

THE WHITE-TAILED GNU IN THE HANOVER ZOOLOGICAL GARDEN.

The accompanying engraving, for which we are indebted to the *Illustrirte Zeitung*, shows the white-tailed gnu, with its calf, now in the Zoological Garden at Hanover. This garden possesses specimens of both the white-tailed gnu (*Catoblepus gnu*) and the black-tailed gnu, also called the blue or Gorgon gnu (*Catoblepus Gorgon*), but those of the former species are specially interesting. At first the young one resembled a bison calf in many respects. Its coat was a pretty brown color, its head being a sepia brown, while the brush-like bunch of hair just above the nose was black, and the short stiff main was also black. Its bushy tail, which reached almost to the hock, was round like that of a dog. The thick hair concealed the rudimentary, button-like horns, but at the end of five weeks these were half a finger long. Although, in that time, the brush-like hair on the head and the mane—very characteristic features of the gnu—had become more marked, the creature still looked as if belonging to a different species from the mother. When eight weeks old its back was only about a hand's breadth lower than the mother's and its horns were about three inches long and quite straight, differ-

the ground is sufficiently thawed for the miner to get out about a foot or a foot and a half of gravel and soil. One man can burn a hole down about a foot a day. The work can be done only when all the surface water is frozen, otherwise it would drain into the prospect hole. In this region wells have been sunk seventy-five feet or more, all through frozen ground, and the miners say they never got below the frost line.

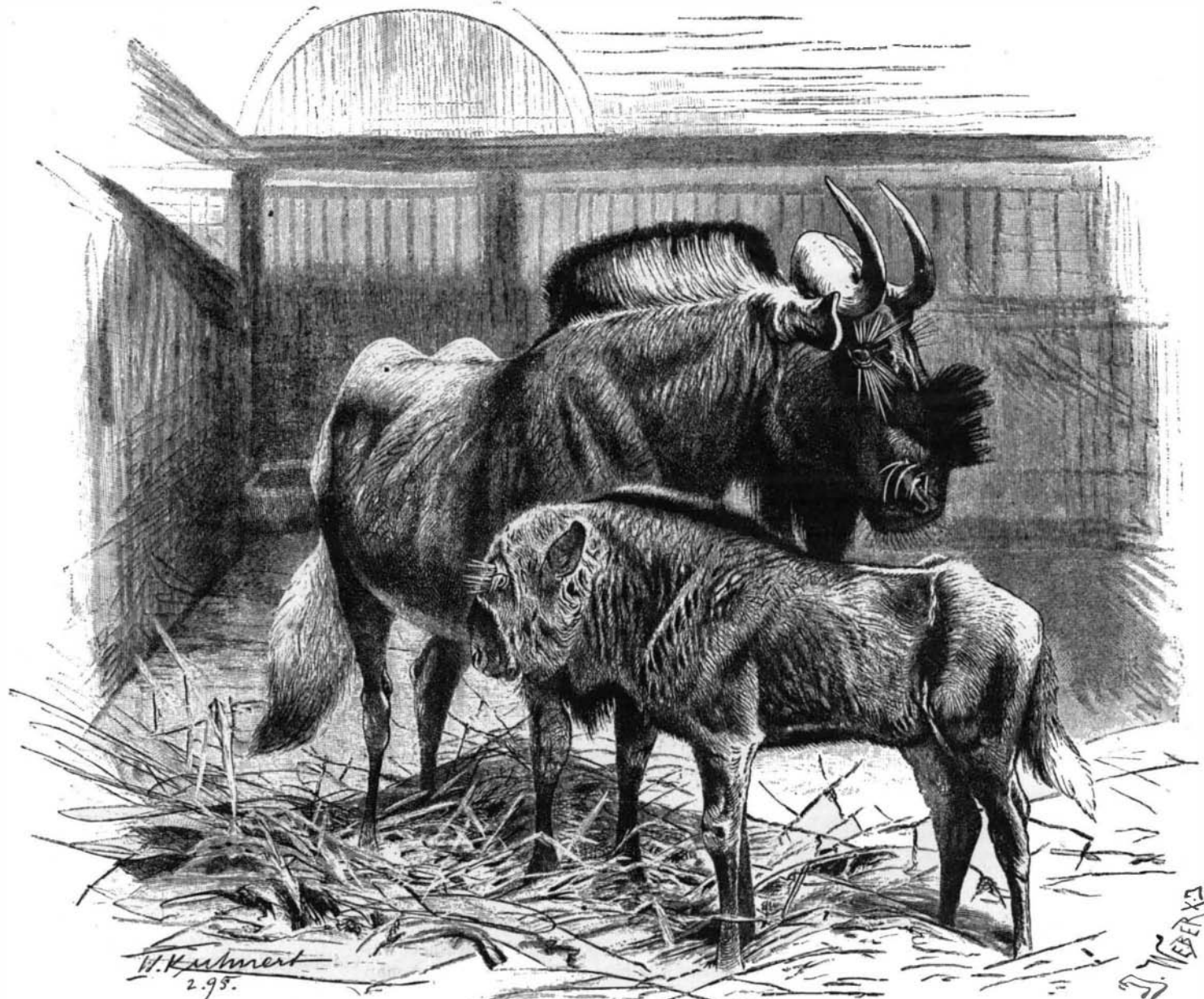
In other districts the work can be done only in the very brief summer, from the middle of May until about the middle of September, and usually for only about ninety days. In these regions the ground is not frozen so deep, and the gravel and soil can be washed from the bed rock. Flumes must be built from the creeks and the water conducted to the claims. The bed rock is from ten to twenty-three feet below the surface, and all the overlying soil must be washed away before the gold is accessible. A working supply of water is rarely obtainable for more than ninety days of the year. Usually almost two entire seasons are consumed in this preliminary work before a sight of the gold is obtained, and the miner must have money as well as pluck to keep him going until he strikes pay gravel. The gravel needs to be remarkably rich to compensate for the arduous and tedious labor of reaching it.

