

Wilderness Reserves.*

BY THEODORE ROOSEVELT.

THE practical common sense of the American people has been in no way made more evident during the last few years than by the creation and use of a series of large land reserves—situated for the most part on the great plains and among the mountains of the West—intended to keep the forests from destruction, and therefore to conserve the water supply. These reserves are created purely for economic purposes. The semi-arid regions can only support a reasonable population under conditions of the strictest economy and wisdom in the use of the water supply, and in addition to their other economic uses the forests are indispensably necessary for the preservation of the water supply and for rendering possible its useful distribution throughout the proper seasons. In addition, however, to the economic use of the wilderness by preserving it for such purposes where it is unsuited for agricultural uses, it is wise here and there to keep selected portions of it—of course only those portions unfit for settlement—in a state of nature, not merely for the sake of preserving the forests and the water, but for the sake of preserving all its beauties and wonders unspoiled by greedy and shortsighted vandalism. These beauties and wonders include animate as well as inanimate objects.

The wild creatures of the wilderness add to it by their presence a charm which it can acquire in no other way. On every ground it is well for our nation to preserve, not only for the sake of this generation, but above all for the sake of those who come after us, representatives of the stately and beautiful hauntings of the wilds which were once found throughout our great forests, over the vast lonely plains, and on the high mountain ranges, but which are now on the point of vanishing save where they are protected in natural breeding grounds and nurseries. The work of preservation must be carried on in such a way as to make it evident that we are working in the interest of the people as a whole, not in the interest of any particular class; and that the people benefited beyond all others are those who dwell nearest to the regions in which the reserves are placed. The movement for the preservation by the nation of sections of the wilderness as national playgrounds is essentially a democratic movement in the interest of all our people.

On April 8, 1903, John Burroughs and I reached the Yellowstone Park, and were met by Major John Pitcher of the Regular Army, the Superintendent of the Park. The Major and I forthwith took horses; he telling me that he could show me a good deal of game while riding up to his house at the Mammoth Hot Springs. Hardly had we left the little town of Gardiner and gotten within the limits of the Park before we saw prong-buck. There was a band of at least a hundred feeding some distance from the road. We rode leisurely toward them. They were tame compared to their kindred in unprotected places; that is, it was easy to ride within fair rifle range of them; but they were not familiar in the sense that we afterwards found the bighorn and the deer to be familiar. During the two hours following my entry into the Park we rode around the plains and lower slopes of the foothills in the neighborhood of the mouth of the Gardiner, and we saw several hundred—probably a thousand all told—of these antelope. Major Pitcher informed me that all the pronghorns in the Park wintered in this neighborhood. Toward the end of April or the first of May they migrate back to their summering homes in the open valleys along the Yellowstone and in the plains south of the Golden Gate. While migrating they go over the mountains and through forests if occasion demands. Although there are plenty of coyotes in the Park, there are no big wolves, and save for very infrequent poachers the only enemy of the antelope, as indeed the only enemy of all the game, is the cougar.

Cougars, known in the Park as elsewhere through the West as "mountain lions," are plentiful, having increased in numbers of recent years. Except in the neighborhood of the Gardiner River, that is within a few miles of Mammoth Hot Springs, I found them feeding on elk, which in the Park far outnumber all other game put together, being so numerous that the ravages of the cougars are of no real damage to the herds. But in the neighborhood of the Mammoth Hot Springs the cougars are noxious because of the antelope, mountain sheep and deer which they kill; and the Superintendent has imported some hounds with which to hunt them. These hounds are managed by Buffalo Jones, a famous old plainsman, who is now in the Park taking care of the buffalo. On this first day of my visit to the Park, I came across the carcasses of a deer and of an antelope which the cougars had killed. On the great plains cougars rarely get antelope, but here the country is broken so that the big cats can make their stalks under favorable circumstances. To deer and mountain sheep the cougar is a most dangerous enemy—much more so than the wolf.

The antelope we saw were usually in bands of from twenty to one hundred and fifty, and they traveled strung out almost in single file, though those in the rear would sometimes bunch up. I did not try to stalk them, but got as near them as I could on horseback. The

closest approach I was able to make was to within about eighty yards of two which were by themselves—I think a doe and a last year's fawn. As I was riding up to them, although they looked suspiciously at me, one actually lay down. When I was passing them at about eighty yards distance, the big one became nervous, gave a sudden jump, and away the two went at full speed.

Why the prong-bucks were so comparatively shy I do not know, for right on the ground with them we came upon deer, and, in the immediate neighborhood, mountain sheep, which were absurdly tame. The mountain sheep were nineteen in number, for the most part does and yearlings with a couple of three-year-old rams, but not a single big fellow—for the big fellows at this season are off by themselves, singly or in little bunches, high up in the mountains. The band I saw was tame to a degree matched by but few domestic animals.

