«Sorcery, messire, though there be many say she died a martyr, and ten thousand people wept.»

«When was she condemned?»

«Early this morning, messire. God forgive her judges!»

Bertrand clung with both lean hands to the spokes of the wheel. «What was her name?»

«Jeanne d'Arc, messire—that great captain of the French called the pucelle.»

Jeanne d'Arc!—a splash in the Seine, a dissolving of ashes, a spread of sinking fragments. No! There was a mightier presence in that sunset land. It was the time of evening when she rode in to her victories.

Behind the carter's back, and so quietly that his sinking made no sound, Bertrand let himself down into the water to float with her to the sea. He heard the rush of troops, the clang of armor, the crash of falling walls, and a woman's voice, a leader's voice, an angel's voice, bell-like, spreading its tones wave upon wave, until they seemed to reach the horizon, to ripple over France and around the world:

«Amys! Amys! ayez bon courage! Sus! Sus! Ils sont tous nostres!»

THE END.

Mary Hartwell Catherwood.

WILD ANIMALS IN A NEW ENGLAND GAME-PARK.

THE CORBIN GAME PRESERVE.

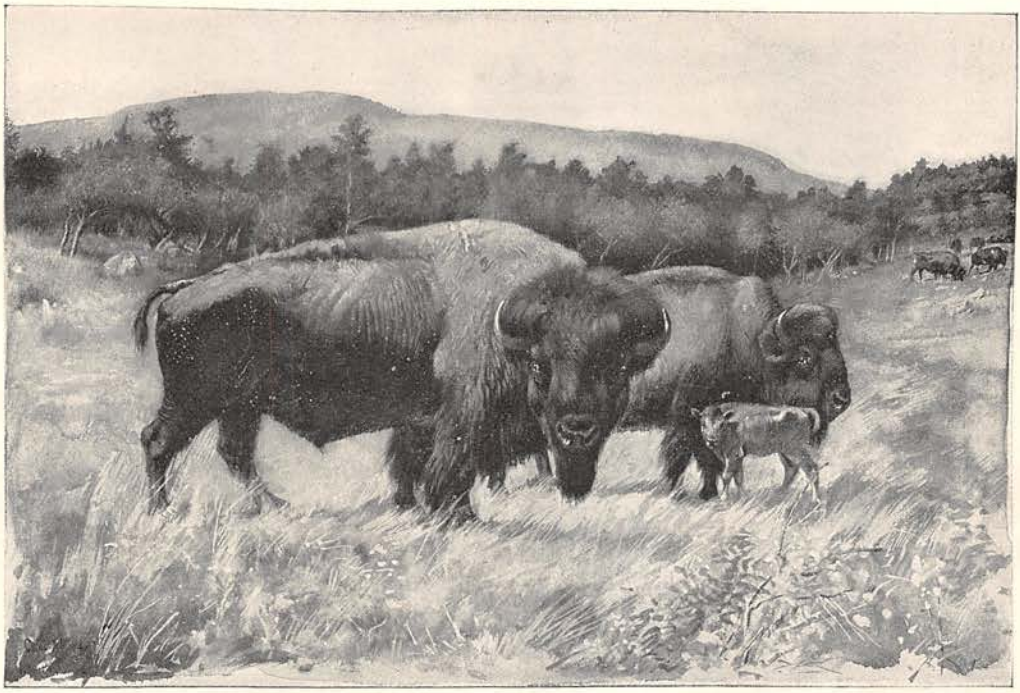
HERD OF BUFFALOES.

THE propagation of the nobler wild animals under such conditions as suit their native instincts has passed beyond the realm of experiment at the game-park founded by the late Austin Corbin at Newport, New Hampshire. There, a wire fence girdling twenty-six thousand acres, picturesquely composed of mountain, forest, and meadow, imprisons nearly four thousand shy creatures, to find which elsewhere the sportsman or sightseer must penetrate some remote and primitive wilderness where—

> Great Nature dwells
> In awful solitude, and naught is seen
> But the wild herds that own no master's stall.

Yet that can scarcely be called a prison wherein the inmates have such happy freedom of range that they do not know they are captives; where all the disguises of habitat closely follow the dictates of nature; where the moose, the buffalo, the elk, the wild boar of the German Black Forest, and the stag of Great Britain, live very much at home. In the diversities of a park nearly eleven miles long by more than four in width, with every variety of highland and lowland, woodland, thicket, and open, the artifice of man has only modified first estate along those lines which tend to save. The bull moose trumpets to the call of his mate on the wooded crests of Croydon Mountain as lustily as in the thickets of Nova Scotia; elks and stags and buffaloes lock horns and gore each other there as freely as in wilds where man has never trod; and one may see in some glade the great head of a boar scowling in his garniture of tusks and bristles, where, disturbed from his dinner of beechnuts, he lingers uncertain whether to fight or fly.

It is true that in the atmosphere of the «animal-garden» one can never feel the

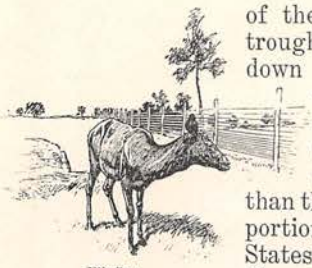


DRAWN BY CHARLES R. KNIGHT.

A GROUP OF BUFFALOES.

genuine poetry of the wilderness. The conditions cannot distil that quintessence of delight which sweetens the cup of the sportsman or naturalist gone back to savage habit. The screech of a railway whistle is a sad dispeller of illusions. A group of elk crunching fruit in an apple-orchard (the Corbin preserve includes many abandoned farms) spoils a little the romance of nature; and it is a disenchantment, in facing the red eye of a bull buffalo glaring out of a shag of hair not fifty feet away, to feel that the huge creature is interested only in chewing his cud and whisking away the flies.

