildlife newsletter and buffalo jerky. The program received rave reviews from the girls and IDEA successfully met each of the aforementioned goals.

Expected Results:

- Increased knowledge of native wildlife species of South Dakota
- Exposure of urban youth to native plants and animals
- Interaction with professionals in the field of wildlife biology, ecology and law enforcement
- Encouragement of youth to consider a career in the field of wildlife studies
- Production and distribution of native wildlife newsletter
- Increased level of interest in wildlife issues

IDEA conducted pre-site visit and post-site visit questionnaires to the groups to see what, if any, increase in knowledge there was as a result of these field trips. The questions asked the children: name at least three facts about buffalo; do prairie dogs communicate with one another; do animals such as deer, buffalo and antelope eat animals or plants; name two types of plants that grow on the prairie; name a job that works with wildlife and do you want a career in wildlife someday. The data showed that before the field trip, only 36% of the girls surveyed could name a career in wildlife. After the presentation, however, 57% were able to name at least one wildlife career. According to another pre-survey question, only 30% of the girls knew at least two species of prairie plants. However, during the post-survey process, 78% of the girls were able to answer that question successfully. More than half of the participants indicated they would be interested in some sort of career in wildlife with answers ranging from a marine biologist to zoologist.

Therefore, in accordance with the expected results of this project, there was a substantial increase in knowledge of Native wildlife species. IDEA exposed approximately 80 urban youth to native plants and wildlife; three professionals in the field of wildlife biology, ecology and law enforcement presented to the children at various times and answered each of their questions; we encouraged all youth, especially the young girls that visited us, to consider a career in wildlife, whether it be working with land mammals, bats, birds, insects, plants or marine life. The message presented to the children was that anyone can pursue a career in wildlife if they stay in school, study math and science and have a love for nature; IDEA distributed nearly 500 newsletters during the field trip and to the directors of the programs for other children who could not attend the field trip. The newsletters are also on display at Crazy Horse Memorial Mountain and distributed through the Oglala Sioux Parks and Recreation Department. More than 57% of the surveyed girls said they are interested in pursuing a career in wildlife.



Above left, the first group of participants from Girls, Incorporated attend a wildlife field trip at the IDEA ranch. Dr. Trudy Ecoffey from the Oglala Sioux Tribe Parks and Recreation Department is a presenter. Pictured at right are more groups from Girls, Inc. Altogether, nearly 80 girls attended the field trips. They ranged in age from 3rd through 7th grade. Pictured at bottom left, a young boy from the Black Hills Universal Church examines the tail of a buffalo hide during a Sunday school field trip in July. IDEA hosted a total of 100 children and program directors during the grant period.





