



Kaibab Plateau:

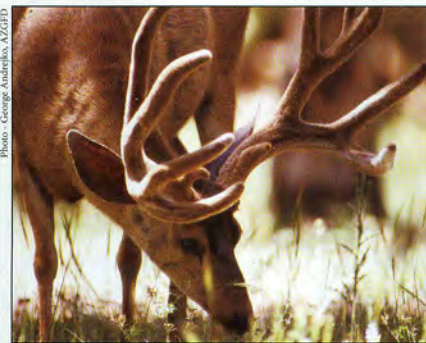
The history of the country's most famous deer herd (PART I)

By Jim Heffelfinger

THE FAMOUS KAIBAB DEER HERD

There are few serious mule deer hunters who don't know the Kaibab Plateau and the most famous deer herd of all time. This plateau in northern Arizona sits between the Grand Canyon and the Utah border covering about 1,100 square miles ranging generally between 6,000-9,000 feet above sea level. Surrounding the plateau is important lower-elevation winter and transitional range for the deer herd. The plateau is covered with porous limestone which accounts for the near total lack of surface water. There are no streams and very few ponds offering water sources for wildlife. The Kaibab Plateau is ecologically unique in the region, partially because it is isolated on 3 sides by the Grand Canyon and its tributaries and by steep slopes and escarpments to the east. This isolation resulted in a unique Kaibab squirrel, but bears, turkeys, wolves, and elk never occurred there in large numbers despite their abundance in other similar forests in the region.

The plateau was well-known to Native Americans who hunted the abundant mule deer population there. Between 2,000-4,000 years ago native people left small twig figures in the shape of deer in



The Kaibab Plateau is known throughout the world for its big mule deer and its role in shaping the early stages of the wildlife management profession.

remote dry caves in the Grand Canyon -- perhaps offerings to assure a successful hunt. The Paiute tribes were hunting deer on the Kaibab at the time of European settlement in 1880s and traded

deer hides with the Europeans and Navajos in the region. The plateau was even referred to as "Buckskin Mountain" in historical documents, but the name "Kaibab" was eventually adopted from the Native American language meaning "mountain lying down." The productive and isolated Kaibab deer herd has always fluctuated more or less independently from the deer populations in the surrounding area.

The first Mormon settlers found their way to the region in the mid-1800s and formed a small community and began grazing the surrounding ranges. These settlers relied on venison and deer leather to eke out of living in this remote corner of the Southwest. Even as the human population began to grow, the Kaibab Plateau always held quality deer due to its remoteness. Being so far from towns, isolation, and lack of decent roads meant there was no chance of humans exerting deer harvest pressure high enough to lower the age structure.



However, the Kaibab gained its fame initially because of the quantity, and not quality, of its deer.

TOO MUCH OF A GOOD THING

The Kaibab Plateau attracted the attention of none other than Theodore Roosevelt who made several trips there to hunt mountain lions. He had a log hunting cabin a mile south of the Arizona Game and Fish Department's Ryan Station. In November 1906, President Roosevelt created the "Grand Canyon National Game Preserve" encompassing the entire Kaibab Plateau and the Grand Canyon for the protection of game animals. Part of this "protection" came in the form of intensive and extensive control of any animal that might kill a deer. This predator control program lasted for about 25 years and in the end the reported tally was: 781 mountain lions, 4,849 coyotes, 30 wolves, and 554 bobcats removed.

The deer population increased dramatically throughout this period of predator control and peaked in 1924, before



Photo - ©Gordon Long

Kaibab mule deer were translocated to Santa Rosa Island more than 80 years ago, where their descendants flourished for decades. Most were eradicated by the end of 2011 as part of the agreement when the island was purchased by the U.S. National Park Service.

crashing to a level that was probably well-below the original population. The habitat was severely over-browsed and the deer population simply collapsed from lack of food. It is this population eruption, and crash, that first brought the plateau its fame. The relationship was immediately drawn between lack of predators and deer overpopulation. Many people used this as an example of what happens when you remove predators, but the situation was more complex than that.

The Kaibab Plateau became ground zero for the budding field of wildlife management. Things learned on the Kaibab formed the genesis of deer management knowledge for early biologists all over the country. What was later termed "The Terrible Lesson of the Kaibab Plateau" has been taught for decades, mostly incorrectly, to every university student majoring in wildlife management throughout the country. However, the interrelationships of ecosystems are rarely as simple as "less predators = more deer." In reality, there were a number of other changes taking place during those years on the Kaibab.