Blue Mountain Forest Park, as the preserve is called, includes parts of four townships, and lies near the enterprising borough of Newport on the Concord and Claremont branch of the Boston and Maine Railroad. It is said to be the biggest game-park in the world, except one owned by the Duke of Sutherland in Scotland, and one or two royal demesnes on the Continent. Of course, in making comparisons one must exclude those immense public preserves, as big as provinces, where the British government of India seeks to save the elephant from extinction, and our own national parks in the West. The name of Blue Mountain attaches to the entire spur of hills which bisects the park, while Croydon designates its highest shoulder, rising to the height of nearly three thousand feet. The steep and densely wooded heights of Croydon, curving like a hump, break the sky-line in the shape of a camel's back; nearby a skirting cañon opens a carriage-route across the mountain. In characteristics it belongs rather to the Green Mountain than to the White Mountain range, though it seems disconnected from both. The verdure of an immense forest of spruce, fir, hemlock, pine, birch, beech, and maple infolds it to the very crest, with here and there a brown patch of clearing. The perspective unrolls none of the grandeur of distinctive mountain scenery which makes northern New Hampshire a famous goal of summer pilgrimage. The aspect is gracious, idyllic, picturesque, with that variety of charm which caresses rather than startles the eye. Yet whoever toils up the acclivities of Croydon, through tangled wood and thicket, may easily fancy himself a thousand miles from the haunts of men. He may miss the glimpse of a moose crashing through the trees with leveled antlers; for this shy creature is rarely visible, and must be stalked with patience or watched for many days. But the forest itself is centuries old, primeval in its interlocked gloom, with but little sifting of sunshine through the umbrella-like top. In this section—midland New Hampshire—tree-life is prodigious in its force. The flora



Elk Doe.

of the great glacial trough which sweeps down the Vermont valley and that of the Connecticut River is richer in variety than that of any other portion of the United States or of all Europe. The greater part of the Corbin inclosure consists of abandoned farms, many of them already beginning to bristle with saplings; for the woods are on the march. Dismantled houses with windows and doors gaping like holes in a skull, ramshackle barns rotten and weather-stained, the wreck of stone fences thick-set with brambles—these meet the eye at every turn.

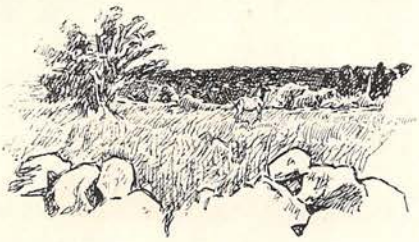
The general outline of the park is that of an ellipse with respective diameters of about four and a half and eleven miles, and the surface is cut diagonally by a backbone of mountain running northeast. The lower slopes and the meadow-levels are diversified with brooks and swamp land, while extensive groves of second growth profusely dot the surface. It is in these that the wild swine, the progenitors of which clashed their tusks against the boar-spears of medieval kings and barons, root and propagate their kind with a fecundity which is a marvel to the keepers. One can scarcely grasp the bigness of the park by figures. But let the reader fancy a demesne considerably more than double the size of Boston and all its suburbs; thirty times the area of Central Park, New York; almost ten times bigger than Fairmount Park, Philadelphia; or fourteen times the acreage of the whole park system of Chicago. Roads, many of them thoroughfares of days gone by, variously intersect the inclosure, and an excellent carriage-track crosses the park from east to west through the picturesque notch. On the western side the declivity is more sloping and open, but has the same agreeable diversity of scene. A wire fence, partly mesh, partly barbed, nearly eight feet in height and twenty-seven miles in circuit, confines the four-footed tenants within its steel barrier. The same posts which support the fence until the trees which have been set shall have grown to take their place, string a telephone connecting the nine substations at the different gates with the central station, the home of the superintendent, the Corbin villa, and the town of Newport. The keepers and other employees of the park vary from twenty-five to fifty, according to the season of the year. It need scarcely be said that the needs of attendance compel a vigilance which never rests. Merely to watch the fence, lest it should have parted somewhere by accident or wanton malice, requires an inspection twice a week. This is the duty of two men who live respectively at the extreme north and south ends of the park. They begin their tramp at dawn, and approach each other on the east side. Crossing the inclosure in company through the notch to the West Pass gate, where there is a little tumble-down hamlet,—Poppy Squash,—now pretty much a matter of bygone days, they part and return to their respective stations.

Listening to the Buck.

These park constables possibly find their duty-round, pursued through rain and sunshine, cold and heat, a dull itinerary, without touch to kindle the fancy or give a tingle to the blood. «The hand of little employment hath the daintier sense,» and one can imagine in these recurrent tours such chances of delightful observation as rarely come to others.

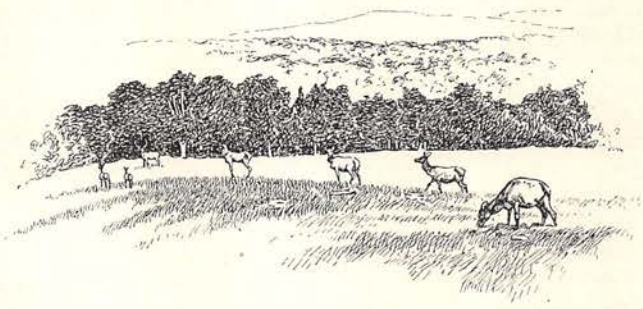
Reports about all matters of interest are made to the superintendent every morning from each substation. The wanderings of the animals, so far as they can be followed, are specially noted; for in the early day the shyer ones more aptly appear in search of breakfast. They are on principle left as much as possible to care for themselves, as in their primitive estate. To insure abundance of drink, however, stone troughs fed by running water are scattered over every square mile; and here and there artificial salt-licks provide what is necessity and luxury alike to all the deer and ox tribes. With few exceptions, the animals find their own shelter, forage for their own food in summer heats and winter frosts, bring forth and provide for their young according to their instincts, without help or hindrance from man. His wardship is practised only to guard against any in-

Doe.