Plants and Animals of the Great Plains

Indigenous Diabetes Education Alliance

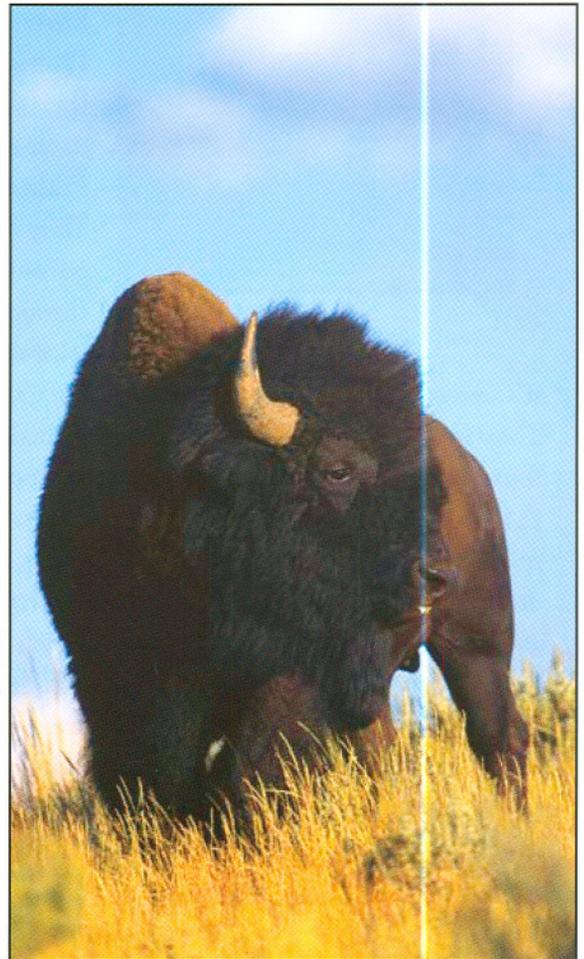
Volume 1

Buffalo: The King of the Prairie

The buffalo, also known as bison, is probably the most recognized animal of the Great Plains. Buffalo have roamed the prairie for centuries and were very important to Plains Tribes. The buffalo provided Indian people with everything they needed for their survival - they dried, boiled or roasted the meat for food; the hides were used to make tipi covers and clothing; the horns were shaped into spoons and ladles; the bladder served as a container for water; the bones were formed into tools. Even the tendons (sinew) of the buffalo were used as thread for sewing or to make bow strings.

At one time, there were over 60 million buffalo in North America. However, when the railroad came through and settlers made their way out west, buffalo were hunted to near extinction. By the end of the 1800s, there were less than 1,000 buffalo left.

The buffalo is a remarkable animal for many reasons. He can survive in the harshest winters, pushing snow out of the way with his massive head to search for food. Their heavy coat protects them even when the temperature drops to twenty degrees below zero! Buffalo live in groups called "herds". Within each herd there is a protector, usually the strongest bull. He fights the other bulls to be the leader. An adult buffalo bull can weight up to 2,000 pounds and he can run up to 45 miles per hour for far distances.



He stands six feet tall at the shoulder and can measure up to ten feet long from the tip of his nose to the base of his tail. Buffalo eat grass and they eat a lot of it. An average 2,000 pound adult buffalo can eat up to 40 pounds of grass in one day! Female buffalo are called cows. They lead the herd to their next grazing area or watering hole. When a buffalo calf is born, he can keep up with his mother and the rest of the herd within only a couple hours of his birth. Newborn buffalo calves are very recognizable by their bright orange color but within two months, they start to change color and turn brown by the time they are four months old.

Buffalo do not have any natural enemies other than man. While a coyote or wolf may hunt a young buffalo calf found separated from the herd, the buffalo are much too strong and fast for any other animal to attack them. Today, there are over 250,000 buffalo in North America.

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Prairie Dogs: Plains Pest or Keystone Species

The black tailed prairie dog is not actually a dog at all, he is related to the squirrel family. While some people may refer to prairie dogs as rodents or simply pests, the prairie dog is a very important species to the South Dakota "eco-system".



Prairie dogs have one of the most sophisticated forms of animal language in the animal world. They use a variety of sounds and body language to communicate with one another. When they stand up on their hind legs and throw their front feet in the air while "barking" they are warning the others that something has entered their territory. They have certain sounds or barks for different predators. They also have specific sound and body language to signal the rest of the colony that everything is safe and clear. They have over 40 identified sounds.

Prairie dogs are also very social animals. They communicate through smell and touch. Sometimes they can be seen touching each other's mouths which looks as though they are kissing. Prairie dogs live in a series of underground tunnels or burrows. They have separate areas for sleeping, for storing food and for getting rid of waste. Their burrows are designed so that air can flow through the burrows and keep it cool in the summer. During the winter, prairie dogs are semi-hibernators. For weeks at a time when

it's extremely cold out, they stay below ground but during less cold days, they come up to look around. They usually have enough food stored inside the burrows for the winter. Prairie dogs have three to four pups in a litter, usually in early spring. Prairie dogs are called a "keystone" species which means that a lot of other animals, birds and insects depend on that species for their own survival. Burrowing owls use the abandoned prairie dog holes for nesting; buffalo and antelope are attracted to the prairie dog towns because the grass has been chewed down and the new grass is very nutritious. Insects, like spiders, use the prairie dog holes to catch other insects. Eagles, hawks, coyotes, swift fox and black footed ferrets have depended on prairie dogs as a food source.

