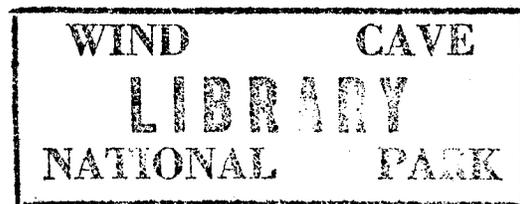


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# A History of Animal Management at Wind Cave National Park

by  
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## Forward

The following paper was written from source materials indexed by Kim Mogen and Gail Cruse for a historical research project being conducted at Wind Cave National Park.

The census statistics of the buffalo, elk, and antelope herds, found in Appendixes A, B, and C are based on all the available information. Since the 1930's the herd counts have been estimates. Reports from some years indicate a reduction of a specific number of animals, but do not always account for every animal reduced from the herds. Many times two or more different herd size numbers were given for one year. When the discrepancy of these figures was thought to be significant, the two or more numbers were included. For some years, no data was available on herd sizes.

## 1992 Notes

Bison are referred to as buffalo in this report because that is how park officials referred to them in all the available sources.

Norbeck Lake, or Lake Ta-Tan-Ka, as reported on in this paper on page 10, has been permanently changed with drainage culverts so it will no longer hold water. The ground where the lake was has been reseeded. This was done in 1990.

There have been a couple of new chief rangers and park biologists, now called Range Management Specialist, since this paper was written. The new personnel in these areas would be able to give updated material relevant to the topic of this paper. Also a great deal of research on the plants and animals of this park has been done since 1977. The written reports of these projects should be available in the Wind Cave library.

The park has also added more fenced area since this report was written, but the herd sizes have remained relatively stable over the past fifteen years. The fire management, or the control-burn program has continued over the years and is considered an integral part of the park management plan.

# **A History of Animal Management at Wind Cave National Park**

## **GENERAL PARK HISTORY**

The bill that established Wind Cave National Park, in the southern Black Hills, was approved by President Theodore Roosevelt on January 9, 1903, but the story of the park goes back to 1881 when the cave was discovered by some local cowboys while they were hunting. Following this discovery and for the next nine years, people from nearby Hot Springs and Custer visited the greatly undeveloped cave for free. In the early nineties, the families of J.D. McDonald and John Stabler began running the cave as a business, charging fees for guided tours and providing meals at a hotel they were operating near the cave site.

In the late 1930's, after a disagreement between Mr. McDonald and Mr. Stabler developed into a serious legal battle over the ownership of the land which contained the only known cave opening, an appeal from the land office to the Department of the Interior caused that agency to take a good look at the cave. The department decided that the cave was large enough and interesting enough to become the center of a national park. Beginning in January of 1900, the lands containing and surrounding the cave entrance were withdrawn from public settling until the park was officially established in 1903.

Wind Cave National Park began with about 11,000 acres of land, a few wooden buildings, and a superintendent who ran the park entirely by himself. Because of a lack of sufficient appropriations, the park remained essentially without improvement until the late 1920's and the 1930's when larger appropriations and greater manpower in the form of a Wind Cave CCC camp made possible some much needed development in the park. The cave was modernized with an electric lighting system and with concrete stairs replacing wooden ones, as well as the building of an elevator to the cave. An adequate administration building and housing for the growing number of personnel were also added to the park during these years. Today Wind Cave National Park consists of 28,000 acres of land and is run by a permanent staff of about fifteen and a seasonal staff of about thirty.

Wind Cave may not have kept its national park status during the early years of little government aid and attention if it had not become the site of a game preserve, housing imported buffalo, elk, and antelope as well as smaller animals already living in the area. As the herds grew in size, they became as important as the cave in attracting visitors to the park.

## THE WIND CAVE GAME PRESERVE

In 1911, J. Alden Loring was directed to survey South Dakota "for the purpose of selecting a suitable tract of land for a national Game Reserve." (1) (Loring, p.6) After Loring discounted the Rosebud Indian Reservation because of its poor location and lack of the right kind of land, he also ruled out a section near Pactola called The Bald Hills because the range was in such poor condition and the average yearly rainfall was not as plentiful as that of Wind Cave. (2) (Loring, pp. 8,9) The third site under consideration was Wind Cave National Park. Although the hills were experiencing a rather severe drought at the time of Loring's visit, he decided that under normal weather conditions, the land at Wind Cave was ideal for the game preserve.