terference with natural laws. The central station, near the southeast corner of the park, is the great ganglion of the system of oversight. Here Superintendent Stockwell, who has had the management since the outset, makes his headquarters, and news converges to him from all directions. His horse stands saddled for him at all times to meet any emergency for his presence, though such flying trips are rarely needed. Here are the barns where is stored the green fodder in siloes for the winter feeding of the buffalo herd and the polled Angus cattle. It may be noted, however, in passing that the full-grown buffaloes, armor-clad against the most cutting wind and cold in the sheathing of their heavy coats, prefer a knee-deep billet in the snow to the shelter of the sheds. Here, also, the boar-hounds are kenneled under the charge of an experienced keeper. To many visitors the dog-kennels are scarcely less attractive than the other spectacles of the park. The eye chiefly fastens on that most stalwart of the canine race, the Great Dane, made recently more famous by companionship with Bismarck, and used in Germany for bringing the wild boar to bay, as more stanch and powerful than any other breed. Its huge bulk is suggestively wrapped in a brindled hide which blends the spots of the leopard and the tiger-stripes, and so befits the ferocity with which it buckles itself to its prey. While these dogs have been successfully used in bringing the wild boar to bay amid the brakes of Blue Mountain Forest, its purpose has hitherto looked rather to the multiplication of animal life as a problem of scientific and practical interest than to its extinction in the pleasures of the chase.

The principle of game-preserving betrays different aspects according to the point of view. In history it has been closely linked with chartered barbarism, with caste proscription, and with the cruelest laws on the statute-book. The same spirit has not yet been wholly uprooted in Europe by the march of time. On the other hand, the preservation of four-footed or feathered game on a large or small scale, to save them from otherwise inevitable extinction, is a righteous exercise of power by the State or the private owner. The annihilation of many interesting forms of animal life in the United States and throughout the world is a threat at which we cannot easily blink. The so-called buffalo, properly designated the bison, a hundred years ago roamed in countless herds from the Alleghanies to the Rocky Mountains. In George Washington's diary of his journey immediately after the Revolutionary War, through what is now western Virginia and eastern Ohio, he mentions that the only well-defined paths through the wilderness were the routes to the salt-licks trampled by the buffaloes. At the time of the opening of the Union Pacific Railroad (1869) they numbered, by the estimate of Mr. W. T. Hornaday of the Smithsonian Institution, about six millions. Three years ago there were supposed to be about two hundred head of buffalo in the Yellowstone National Park, designed to be the great game-preserve of the nation. But even the cavalry force under the command of the superintendent has not saved this forlorn herd from the rifle of the poacher. The last report estimates the survivors at fewer than fifty. Captain Anderson recommends that even this remnant should be at once distributed among the zoölogical gardens and private preserves of the country to insure their safety and further increase by breeding.



Herd of Deer.

A great diminution is also true, though in less degree, of the moose and the elk. As in this article the popular names have been given to animals, it may be explained that our so-called moose is the true elk, and that our elk is simply the wapiti deer or stag, the American representative of the red deer of Europe. The moose was once common over the whole

DRAWN BY CHARLES R. KNIGHT.

LOOKING NORTH.

United States, from New England to the Pacific coast, in the mountainous sections. It is now, in lessening numbers, found only in northern Maine; and before many years its range will be limited to Canada. The same probability holds true as respects the caribou, or American reindeer. The facts, political and geographical, which retard the rapid growth of human society will probably keep that immense region eminently suitable to the increase and development of wild animals, and one of the favorite hunting-grounds of the world. The elk, from the great range of its habitat, and its more omnivorous feeding-habit, will linger longer; but with the tightening pressure of the farm, the cattle-range, and lumbering enterprise in the wilder regions of the West, and the annual swarming thither of American and European sportsmen, the elk, too, before many years will have disappeared.

The inception of Blue Mountain Forest Park occurred less than eight years ago. Austin Corbin, a native of Newport, New Hampshire, began a unique enterprise amid scenes endeared by early memory and well ordered by nature for the end in view. The germ of the project was paltry beside the bigness and celerity of its evolution, for the plot grew with its planning. The capitalist who, despite his great business operations, had never lost his love of nature was warmly interested in preserving the wilder face of his native region. The Corbin family farm of three hundred acres, which was afterward increased to a spacious country-seat of fourteen hundred acres, lay on the edge of what is now the great animal-preserve. Yet the beginning of the land purchases constituting the park was in part a matter of accident. It led, however, to the further acquirement of desirable property which adjoined at the outset, with the notion of attracting friends to establish summer homes amid picturesque and healthful surroundings. Another factor soon came to the fore. Mr. Corbin had received, several years before, a present of a pair of deer, buck and doe, from his brother, and these he kept at his Long Island country-seat. His love of animals, spurred by ob-

servation, induced further purchases of deer of several varieties, and the herd soon grew to a respectable size. The moist climate of the island did not prove favorable to any but the white-tailed or Virginian deer, which is indigenous to the region; so in the most natural way the thought of his newly acquired New Hampshire property linked itself with the preservation of the wild stock which languished in its sea-bound home.

Out of this stage the larger conception of a park in which could be preserved a representative collection of such of the larger game animals of the North American continent as could safely harbor together, had a rapid birth in the mind of a man whose imagination ran *pari passu* with his passion for animated nature, and who had wealth to execute his purpose. Mr. Corbin, after he had roughly outlined the dimensions and topography of the tract which seemed to be needed, began at once to negotiate for the adjacent properties. His enthusiasm kindled with each step and expanded the scope of his plan as he foresaw the possibilities of a great nursery and breeding-forest of the creatures of the wilderness, from which the wants of other parks might be supplied. It took three years to consummate the purchase, involving from first to last the transfer of three hundred and seventy-five titles. Many of these tracts had been in the ownership of the same families since the first settlement of the country. Many of them were farms wholly or partly abandoned, and some of them ranges of mountain forest where the woodsman's ax had never cut a chip, while a few were as highly cultivated as any agricultural lands in New England. To secure them in continuity required nice diplomacy, and the masking of the Corbin project as long as possible. Some of the parcels were bought in other names, and now and again rural shrewdness pitted itself not unsuccessfully against financial experience. Yet, on the whole, there was no serious trouble in arranging satisfactory terms from one dollar to twenty-five dollars per acre. Superintendent Stockwell, native of a farm now within the park limits, who knew the landholders and land values for many miles about, was the adroit agent of his chief in effecting this web of purchases.