Prairie dogs eat grass, which makes them "herbivores" (ER-be-vore) which are animals that only eat plants and not other animals. Their grazing habits are actually good for the prairie because after they eat the grass down to the bottom, more nutritious grass grows in its place.

Prairie dogs can live between three to five years in the wild and up to eight years in captivity. The prairie dog population used to be in the hundreds of millions, however today, there are between ten to twenty million in North America.



Pronghorn Antelope: Prince of the Prairie

The Pronghorn Antelope is the fastest animal on the prairie. He can run at speeds over 45 mph for long distances and over 50 mph for short periods. Both male and female pronghorns have horns but the males horns are much longer and have a distinctive “prong” which gives the animal its name. They shed



their horns in January or February and they start growing back immediately. They are referred to as horns, not antlers because they are made of a protein which grows on a bony core. The pronghorn has remarkable eyesight. Their eyes are located further back on their head so that they can still keep watch for enemies even while they are grazing. Pronghorn are also distinguishable by their long eyelashes which help protect them from dust and helps shade their vision in the bright sun. They also have unique oil glands on the sides of their head which they use to rub and mark their territory. The noticeable white hair on their rumps flares out to serve as an alarm signal to the rest of the herd. They are able to see movement up to three miles away. Pronghorn are herd animals which helps them defend against predators.

It is common for female pronghorn to have twins, even sometimes triplets. Within a couple hours after birth baby pronghorn can already walk and after only a few days, they can keep up with their mother. During the winter, you can see herds of nearly 500 animals. The pronghorn's natural enemy is the coyote, which preys on young pronghorn. While the pronghorn is fast, it isn't

very skilled at jumping over fences but instead prefers to slide underneath where they often times get tangled in fence wire. This makes them easy prey for a wolf or coyote.

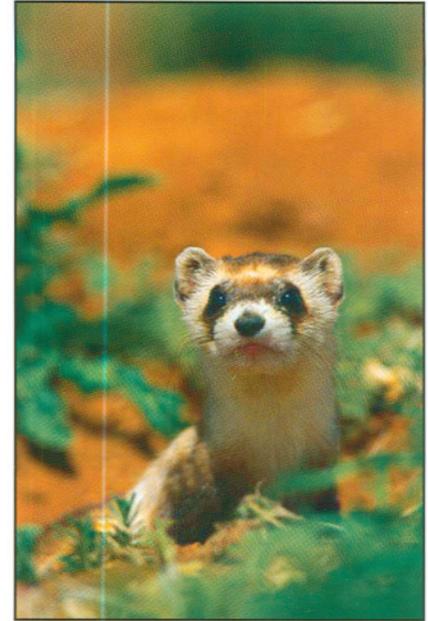
Mule Deer

Mule deer are one of the most common species seen on the Plains. They are distinguishable because of their large ears and black tail and are also sometimes referred to as a blacktail deer. They have large antlers which grow straight up with separate branches (white tail deer have smaller antlers off of a main beam). Mule deer are darker, grayish in color compared to white tail. Only males have horns which they use to fight predators and other male deer. They shed their antlers in the spring time. They eat mostly sage brush, pine needles and shrubs in winter and grasses in the summer. Twins are not uncommon for mule deer. Coyotes and mountain lions are their natural enemies. Mule deer can be found on the prairie as well as in the draws and in trees in the Black Hills. Males, called bucks, are solitary animals. Does raise their fawns until they are a year old and they have their second fawn in the fall. They are relatively fast animals and can jump fences up to six feet tall.