The drawbacks to the area chosen for the preserve were, in Loring's words, "the expense and difficulty of fencing, and the probable lack of a sufficient water supply during such dry seasons as the present one...."(3) (Loring, p. 11) Loring studied the area thoroughly as to a possible water supply and reported that water could be piped from a nearby ranch to supplement the water in Cold Springs Creek and Beaver Creek, which normally carried an ample supply of water through the proposed preserve area. Loring's report to the American Bison Society describes in detail the land, water supply, climate, and the animals for which the land was best suited.

The Wind Cave Game Preserve was established on August 10, 1912 as a result of Loring's report. The bill creating the preserve reads as follows:

672. Wind Cave National Game Preserve. There is established a national game preserve, to be known as the Wind Cave National Game Preserve, upon the land embraced within the boundaries of the Wind Cave National Park, in the State of South Dakota, for a permanent national range for a herd of buffalo presented to the United States by the American Bison Society, and for such other native American game animals as may be placed therein. The secretary of Agriculture is authorized to acquire by purchase or condemnation such adjacent lands as may be necessary for the purpose of assuring an adequate, permanent water supply, and to enclose the said game preserve with a good and substantial fence and to erect thereon all necessary sheds and buildings for the proper care and maintenance of the said animals. (Aug. 10, 1912, c 284, 37 Stat. 293.) (5) (13-10)

The game preserve consisted of 4,000 acres of Wind Cave National Park land, and five or six acres from Harney National Forest lands. An additional eighty acres was acquired by buying privately owned ranches. (6) (2)

The money needed for fencing the area and acquiring the lands outside the park was provided by the American Bison Society. This sum of \$26,000 was to be handled by the U.S. Biological Survey, which was an agency of the Department of Agriculture. (7) (Bohi, p. 431) Seth Bullock, who was well known at the time as a hunter and a friend of Theodore Roosevelt, was appointed custodian of the game preserve area by the Bison Society.

In 1913, after the preserve had been enclosed with a woven wire fence eighty-eight inches high, it was ready to receive the animals for which it was intended. A herd of fourteen buffalo was brought to the park in November of 1913. This initial herd was a gift from the New York Zoological Society through the American Bison Society. Six more buffalo were brought to the park from Yellowstone in June, 1916. In 1969 a bison bull from Theodore Roosevelt National Park was added to the herd. The present herd stems from these initial twenty buffalo.

Twenty-one elk were transferred from Jackson Hole in March of 1914. Of these, only fourteen survived the shock of the trip. In February of 1916, twenty-five more elk were brought to the Wind Cave Game Preserve from Yellowstone National Park. As elk are capable of jumping the park fence and do migrate to and from areas outside the park, the original imported elk may have mixed with those of Custer State Park and other herds in the hills over the years.

Thirteen antelope arrived on October 14, 1914 from Brooks, Alberta, Canada and were a gift of the Boone and Crockett Club of New York. (8) (13-10) There was considerable trouble in maintaining and increasing the antelope herd and in 1916, nine more antelope were shipped from Alberta, Canada. Again in 1951, twelve antelope were brought to the park from Yellowstone.

The first person to manage the game preserve was Fred M. Dille, who was a reservation inspector for the Biological Survey. Dille supervised the building of the fence which enclosed the game preserve and was at the preserve when the first shipment of buffalo were brought to it. Dille personally helped to ship antelope from Canada. Since Wind Cave National Park was without a superintendent at this time, the government arranged to have Inspector Dille appointed as Acting Superintendent while he oversaw work on construction of the preserve. (9) (13-10)

In December of 1914, Mr. Abdon P. Chambers was appointed Warden of the Wind Cave Game Preserve through the Civil Service examination. Mr. Chambers ran the preserve until 1928 when he died as a result of catching actinomycosis from an antelope.

In May of 1928, Mr. Chambers was replaced by H. Harrison Hoydt who was in charge of the preserve until 1935, when it was turned over to the administration by Wind Cave National Park.

Of the 4,000 acres set aside for the game preserve, 3,400 acres were fenced as a game pasture for the animals. The preserve headquarters consisted of a ranch house and barn, which had been built by previous owners, one small pasture which contained about sixty acres for horses and cows, and two fields of alfalfa which were about eleven acres all together. (10) (13-10)

The establishment of this preserve was probably the most important event in the first quarter century of the park. In 1910, Richard Ballista wrote in his Annual Report of the Department of Interior that,

"Owing to its inaccessibility and the fact that its scenic attractions is not sufficient, in all probability, to inspire a greater number of visitors to the park, it should be classed as a local or state park and can never in any sense of the word become a national park." (11) (Jones, p.m)

Because of this attitude from Washington D.C., the park was given only very small appropriations and had only a superintendent until 1919, to do maintenance work, construction, protection, and public service work. The game preserve provided a second attraction to the area that became very popular with visitors to the park and helped to further establish its position for national park status.

