INDIAN BOW AND ARROW. EFFECTIVENESS AS A WEAPON. INDIAN WEAPONS AND SHIELDS.


(187) At fifty yards a well-shaped, iron-pointed arrow is dangerous and very sure. A handful drawn from the quiver and discharged successively will make a more rapid fire than that of the revolver, and at very short range will further penetrate a piece of plank than the ball of an ordinary Colt's navy pistol. The arrow head varies in length and shape, and the shaft itself slightly changes, according to the tastes of different bands or tribes; and yet so constantly are arrows exchanged in gambling or

(188) barter that the character of the arrow used does not invariably determine the tribe engaged. Such were many of the arrows taken from the bodies of Captains Petterman, Brown, Lieutenant Grummond, and others, after the massacre of December, 1866 (Fort Phil Kearny Massacre). All the peculiarities there found have been seen in the quivers of the Kittekehas, Chowees, Petropowetaws, and other Pawnees, all of whom are friendly, and some of whom are now, as in the winter of 1865-6, in the employ of the United States. The head is often barbed, but not generally, and is from two to three and a-half inches in length, made of iron, and ground to a double edge. The shaft, which is about twenty-five inches in length, is winged by three feathers of the eagle, sage-hen, or wild-goose, and from the sinew wrapping of the head to that which binds the feathers is deeply marked by three grooves or blood-seams, so that when the flesh of man or beast closes about the shaft, these seams act as conduits and gradually bleed the victim to death. These grooves are with some Indians straight, and with others are zigzag or winding from midway down to the feathers. The bows of Ogillalla and Brule Sioux, Arrapahoes, Cheyennes, and most of the Indians east of the Rocky Mountains, are from thirty-two to forty inches long, of great elasticity and tension, so that they easily drive an arrow through

(189) a two inch plank, and even through a man or buffalo.


(93) Near headwaters of Flathead river, October 28, 1855. Battle between Kootenai and Blackfoot Indians. I was very glad when I saw McKay making Kickapoo fly around our pack animals, keeping them bunched and trying to keep the Blackfeet from getting away with any of them. I saw one of our pack horses fall and roll over down hill and another one with a broken leg. It was

(93) now I saw McKay do an act which is seldom seen, viz: drive an arrow through an Indian's body. I joined him at this time saying, "Well done Mo", but was saddened to see that both he and Kickapoo were bleeding.


(76) Bow. --- (Clark quotes Belden) "The bow - the weapon so long in use among the different Indian tribes of this continent, so typical of Indian life, and the mere mention of which always associates our ideas with the red man - is made of various kinds of wood, and its manufacture is a work of no little labor. Even at this day (1878-1884) the bow is much used, and although an Indian may have a gun, he is seldom seen
The armament of an Elizabethan ship. Priming and firing. The guns did not fire very true; for the shot was always so much smaller than the bore of the piece that it wobbled about inside the gun, and made it impossible to aim exactly. Scales were cut upon the quoins, and perhaps upon the guns themselves, to help the gunner to lay his piece with accuracy. Breech-loading guns, etc. The breech-loading guns were mounted in the tops and cageworks "for murdering near at hand." They were not mounted on wheeled carriages, but on pivots, and strong wooden stanchions, upon which they could be turned, raised or depressed, by one or two hands. Some of them had iron handles by which their gunners could turn them in any direction. These breech-loading guns had open "beds," or "tails," in the breech, to receive the "chambers" containing the charge. The chambers were fixed into the beds or tails by means of iron or wooden wedges. After firing, the chamber was taken out, and another driven in. These guns could be fired rapidly, some thirty times and hour, or nearly as fast as a man could fire and load; but perhaps they were never fired quite so rapidly in action, as they would have become almost red hot, and very violent in their kick. The big M.L. guns (muzzle loading) could be fired about once in five or six minutes. If they became hot through repeated firing, they had to be sponged within and without, and allowed to rest. Large guns were generally painted about the touchholes with the Royal arms and the name of their ship. They were very little worse than the guns in use at the time of the battle of Trafalgar. The largest gun in general use in our navy in the reign of Elizabeth was the demi cannon, which threw a ball of about 30 lbs. and had a range of about a mile. Nelson's chief weapon was the 32 pr. (pounder) gun, which carried about a mile and a half, when elevated 10 degrees. The ships were generally mounted with more guns than they needed, and the excessive strain of so many guns must have shortened their terms of service. Even merchant ships and the smaller ships of Elizabeth's navy carried powerful armaments; and our sea victories in this reign were directly due to the comparative excellence of our sea artillery; and to our recognition of the fact that a war ship is a moveable battery rather than a floating parade ground, or battering ram.