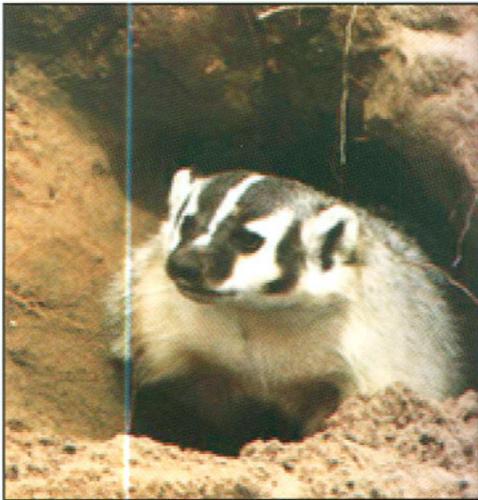


Black Footed Ferret

The black footed ferret is not the same kind of ferret that you might find in a pet store. These ferrets were born in the wild and they are the most endangered mammal in North America. Unlike the prairie dog, the ferret is a carnivore (CAR-ne-vore), which means he eats meat, not plants. Ferrets are a solitary animal. They mate in the spring and the female raises the litter. Ferrets are also very territorial, they are not social like prairie dogs and they do not live close to one another. While ferrets were preyed on by coyotes, fox and badger, they are nocturnal animals and need to be especially careful of owls and hawks that like to hunt at night. The black footed ferret has an amazing survival story. There used to be a large number of black footed ferrets - possibly as many as 5 million at the start of the 1900s. They survived mainly on prairie dogs and would actually move into a prairie dog colony once they took it over. But as the prairie dog towns were destroyed by the incoming cattle ranches, the ferret lost its main food source. He became isolated and weakened by diseases like rabies and distemper. They were thought to be extinct until a rancher's dog in Wyoming found what looked like a dead weasel. When wildlife experts took a closer look at it, they realized it was actually a rare black footed ferret. This led to the discovery of nearly 130 ferrets. However, disease hit the ferrets and all but 18 of them survived. They were captured and put into a breeding program to save the species. These were the last wild ferrets which are the ancestors of all the black footed ferrets alive today. Since that time, efforts to reintroduce the ferrets back into the wild have taken place in at least three different states, including South Dakota.



Badger



The badger actually comes from the same mammal family as weasels and ferrets. They have a distinct look to them with a thick white stripe that runs down the center of its face and a white crescent shape behind each eye which extends to the top of his head to under his chin. His black eyes and black nose make him look as though he is wearing a mask. Male badgers can weigh over 30 pounds and stand up to fourteen inches tall at the shoulder. Just like the ferret, the badger is a solitary animal that prefers to be on his own until mating season. However, pound for pound, the badger is the strongest animal on the prairie and has a reputation for being ferocious (which is why some football teams use the badger as their mascot). They have very powerful jaws and large claws for digging. Many times coyotes try to hunt them but rarely do they

succeed because the badger is so mean. They usually hunt for mice or prairie dogs and they use their large claws to dig them out. They can dig fast enough to crawl into a burrow after a prairie dog. However, if no prairie dogs are available, a badger will eat almost anything which makes him an omnivore (OM-ne-vore) meaning he will eat plants and animals including insects, frogs, rabbits, roots and fruit. If a badger is cornered, it will attack a human if he gets too close so it's always best to leave a badger alone.

Prairie Plants

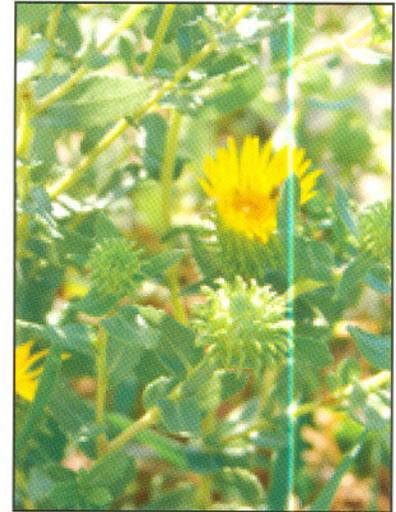


Thick spike wheatgrass

There are more than twelve different species of wheatgrass on the Great Plains. It is very good grazing food for wildlife and cattle. Thick spike wheatgrass can grow up to three feet tall. It is a hearty plant that is better tasting in the early spring when it's soft, than late summer when it gets tougher to eat.

Curlycup Gumweed

The yellow flowers and green spiky buds have a sticky or gummy substance on them which is why it was named "gumweed". It grows especially in places that have been overgrazed and can be seen along roadsides throughout the Great Plains states. The sticky substance has a strong menthol-like smell. The Lakota Indians used gumweed for treating babies with colic and the early settlers used it to treat breathing disorders and whooping cough.