In 1929, a second game pasture of 3,600 acres of park land was fenced and allowed space for the growing animal herds. Because the pastures were not where travelers might easily view the animals from the roads, an exhibition pasture was constructed near the park administration building where visitors to the cave would easily see a few selected animals from the various herds.

Because the practice of raising wild game animals under semi-natural conditions was a relatively new project in 1914, A.P. Chambers, the first permanent warden of the preserve, experienced many trials and tribulations as he coaxed his animal herds into becoming growing, healthy herds. The buffalo and elk survived with very little trouble. They were given hay the first year on the preserve as that had been their diet previous to their transfer to South Dakota. They soon adapted to the

natural prairie environment and began multiplying rapidly enough so that soon the herds outgrew the range and had to be culled and reduced.

In the superintendent's monthly report of September of 1924 there was mention made of the methods of herd reduction.

During the month Warden Chambers of the Game Preserve made a trip through southwest South Dakota and north-west Nebraska selling some of the surplus buffalo and elk in the preserve. He had a very successful trip having taken orders for 15 buffalo and 19 elk to be butchered and delivered about Thanksgiving time. (12) (14-1).

In the October monthly report, the superintendent wrote that "approximately 150 head of buffalo and elk have been contracted for." (13)(14-1)

The pastures that they lived in did not contain predators interested in animals the size of elk and buffalo, so eventually the herds had to be reduced by the warden of the game preserve or by park officials, in order to keep the herd sizes in balance with the range.

The land that housed the game preserve had been ranch land prior to 1912 and had been overgrazed by cattle so that until it had regained its natural condition, the game animals on the preserve were often fed hay. In 1916, Warden Chambers wrote in his monthly report for August, that he "...had 18 tons of native hay put up and I have about 5 tons of alfalfa. In addition I have nearly 20 tons of hay left over from last year and I will have several loads of oats." (14) (13-3)

It was the antelope that caused Mr. Chambers much trouble. The antelope did not take to their new environment as readily as the elk and buffalo had. They seemed to die for no apparent reason. Because Chambers had little to go on besides his own experiences with these curious little animals, it took him a while to realize that the antelope survived best when they were allowed to pick and choose their own food from the prairie. Chambers was forced to believe that the oats and corn he had been so helpfully feeding the antelope had merely been causing some of the animals to die from indigestion. (see Appendix D)

Another problem in keeping a stable antelope herd was the number of predators large enough to kill antelope. There were a number of coyotes and bobcats which easily crossed fence lines into the game preserve and when Chambers found enough evidence of predator-caused deaths in his antelope herd, he immediately declared war on predatory animals. While this campaign against smaller, less-desirable animals did help to keep the antelope herd from being completely exterminated, it also depleted the

numbers of many interesting wildlife species too small to be given a place of any importance by the Bureau of Biological survey as well as most other wildlife agencies. Chambers believed that antelope could survive complete destruction by predators successfully if they were given enough space to roam. His report on his "Experience In Propagation of the Pronghorn", Appendix D of this paper, is an entertaining description of his experiences with antelope at Wind Cave National Park.

Both the game warden and the superintendent of the park took great satisfaction in the elimination of predatory animals. From 1912, when the preserve was established, until 1921, 598 predatory animals were destroyed in order to protect the antelope. (15) (12-5) These included not only coyotes and bobcats, but also porcupine, skunks, raccoons, and even a black footed ferret. The following excerpts from reports by the superintendent and the warden show the attitude by these officials toward predatory animals, and give an indication of the kinds of animals destroyed.

