

KAIBAB INVESTIGATIVE COMMITTEEJune 8 to 15, 1931

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REPORT OF KAIBAB INVESTIGATIVE COMMITTEE

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For several years the Kaibab deer problem has attracted national attention. There has been much difference of opinion and some controversy as to conditions of the range and remedies proposed or employed in the management of the Kaibab deer herd.

The Kaibab Investigative Committee has traveled approximately six hundred and fifty miles in the actual field examination of the Kaibab area during a period of eight days. Travel was greatly facilitated because of the numerous motor trails traversing the Kaibab Forest. The party, however, rode horses from Swamp Point in making the Powell Plateau trip, which is within the Grand Canyon National Park. The committee has observed practically every forest type and condition within the Kaibab area. A map showing the routes traversed is herewith attached.

Description

The Kaibab area in northern Arizona covers approximately 1,052,000 acres extending northward from the Grand Canyon of the Colorado River. It is bounded on three sides by cliffs which almost everywhere are wholly inaccessible, and on the remaining side an inhospitable desert completes the total isolation of the area so far as the big game of the region is concerned. The main part of the Plateau rises to an elevation of 8,000 to 9,000 feet, while on the east, west and north the land falls away to an altitude of from 4,000 to 5,000 feet.

The higher portion of the plateau, covering approximately 370,000 acres, is clothed in beautiful forests of yellow pine, abundantly interspersed with aspen, together with some spruce and white fir. As one

begins the descent to the lower areas, thickets of dwarfed oaks, extensive areas of the shrub Cowania, locally known as cliff rose, juniper, pinon and sagebrush are seen to be the prevailing types of vegetation.

About 1870 settlers introduced cattle and sheep into the Kaibab Forest. It is estimated that the stock grazing the area in 1913 numbered about 15,000 cattle and 5,000 sheep. In 1893 the Kaibab passed to the control of the Forest Service and in 1906, by Act of Congress, the greater part of the area was set aside as a Reserve for the mule deer, a species which inhabits many of the forest regions in this part of the United States and which is particularly abundant on the Kaibab.

In 1919 the Grand Canyon National Park was created and more than one-fourth of the southern portion of the Kaibab was included within its boundaries. Owing to deterioration in the range from overuse by deer and livestock, permittees have for some time been withdrawing their sheep and cattle from the region. The territory had long been a famous hunting ground for Indians and the settlers came here for much of their wild meat supply. Campaigns for the destruction of predatory animals were extended. Several hundred cougars, thousands of coyotes, as well as many wildcats, and the few gray wolves of the region were destroyed. The deer, relieved of the destructive effect of their wild and human enemies, swiftly began to show a marked increase in number.

By 1920 the officers of the Forest Service in charge of the Kaibab became concerned at the progressive deterioration of the range. In 1924 a committee of men not connected with the Forest Service was appointed to study the range conditions of the territory and determine whether there

were more deer on the Kaibab than the food supply would sustain. This investigating committee reported that not only were there too many deer in the territory to subsist on the available food, but that the range had been so largely depleted that it was in imminent danger of being totally destroyed over large areas. It, therefore, recommended the removal of at least one-half of the deer at once. Although their recommendations were not immediately carried out by the State and Federal authorities, some reductions have been made every year by these agencies. In addition there has been much loss to the herd due to starvation on the winter range.

It is a curious fact that there are some regions on the Kaibab where forage for deer still persists to considerable extent that is little utilized by these animals. The mule deer is very local in its range, and many die of starvation within a few miles of food that might be secured if they would only travel a short distance away from their natural habitat. For example, this is especially noticeable on the northern part of the Kaibab Plateau which is traversed by the main road over which visitors usually come into the Kaibab. A traveler entering from the north may see beside the road areas of cliff rose bearing leaves within reach of the deer. Also here and there are patches of locust, oak, and even a limited amount of low aspen. The casual visitor, therefore, may readily get the erroneous idea that there is still much forage for deer in the entire region, and that all is well with the deer. This idea is further accentuated when the large number of deer are observed feeding in the meadows of VT and Little parks.

One must go back into the Forest and down onto the winter range areas to get a real appreciation of the general lack of forage. Absence of sufficient water is one of the reasons why the deer do not use the north end of the Plateau in summer. The mule deer seem to have very fixed habits of going to certain areas for winter, regardless of whether or not sufficient forage is available.

It is desirable to have as many deer within the Kaibab Forest as the available forage supply will permanently support, not only that these deer may serve as a great tourist attraction, but in order that the surplus may be utilized by man. The Kaibab provides a very attractive hunting ground and the new bridge across the Colorado River makes the Kaibab Plateau now more accessible to the people south of the River.