Nor did the stocking of the preserve offer any obstacles not easily overcome by the enthusiasm of the owner. The first-comers of the buffalo colony were purchased in Iowa, where a few had been semi-domesticated, and the last ten were secured from a somewhat noted Western character, «Buffalo» Jones of Omaha, Nebraska. This personage conducted a small wild-stock farm, and his pair of buffalo bulls tamed to the plow, and his team of elk broken to harness, inspired many a newspaper paragraph. The elk and moose were derived from different sources in Minnesota, North Dakota, Montana, and Maine, at prices ranging from eighty to one hundred and twenty-five dollars for elk, and from one hundred to two hundred dollars for moose. The wild swine from the German Black Forest were imported through Hagenbeck, the famous animal-merchant, at a cost of one thousand dollars for the fourteen progenitors of the droves which now swarm in the Blue Mountain woods. Mr. Corbin's interest soon extended to the inclusion of foreign as well as indigenous fauna. The fallow and red deer were derived from Great Britain, the black-tail deer from Montana, while the Adirondacks and the Aroostook forests of Maine contributed the common Virginian deer, the caribou having also been sent from the last-named region. The prodigious increase in these originals is a suggestive object-lesson, indeed, on the facility with which parks and preserves may be stocked with wild animals.

Of the large fauna indigenous to New Hampshire, the wolf passed long ago with the native elk and moose; and in the vicinity of Newport the visit of a bear, a panther, or a deer was so rare before the founding of the Corbin preserve that such an event was a nine days' wonder. Among the quadrupeds, racoons, foxes, and squirrels (both varieties, the fox and the red) furnished the rural sportsman with his most attractive game. But since the establishment of the park there has been a change full of interest and significance. Several large bears have been killed on the very edge of the inclosure,

DRAWN BY E. E. THOMPSON.

BIGHORN, OR ROCKY MOUNTAIN SHEEP.

DRAWN BY J. SMIT.

MOOSE.

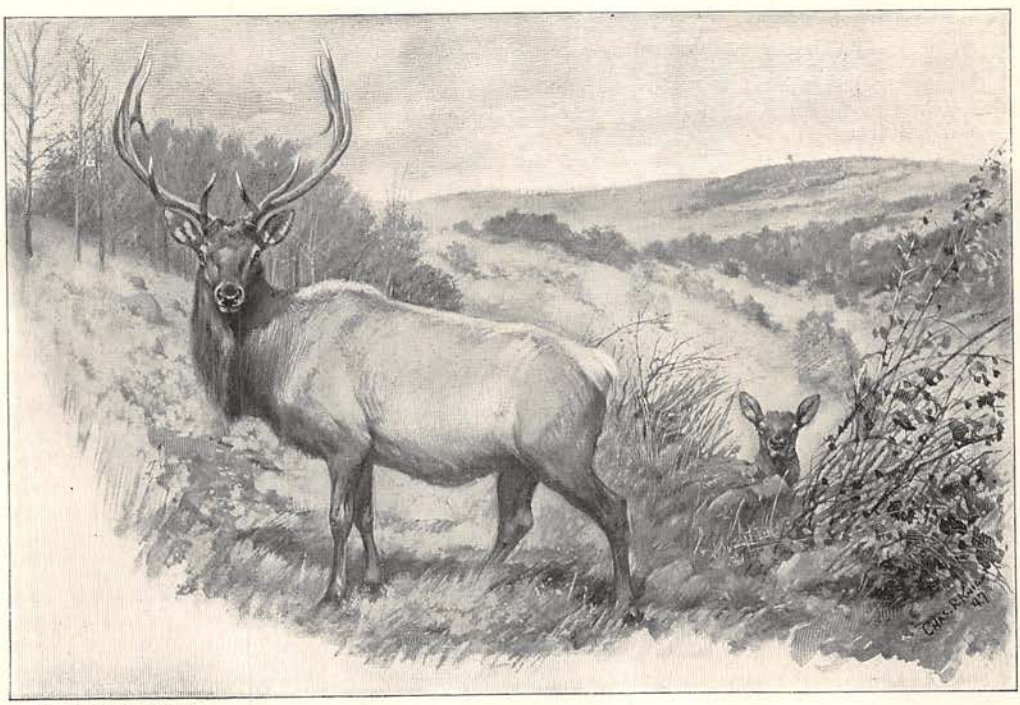
and many have been seen in the neighboring forests. Panthers and wildcats too have become by no means uncommon in a region where they had been previously nearly extinct, and wild deer have become plentiful in the vicinity. This opens a curious field of speculation to the scientist and the natural-history observer. Can it be possible that some mysterious affinity has lured back creatures once native from their distant retreats? or that accidental spies have carried the news, and that the instinct of companionship or the desire of prey has been irresistible? If the fact is authentic as to this reappearance of the *ferœ naturœ* in the vicinity of the Corbin preserve (and there seems no reasonable doubt), it suggests additional reason for the institution of game-parks by the lovers of wild field-sports. It becomes a question not only of preserving animals, but of the stocking of wood and mountain, by the force of natural law, about a carefully guarded nucleus, in a region where the utilities of life cannot be economically pursued.