#### Superintendent's Reports:

1919-June. Mr. Beach, who is here hunting and trapping for the Agriculture Department has been fairly successful in the extermination of predatory animals having caught or killed 6 coyotes and 5 bobcats. (16) (1)

1919-October. Skunks are becoming numerous and quite a pest. We have succeeded in shooting and trapping 5 or 6 this month. There are plans to exterminate all the skunks in the park. (17)(1)

1921-July Coyotes have again become quite a nuisance and the Agriculture Department has sent a man to the park to assist Warden Chambers in exterminating them.(18)(1)

1922-January. Ranchmen asked park permission to set some traps within the park. This permission was granted of course, in fact I [Roy Brazell, supt.] encouraged them to help us exterminate the pest.(19)(1)

1922-April. Mr. Louis Knowles accompanied by Mr. Troy C. Beach, trapper and hunter employed by the Agriculture Department commenced work the 13th of March and caught by trapping: 5 bobcats, 21 porcupines, 5 coyotes, 3 skunks, 1 raccoon, 1 black footed ferret. (20)(1)

1926-December. A trapper will be hired to thin the coyotes and porcupine population.(21)(1)

1927-January. Archie Howes, government trapper from the Biological Survey, moved his camp to the east boundary and trapped 15 coyotes. (22)(1)

1934 A predatory animal control field operator of the Biological Survey reports the following number of animals poisoned or otherwise removed from the park: 8 skunks, 12 coyotes, 1 raccoon, 9 porcupines, 1 bobcat. An estimated 600-700 prairie dogs were poisoned.(23)(4)

1935 From April 27 to May 31, the trapper at the game preserve ranch caught 8 coyotes, 2 bobcats, 4 rabbits, 3 porcupines, and 1 skunk. (24)(4)

In this report, the park superintendent, Edward Freeland, notes dissatisfaction with the method of controlling predatory animals. At this time, coyotes were the only animals they were interested in controlling.

from Game Warden's Reports:

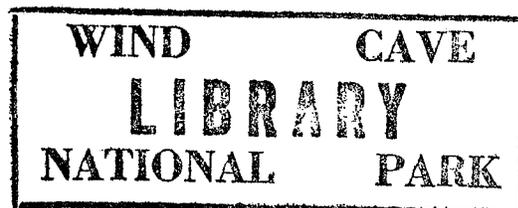
It is my belief that before we give up the idea of raising antelope we should do everything that we could to combat the predatory animal situation.(25)(12-5)

Coyotes and bobcats trapped"

1920-21 11 coyotes

1921-22 16 coyotes, 5 bobcats

1922-23 47 coyotes poisoned or trapped, 2 bobcats (12-5)



In 1929 the range was so poor that again hay had to be fed to the animals. The park superintendent reported the following:

About 100 tons of hay has been contracted for by the Bureau of Biological Survey, and it is being distributed daily to various parts of the pasture. Several buffalo have died this month from a combination of old age, cold weather, and insufficient feed. Hay was given to the animals from March through May of 1929.(27)(4)

One of the more controversial issues that arose during the years that the game preserve was operated by the Department of Agriculture, was the creation of an artificial lake for the purpose of providing a better water supply for the animals. This lake was called Lake Ta-Tan-Ka, or Norbeck Lake, after Senator Peter Norbeck, one of the advocates for the project. Norbeck Dam was created by taking large quantities of dirt from the upstream side of the dam, leaving an area which was "barren of any soil capable of growing vegetation. This area was soon covered over by the rising waters back of the dam which created a small artificial lake."(17-10)

Since part of the flooded area was on park land, administered by the Department of Interior, the park service objected to the idea of artificiality, and stated that reservoirs requested by other areas had been vetoed.(15-10)

After the issue was debated and the legal points were satisfied, the project was carried out, and a lake of about three acres was created in 1929.

It was unfortunate that the flooded area was on top of rock so porous that the lake never became much more than a puddle, nicknamed Peter's Puddle, after Peter Norbeck, to this day.

In the 1930's plans were made to either "plug up" the leaks at the bottom of the lake or to fill back the reservoir to the way it was before. It was decided to leave well enough alone, so the lake has risen and fallen over the years, depending on the amount of rainfall. In 1936, the water level dropped so much that the bottom of the reservoir was easily visible. (17-4) In July of 1957, the lake was twenty-four feet deep during the summer. (7) Presently, very little water is visible in the "lake".