It is the conclusion of the committee, after carefully reviewing the general condition of the Kaibab range, and also observing the degree of recovery within the fenced experimental plots that the Kaibab area is not now producing more than 10% of the available and nutritious forage that this range once produced.

No doubt the entire accessible Kaibab area has suffered at least two periods of severe range depletion; first, by domestic grazing animals, and then by deer. In the words of a financier, the capital investment, which in this case is the forage, has been used up almost completely.

The forage of the entire Kaibab area is yet in a deplorable condition and with the exception of the east side winter range, it is doubtful whether there has been any considerable range recovery due to the reduction of the deer herd. It is believed, however, by those who have

studied Kaibab conditions over several years, that in places there is a slight suspension of range deterioration because of the reduction of the deer and domestic stock.

The committee considers the total lack of aspen reproduction, the continuous browsing of conifer species, and the deterioration of the best remaining browse species an indication that the deer are still so numerous as to make range recovery impossible. We, therefore, recommend that supervised hunting be continued and a removal not less than that of last season, including both sexes, be effected this fall by licensed hunters or by other legal methods.

The depleted condition of the Kaibab range is due to overgrazing by both domestic stock and deer, but the cattle and sheep have been reduced to almost insignificant numbers, considering the area of the range. Cattle and horses are mainly grass eaters when grass is available. Deer, on the other hand, prefer weeds and browse. There is, however, conflict in the use of forage as between cattle and deer when utilization is carried to the extreme. Cliff rose is one of the valuable and originally abundant browse species that has suffered greatly from a double use by both deer and cattle on the winter range of the Kaibab. It is desirable, therefore, as a measure of range restoration, to eliminate unauthorized cattle as well as to reduce the deer to a point where these choice browse species will be able to recover. It is also apparent that if overgrazing continues, the aspen forest type will ultimately disappear from the Kaibab Plateau. There is practically no aspen reproduction anywhere now. A very few yellow pine seedlings are "getting away" out of reach of the deer. Conifer

reproduction within the Kaibab, under present conditions, is virtually impossible. Practically all pine, spruce and fir reproduction has developed a peculiar Kaibab form, due to repeated browsing of terminal buds by the deer.

Relation to National Park

Since the Kaibab Forest has become a national playground and joins the Grand Canyon National Park, the administrative policy toward wild life and forest management must vary in several respects from that of an average National Forest in this region. The preservation of wild life as a tourist attraction is of first importance here. This is not true of many Forests where grazing of domestic livestock and other economic uses must be given greater consideration.

The National Park Service is as much concerned in preserving the deer along the approach to the Park entrance as in the National Park itself. In fact, most of the deer that the tourists see are nearly always in the meadow-like areas just outside the Park. Range depletion is generally as serious within the National Park as within the adjoining Kaibab area. The two National areas are an intimately connected biological unit. It is the object of the Park Service to maintain, as near as possible, a natural condition within the parks. It is the opinion of the Committee that the Park Service should be as much concerned with the perpetuation of the Park flora as with the preservation of the Park fauna, and overgrazing within the Park must be corrected if the plant life within the Park area is to be restored to anything like a natural condition, and, of course, it must not be forgotten that all animal life is either

directly or indirectly dependent upon plant life. Animal depletion is sure to closely follow plant depletion. There is, of course, a theory that if the coyotes and cougars within the Park area are not hunted or trapped that eventually these predators will reduce the deer to the grazing capacity of the range, and that serious injury to forest and forage species will then cease.

Big Game Management a Western Problem

It is believed that the Kaibab study and demonstration should mark the beginning of a new era in big game management in the Western United States. A study of the Kaibab situation has emphasized the close relationship of game management and forest management. Game cannot exist without subsistence and cover. Range destruction means game destruction. Apparently excess grazing by deer is more destructive to forest reproduction than utilization of the same intensity by either sheep or cattle. Both must be avoided if our forests and ranges are to be saved. Game preservationists, to be consistent, must oppose overgrazing by game as strenuously as they have opposed overgrazing by sheep and cattle. Overgrazing by game is certain to defeat the objects of both forest and game conservation.

The principal administrative difficulties on the Kaibab seem to have grown out of the fact that the game belongs to the States and the forest range on which the game subsist belongs to the Nation. The State Fish & Game Department is charged primarily with the protection of the game, and the primary duty of the Forest Service is to protect the forests against injury. This situation exists wherever there are National Forests

inhabited by game. Federal agencies have made it clear that the Government makes no claim to the ownership of game within the National Forests.