It is roughly estimated that Mr. Corbin's enterprise has cost nearly a million dollars, aside from the expense of annual maintenance, which equals the interest on half as much more. The details of administration have been managed with a skill and care parallel with the lavish expense of money. Study of habit has gone hand in hand with provision against the accidents of a wild state to produce a spectacle fascinating to lovers of the animal kingdom. In the parade of the creatures represented in Blue Mountain Forest it is fitting to give precedence to the buffalo. It is in many ways the most typical animal of the North American continent. The boundless profusion of the herds which marked an earlier period proved how it fared in the natural war known as the survival of the fittest. The buffalo's bellicose front is a ludicrous paradox. Formidable in mass, when its army of glancing horns and shaggy breasts could easily have demolished a regiment of Napoleon's cuirassiers, the individual buffalo is as pacific as a milch-cow. The writer approached one grazing by the roadside with a call of «Bos! bos!»—the same cry with which the Yankee farm-lad and the Roman herdsman twenty centuries ago have called the cattle home. The great creature immediately sidled up with lolling tongue, as if begging a handful of salt. Its ugliness of aspect comes of the enormous size of its head, behind which the great muscles attached for its support build a hump on the shoulders. It is this hump which furnishes one of the epicure's favorite game dishes. Long, shaggy hair of dark brown covers the forehead and shoulders, and in winter this becomes a curly, felted mane extending half-way to the animal's flanks. The small red eyes gleaming from their thicket of hair look singularly sullen and vicious. The great convexity of the forehead, which bulges out and overhangs like a beetling cliff, so different from the angles of the skull characterizing the other *Bovidœ*, adds greatly to the menace of its aspect. The horns curve laterally, and are so hidden in shag that their length can scarcely be appreciated, though they are used with terrible execution by the bulls in their fights. The largest of the bulls at the Corbin preserve is so dangerous a duelist that he is not allowed at large. Last year he killed a rival in what must have been a Homeric battle, though no one saw the conflict. The earth was plowed up and reddened for many square rods, and the vanquished hero was frightfully gored. The victor was found pawing the ground and bellowing with triumph, as proud as Achilles dragging the corpse of Hector around Ilium. However pugnacious with its own kind during the rutting-season, the buffalo, unlike other animals in the preserve, shows no disposition to attack man.

The domestication of the buffalo, and the possibilities of crossing the breed, have been

subjects of experiment at the park. The variety of cattle known as «polled Angus,» foremost among British herds in bigness of bone, milk-giving quality, and delicacy of flesh, was selected for the trial. The buffalo bulls were eager to vanquish the native lords in the trial of horns, and to add the cows to their own following, but beyond this the results have not been encouraging. The attempt, however, has not been abandoned, as there seems to be no important structural difference. Darwin, in his «Domestication of Animals and Plants,» lays stress on the fact that the taming of wild animals to the use of man was a matter of uncounted ages, consummated by very gradual steps in the process of selection, and by a wise use of the accidents of variation. Man, even as savage or barbarian, had scientific instincts. It is a curious fact, too, that the domesticated animal relapses so easily into wildness, and that some of the most formidable creatures in their wild state become the most docile servants of man. The elephant and the buffalo of India and South Africa are illustrations of this. The urus, or primitive ox of Europe, which attained such a size that Cæsar describes it as only a little smaller than the elephant, has been within historic times the hunter's quarry solely. The great Roman emphasizes its ferocity as sparing neither man nor beast, and offering a splendid school of daring for the young German warriors. Yet the bones of the urus have been found so profusely mixed with the bronze, polished flints, and pottery relics of the Swiss and Bavarian lake-dwellers as to make it certain that among this primitive race the savage beast was usefully domesticated. On the other hand, all man's art has failed to tame the native wild cattle of Great Britain, supposed to be the nearest modern relatives of the urus, still preserved at Chillingham, Cadzow forest, and other English parks. The docile temper of the buffalo ought to present no difficulties to its complete domestication, and experiment has gone far enough to prove that its kind will live and breed as certainly as ordinary cattle, with even less protection from stress of weather.

The Old-World congener of the buffalo, the aurochs of the Germans, was two hundred years ago scattered well over central and eastern Europe. Larger and fiercer than its American relative, it attacks man fearlessly, charging the peaceful wayfarer as well as the hunter. A recent report limits their present number to less than five hundred, a rapidly diminishing herd preserved by the Russian czar in a Lithuanian forest. Imperial protec-



DRAWN BY CHARLES R. KNIGHT.

AMERICAN ELK.

DRAWN BY CHARLES R. KNIGHT.

VIRGINIA DEER.

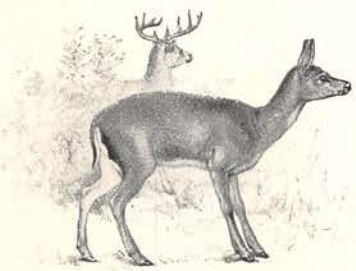
tion has failed where Mr. Corbin's treatment has been highly successful. The herd in Blue Mountain Forest now numbers seventy, and a dozen or more calves are looked for in the spring. At the expected rate of increase, not many years should elapse before the Corbin preserve can supply all the park and menagerie needs of America, and perhaps of Europe. It is true that a care is bestowed on this animal which no others in the park receive. The calves and yearlings are housed in sheds during the winter, each grade being kept separate from the others, and the adults have access at will to a similar protection. They are fed with green maize fodder and hay, which serve well in lieu of the famous buffalo-grass, as no attempt to grow it in the park has succeeded. Widely distributed over the Western prairies and mountain-slopes in great patches, this seems to partake of the nature of a leguminous plant as well as of a true grass. During the winter its dried and twisted leaves coil into a bulb, which sheathes a tender green heart, full of sweetness and succulence, as of fragrant clover-blossoms, where bees hum the busiest. The wild herds scent its presence beneath the deep snow with unerring prescience. But the sleek hides of the animals in Blue Mountain Forest after a winter's siege indicate a toothsome substitute.