Woolly Verbena

This beautiful lavender flower is admired more for its attractiveness than for its usefulness. The tall flowers bloom through late summer and can grow up to four feet tall. Unfortunately, they do not have any food value for wildlife because the leaves are coarse and the plant is very bitter in taste. The Lakota Indians used to make tea from its leaves to relieve stomachaches.



Purple Alfalfa

Unlike the woolly verbena, this purple flower is great for grazing, it regrows quickly and can be found even during the winter. Livestock love alfalfa as do buffalo and other wildlife. It is nutritious and harvested by ranchers into bales for feed all year round.



Prairie Plants



Yellow Evening Primrose

The yellow primrose flower is the most common yellow species of flower found on the Plains. Each flower has four bright yellow petals up to a half an inch long on a deep green plant that grows up to ten inches tall. It is a nutritious plant which is eaten by various species of wildlife.

Bluebell

This flower is also known as Harebell and Bluebells of Scotland because while it grows on the prairie, it is also found in Europe. The bell shaped flowers give the plant its

name. This flower is also eaten by different species of wild animals as well as sheep. Cows don't seem to like it as much.



Lead Plant

This summer plant has spikes of tiny purple flowers but got its name from the lead-gray colored leaves which are covered by a dense layer of short hairs which hides its green color. It grows between one and three feet tall and is also known as "prairie shoestring". It is very nutritious and tasty to animals which means it is not found in great abundance. Prairie birds use it for nesting and sharptail grouse eat the seeds in the fall. Native Americans have dried the leaves of the lead plant and drank it as a tea.



Star Lily

The stemless star lily flower grows low to the ground and is recognizable by the seven white petals that form a star with slender yellow tubes growing out of its center. It is also known as a sand lily, mountain lily or sage lily. It is more beautiful than it is edible and only blooms for a short time in the spring.



Careers in Wildlife

By Trudy Ecoffey, Wildlife Biologist

As a child, I spent a lot of time outdoors on our family farm so I have seen a lot of wildlife and plant life. I had an older cousin who was always teaching me about snakes, frogs and birds and I loved learning everything I could about them. Growing up, I had a real interest in science and math in grade school



so my teachers encouraged me to explore biology. In college, I majored in biology and animal science. Today, I am a senior biologist for the Oglala Sioux Tribe. My job is different every day. Some days we track animals like mountain lions. When we find one, we give it a tranquilizer and put a collar on him that has a transmitter. This allows us to track him after we set him free. We do this so we can watch where he goes and how much territory he covers. On other days I may be counting prairie dogs or helping to round up buffalo. During calving season, we need to check on the health of the buffalo, count how many calves we

have and also check our fences to make sure there aren't any holes in them. If the buffalo get out of their pasture, it's our job to bring them back in.

In the evening, we spotlight for animals to look for nocturnal (nighttime) animals like bats, weasels, ferrets and deer. We report any sick coyotes and check them for distemper or mange. Sometimes we take blood samples from animals to check for diseases. We even relocate fish when a dam needs to be repaired. We check for eagle and hawk nests and when we find an injured bird, we take them to a place like Reptile Gardens for rehabilitation.

When I am actually in my office, we make maps of where all the different animals on the reservation are located and we answer calls about mountain lion sightings or we may have to remove a wild animal that wandered into someone's yard. If you are interested in a career in wildlife, there are many different fields you can go into: conservation officer, fish and game warden, marine biologist, zoologist, wildlife enforcement officer, fishery technician, fish and wildlife technician, buffalo herd manager or even an eco-tourism guide. No matter what field you choose, you need to have a love for animals and work hard in school especially in math and science. It's a good idea to find internship opportunities to get some experience. For more information, check out www.ecojobs.com or www.eco.org or visit your local fish and game office.



I hope you will explore a career in wildlife!

Trudy is the Senior Biologist for the Oglala Sioux Parks and Recreation Authority in Pine Ridge and she is also a PhD Candidate with South Dakota State University



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