The True History of the Conquest of New Spain by Bernal Díaz del Castillo, Translated by Alfred Percival Maudsley, Hakluyt Society, London, Second Series, No. XXIII, Volume I, Pages 23 and 33. March, 1519. Cozumel. Chapter XXVI. How Cortes reviewed all his army and what else happened to us. When we had been in Cozumel three days Cortes ordered a muster of his forces so as to see how many of us there were, and he found that we numbered five hundred and eight, not counting the shipmasters, pilots and sailors, who numbered about one hundred. There were sixteen horses and mares all fit to be used for sport or as chargers. There were eleven ships both great and small, and one a sort of launch which a certain Gines Cortes brought laden with supplies. There were thirty two cross bowmen and thirteen musketeers; - escopeteros, as they were then called and (Blotted out of the original Manuscript is the word "ten". - G.G.) brass guns, and four falconets, and much powder and ball. About the number of cross bowmen my memory does not serve me very well, but it is not material to my story. After the review Cortes ordered Mesa surnamed "the gunner" and Bartolome de Usagre and Abenga and a certain Catalan who were all artillerymen, to keep their guns clean and in good order, and the ammunition ready for use. He appointed Francisco de Orozco, who had been a soldier in Italy to be captain of the Artillery. He likewise ordered two crossbowmen named Juan Benitez and Pedro del Guzman the crossbowman, who were masters of the art of repairing crossbows, to see that every crossbow had two or three (spare) nuts and cords and fore cords and to be careful to keep them stored and to have smoothing tools and inguijuela and to see that the men should practice at a target. He also ordered all the horses to be kept in good condition.
The Indian Sign Language, by W.P. Clark, U.S. Army, Philadelphia, 1885. (76) "without his long-bow, and quiver well filled with arrows. The gun may get out of order, and he cannot mend it; the ammunition may become wet, and there is an end of hunting; but the faithful bow is always in order, and its swift arrows ready to fly in wet as well as dry weather. Thus reasons the savage, and so keeps his bow to fall back upon in case of accident. Until the invention of the breech-loader," (1845-1860) "it is a fact well known to frontiersmen that the bow was a far more deadly weapon at close range than the best rifle. A warrior could discharge his arrows with much greater rapidity and precision than the most expert woodsmen could charge and fire a muzzle-loading rifle. The Indian boy's first lesson in life is to shoot with a bow. --- As he grows older he receives the long-bow, and at (77) last the strong-bow. These strong-bows are powerful weapons, and I have seen them so stiff that a white man could not bend them sarcoe four inches, while an Indian would, with apparent ease, draw them to the arrow's head." (R.J. Hamilton, a Piegan, explained that both flexor and extensor muscles, coordinated, were used in drawing the short strong-bow. As the hand, four fingers on the string, was drawn back with a snap, the hand holding the bow was pushed forward with a snap. According to Dick Sanderville, a Piegan, they used a long-bow until they got the horse, which compelled the Indian to use a shorter bow for convenience. The long-bow, having greater leverage, could be drawn without the forward push of the hand holding the bow. Thus the advent of the horse changed the length of the bow, and the technique of drawing the bow. JGC.) "A shaft fired from one of these bows will go through the body of a buffalo, and arrowheads have been found so firmly imbedded in the thigh-bones of a man that no force could extract them. --- All the bows differ in length and strength, being gauged for the arms of those who are to use them; but a white man, would, until he learned the sleight of it, find himself unable to bend even the weakest war-bow. This has given rise to the impression that the Indians are stronger than white men, which is an error; for, although only a slight man myself, I learned, after some practice, to bend the strongest bow, and could send a shaft as far or as deep as any savage. On one occasion I shot an arrow, while running, into a buffalo so that the point came out on the opposite side; another arrow disappeared in the buffalo, not even the notch being visible. The power of the bow may be better understood when I tell you that the most powerful Colt's revolver will not send a ball through a buffalo. I have seen a bow throw an arrow five hundred yards, and have myself often discharged one entirely through a board one inch thick."

(78) "Once I found a man's skull transfixed to a tree by an arrow which had gone completely through the bones, and imbedded itself so deep in the wood as to sustain the weight of the head. He had probably been tied to the tree and shot. --- I once saw an Indian ride alongside of a large buffalo cow going at such speed that it required the best exertions of his very fleet pony to overtake and keep up with her. Leaning forward on his pony, and drawing an arrow to its head, he sent it entirely (79) through the buffalo just back of the foreshoulder, so that it fell on the ground on the opposite side."