The cows calve in April and May, and the young ones are weaned in the autumn, just before the early snowfall, though in the natural state they follow their mothers for several years. The process of separation is one of difficulty, not to say danger, and is somewhat dreaded by the gamekeepers; yet cow and calf quickly forget each other. When the snow flies the adult herd is driven into winter quarters by horsemen. The coat now fades to a dingy yellow, which deepens again with the spring running, till late autumn burnishes the fur into a glossy dark brown, and grows it to a downy thickness. Aside from the change wrought by greater familiarity with and indifference to the presence of man, the buffalo of the park and the wild animal of the plains are quite the same in habit. The captives wander about in two parties, sometimes augmented by the Angus cattle, the larger of the shaggy bands accompanied by that valiant bull which has won the primacy in battle. They roam from

ten to twenty miles a day through the lower levels of the park, never consorting with the *Cervidæ*, or deer-people, as Kipling would call them, lazily browsing wherever the herbage is most tempting. But they rarely fail to visit the sand-wallows, in which they roll and scour their hides; for *Bison americanus* is a cleanly fellow in spite of his unkempt and bearded aspect, which promises an abode for clans of parasites.

Up to a very recent date only seven of the buffalo herd had been sold; but at the time of this writing a further disposition of twenty-six head to Van Cortlandt Park, New York City, is said to have been negotiated. The prices demanded have been much below the real value, from four hundred to four hundred and forty dollars each, as sales have been made to favored customers only, public park or private menagerie. The animals are transferred from the park to the freight-station in huge wheeled crates; and when these vehicles are backed up to the car, and the door opened wide, the captives, restless in their close quarters, promptly retire crab-fashion into their new prison. When a single buffalo is shipped, he is kept in his crate till the journey's end.

The gregarious habit of the buffalo is much less noticeable in the elk, or wapiti deer, the American representative of the European stag. In Blue Mountain Forest this species numbers not less, probably considerably more, than a thousand. Surpassed only by the moose in size, and far more graceful, it towers a foot higher than the stag, and is correspondingly bigger in horns and barrel. The buck has the most majestic bearing of the cervine tribe, and tosses such a crown of antlers as to make this the coveted prize which, more than any other cause, leads to its pursuit, for as food the flesh is coarse. The neck is long, the color shading from tan to brown, except on the hind legs, where white patches edged with black stamp the universal badge of the elk. The antler-



DRAWN BY E. E. THOMPSON.

COMMON AMERICAN DEER.

DRAWN BY J. SMIT.

FALLOW-DEER.

points grow forward and fork into tines numerous and wide-spreading; for it is not rare to find this crowning ornament from four to five feet in width by three in height. They reach their full size at rutting-time in September, when the buck is armed at all points for his annual duels, and are shed during the spring months, unlike other members of the deer tribe, which drop their antlers in the winter. The elk is the most pasha-like in family habit, and its jealousies are curiously human. The duels of the bucks, however, are rarely fatal. Interlocking their great horns, they wrestle with such obstinacy as sometimes to break off a portion of the antlers; sometimes, indeed, one may toss his antagonist: but they rarely gore each other, perhaps from the wide spread of the horns and the too great distribution of the force of impact, for one may fancy the inclination not lacking. Sometimes the bucks turn «rogues,» and are habitually fierce. These may charge working-parties or visitors with fury at any time, so they are speedily shot; but any of the bucks are likely to try conclusions with humankind in the September-October season.

Many are the anecdotes of narrow escape from hoof and horn at Blue Mountain, and these are always associated with the capricious antics of the stag elk. The does bring forth their young in May, amid the dense thickets, and it is not till midsummer that they emerge into the open with their frolicsome offspring. They are rarely seen in association of more than half a dozen, and the sexes do not mingle except at the rutting-

season. Once the stag has beguiled or annexed as large a herd as possible, he becomes for the while the most uxorious of husbands. The superintendent of the park related a curious comedy of animal life in an instance of an elk's cross-purposes, his pugnacity inflamed yet thwarted by conjugal ardor. Driving through the notch, he happened on a large family guarded by its pasha. The jealous stag at once lowered his antlers and prepared to charge. But one eye was ever on the terrified hinds, which scattered in different ways; and though the discharge of a gun had not moved him, the flight of his spouses despatched him on a gallop to round up the fugitives. This done, his ire rekindled, and bellowing with deferred wrath, he threatened again to charge, when the hinds again broke, and again the worried stag postponed action. This was repeated several times before it ended in the total flight and disappearance of the herd. Probably no wild animal is better suited to park purposes than the elk. It is extremely hardy and adaptable to food and climate. This is shown by its immense natural range, extending from the Atlantic to the Pacific, and far down into a warm climate as well as up toward Arctic cold. Its stately beauty of form is unequaled, its fecundity reliable. The only drawback to semi-domestication in parks is its capriciousness of temper. When the rutting-season begins the gates of Blue Mountain Forest are closed to the general visitor, and this exclusion lasts till spring.

One may be fairly sure of seeing groups of buffalo and elk, but he would search long and far for a glimpse of a moose, the colossus of his race, though a numerous herd of them lie ambushed in the upland forests and thickets of the great park. In the spring they sometimes descend early in the morning to wallow in the marshes, but at other times they hide in a home virtually as secluded as a Canadian fastness. Once only, after a repeated search, and then by a lucky chance, has an attempt availed to secure a photograph of a bull moose in Blue Mountain woods. The stalk in the dead of winter for a snap-shot with the camera was even more exciting than if the hunter's weapon had been loaded with deadlier ammunition than a sensitive plate. In its native wilds this hermit is not often allured from its retreats to be seen of men, except by that music of the birch-bark trumpet, more difficult to master than flute or fiddle, which counterfeits the thrilling summons of the cow to her mate. The American moose, dubbed in other lands the elk, is the king of the deer kind. The shoulders overtop a horse, and the palmated antlers slope a little backward from a head two feet long. A coarse, thick brown fur pads the fore body against anything less than Arctic winter. The horns attain maturity in the fifth year, but they augment in size and weight until fourteen branches fork from their base, and then only a strong man could lift the antlered skull. With head thrown back, the alarmed bull will cleave the tangled woods with the rush of a steamship through the water; yet his walk is so velvet-footed that it scarcely rustles a dead twig. Less polygamous than the elk or the buffalo, the ferocity of this animal in rutting-time, though ordinarily the most timid of creatures, is proverbial among Canadian woodsmen, and an attack on any intruder, man or beast, is inevitable. The danger of such an onset, unless stopped by a bullet, may be fancied from the fact that a well-planted stroke of the hoof, the favorite weapon of attack, has been known to kill a wolf or a panther. The augmentation of the stock in Blue Mountain Forest shows how well its moose have thriven; for the dozen originally imported have increased to one hundred and fifty. The cows calve in the springtime, often bearing twins. After this event the family retires to the deepest seclusion of the woods, away even from its lord, and the young calves often remain with the mothers two years. Perhaps in time, as the number increases, this denizen of Blue Mountain will be more visible, and thus add greatly to the attractions of the park. Less graceful than the elk, the strength and grandeur