President Roosevelt banned all deer hunting from 1906 to 1924. Although removing only bucks will not control a deer population, the establishment of the game preserve also stopped the harvest of female deer which allowed the deer herd to over-populating the habitat. Fires were not suppressed like they are today and this natural disturbance altered habitat in such a way that greatly

avored species like deer that thrive on disturbed habitats (brushy cover and browse with abundant weeds). During this period, the amount of livestock grazing on the plateau was also dramatically reduced. An early U.S. Forest Service report from 1931 estimated there were 20,000 cattle and 200,000 sheep grazing the Kaibab Plateau and surrounding desert country in 1887-89. At the turn of the century, there were also several dairies and large numbers of horses on the same range. By 1924, grazing pressure had been reduced to about 4,000 cattle and 3,500 sheep. The earlier numbers were only rough estimates and doubtless exaggerations, but there is no doubt the intensity of grazing was reduced substantially during this period. The reduction of this intense grazing resulted in more forage available for deer, further aiding the build-up of the deer population.

By 1918, the vegetation was showing signs of damage from over-browsing by the increasing deer population. Inspections of winter range for several years after this spawned reports of a rapid deterioration of the range. Conditions worsened until Henry C. Wallace, Secretary of Agriculture, assembled a special investigation committee of experienced game biologists from around the country to report on the condition of the deer herd and its habitat. This committee entered the Grand Canyon National Game Preserve on August 16, 1924 and reported that *"The conditions of forage throughout the Preserve can only be characterized as deplorable, in fact they were the worst that any member of the Committee had ever seen. When not only the leaves but the annual growth of trees, bushes, shrubs, and grass are so closely cropped that seeding is impossible the condition of the range moves swiftly towards utter destruction."* The final report issued by this committee contained several recommendations aimed not only at preserving the Kaibab deer herd in a healthy condition, but also at halting and restoring the range damage from over browsing. They stated that *"The Committee believes that as an immediate remedy for the present*

situation no reduction of less than 50% of the existing deer herd would be effective. We, therefore, recommend that one half of the existing herd be removed and that this removal be accomplished as quickly as possible."



Captured Kaibab mule deer awaiting transportation off the Plateau to new deer habitat.

TRAPPING AND TRANSLOCATION

It seemed to make sense to capture deer from this over-abundant population and move them to areas where they were scarce. How best to do that had not yet been established by the wildlife profession. The solution of live-capturing deer was a 2-pronged approach. First, bucks, does and fawns would be trapped in large corral traps in fall and winter and transported directly to release areas. Secondly, fawns would be snatched from the field in June and July, raised with bottled milk on local dairy farms until weaned, and then shipped in October. The fawns from the "fawn farms" were mostly purchased by individuals for private and public parks and zoos. Some private individuals probably purchased deer to release in the wild on their ranch.

Trapping began in 1926 with 125 deer captured, but 40 of those were released at the capture site or died during capture and another 23 died in transit. In 1927, only 37 deer were captured with 16 of those dying or released at the capture site. Efforts the next year were a little more successful with 96 deer captured, but only 65 were released. An additional trap was added in 1929 which allowed for the capture of 403 mule deer, of which 298 were released in new areas. In fall of 1931, 159 deer were captured, but many were released at the capture site because of low demand for

more Kaibab deer. High losses associated with the methods of capture and transport were a concern, and it was becoming obvious this method was not contributing to a real reduction in the deer population.

Initially, those wanting Kaibab mule deer simply had to pay an established "cooperative fund fee" of \$35 per deer crated and delivered to a railroad point in Maryville, UT. This money was then used to fund the capture efforts. After 1928, applicants paid only \$5-7 per live deer, but they had to supply the transportation and prepare the transport trucks.

We may never have an accurate account of all the places Kaibab deer were taken, but there are vague references to Oklahoma; Denver, Colorado; Beverly, Massachusetts; the National Zoological Park in Washington D.C.; London, Ontario, Canada; Detroit, Michigan; and San Pedro, California. Long-time Kaibab researcher, Clay McCulloch reported that *"at least 383 of them went outside of Arizona to 34 other states and Canada."*

Some of the deer captured in 1930 were released on Santa Rosa Island off the coast of California. Santa Rosa Island is 85 square miles and one of the Channel Islands northwest of Los Angeles. Records show that 30 Kaibab mule deer were released and that small nucleus grew to as many as 4,000 - 6,000 Kaibab mule deer inhabiting the island with no other additions to the gene pool.