The next great change in military rifles was the adoption of the breech loader. While the breech-loading rifle had been used before this time - the Ferguson and Hall rifles being examples - its action was not entirely satisfactory until the invention of the metallic cartridge case, with its device to prevent the escape of powder gas through the breech. In 1813 Pauly, a Frenchman, evolved a breech-loading rifle with a swinging block; and Dryse, working under him, developed the first needle-gun bolt action. Dryse's bolt action was modified and adopted by the Prussians; and by 1848 Prussia had equipped all her troops with the needle gun. The cylindro-conical bullet was enclosed in a paper cartridge with the powder; the detonator or cap was placed inside the cartridge, between the powder and bullet. A needle enclosed in the bolt, upon the release of a spring, was forced through the paper cartridge and struck the cap, which ignited the powder. The success of the Prussians in the Danish and Austrian wars caused all nations to adopt the breech loaders. The English in 1866 converted the Enfield into the Snider breech loader, and in 1869 adopted the Martini-Henry rifle, both having hinged breech blocks. The French in 1866 adopted the Chassepot, an improved needle gun. The other Europeans adopted breech loaders in 1866 and 1868; and the United States, which during the Civil War had used some Sharpe and Spencer breech loading rifles, in 1873 adopted the Springfield. In 1871 Germany replaced the needle gun by the Mauser rifle; Italy, which had armed her infantry with the Carcano rifle in 1868, abandoned it for the Vetterli in 1871; Austria, which had adopted the Werndl in 1868, modified it in 1873; France substituted the Gras rifle for the Chassepot in 1874; the Russian Board of 1871 was modified and improved in 1880. Except the Werndl, the rifles had bolt breech mechanism. Magazine. The next great departure in the military rifle was the introduction of the magazine. The repeating firearm was brought out in America by Colt in 1840, followed in 1860 by the Henry and Spencer rifles. In 1867 the Henry was improved and re-named the Winchester. The effect produced by the Winchester in the hands of the Turks in the Russian-Turkish War of 1877-8, showed the advantage of repeating firearms over single loaders. The repeating rifle early became popular as a hunting rifle, but not until the advent of smokeless powder did the military powers adopt it.


[394] Our war was fought with the muzzle-loading rifle. Toward the close of it I had one brigade (Walcott's) armed with breech-loading "spencer's"; the cavalry generally had breech-loading car-395 bines, "Spencer's" and "Sharp's," both of which were good arms.

The only change which breech-loading arms will probably make in the art and practice of war will be to increase the amount of ammunition to be expended, and necessarily to be carried along; to still further "thin out" the line of attack, and to reduce battles to short, quick, decisive conflicts.


[75] Later the Confederate depots turned out a saddle which was easy on the horse but very hard on the rider; and eventually the Confederate cavalry was pretty well equipped with United States regulation saddles, provided by the enemy. Firearms were a harder problem. Colt's revolvers were plentiful in time, from the same unfailing source. Rifled muskets (Continued opposite page 171.)

(328) In Piegan camp on Bow river, winter of 1787-1788. The Pegan (Piegan) in whose tent I passed the winter was an old man of at least 75 to 80 years of age; his height about six feet, two or three inches, broad shoulders, strong limbed, his hair gray and plentiful, forehead high and nose prominent, his face slightly marked with the small pox, and altogether his countenance mild, and even, sometimes playful; although his step was firm and he rode with ease, he no longer hunted, this he left to his sons; his name was saukamappee (Young Man); his account of former times went back to about 1730 and was as follows. The Pegasans were always the frontier tribe, and upon whom the Snake Indians made their attacks, these latter were very numerous, even without their allies; and the Pegasans had to send messengers among us to procure help. Two of them came to the camp of my father, and I was then about his age (pointing to a lad of about sixteen years) he promised to come and bring some of his people, the Nahathaways (Cree) with him, for I am myself of that people, and not of those with whom I am. My father brought about twenty warriors with him. There were a few guns amongst us, but very little ammunition, and they were left to hunt for the families; our weapons was a lance, mostly pointed with iron, some few stone, a bow and a quiver of arrows; the bows were of larch, the length came to the chin; the quiver had about fifty arrows, of which ten had iron points,

(329) the others were headed with stone. He carried his knife on his breast and his axe in his belt. Such was my father's weapons, and those with him had much the same weapons. I had a bow and arrows and a knife, of which I was very proud. We came to the Pegasans and their allies. They were camped on the plains on the left bank of the river (the north side) and were a great many. We were feasted, and a great War Tent was made, and a few days passed in speeches, feasting and dances. A war chief was elected by the chiefs, and we got ready to march. Out spies had been out and had seen a large camp of Snake Indians on the plains of the Eagle Hill (between Battle river and the south branch of the Saskatchewan), and we had to cross the river in canoes, and on rafts, which we carefully secured for our retreat. When we had crossed and numbered our men, we were about 350 warriors (this he showed by counting every finger to be ten, and holding up both hands three times and then one hand) they had their scouts out, and came to meet us. Both parties made a great show of their numbers, and I thought that they were more numerous than ourselves. After some signing and dancing, they sat down on the ground, and placed their large shields before them, which covered them: we did the same, but our shields were not so many, and some of our shields had to shelter two men. Theirs were all placed touching each other; their bows were not so long as ours, but of better wood, and the back covered with the sinews of the bison which made them very elastic, and their arrows went a long way and whizzed about us as balls do from guns. They were all headed with a sharp, smooth, black stone (flint) which broke when it struck anything. Our iron headed arrows did not go through their shields, but stuck in them; on both sides several were wounded, but none lay on the ground; and night put an end to the battle, without a scalp being taken on either side, and in those days such was the result, unless one party was more numerous than the other.