Elk

Boars.

of the bull moose's clumsy bulk, and the huge antlers, solid enough to shatter a stone wall, make a picture that, once seen, is not easily forgotten. If the pleasures of the chase are ever added to the more important uses of this vast breeding-farm of wild creatures, it will share with the wild boar that brevet of distinction which comes of greater difficulty and danger in pursuit. Though the visitor rarely sees a moose, its tooth-marks can be noted with half an eye. In common with the elk, it browses on the forest twigs and leaves, and in winter it devours the bark and smaller branches with avidity. Everywhere the trees of the upper woodlands, especially the birches, maples, and beeches, are disfigured with patches peeled from the surface; sometimes, indeed, the lower growing branches are completely stripped as with an ax. One may be sure that this is the «blazing» of a moose on a foraging expedition.

DRAWN BY J. SMIT.

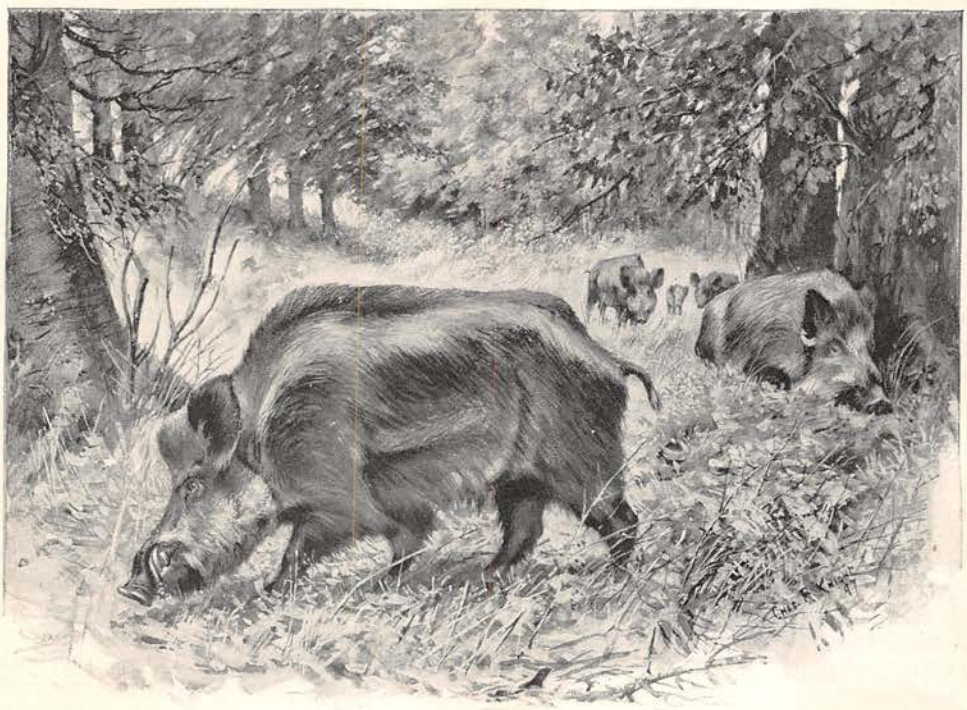
ROEBUCK.

In addition to the larger *Cervidæ*, there are in the park twelve hundred deer of other varieties, most of them our common American deer, including a few of the black-tailed species, yet with a considerable minority of the European stag and fallow or spotted deer. Both the latter-named have thriven in their transplanted homes, and the stag is one of the most beautiful and stately animals in the park, though one of the shyest. Its pedigree is interwoven with the history, poetry, and romance of the Old World, and recalls, in a magic mirror, a legion of recollections fascinating to old and young. The stag or red deer has vanished from its indigenous haunts, except in parts of the Scottish Highlands and in eastern Europe; and in all cases it survives only by the gamekeeper's care, doomed to time-honored fate at the hands of a privileged few. Its habits are closely analogous to those of the elk, its antlers and carriage scarcely less lofty, and its home in the Corbin preserve appears to furnish an environment fit for all its needs.

Interesting as are such foreigners added to our native fauna with the possibility of giving them a firm foothold, the main significance of a park like Blue Mountain Forest glances another way. Several of the experiments with alien varieties of bird and beast have ended badly—as, for example, the European reindeer, though the same ill-luck befell its American relative, the caribou. So, too, the Himalayan goats paired off with the Rocky Mountain sheep, in the vain attempt to survive the exigencies of a New Hampshire climate. In the catalogue of failures one must not overlook that most skilful of four-footed mechanics, the beaver. A pair put into the park about four years ago built a dam with great celerity, felling a ring of trees as unerringly in place as would choppers smiting with the sharpest of steel axes. Having built this monument, they vanished down the waterway which they had fortified. Wire fencing proved as worthless a barrier to the «royal pheasants» so lavishly introduced; for the native partridge, or ruffed grouse, and the woodcock seem to be the only feathered game thoroughly at home in these New Hampshire woods.