large districts could be worked in a systematic way and big profits be realized. From all accounts, that is how the Yukon gold and silver region will be made to give up its riches.

Test of an Eighteen-inch Armor Plate.

An important test of an 18-inch Harveyized armor plate took place at the Indian Head proving ground on May 1. The test was particularly interesting, as it was practically a competition of the suspected Carnegie product and the successful Bethlehem manufacture. The test of the 18-inch Bethlehem plate on March 11 was described in the *SCIENTIFIC AMERICAN* for March 23, 1895. The Carnegie plate was tested with exactly the same grade of shells. The Carnegie plate weighed 79,300 pounds, was 16 feet 9½ inches long, 5¾ inches wide and cost \$20,000. It was the representative of ten plates, weighing 306 tons, for the battleship Oregon. The plate was attached to an oak backing three feet thick, by 26 three-inch bolts. The plate was erected on a hillside about 300 feet from the gun battery.

The first projectile was an 850 pound 12-inch Holtzer shell, propelled by 249 pounds of brown, hexagonal powder. The velocity was 1,465 feet per second, and



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DRAWN FROM LIFE BY WILHELM KUHNERT.

ing in this respect from those of the old gnu. The color of its coat was also beginning to change.

The gnu belongs to the antelope family, the members of which differ so greatly in size, proportions, color, the shape of the horns, etc.

The Alaskan Gold Regions.

Last season's yield of gold from the Yukon River district in Alaska was about \$249,000, according to an estimate gathered from miners and business men in the district by the *Alaska News*. The returns are undoubtedly big, but the labor of getting the gold, as described by one of the oldest miners in the region, is very great. The Yukon district is remarkably difficult of access, and a great many adventurers who have started hopefully from Juneau have failed even to get near the gold region. It is an expensive journey, too. Then the character of the gold mining and the limitations under which it must be done have sent many fairly experienced miners back in despair.

In many districts the gold-bearing rock is twenty or more feet below the surface, and shafts must be sunk to that depth through ground frozen solid and by a most laborious process. The prospect holes are usually about three and a half feet wide by six feet long. Enough wood must be cut to cover this space, and a rousing fire be kept up for almost a whole day before

When the claims are worked by burning prospect holes in the winter, hot water is needed for washing the gravel when it is obtained. Usually when the gold-bearing gravel has been reached the returns have been handsome. Along Miller Creek in the past season or two the yield has averaged as much as \$1 or \$1.50 a pan, and claims staked out two or three years ago are now held at prices varying from \$2,000 to \$20,000 each.

The extent of the gold belt of northwest Alaska and the Canadian Northwest Territory is still a matter of speculation. From the information brought by prospectors it is believed that the belt covers a district from seventy-five to a hundred miles wide, commencing on the head waters of the Hootalinqua River, in British Columbia, and following closely the course of the Yukon River to and beyond the Arctic Circle, a distance of about nine hundred miles. It is probable that dozens of tributary streams, as yet unexplored, many doubtless unknown, are rich in gold and silver. The vast region is practically unexplored. The mining at present going on is but nibbling on the edge of the rich region. But when the gold and silver mines are systematically opened up, it will be a region for the capitalist and not for the individual miner. The ground must be exceptionally rich in gold to pay one or two miners working for themselves. With capital

the shell struck the plate with an energy of 12,662 foot tons. This was a cracking shot, but the plate was not cracked or penetrated, the projectile being completely shattered after entering about 6 inches. Portions of the outer shell of the plate scaled off. The next shot was propelled by 443 pounds of powder, the muzzle velocity being 1,926 feet and the striking energy 21,885 foot tons. This shot was to test for penetration, but it only passed through 10 inches of the plate, the head of the projectile being smashed on the plate. The metal of the plate where the projectile struck was fused. Notwithstanding a crack about three-quarters of an inch wide which extended from top to bottom of the plate, it was accepted by the government. It was then determined to attack it with the great 18-inch gun. A 13-inch Carpenter shell, weighing 1,100 pounds, was driven by 489 pounds of powder. The projectile had a striking energy of 25,000 foot tons. It was of course expected that the shot would demolish the plate, but instead, after penetrating 10 inches, the projectile itself was completely destroyed. The solid oak backing was, however, greatly split. A crack 3 inches wide extended some distance from the top. The ability of the plate to keep out the heaviest projectiles we now manufacture is amply demonstrated. At present the race between armor and gun seems to be in favor of the armor.