This island was at the center of controversy after the Vail & Vickers Company, who owned the island since 1901, sold it to the Federal government for \$30 million in 1986. The island is now part of the Channel Islands National Park and one of the stipulations was that all Kaibab mule deer be removed by the end of 2011. They were largely successful and the National Park Service is currently monitoring the last few deer which have been fitted with radio-collars in the hopes they will attract any other deer on the island to be removed.



The daughter of Mrs. Annie Judd of Kanab, UT with Kaibab fawns in 1930. Fawns were held until weaned in large, fenced enclosures before being placed in crates and translocated off the Plateau.



Kaibab mule deer being "coaxed" into a crate for transportation elsewhere, 1929-30.

THE FAWN ROUND-UP

In addition to the trapping of deer, another effort was underway to remove deer from the plateau. Applications for deer were accepted by the U. S. Forest Service and men were hired to ride the plateau in likely fawning areas and capture fawns. The fawns were then brought to one of 4 old dairy farms on the mountain and hand reared. Those fawns that did not die soon after capture were weaned and released into larger pastures until being shipped to many places around Arizona and beyond.

In 1926, 178 fawns were caught, but only 68 were ever shipped. The next year, 24 local residents in Fredonia, AZ and Kanab, UT were authorized to capture and care for fawns using specifications provided by the Forest Service. That year (1927) 355 fawns were captured by authorized residents, but again, only 110 were shipped alive. In 1928 the fawn-rearing involved 34 local participants that caught 403 fawns, but delivered less than 38% of those for shipment. Raisers were paid \$27 for every fawn delivered alive on October 1. By 1931 the deer herd had been reduced through hunting and so the fawn captures were discontinued.

THE FAMOUS KAIBAB DEER DRIVE

With continued concerns over the increasing deer population, at least one person was thinking outside the box. George McCormick, a Flagstaff resident, stepped forward and convinced then Governor Hunt that he could use a long line of people on foot and horseback to drive 5,000 – 8,000 mule deer off the Plateau, across the Colorado River, and up the south rim of the Grand Canyon. Governor Hunt agreed to pay \$2.50 for each deer successfully driven in that manner. Famous author, Zane Grey offered \$5,000 for exclusive movie rights of the whole affair. A group of 125 enthusiastic drivers pushed through the deer habitat in a large drive line; the deer were driven from the men, but not in any consistent direction. The drive was abandoned when it was evident there were many more deer behind than in front of the drivers. The now-famous Kaibab deer drive was a predictable failure with no deer driven south across the Colorado River. In the words of Jack Fuss, one of the participants, it was *"the most crazy damn thing I ever heard of."*

HUNTING

Immediately after the Committee's final report in October 1924, the Forest Service announced it would open a hunt. Arizona Governor George Hunt heard about the Forest Service's plans to open a hunt and rightly opposed the federal government taking control of the deer herd. To maintain control of the situation, Governor Hunt sent the Coconino County Sheriff to arrest anyone leaving the Kaibab Forest with a deer because the State of Arizona had not opened a deer hunt on the Kaibab. In five days, about 200 hunters harvested a deer before the arrest of three hunters by the Sheriff put an end to the hunting. A week later an agreement was reached between the State of Arizona and the Forest Service, allowing hunters to harvest up to three deer each for a \$5 permit fee. Only 270 hunters were willing to participate, but they harvested 675 deer during the 17-day season.

The summer of 1924 was dry and an early snow that fall caused massive win-

ter kill after that first hunt as weakened deer were forced onto poor winter range earlier than usual. Annual agreements between state and federal authorities allowed hunts to continue 1925 to 1927, but the harvest was woefully inadequate to reduce the deer population sufficiently and many deer died each winter. In 1928, the Forest Service authorized government shooters to remove deer, but the public outcry was so intense that this was discontinued the very next year.

In spite of (not because of) all these efforts to regain control of the over-abundant deer population, the Kaibab herd returned to a more appropriate level. By most accounts it appears that the deer herd on the Kaibab Plateau was reduced enough by 1934 to allow recovery of the browse. With the help of several wet years in the late 1930s, deer body condition improved and browse plants showed vigorous annual growth. Lessons learned on the Kaibab – both biological and political – set the stage for the further refinement of deer management throughout the West in the coming decades.

Watch for Part 2 of this article in the next issue as we track the management of the Kaibab mule deer herd up to the present day.



Editors note: Jim Heffelfinger is an adjunct professor at University of Arizona, Professional Member of the Boone & Crockett Club, Chair of the WAFWA Mule Deer Working Group, and a game biologist for the Arizona Game & Fish Department. See www.deernut.com for a copy of his book "Deer of the Southwest" and follow him on Twitter @GameTrax or Facebook as "Jackrabbit Jim."