But if there have been some failures, how splendid the successes! This can be more vividly grasped in a recapitulation which sums up the results in a few figures. The buffalo herd, which now numbers about eighty-five, has sprung from four bulls and ten cows procured in 1889, and two bulls and eight cows added in 1892. It is the largest conventicle of these gentle savages in existence, except, perhaps, some unknown wild herd roaming in British America, and yet not a few of them have been sold to other parks. Of the moose kind, fewer than a score pur-

chased in 1889 have begotten a progeny now rounding a total of one hundred and fifty or more. The elk herd has grown from one hundred and forty, introduced in 1889–90–91, to what is believed to be little short of one thousand; and the higher estimate of twelve hundred attaches to the increase of the original one hundred and twenty deer of four varieties. A limited number of bull elks and bucks are shot every fall to control the inevitable increase. Four-



DRAWN BY CHARLES R. KNIGHT.

WILD BOARS.

teen wild swine of the German Black Forest, the brakes of which harbored the breed in a savage state centuries before Cæsar carried the Roman eagles across the Rhine, have populated the Blue Mountain thickets with eight hundred or more savage-looking offspring, and each year accelerates the ratio of increase. In all these figures it must be remembered that there is a factor of uncertainty except as regards the buffalo. Scattered over forty square miles, largely dense and tangled forest, many of the animals have never been seen by human eye, and hide themselves in what is virtually an aboriginal wilderness. But in the inevitable guesswork, the park statistics, it is claimed, aim at under- rather than over-counting.

The prolific breeding of the wild hogs will, in the course of the next decade, make their great reduction a necessity. So perhaps one of the most exciting of medieval sports may be revived in this latter day, when again

> The babbling echo mocks the hounds
> Replying shrilly to the well-tuned horns.

The pig-sticking (a butcher-like name for a manly sport) of the Anglo-Indian ranks as an adventure scarcely less exciting than tiger-hunting. Though the wild boar of Hindustan is less savage and powerful than its European representative, it would soil the sportsman's unwritten code to use any weapon more deadly to his game, and less risky to himself, than the spear. This means close quarters and personal courage, though the modern sport is less perilous than that which faced the royal game on foot with spear and hounds; for in the forests of Europe the hunter dismounted to assail the boar held at bay by his dogs. The brave Abyssinian of to-day faces the spring of the lion with lance and sword.

The conditions of Blue Mountain Forest, with its teeming herds of wild swine of a pedigree insuring their ferocity if brought to bay, offer a noble opportunity for introducing a kind of hunting than which none

could better test skill and manhood. It would be far more pulse-stirring than perforating grizzlies with steel-pointed bullets pumped from an unfailing magazine. The aspect of the boar—such a one as the writer was lucky enough to see—rooting in the edge of a wood, yet forever on guard with a wicked eye, ennobles him at once as an enemy to be held in honor. The huge head and snout gleaming with tusks, the square shoulders, the gaunt body with brawny flanks built for a swiftness which almost outruns the horse or dog, all covered with coarse, long brown bristles, made an impressive picture. These swine in the Blue Mountain woods banquet royally on beech-mast in the fall, and it is not often that they show themselves. But when the thickets are whipped clean, and the trees are silhouetted from bole to topmost pinnacle, and the pale winter sunshine filters into the heart of every nook and covert, one does not need to wander far. Then, too, these suspicious animals are lured from solitude to the open glades, where daily rations of corn eke out the scanty provender of nature.

The purpose of the founder of Blue Mountain Forest Park, among several objects eminently worth attaining, included the naturalization of wild animals under such conditions as would effect in some cases modification by cross-breeding. The buffalo, so far, has not crossed with domestic cattle, nor has the elk, so far as known, crossed with its European congener the red deer. Such experiments can come to an issue only with time and patience, and this royally planned preserve is not yet eight years old. But if this problem is yet in embryo, others have met with a full reward. Most of all as a vast nursery of wild creatures indigenous to our continent, the park has multiplied results on a scale outfooting expectation. It is safe to say, for example, that it has insured, not merely the existence of the buffalo, but its increase in a measure to make possible the extensive stocking of other parks. The disposition to found public and private preserves has grown smartly within recent years. Aside from provision to gratify our human taste for more rarely seen forms of animal life in city parks, individuals and clubs have taken steps to enrich and protect hunting-grounds and create artificial wildernesses. Judge Caton's well-known preserve in Ohio, though on a much smaller scale than the Corbin park, and more limited in its variety of animals, antedated it, and is noteworthy as the place where a careful study of the wapiti, or elk, was first made. Mr. George Vanderbilt's later inclosures at his Biltmore estate in North Carolina, though his plans seem as yet unshaped, are big with promise. So, too, the Gould park in the Adirondacks, and Dr. Seward Webb's nine-mile inclosure in the same splendid wilderness, bear testimony to the influence of the Corbin example. Newspaper report also credits Mr. William C. Whitney with the purpose of establishing a great animal-preserve in the Berkshire Hills of Massachusetts. But it is rather in less audacious enterprises that the value of the inspiration of Blue Mountain Forest Park will find its effective vent in regions topographically planned like northern New York, northern New England, and extensive tracts of Pennsylvania.

Mountain lands by the hundred thousand acres, where the farm is giving up its long fight, lie within little more than a half-day's journey from the great Eastern capitals. These regions do not respond to agriculture. Their sole big crops are stones and trees and wild animals. The returns of the harvesters of pulp-wood scarcely pay the chopping. The very corner-stone of sound economics is finding use in the channel of fitness along the line of least resistance. With this thought in mind, the transformation of vast tracts of mountainous New England back to a state of nature loses, even on its sentimental side, somewhat of the repugnance which attaches to the notion of a backsliding of civilization. The entire plateau, from ten to twenty miles in width, which roofs the Green Mountains of Vermont, for example, a section of noble woods and picturesque lakes, is thinly settled, and yields a reluctant livelihood to man. Whole townships, six miles square, with only a dozen voters who send one another by turns to the legislature, may be easily cited. Regions like this seem fashioned by nature's hand for natural uses, such as may be found in park and preserve and the pleasures of woodland sport. The Green Mountain plateau so fitly meets the needs of wild animal life that its woods already swarm with bear and deer. The close law enacted about ten years since, which prohibited deer-shooting until 1900, has so favored multiplication that the does and fawns frequently herd with cows on the slopes and meadows.

G. T. Ferris.