In 1935 the Wind Cave Game Preserve was transferred from the Agriculture Department to the Department of the Interior and the administration of Wind Cave National Park. The bill which authorized this transfer reads as follows:

Section 601. That, effective July 1, 1935, the Wind Cave National Game Preserve in the State of South Dakota, be, and the same is hereby, abolished, and all the property real or personal, comprising the same is hereby transferred to and made a part of the Wind Cave National Park and the same shall be administered by the Secretary of the Interior as a part of said park, subject to all laws and regulations applicable thereto, for the purposes expressed in the Act of August 10, 1912 (37 Stat 268-293). establishing said game preserve. (16 U.S.C. sec. 141b) (28)(13-10)

### **PARK ADMINISTRATION OF GAME ANIMALS**

The chief ranger of Wind Cave National Park, Estes Suter, took charge of the wildlife upon transfer of the preserve to the park. Since that time the position of park biologist has been created and the men who have filled that position, Alan Lovaas and presently Rich Klukas, have had the major responsibility of managing the animals of the park. This responsibility is shared by the chief ranger and supervised by the park superintendent.

Shortly after the transfer of management of the game preserve, "it was decided to enlarge the range to include the entire park area..."(29) (17 5) Most of the work of fencing the park was handled by the CCC boys who were camped in the park. As soon as the fence was completed, the animals were free to roam throughout the entire park, except for the headquarters and housing areas which are enclosed by another fence.

The boundaries of the park have gone through a number of changes over the years. From 10,523 acres in 1910, the park grew by 1200 acres in 1931 and in 1946 the Custer Recreation Demonstration Area increased the park to 28,059 acres which is the present size of the park.

The greatest change in the park boundaries came in 1946 when certain lands bought from ranchers and set aside for wildlife were added to Wind Cave National Park. This area, know as the Custer Recreational Development Area, was carefully studied and analyzed in order to justify its addition to the park in order to "permit the maintenance of herds of plains animals in proper proportion to the estimated numbers of the early herds as an exhibit of the ecology of that section."(30)(16-1) In determining the range capacity for the various animals, the animal unit was primarily based on domestic stock. One buffalo is equal to one animal unit, one elk equals 3/4 animal unit and an antelope is considered 1/5 animal unit. (31)(16-1) It was decided in 1943 that while the present

Wind Cave park area could maintain 240 buffalo, 160 antelope and 40 elk, the park with the Custer RDA could maintain 430 buffalo, 330 antelope and 75 elk. The report went on to say that, "It is believed that the above figures would be in accord with park principles and range utilization would probably be normal. It is realized that the herds would have to be managed artificially due to lack of predators, and use by aborigines." (32) (16-4)

From the beginning of park history until the late 1930's, local ranchers had been allowed to graze their cattle on park land that was not fenced in for the game herds. The annual report of 1940 describes the reasons for discontinuing the practice. "The practice of granting grazing permits to ranchers who previously owned land in the area was discontinued May 1, 1939 to prevent erosion and in order that the range may regain its normal condition." (33) (2) Because this land had been subjected to a great amount of grazing by cattle and had further suffered from drought conditions in the 1930's, seeding became a common practice in the next ten years. In 1953 the superintendent noted in his monthly report for September that "Dr. Abertson and George F. Ingalls spent a day in the park making observations and studies of range grasses on August 17 and concluded that the park as a whole is in a badly overgrazed condition." (34) (6) In April of that year the superintendent had written that "seeding land is common in the park and approximately 160 acres were seeded with 600 lbs of seed." (35) (6) Seeding the land continued until 1959 when fifty-five acres of park land were overseeded to help rehabilitate the prairie grassland. (36) (2)

In 1940, the herds again had to be fed with hay. The wildlife report for February of 1940 states that,

sixty-five tons of prairie hay were purchased during the month for the buffalo, making a total of 169 ton thus far this winter. This amount will be sufficient to continue feeding until the growth of grasses on the range produces sufficient feed." (37) (16-4)

In the 1940's the range began to improve and with the practice of seeding in the fifties, it returned to its "normal" condition, that is, those conditions that existed before the range became a cattle grazing ground. Since that time, the park officials have tried to maintain a good balance of game animals so that artificial feeding has not been necessary.

## ANTELOPE

The antelope herd, so carefully tended in its first years in the park by A.P. Chambers, revelled in being allowed out of the old game preserve pastures in 1936, when they were allowed to roam around the entire park acres. A spring wildlife report in 1936 describes the antelope's first taste of "open" range.

It was interesting to watch the antelope the first day they found they could get on new range by the removal of part of the old fence north of headquarters. They covered the entire east range in a comparatively short time, running hither and yon, but have now settled down to quieter feeding. Only 26 antelope have been seen at any one time. (38) (16-4)

Estes Suter, the park wildlife ranger, reported on the various animal herds after the game preserve transfer in 1935. Of the antelope he said, Most of the antelope are exceptionally poor and even from some distance the outline of their ribs and back are very conspicuous....The condition of the range is becoming quite serious and I believe that lack of proper feed is doing far more harm than predatory animals. In their weakened condition they become very easy prey.