They were feeding on the brink of a steep wash-out at the upper edge of one of the benches on the mountain side just below where the abrupt slope began. They were alongside a little gully with sheer walls. I rode my horse to within forty yards of them, one of them occasionally looking up and at once continuing to feed. Then they moved slowly off and leisurely crossed the gully to the other side. I dismounted, walked around the head of the gully, and moving cautiously, but in plain sight, came closer and closer until I was within twenty yards, where I sat down on a stone and spent certainly twenty minutes looking at them. They paid hardly any attention whatever to my presence—certainly no more than well-treated domestic creatures would pay. One of the rams rose on his hind legs, leaning his fore-hoofs against a little pine tree, and browsed the ends of the budding branches. The others grazed on the short grass and herbage or lay down and rested—two of the yearlings sometimes playfully butting at one another. Now and then one would glance in my direction without the slightest sign of fear—barely even of curiosity. I have no question whatever but that with a little patience this particular band could be made to feed out of a man's hand. Major Pitcher intends during the coming winter to feed them alfalfa—for game animals of several kinds have become so plentiful in the neighborhood of the Hot Springs, and the Major has grown so interested in them, that he wishes to do something toward feeding them during the severe winter. After I had looked at the sheep to my heart's content, I walked back to my horse, my departure arousing as little interest as my advent.

Soon after leaving them, we began to come across black-tail deer, singly, in twos and threes, and in small bunches of a dozen or so. They were almost as tame as the mountain sheep, but not quite. That is, they always looked alertly at me, and though if I stayed still they would graze, they kept a watch over my movements, and usually moved slowly off when I got within less than forty yards of them. Up to that distance, whether on foot or on horseback, they paid but little heed to me, and on several occasions they allowed me to come much closer. Like the bighorn, the black-tails at this time were grazing, not browsing, but I occasionally saw them nibble some willow buds. During the winter they had been browsing. As we got close to the Hot Springs we came across several white-tail in an open, marshy meadow. They were not quite as tame as the black-tail, although without any difficulty I walked up to within fifty yards of them. Handsome though the black-tail is, the white-tail is the most beautiful of all deer when in motion, because of the springy, bounding grace of its trot and canter, and the way it carries its head and white flag aloft.

Before reaching the Mammoth Hot Springs we also saw a number of ducks in the little pools and on the Gardiner. Some of them were rather shy. Others—probably those which, as Major Pitcher informed me, had spent the winter there—were as tame as barnyard fowls.

Just before reaching the post, the Major took me into the big field where Buffalo Jones had some Texas and Flat Head Lake buffalo—bulls and cows—which he was tending with solicitous care. The original stock of buffalo in the Park have now been reduced to fifteen or twenty individuals, and the intention is to try to mix them with the score of buffalo which have been purchased out of the Flat Head Lake and Texas Panhandle herds. The buffalo were put within a wire fence, which, when it was built, was found to have included both black-tail and white-tail deer. A bull elk was also put in with them at one time—he having met with some accident which made the Major and Buffalo Jones bring him in to doctor him. When he recovered his health he became very cross. Not only would he attack men, but also buffalo, even the old and surly master bull, thumping them savagely with his antlers if they did anything to which he objected.

When I reached the post and dismounted at the Major's house, I supposed my experiences with wild beasts for the day were ended; but this was an error. The quarters of the officers and men and the various hotel buildings, stables, residences of the civilian officials, etc., almost completely surround the big parade ground at the post, near the middle of which stands the flag-pole, while the gun used for morning and evening salutes is well off to one side. There are large gaps between some of the buildings, and Major Pitcher informed me that throughout the winter he had been leaving

alfalfa on the parade ground, and that numbers of black-tail deer had been in the habit of visiting it every day, sometimes as many as seventy being on the parade ground at once. As springtime came on the numbers diminished. However, in mid-afternoon, while I was writing in my room in Major Pitcher's house, on looking out of the window I saw five deer on the parade ground. They were as tame as so many Alderney cows, and when I walked out I got up to within twenty yards of them without any difficulty. It was most amusing to see them as the time approached for the sunset gun to be fired. The notes of the trumpeter attracted their attention at once. They all looked at him eagerly. One then resumed feeding, and paid no attention whatever either to the bugle, the gun or the flag. The other four, however, watched the preparations for firing the gun with an intent gaze, and at the sound of the report gave two or three jumps; then instantly wheeling, looked up at the flag as it came down. This they seemed to regard as something rather more suspicious than the gun, and they remained very much on the alert until the ceremony was over. Once it was finished, they resumed feeding as if nothing had happened. Before it was dark they trotted away from the parade ground back to the mountains.