The rapid increase of big game in many National Forests has introduced a new and perplexing factor into National Forest management. This increase in big game has, no doubt, been stimulated by the National Forest administration itself. Government Rangers who are considered as Game Wardens have systematically patrolled the millions of acres of forest lands and aided the States in the enforcement of game protective measures. In most States hunters are permitted to kill only one male big game animal per season. Out of necessity stockmen and farmers have waged a systematic war on predatory animals. Sportsmen who like to hunt with dogs have found cougar hunting a thrilling sport. All of these activities have operated to give our deer an unnatural advantage. Deer are very prolific and under original conditions the mortality was exceedingly high.

The committee sees nothing alarming in the increase of big game within any forest area if sane management and control measures can be developed and applied before serious range and forest injury results. It is a relatively simple matter quickly to reduce big game by hunting. The handling of the Kaibab situation by the Arizona Game Commission and the U. S. Forest Service offers a splendid example of the efficiency of closely supervised hunting to remove both male and female deer from overstocked areas. It is imperative that females be taken if a reduction in the game is desired.

In other places there has been much protest against the reduction of big game animals on congested areas for the reason that such hunts

have in most cases been poorly supervised, and often gets out of control. It is quite essential that the number and distribution of hunters be based on the desired kill in any given area; that hunters be required to register in and out of hunting grounds where a special hunt is being conducted for the purpose of reducing game herds. The State Game Commission of Arizona and Forest officials have cooperated successfully in the management of deer hunting in the Kaibab Forest. Such cooperative working agreements might be followed with success elsewhere.

The new game situation with which many States are now confronted, makes it apparent that the establishment of extensive game refuges conforming to large National Forest divisions, and even whole counties fixed by inflexible legislation is an unwise procedure in big game conservation. Experience has taught that it is better to place wide discretionary power with State Departments, in order that administrative action may be promptly taken in emergencies.

Cooperation in Research

There should be more coordination and cooperation among Federal Departments concerned with the solution of biological and economic problems as affecting the management of Federal lands and the plant and animal life produced thereon. The committee urges the extension of the research activities of the U. S. Biological Survey, in order that this scientific Bureau may lend greater assistance to the Forest Service, the Park Service, and all other Government agencies confronted with perplexing biological problems.

To secure the best results it is incumbent that these Federal Departments cooperate in full measure with the University, the State Fish

& Game Commission, Livestock organizations, and Sportsmans' organizations in the State in which these investigations are carried on.

Scientific men connected with State universities and colleges should serve as helpful sources of impartial information and render exceedingly important service to State Game Departments in the development of game management plans. Nearly every major educational institution of the West has the facilities and the men qualified to gather needed facts upon the plant and animal life within their respective states.

The committee approves the contemplated cooperative plan for continued studies of the Kaibab problem. While such has been learned from systematic studies already under way, the need of much additional exact information is recognized.