Many antelope had died in 1935 and after studying possible causes for so many deaths, Estes Suter determined that the poor range conditions had caused the antelope to search for substitute browse, and fresh tracks led to freshly stripped pine boughs, showing that great quantities of pine needles had been consumed. Large cactus beds had also been pawed up and a lot of green cactus eaten. Since no indication of disease could be discovered, the antelope deaths were attributed to their substitute browse. (40) (16-10)

When they were turned into the larger park area, there was apparently sufficient browse of the right kind so the antelope no longer substituted pine needles and cactus.

For a while the antelope seemed to be surviving quite well. Then in 1951, it was observed that due to blizzard conditions and heavy poaching, the herd was reduced to fifty females and one male. Twelve head were brought from Yellowstone National Park in February that same year.

This new addition to the park herd seemed to spark new and rapid growth in the antelope herd, so much so that in 1964 there were over 300 antelope in the park and seventy-five were driven into Custer State Park. The 1976 census showed slightly over one hundred antelope in the park, a number which has seemed to remain relatively stable in the last ten years.

Because of their great curiosity, these animals are subject to easy poaching and may still be somewhat controlled by the park's coyote population.

The "Long Range Wildlife Management Plan for Period 1964 Through 1968, Wind Cave National Park" states that:

If possible, reduction of the antelope population will be by live trapping and/or transfer to other NPS units or to lands administered by other Federal or State agencies on a capture-cost basis. Trapping facilities are not available in the Park, however, and the South Dakota State Game, Fish and Parks Department has, for the present, discontinued antelope trapping activities in the State as all possible ranges are stocked to capacity. As there seems to be difficulty in finding places to put excess antelope, it must be recognized that direct reduction methods may be required to keep the population within accepted limits. Disposal of antelope carcasses will be made to the Indians through the Bureau of Indian Affairs.(40)(31)

#### **HERD REDUCTION POLICIES**

To this date, antelope have not had to be controlled by a program of direct reduction. However, both the elk and buffalo have been on a reduction program ever since the days of the game preserve when A.P. Chambers made special trips to find buyers for the extra animals. In 1938 an enactment by Congress authorized that, "the Secretary of the Interior...in his discretion and under regulations to be prescribed by him, to sell or otherwise dispose of the surplus buffalo and elk of the Wind Cave National Park herd."(41)(13-10)

In 1952 Wind Cave National Park and Custer State Park agreed that any surplus animals resulting from a reduction program in Wind Cave would be released into Custer State Park along the common north boundary. Eighty percent of all animals released remain the property of the state and twenty percent of the annual number reduced are held in cold storage for issuance by National Park Service to Indian Agencies for various purposes.(42)(13-10)

This agreement was effective for ten years and was then revised and renewed until 1965. Today all animals reduced from the herds are live shipped elsewhere.

## BUFFALO

In the second half of the 1930's, after the transfer of the game preserve, the buffalo were driven into the old buffalo corrals near the old game preserve headquarters area to be branded. Park officials branded the young buffalo on their horns with the last number of the year of their birth. This method was supposed to not only mark the Wind Cave herd, but also be an accurate indicator of age. It was found necessary to rebrand many buffalo because their horns grew so much in the space of a year.

In the winter of 1939-1940 the range was so poor that the buffalo roundup was cancelled and late in the winter, hay was fed to the animals. Occasionally animals which were grazing near the corral were captured and taken out of the park herd in order to keep the size of the herd down.

As late as 1942, a new corral was built near the old ones and a roundup was conducted in order to brand young buffalo and to weed older and less fit animals from the herd. It was the practice of the wildlife ranger in the late thirties and in the 1940's to selectively thin out the buffalo herd by killing old or sick-looking buffalo, rather than letting them die naturally. The regional office of the park was all for this type of animal reduction. In 1941, Daniel Beard, the regional biologist, recommended that another park follow the Wind Cave plan until a better one could be recommended. He wrote that,

Estes Suter has systematically culled out the sickly, the definitely misshapen, and other "predator bait." Suter has tried to build up his herd...by selecting the worst of the "normal" stock that remains after "predator bait" is taken out. (44) (17-8)

In 1946, a program was initiated to vaccinate all buffalo calves in order to control the spread of brucellosis. While an effort was made to continue vaccinating the calves, it became increasingly difficult to round up the entire herd after the animals were allowed to roam the entire park and the newly added Custer RDA land. In 1950 half of the herd was moved into the former Custer RDA lands and in May of 1951, about one hundred Wind Cave buffalo escaped through the boundary fence and mingled with the Custer State Park herd. (45) (5) In 1952, buffalo were baited into Custer State Park which was the major means of disposing buffalo until the early 1960's.