The next day we rode off to the Yellowstone River, camping some miles below Cottonwood Creek. It was a very pleasant camp. Major Pitcher, an old friend, had a first-class pack train, so that we were as comfortable as possible, and on such a trip there could be no pleasanter or more interesting companion than John Burroughs—"Oom John," as we soon grew to call him. Where our tents were pitched the bottom of the valley was narrow, the mountains rising steep and cliff-broken on either side. There were quite a number of black-tail in the valley, which were tame and unsuspecting, although not nearly as much so as those in the immediate neighborhood of the Mammoth Hot Springs. One mid-afternoon three of them swam across the river a hundred yards above our camp. But the characteristic animals of the region were the elk—the wapiti. They were certainly more numerous than when I was last through the Park twelve years before.

In the summer the elk spread all over the interior of the Park. As winter approaches they divide, some going north and others south. The southern bands, which, at a guess, may possibly include ten thousand individuals, winter out of the Park, for the most part in Jackson's Hole—though of course here and there within the limits of the Park a few elk may spend both winter and summer in an unusually favorable location. It was the members of the northern band that I met. During the winter time they are very stationary, each band staying within a very few miles of the same place, and from their size and the open nature of their habitat it is almost as easy to count them as if they were cattle. From a spur of Bison Peak one day, Major Pitcher, the guide Elwood Hofer, John Burroughs and I spent about four hours with the glasses counting and estimating the different herds within sight. After most careful work and cautious reduction of estimates in each case to the minimum the truth would permit, we reckoned three thousand head of elk, all lying or feeding, and all in sight at the same time. An estimate of some fifteen thousand for the number of elk in these northern bands cannot be far wrong. These bands do not go out of the Park at all, but winter just within its northern boundary. At the time when we saw them, the snow had vanished from the bottom of the valleys and the lower slopes of the mountains, but grew into continuous sheets further up their sides. The elk were for the most part found up on the snow slopes, occasionally singly or in small gangs—more often in bands of from fifty to a couple of hundred. The larger bulls were highest up the mountains and generally in small troops by themselves, although occasionally one or two would be found associating with a big herd of cows, yearlings, and two-year-olds. Many of the bulls had shed their antlers; many had not. During the winter the elk had evidently done much browsing, but at this time they were grazing almost exclusively, and seemed by preference to seek out the patches of old grass which were last left bare by the retreating snow. The bands moved about very little, and if one were seen one day it was generally possible to find it within a few hundred yards of the same spot the next day, and certainly not more than a mile or two off. There were severe frosts at night, and occasionally light flurries of snow; but the hardy beasts evidently cared nothing for any but heavy storms, and seemed to prefer to lie in the snow rather than upon the open ground. They fed at irregular hours throughout the day, just like cattle; one band might be lying down while another was feeding. While traveling they usually went almost in single file. Evidently the winter had weakened them, and they were not in condition for running; for on the one or two occasions when I wanted to see them close up I ran right into them on horseback, both on level plains and going up hill along the sides of rather steep mountains. One band in particular I practically rounded up for John Burroughs—finally getting them to stand in a huddle while he and I sat on our horses less than fifty yards off. After they had run a little distance they opened their mouths wide and showed evident signs of distress.

We came across a good many carcasses. Two, a bull

*This is one of the chapters in the new volume of the Boone and Crockett Club Book, "American Big Game in its Haunts."

and a cow, had died from scab.' Over half the remainder had evidently perished from cold or starvation. The others, including a bull, three cows and a score of yearlings, had been killed by cougars. In the Park the cougar is at present their only animal foe. The cougars were preying on nothing but elk in the Yellowstone Valley, and kept hanging about the neighborhood of the big bands. Evidently they usually selected some outlying yearling, stalked it as it lay or as it fed, and seized it by the head and throat. The bull which they killed was in a little open valley by himself, many miles from any other elk. The cougar which killed it, judging from its tracks, was a very large male. As the elk were evidently rather too numerous for the feed, I do not think the cougars were doing any damage.

Coyotes are plentiful, but the elk evidently have no dread of them. One day I crawled up to within fifty yards of a band of elk lying down. A coyote was walking about among them, and beyond an occasional look they paid no heed to him. He did not venture to go within fifteen or twenty paces of any one of them. In fact, except the cougar, I saw but one living thing attempt to molest the elk. This was a golden eagle. We saw several of these great birds. On one occasion we had ridden out to the foot of a great sloping mountain side, dotted over with bands and strings of elk amounting in the aggregate probably to a thousand head. Most of the bands were above the snow line—some appearing away back toward the ridge crests, and looking as small as mice. There was one band well below the snow line, and toward this we rode. While the elk were not shy or wary, in the sense that a hunter would use the words, they were by no means as familiar as the deer; and this particular band of elk, some twenty or thirty in all, watched us with interest as we approached. When we were still half a mile off they suddenly started to run toward us, evidently frightened by something. They ran quartering, and when about four hundred yards away we saw that an eagle was after them. Soon it swooped, and a yearling in the rear, weakly, and probably frightened by the swoop, turned a complete somersault, and when it recovered its feet, stood still. The great bird followed the rest of the band across a little ridge, beyond which they disappeared. Then it returned, soaring high in the heavens, and after two or three wide circles, swooped down at the solitary yearling, its legs hanging down. We halted at two hundred yards to see the end. But the eagle could not quite make up its mind to attack. Twice it hovered within a foot or two of the yearling's head—again flew off and again returned. Finally the yearling trotted off after the rest of the band, and the eagle returned to the upper air. Later we found the carcass of a yearling, with two eagles, not to mention ravens and magpies, feeding on it; but I could not tell whether they had themselves killed the yearling or not.