(331) At length the tall chief retired and they formed their long usual line by placing their shields on the ground to touch each other, the shield having a breadth of full three feet or more.
were issued to the cavalry regiments as they became available, and very early Stuart was managing to arm at least one squadron in each regiment with weapons of precision. Carabines were always hard to get, and by the time that they could be generally distributed, the Federals were using breech-loading carabines to great advantage. The indefatigable Gorgas reconditioned, and even manufactured, some supply of these — and by that time the blue troopers were carrying a repeating carbine — a terrible gun, said the gray people, mournfully, which a Yank could load on Monday and shoot all the rest of the week. From time to time large captures of Federal breech loaders were made in Virginia, but the Confederates were never able to manufacture ammunition for them, having no brass for cartridges. —

(66) (1861) There were, in the Federal arsenals and depots seized by the several states on the act of secession, a total of 190,000 small arms and 8,000 cannon. In the state arsenals, under the control of the governors, there were 350,000 stand of rifles and muskets. These pieces were not all modern; they ranged from flint lock muskets, of Mexican War stocks, to the latest model of percussion-cap rifle. A great many of them were rifle muskets, modified recently from flint-lock to percussion-cap. Among them were some cavalry carabines, and some of the old artillery carabines, ante-dating the war with Mexico — as useful as crossbows.


(178) (New Mexico: Espejo Expedition. 1583. The Pueblo Indians.) Their arms consist of bows and arrows, macanas and chimaes; the arrows have fire-hardened shafts, the heads being of pointed flint, with which they easily pass through a coat of mail. The chimaes are made of cow hide, like leather shields; and the macanas consist of rods half a vara long, with very thick heads. With them they defend themselves within their houses.


(334) (Texas, 1541) During this journey a Teya was seen to shoot a bull right through both shoulders with an arrow, which would be a good shot for a musket.

American, The Life story of a Great Indian by Frank B. Linderman, New York, 1830. Life of Plenty Coups, or Many Achievements, a Crow Indian, dictated to Linderman by Plenty Coups, with comments by Linderman.

((14) Gripping it (the bow) firmly with his left hand, he (Plenty Coups) deftly placed the arrow with his right, the index and second fingers straddling the shaft and, with the third finger, pulling the bow-string. The thumb's end was against the arrow notched into the string. "Both hands and both arms must work to—

(15) gether — at once," he said. "The left must push and the right must pull at the same time (so) if an arrow is to go straight or far. The left hand, grasping the bow, must be in its center. The right hand, palm toward one (like this), its fingers straddling the arrow (so), must know and keep the center of the bow-string without the eyes having to look;"

(16) "speed in shooting was very necessary, since both in war and hunting a man must be quick to send a second arrow after his first. We were taught to hold one, and sometimes more arrows in the left hand with the bow. They were held points down, feathers up, so that when the right hand reached and drew them, the left would not be wounded by their sharp heads. Sometimes men carried an extra arrow in their mouths. This was quicker than pulling them from a quiver over the shoulder, but was a method used only in fighting, or dangerous situations."
The publications of the Champlain Society, VI, A Journey from Prince of Wales's Fort in Hudson's Bay to the Northern Ocean in the years 1769, 1770, 1771, and 1772, by Samuel Hearne, Edited by J.B. Tyrrell, Toronto, 1911.

(142) Copper Indians prepare for war on Esquimaux, May, 1771, near Coppermine river. Accordingly, each volunteer, as well as those who were properly of my party, prepared a target, or shield, before we left the woods of Clayoquot. Those targets were composed of thin boards, about three quarters of an inch thick, two feet broad, and three feet long; and were intended to ward off the arrows of the Esquimaux.

(189) Esquimaux of Copper river, and around Bloody Falls, July 1771. Their arms and fishing-tackle are bows and arrows, spears, lances, darts, &c. which exactly resemble those made use of by the Esquimaux in Hudson's Straits, and which have been well described by Cranze; but, for want of good edge-tools, are far inferior to them in workmanship. Their arrows are either shod with a triangular piece of black stone, like slate, or a piece of copper; but most commonly the former.


(338) The second great battle with the Tlaxcalans, September 5, 1519. To go back to out battle: How they began to charge on us! What a hail of stones sped from their slings! As for their bowmen, the javelins lay like corn on the threshing floor; all of them barbed and fire-hardened, which would pierce any armour and would reach the vitals where there is no protection; the men with swords and shields and other arms larger than swords, such as broadswords, and lances, how they pressed on us and with what valour and what mighty shouts and yells they charged upon us!