In 1961 there was a meeting in Pierre, the South Dakota state capital, regarding brucellosis, a disease which causes the cows to abort and is generally spread from one cow to another by direct contact. At this meeting, results of testing the Wind Cave herd were discussed. The herd

showed an "unusually high incident of infection." (46) (18-1) Because of these test results, the agreement with Custer State Park regarding the reduction of Wind Cave herds had to be reconsidered. In a letter to the regional office in 1961, Wind Cave's Superintendent Lombard wrote the following:

We believe we should consider removal of this year's surplus buffalo by direct slaughter inside Wind Cave rather than trying to bait the desired number of animals into Custer State Park. Our reason is that Custer State Park has started inoculation of calves for brucellosis control and we have not. Also, we would like to remove some more old bulls and old cows by selective reduction. (47) (18-1)

The region approved this plan and the buffalo herds were reduced this way until later when the herd was brucellosis free.

In 1965, new corrals, chutes, and holding pens were constructed on the land acquired in 1946. The old buffalo corrals had been destroyed in the 1950's along with all of the other buildings of the old game preserve. The new corrals were designed to be used in an annual program to "test, cull, and vaccinate all individuals in an effort to establish a brucellosis free herd." (48) (19-1) This plan was a bit impractical as the buffalo were spread out in such a wide area that an accurate ground count was almost impossible, let alone rounding up the entire herd. (49) (64) There were not enough people and funds available for such an extensive program.

The 1952 agreement with Custer State Park had been revised so that all animals directly slaughtered at Wind Cave National Park were given to Custer State Park for butchering and selling. In June of 1965, a new agreement between the National Park Service and the Bureau of Indian Affairs superceded the agreement with the state park because "the United States Department of Agriculture, Animal Disease Eradication Division, requested the National Park Service to carry out a brucellosis eradication program in all infected bison herds." (50) (3)

In 1973 the program of brucellosis eradication was modified. The Department of Agriculture agreed to discontinue the annual bison roundup and to have roundups and testing on a two or three year basis when every it is necessary to control the herd size.

After the 1975 roundup, Chief Ranger Deane Shilts reported that: no attempt was made to test for brucellosis since all animals removed from the park were slaughtered and the meat turned over to the Bureau of Indian Affairs to be distributed to Indian tribes. It should also be noted that the U.S.D.A. declined to

furnish a veterinary to draw blood and run necessary brucellosis tests of the animals trapped. (52) (64)

During the roundup in the winter of 1976-1977, seventy-five buffalo were killed and given to various Indian tribes. The final herd size after the roundup was estimated at 359.

### ELK

Although elk are the most exciting of the animals seen in the park because they are not easily seen, it is for that very reason that park officials have given them a back-seat position to the buffalo and the antelope. In Ranger Estes Suter's report on elk in 1937, he said:

the condition of the elk is very satisfactory indicating plenty of feed on the park for them. However, if disposing of game animals for the betterment of range becomes necessary I would suggest that some of these animals would be disposed of first. From the stand point of observation by the public, the elk are of the least value. Another fact that lessens their value as a park attraction is that they are plentiful in Custer State Park which adjoins Wind Cave. (53) (16-4)

Elk were controlled by selling surplus animals to people in the southern hills area as early as the 1920's. This method of control was used until the game preserve was turned over to the park. At the time of the transfer, there were fewer than 100 elk left in the park. After they were allowed to travel a greater range, and the Custer RDA land was added to the park, the herd began a period of rapid growth. Elk are capable of jumping over the boundary fence of the park and consequently the herd had a chance to mingle with the elk of Custer State Park and those on National Forest lands. In the late 1930's through the 1940's, park officials tried to control the size of the elk herd by baiting and herding the animals into Custer State Park. This program was not very successful and in the early 1950's, over 1,000 elk were counted in the park and a program of direct control was begun. In the mid-1950's, 700 elk were killed. This program was continued until the elk population was close to 100 animals. (54) (31)

In more recent times, the elk have become more important in the eyes of the park biologists and have equal range status with the buffalo and the antelope. The elk have been controlled under the same program as the buffalo and are herded into the buffalo corrals when their numbers get out of hand. The meat of the surplus elk also is live shipped elsewhere. In the winter of 1976-1977, surplus elk were used to stock other areas of the country and almost 200 elk were live shipped from Wind Cave National Park.