Here and there in the region where the elk were abundant we came upon horses which for some reason had been left out through the winter. They were much wilder than the elk. Evidently the Yellowstone Park is a natural nursery and breeding ground of the elk, which here, as said above, far outnumber all the other game put together. In the winter, if they cannot get to open water, they eat snow; but in several places where there had been springs which kept open all winter, we could see by the tracks they had been regularly used by bands of elk. The men working at the new road along the face of the cliffs beside the Yellowstone River near Tower Falls informed me that in October enormous droves of elk coming from the interior of the Park and traveling northward to the lower lands had crossed the Yellowstone just above Tower Falls. Judging by their description the elk had crossed by thousands in an uninterrupted stream, the passage taking many hours. In fact nowadays these Yellowstone elk are, with the exception of the Arctic caribou, the only American game which at times travel in immense droves like the buffalo of the old days.

A couple of days after leaving Cottonwood Creek—where we had spent several days—we camped at the Yellowstone Cañon below Tower Falls. Here we saw a second band of mountain sheep, numbering only eight—none of them old rams. We were camped on the west side of the cañon; the sheep had their abode on the opposite side, where they had spent the winter. It has recently been customary among some authorities, especially the English hunters and naturalists who have written of the Asiatic sheep, to speak as if sheep were naturally creatures of the plains rather than mountain climbers. I know nothing of old world sheep, but the Rocky Mountain bighorn is to the full as characteristic a mountain animal, in every sense of the word, as the chamois, and, I think, as the ibex. These sheep were well known to the road builders, who had spent the winter in the locality. They told me they never went back on the plains, but throughout the winter had spent their days and nights on the top of the cliff and along its face. This cliff was an alternation of sheer precipices and very steep inclines. When coated with ice it would be difficult to imagine an uglier bit of climbing; but throughout the winter, and even in the wildest storms, the sheep had habitually gone down it to drink at the water below. When we first saw them they were lying sunning themselves on the edge of the cañon, where the rolling grassy country behind it broke off into the sheer descent. It was mid-afternoon, and they were under some pines. After a while they got up and began to graze, and soon hopped unconcernedly down the side of the cliff until they were half way to the bottom. They then grazed along the sides, and spent some time licking at a place where there was evidently a mineral deposit. Before dark they all lay down again on a steeply inclined jutting spur midway between the top and bottom of the cañon.

Next morning I thought I would like to see them close up, so I walked down three or four miles below where the cañon ended, crossed the stream, and came up the other side until I got on what was literally the stamping ground of the sheep. Their tracks showed that they had spent their time for many weeks, and probably for all the winter, within a very narrow radius. For perhaps a mile and a half, or two miles at the very outside, they had wandered to and fro on the summit of the cañon, making what was almost a well-beaten path; always very near and usually on the edge of the cliff; and hardly ever going more than a few yards back into the

grassy plain-and-hill country. Their tracks and dung covered the ground. They had also evidently descended into the depths of the cañon wherever there was the slightest break or even lowering in the upper line of basalt cliffs. Although mountain sheep often browse in winter, I saw but few traces of browsing here; probably on the sheer cliff side they always got some grazing.

When I spied the band they were lying not far from the spot in which they had lain the day before, and in the same position on the brink of the cañon. They saw me and watched me with interest when I was two hundred yards off, but they let me get up within forty yards and sit down on a large stone to look at them, without running off. Most of them were lying down, but a couple were feeding steadily throughout the time I watched them. Suddenly one took alarm and dashed straight over the cliff, the others all following at once. I ran after them to the edge in time to see the last yearling drop off the edge of the basalt cliff and stop short on the sheer slope below, while the stones dislodged by his hoofs rattled down the cañon. They all looked up at me with great interest, and then strolled off to the edge of a jutting spur and lay down almost directly underneath me and some fifty yards off. That evening on my return to camp we watched the band make its way right down to the river bed, going over places where it did not seem possible a four-footed creature could pass. They halted to graze here and there, and down the worst places they went very fast with great bounds. It was a marvelous exhibition of climbing.

[TO BE CONCLUDED.]