(339) First battle with the Tlaxcalans, September 2, 1519. (the macana) While we found ourselves in this conflict among these great warriors and their fearful broadswords, we noticed that many of the strongest among them crowded together to lay hands on a horse. They set to work with a furious attack, laying hands on a good mare known to be very handy either for sport or for charging. The rider, Pedro de Moron, was a very good horseman, and as he charged with three other horsemen into the ranks of the enemy (they were ordered thus to charge together, so as to help one another) the Indians seized hold of his lance and he was not able to drag it away, and others gave him cuts with their broadswords and wounded him badly, and then they slashed at the mare, and cut her head off at the neck so that it hung by the skin, and she fell dead. If his mounted companions had not come at once to his rescue they would also have finished killing Pedro de Moron.


There were shields great and small, and a sort of broadswords, and others like two-handed swords set with stone knives which cut much better than our swords, and lances longer than our are, with a fathom of blade with many knives set in it, which even when they are driven into a buckler or shield do not come out, in fact they cut like razors so that they can shave their heads with them.

Travels and Works of Captain John Smith, Arber & Bradley, Edinburgh, 1910. (I: lxvii) (Virginia, 1607) One of our gentlemen having a target which he trusted in, thinking it would bear out a slight shot, he set it up against a tree, willing one of the savages to shoot, who took from his back an
(Note to be placed facing Page 173. Subject: AMOUNT OF FOOD REQUIRED IN POUNDS TO CONSTITUTE A RATION, WHITE AND INDIAN.)

Annual Report of the Commissioner of Indian Affairs, 1854. Report of Isaac I. Stevens, Governor and Superintendent of Indian Affairs to the Commissioner of Indian Affairs, September 16, 1854.

(314) (Lower Pend d'Oreille Indians) In the summer the Indians live principally on fish, which they catch not only by weirs or fish-traps, but by the hook and line, and by spearing. They also collect camash and bitter roots, and a berry called in some of the eastern States the sugar berry, or sugar pear. These they dry separately, and also in cakes with moss, for winter use. This food affords nourishment nearly sufficient to sustain life. In the autumn, in addition to hunting venison and bear, they dry meat and fish for winter use. When the severe cold weather has fairly set in the whole band moves to some noted venison hunting-ground, where during the heavy snows the deer cannot escape, and are readily pursued and killed with clubs. They hunt over the whole section so thoroughly as to exterminate these animals in that locality, leaving none to breed. In this way they have destroyed the deer entirely in all but two or three places. To each of these they will proceed during the coming, and one or two subsequent seasons; the deer will then all be destroyed, leaving the inhabitants no dependence unless by that time they shall have sufficient land under cultivation to support them; otherwise there will be a great deal of suffering among the people. Last winter they killed eight hundred deer. These were but just sufficient for their wants.

(352) (Same report.) Pend d'Oreilles of Lower Lake. 60 Lodges. 420 Population.


As a grub list for three people for a ten day hiking trip I would suggest something like the following: Bacon, 7 lbs. Ham, 4 lbs. Dried beef, 2 lbs. Cheese, 2 lbs. Powdered soups, 1 lb. Shortening (save all bacon fryings) 1 lb. Flour, 10 lbs. Corn meal, 4 lbs. Powdered milk, 1 lb. Powdered eggs, 8 ozs. Rice, 3 lbs. Oatmeal, 2 lbs. Coffee, 1 lb. Cocoa, 1 lb. Tea, 4 ozs. Sugar, 6 lbs. Baking powder, 8 ozs. Evaporated fruits (apples, apricots, peaches, prunes) 4 lbs. Raisins, 3 lbs. Sweet Chocolate, 3 lbs. Dehydrated vegetables, 1 lb. Salt, pepper, etc., 1 lb. TOTAL: 55 lbs. 4 ozs. This, you understand, you need not follow absolutely, but is intended as a general guidance as to varieties and quantities. Discard and substitute to suit your own ideas. As you will notice, the foods included are all highly water free, and when using such I have found that a man can stand up to trail-packing on a daily ration of around 17 pounds. If one takes much canned goods the weight of the daily ration will have to be increased. --- Paul M. Fink.

(Three days rations for ten persons equals thirty rations.)

Station WMAL, Washington, D.C., Sunday, October 30, 1940, 7:10 P.M. E.S.T. "News of World" with Allen and Pearson. Major Powers, U.S. Army, Quartermaster's Corp, guest speaker, stated:

Plenty of coffee is furnished the American soldier. Each soldier in the Army consumes annually 45 pounds of coffee.

See Ration Table for U.S. Army in the Philippine Islands, 1898-1899, facing Page 173. This gives 100 pounds of green coffee to 1000 rations, and 80 pounds of roasted coffee to 1000 rations.

On the above ration table, 45 pounds of green coffee would give each soldier 450 rations of coffee per year, green, and the same of roasted.