## OTHER ANIMALS OF THE PARK

There have been deer in the park ever since it was established. Most deer in the park are mule deer, although a number of white tail deer have also been observed. Deer, like elk, are capable of jumping the boundary fence, but the numbers have been relatively stable over the years. Rich Klukas, a Wind Cave park biologist, estimated that there are presently about 150 deer in Wind Cave National Park. About half of this number stays in and around the park headquarters area and can be easily seen by the public.

A number of animals other than the four larger game animals already discussed also live inside the boundaries of the park. One of the most obvious of these is the prairie dog, which is the subject of a long-range controversy. Prairie dogs multiply rapidly and no method of prairie dog control has yet been agreed upon within the National Park Service other than allowing natural predator control. Occasionally prairie dog towns have been poisoned to keep the numbers of these animals down.

During the time of the Wind Cave Game Preserve, and even beyond that time, pains were taken to rid the park of coyotes, rattlesnakes, bobcats, and porcupines. Today these animals are allowed to exist as a natural part of the balance of wildlife in the park.

During the days when trapping was common, raccoons, skunks, and even a black-footed ferret, were caught in the traps. Years later, in 1954, when Walt Disney Productions was filming The Vanishing Prairie, at Wind Cave, three black-footed ferrets were released in the park after they had used them in their filming. These animals, now on the endangered species list, were sited throughout the 1950's. The last official report of a black-footed ferret siting was in 1968. (55)(33) It is not known whether these animals still exist in the park.

In 1940, a pair of badgers were secured from the Custer State Park Zoo. These badgers were slow to adapt to natural surroundings but today badgers are commonly seen in the park. (56) (16-4)

Two sitings of mountain lions in the park have been documented. In 1953 a mountain lion was observed at the western boundary of the park (57) (6) and in 1967 another siting of a mountain lion was made, again at the west boundary. (58) (9).

Bighorn sheep were considered native to the area, but only one attempt to import sheep was made. In 1917, five of these animals were supposed to be shipped from Yellowstone National Park. These animals all died of pneumonia in the Yellowstone holding range just before they were to be shipped. (59) (12-10) One bighorn sheep was, however, sited in the

park in 1967. (60) (40) No sheep have been observed in the park since that time.

The "Long Range Wildlife Management Plan for Period 1964 Through 1968 Wind Cave National Park" describes the management of all animals other than the large game animals as follows:

All other native species included in the Park will be managed without direct control measures, except as may be necessary for the public health or safety purposes, e.g., an outbreak of rabies in skunk, fox or coyote; rattlesnakes in the campground, headquarters residential area, or other public use areas.

(61) (31)

### **THE FUTURE OF ANIMAL MANAGEMENT AT WIND CAVE NATIONAL PARK**

The above is still the basic policy of Wind Cave National Park. Rich Klukas, the park biologist at the time of this report, believes that the present range can hold 125-150 antelope, 350-400 elk, and 350 buffalo. Mr. Klukas believes that greater care should be taken during the buffalo and elk roundups to eliminate an equal ration of bulls and cows. In the past, due to herd organization, the cows have been more easily herded into the corrals and consequently more cows have been eliminated than have bulls. The present biologist believes that the range can hold more animals than are recommended, but extra range is allowed to provide certain areas with rest from grazing and to handle periods of drought.

An experimental program of control-burn which would allow the park to gain more grassland which would be fertile and would have better forage is in progress. If this program is successful and fully developed at Wind Cave, the park biologist foresees allowing the animal herd sizes to increase by twenty percent before reduction programs would have to be used.

Probably the greatest change that has taken place in the history of the animal management program at Wind Cave is the attitude toward predatory animals. While these animals have undergone a program of extensive trapping to a program of no direct control, the buffalo and elk herds brought in from other areas of the country to once again roam their native grounds, have progressed to the point of extensive direct control.

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- Archive Boxes: The material in each of these boxes is organized into folders. 10-2 would be Box number 10, folder number 2.

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14. The Difficult Years 1914-1931 Box 1
15. The Difficult Years 1914-1931 Box 2
16. Years of Growth 1931-1946 Box 1
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18. Post War Years 1945-1960 Box 1
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