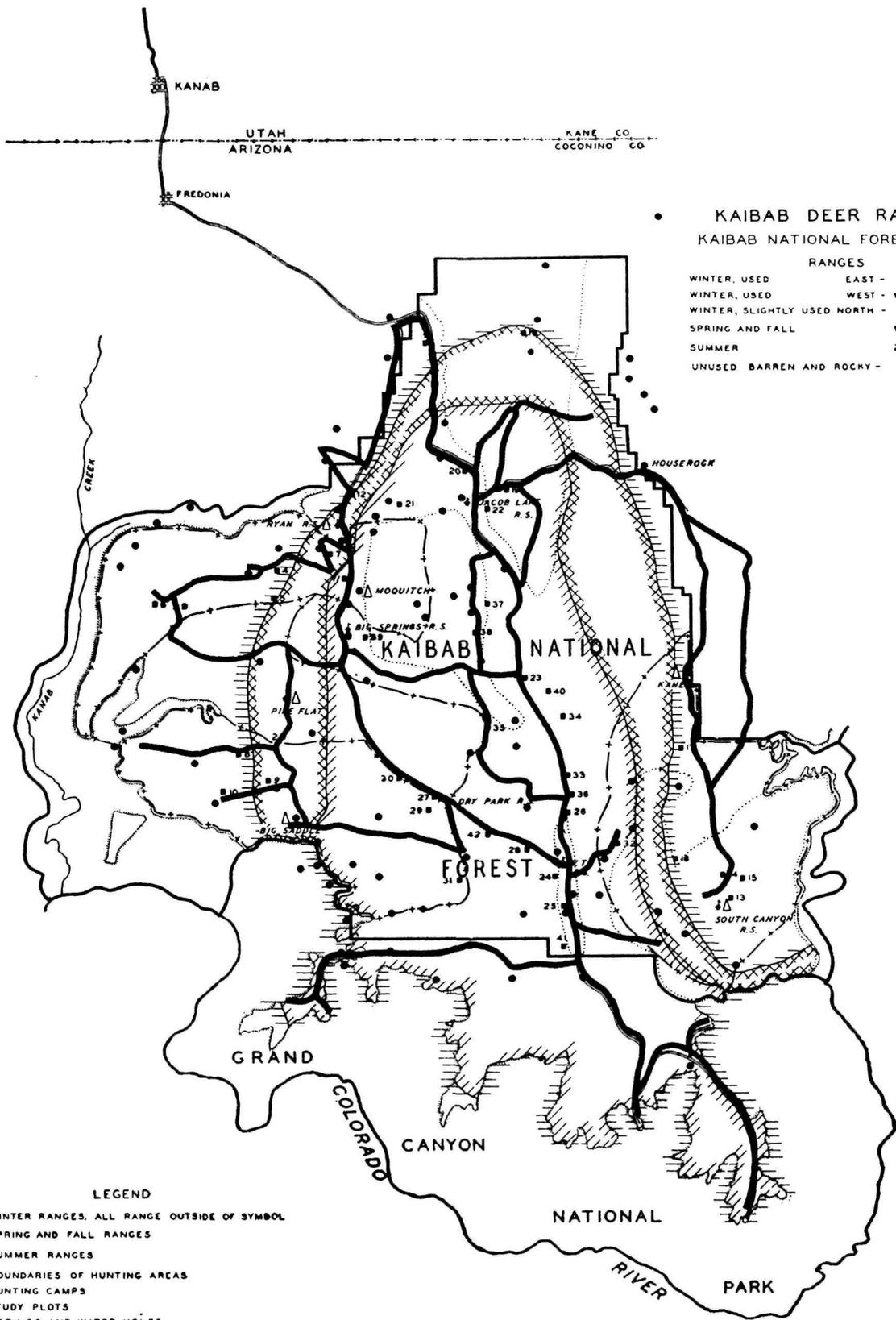
The establishment of fenced experimental plots with charted unfenced comparative areas is a commendable piece of scientific work. Without this type of systematic study it would have been next to impossible to have drawn accurate conclusions as to the state of deterioration or possibility of recovery of the overgrazed range of the Kaibab. The recovery on these protected plots is encouraging, in that it proves that the plant life of the Kaibab can be restored to a great extent, if not wholly rehabilitated, if grazing is sufficiently reduced for a number of years.

Conclusions

There is need of additional man-power for the proper field administration of the Kaibab Forest. It appears impossible for a Supervisor with only one Ranger to maintain adequate administrative control over seven hundred thousand acres of forest and range lands.

The committee recognizes the necessity for the present limited use of the range by local residents. There should, however, be no increases while the range is in a depleted condition. Stock in excess of permits must be eliminated and appropriate action taken to stop trespassing and unauthorized grazing and to remove any uncertainty as to the number of cattle that do actually graze within the Kaibab National Forest. The Forest and Park Services should continue to remove unowned wild horses and unpermitted cattle from the range.

There exists a most urgent need for reducing the present number of deer in the Kaibab area to a point much below the present limited carrying capacity of the range and maintaining the deer herd at such a level until such time as the various species of shrubs and young trees upon which the deer depend for browse are re-established. Thereafter, by careful game management, the deer may be permitted to increase to such numbers as the natural food supply may sustain. During this necessary period of re-establishment, we recommend that all forms of natural wild animal life, other than deer, in the Kaibab area be left undisturbed, except for necessary scientific purposes, or where serious damage to private property is being done, and that suspension of Federal and State predatory animal killing be continued, also the area should be closed to private trapping and hunting of flesh-eating animals until adequate annual reductions of deer are made.



● KAIBAB DEER RANGES
KAIBAB NATIONAL FOREST ONLY

RANGES	
WINTER, USED	EAST - 70,000 ACRES
WINTER, USED	WEST - 190,000 ACRES
WINTER, SLIGHTLY USED NORTH	- 30,000 ACRES
SPRING AND FALL	110,000 ACRES
SUMMER	290,000 ACRES
UNUSED BARREN AND ROCKY	- 16,000 ACRES

- LEGEND**
- WINTER RANGES, ALL RANGE OUTSIDE OF SYMBOL
 - SPRING AND FALL RANGES
 - SUMMER RANGES
 - BOUNDARIES OF HUNTING AREAS
 - HUNTING CAMPS
 - STUDY PLOTS
 - SPRINGS AND WATER HOLES
 - CLOSED TO ALL STOCK EXCEPT BUFFALO
 - SHEEP RANGES, ALSO USED BY CATTLE
 - ROUTES OF TRAVEL