(1:lxviii) arrow of an ell long, drew it strongly in his bow, shoots the target a foot through, or better; which was strange, being that a pistol could not pierce it. We seeing the force of his bow, afterwards set him up a steel target; he shot again, and burst his arrow all to pieces. He presently pulled out another arrow, and bit it in his teeth, and seemed to be in a great rage; so he went away in great anger. Their bows are made of tough hasell (hazel), their strings of leather, their arrows of cane or hazel, headed with very sharp stones, and are made artificially like a broad arrow; other some of their arrows are headed with the ends of deer's horns, and are feathered very artificially.

Bulletin 30, Smithsonian Institution, Bureau of American Ethnology, Part 3, Washington, 1910. Pages 546-547, Shields by James Mooney. (Extract) The shield of the equestrian warrior of the plains was round, varying from 12 to 26 in. in diameter, and averaging about 17 in. The ordinary material was thick buffalo hide, with one or two covers of soft dressed buffalo, elk, or deer skin, but a few instances are known of shields of netted rods covered with soft dressed skin, the supposed protecting power in such cases being wholly due to the "medicine." The design upon the outside cover was different from that upon the inside cover, which last was exposed only at the moment of going into the fight, by loosening and throwing back the outside cover. The protecting "medicine" and the head and bridle pendant were usually kept between the two covers. The shield was carried upon the left arm by means of a belt passing over the shoulder, in such a way as to permit the free use of the left hand to grasp the bow, or could be slung around to the back in a retreat. It was sufficient to stop an arrow or turn the stroke of a lance, but afforded by slight protection against a bullet.

(NOTE: In 1735 the Shoshoni shield was three feet or more in breadth. (Thompson, 331, cited p. 170, supra). In 1771 Indians on the Coppermine river had wooden shields three quarters of an inch thick, two feet broad, and three feet long. (Hearne, 149, cited p. 171, supra). Shields of this size were too cumbersome to be carried on horse-back, so when the horse was acquired by the Indians a smaller shield came into use. The larger shield was employed to hide behind, while the smaller shield, adopted when the horse was acquired, was used to deflect or ward off blows and missiles. Thus, the acquisition of the horse modified the size of the shield, and the method of using it, just as the acquisition of the horse led to the shortening of the bow, and a change in the manner of drawing it. Thompson does not record that "medicine" emblems, or devices to give a shield supernatural power to protect the owner were employed on these early shields. Hearne records that his Indians made their shields just before going into battle, and fails to mention that any "medicine" was attached to them to make them more potent in protecting their wearers. It is believed that this protective device of putting "medicine" in a shield was not employed until the smaller shield came into use. Therefore the acquisition of the horse may have also led to the employment of "medicine" in the shield. A smaller shield gave less actual protection, and some supernatural power would then become necessary, attached to the shield, to make up for that deficiency. J.G.C.)

Narrative of David Thompson, 1784-1813, Edited by J.B. Tyrrell, XII Champlain Society Publications, Toronto, 1918.

(168) (The "Dinnae" Indians, or Chepawans, hold the bow horizontally when discharging the arrow. All other Indians hold it vertically.)
RATIONS ON THE TRANSPORTS.

The following table shows the quantity and description of food issued to the troops on board the transports en route from the United States to the Philippine Islands; the computations are for 1000 men:

MEATS.

Pork .................................. 75 pounds.
Bacon .................................. 150 pounds.
Fresh Beef 875 pounds, or
Fresh Beef 750 pounds
and Canned Salmon 125
pounds ................................ 875 pounds.

Flour ................................... 1125 pounds.
Dry Beans or Pease ................. 75 pounds.
Rice or Hominy ..................... 50 pounds.
Fresh Potatoes, 800
pounds, or Potatoes
700 pounds ......................... 800 pounds.

For 1000 men .......................... 3877.5 pounds.
Per man one ration .................. 3.88 pounds.

RATIONS IN THE FIELD.

Bacon .................................. 750 pounds.
Hard Bread .............................. 1000 pounds.
Beans .................................. 150 pounds.
Potatoes, Onions
and Canned Tomatoes, when possible1000 pounds.
Coffee, roasted ..................... 80 pounds.
Sugar .................................. 150 pounds.

For 1000 men ......................... 3307.5 pounds.
One ration ............................ 3.31 pounds.

THE TRAVEL RATION.

The travel ration when en route, computed at the rate of 1000 men:

FOR FIRST FOUR DAYS.

Hard Bread ............................ 1000 pounds.
Canned Beef ........................... 750 pounds.
Baked Beans, (3
pound cans) .............. 450 pounds.
Coffee, roasted ................. 80 pounds.
Sugar ................................. 150 pounds.

One thousand rations 2430 pounds.
One ration .......................... 2.43 pounds.

AFTER FOURTH DAY, ADDITIONAL.

Tomatoes, (gallon cans) ........... 1000 pounds.
One ration ................................ 1 pound.

Col. David L. Brainard has served as Chief Commissary with the Army in the Philippines.

(See also note facing Page 173)
A ration is the amount of food required to subsist one man for one day.

(Standard Definition)


(389) To be strong, healthy, and capable of the largest measure of physical effort, the soldier needs about three pounds gross of food per day, and the horse or mule about twenty pounds.

(391) In my opinion there is no better food for man than beef-cattle driven on the hoof, issued liberally, with salt, bacon, and bread. Coffee has also become indispensable. Therefore I would always advise that the coffee and sugar ration be carried along, even at the expense of bread, for which there are many substitutes.


(308) When living upon meat alone, they eat a large amount, perhaps an average of six or seven pounds per day for an individual.

(308) When in camp they eat often and when living on meat alone they eat an amount that would astonish a white man.


(96) The flesh of a moose in good condition, contains more nourishment than that of any other deer; five pounds of this meat being held to be equal in nourishment to seven pounds of any other meat even of the bison, but for this, it must be killed where it is quietly feeding; when run by men, dogs, or wolves for any distance, it's flesh is altogether changed, becomes weak and watery and when boiled; the juices separates from the meat like small globules of blood, and does not make broth; the change is so great, one can hardly be persuaded it is the meat of a Moose peer.

(112) The daily allowance of a man is eight pounds of fish, which is held to be equal to five pounds of meat; almost the only change through the year are hares and grouse, very dry eating; a few martens, a chance beaver, lynx and porcupine.

(208) --- and seven French Canadians, a fine, hardy, good humoured set of men, fond of full feeding, willing to hunt for it, but more willing to enjoy it: When I have reproved them, for what I thought gluttony, eating full eight pounds of fresh meat per day, they have told me, that, their greatest enjoyment of life was eating.

(434) On the west side of these alluvials is Cumberland Lake, on the east bank of which is situated Cumberland House in Latitude 53° 56′ 45″ N. Longitude 102° 13 West. This House was the first inland trading post the Hudson's Bay Company made, remarkably well situated for the trade of fine furs: it serves as the general depot for all the dried provisions made of the meat and fat of the bison under the name of pemican, a wholesome, well tasted nutritious food, upon which all persons engaged in the Fur Trade mostly depend for their subsistence during the open season; it is made of the lean and fleshy parts of the bison dried, smoked, and pounded fine; in this state it is called Bear Meat: the fat of the bison is of two qualities, called hard and soft; the former is from the inside of the animal, which when melted is called hard fat (properly grease) the latter is made from the large flakes of fat that lie on each side the back bone,
### RATION TABLE FOR INDIAN SCHOOLS

<table>
<thead>
<tr>
<th>Component articles</th>
<th>Quantity</th>
<th>Substitute</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flour, white, pounds</td>
<td>50</td>
<td>Rye flour, pounds</td>
<td>35</td>
</tr>
<tr>
<td>Flour, whole wheat, pounds</td>
<td>35</td>
<td>Corn meal, white or yellow,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>pounds</td>
<td>45</td>
</tr>
<tr>
<td>Rolled oats</td>
<td>5</td>
<td>Hominy grits, cracked wheat,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>corn flakes, etc.</td>
<td>5</td>
</tr>
<tr>
<td>Rice, pounds</td>
<td>3</td>
<td>Hominy, macaroni or barley,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>pounds</td>
<td>3</td>
</tr>
<tr>
<td>Milk, quarts</td>
<td>100</td>
<td>Milk, dried, pounds</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Milk, unsweetened, condensed,</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pounds</td>
<td></td>
</tr>
<tr>
<td>Cheese, pounds</td>
<td>1</td>
<td>Liver, pounds</td>
<td>30</td>
</tr>
<tr>
<td>Beef, pounds</td>
<td>40</td>
<td>Hearts, pounds</td>
<td>30</td>
</tr>
<tr>
<td>Note - If impracticable to procure</td>
<td></td>
<td>Frankfurters, pounds</td>
<td>30</td>
</tr>
<tr>
<td>eggs, the meat ration may be</td>
<td></td>
<td>Corn beef, pounds</td>
<td>30</td>
</tr>
<tr>
<td>increased to 50 pounds</td>
<td></td>
<td>Mutton, pounds</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pork, pounds</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ham, smoked, pounds</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chicken, pounds</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veal, pounds</td>
<td>40</td>
</tr>
<tr>
<td>Egges, dozen</td>
<td>10</td>
<td>Fish, fresh, pounds</td>
<td>40</td>
</tr>
<tr>
<td>Sugar, pounds</td>
<td>15</td>
<td>Fish, canned, or pickeled,</td>
<td>30</td>
</tr>
<tr>
<td>Honey, sirup or molasses, gallons</td>
<td>1½</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter, pounds</td>
<td>6</td>
<td>Peanut, butter, pounds</td>
<td>5</td>
</tr>
<tr>
<td>Lard, pounds</td>
<td>6</td>
<td>Canned vegetables, pounds</td>
<td>25</td>
</tr>
<tr>
<td>Bacon, pounds</td>
<td>8</td>
<td>Corn, dried, or peas, dried,</td>
<td>10</td>
</tr>
<tr>
<td>Potatoes, pounds</td>
<td>7½</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh vegetables, pounds</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomatoes, fresh or canned, pounds</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans, dried, (white, pink, or</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>frijoles), pounds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit, canned or fresh, pounds</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples, oranges, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit, dried, pounds</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yeast, pounds</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocoa, pounds</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereal coffee, pounds</td>
<td>2</td>
<td><em>(p. vii. Cereal coffee, one meal, for 100 children estimated 1 pound)</em></td>
<td></td>
</tr>
</tbody>
</table>

Subsistence supplies allowed day schools that furnish noonday luncheon will be for each day one-third of ration allowed boarding schools.

Respectfully, C.J. Rhoads, Commissioner.

Approved, July 18, 1929. R.L. Wilbur, Secretary.

Fannie Merritt Farmer's The Boston Cooking School Cook Book. 1939 Ed. (39) Coffee for Fifty. 1 pound coffee. 6 to 8 quarts cold water.
Thompson's Narrative of his Explorations in Western America, 1784-1812, (434) covering the ribs, and which is readily separated, and when carefully melted resembles butter in softness and sweetness. Pemmecan is made up in bags of ninety pounds weight, made of the parchment hide of the bison with the hair on; the proportion of the Pemmecan when best made for keeping is twenty pounds of soft and the same of hard fat, slowly melted together, and at a low warmth poured on fifty pounds of Beat Meat, well mixed together, and closely packed in a bag of about thirty inches in length, by near twenty inches in breadth, and about four in thickness which makes them flat, the best shape for stowage and carriage. On the great plains there is a shrub bearing a very sweet berry of a dark blue color, much sought after, great quantities are dried by the natives; in this state, these berries are as sweet as the best currants, and as much as possible mixed to make Pemmecan; the wood of this shrub, or willow is hard, weighty and flexible, but not elastic, and wherever it can be procured always forms the (435) arrow of the Indian, the native name is Mis-sars-cut; to which meen-nar is added for the berry; we call it by the native name, but the French who murder every foreign word call the berry, poires, and pin-me-carrn; peemittegar. I have dwelt on the above, as it (is) the staple food of all persons, and affords the most nourishment in the least space and weight, even the gluttonous French canadain that devours eight pounds of fresh meat every day is contented with one and a half pounds per day; it would be admirable provision for the Army and Navy.

(444) In their own houses in Canada a few ounces of pork, with plenty of coarse bread and potatoes is sufficient for the day, and (they are) contented. Yet the same men when with me on government surveys, where the allowance was one pound of mess pork (the best) one and a half pound of good fresh biscuit and half a pound of pease, did not find it too much, and the evening of each day left nothing.

(446) One of my men named Du Nord beat a dog to death, he is what we call a "flash" man, a showy fellow before the women but a coward in heart, and would willingly desert if he had courage to go alone; very gluttonous and requires full ten pounds of meat each day.

Voyages from Montreal on the River St. Laurence, through the Continent of North America to the Frozen Pacific Oceans, etc., in the years 1789 and 1793, by Alexander Mackenzie, Esq., London, 1801.

(xlvi) --- but the canoe-men, both from the north and Montreal, have no other allowance here, or in the voyage, than Indian corn and melted fat. The corn for this purpose is prepared before it leaves penticton, by boiling it in a strong alkali, which takes off the outer husk; it is then well washed, and carefully dried upon stages, when it is fit for use. One quart of this (1 quart of shelled corn weighs 1.75 pounds, Systematic Cookery, Montreal, 1838, p. 7) is boiled for two hours, over a moderate fire, in a gallon of water (1 gallon of water weighs 8 pounds); to which, when it is boiled a small time, are added two ounces of melted suet; this causes the corn to split, and in the time mentioned makes a pretty thick pudding. If to this is added a little salt, (but not before it is boiled, as it would interrupt the operation), it makes a wholesome, palatable food, and easy of digestion. This quantity (allowing for evaporation in boiling, about 2½ to 3 pounds) is fully sufficient for a man's subsistence during twenty-four hours; though it is not sufficiently heartening to furnish the strength necessary for a state of active labour. The Americans call this dish hominy.
Every one on board over six years old was allowed seven pounds of bread a week. The other provisions were doled out on the basis of eight people eating or "messing" together. On five days of the week this group were allowed each day "two pieces of pork (each piece to be two pounds) with pease... and on the other two days four pounds of beef with pease each day, or four pounds of beef with a pudding, with pease for the two days." Contract made with the owners of the ship Nassau, of five hundred tons, carrying one hundred and ninety passengers to Virginia. An Atlantic Voyage in the seventeenth century, p. 323

In this connection it may be of interest to refer to the provision made by the distinguished Arctic explorer Richardson when setting out on his boat voyage through Rupert's Land in 1851. The most ample means for the preparation of full supplies was in his hands. He describes it follows (sic):
"A round or bullock of beef of the best quality having been cut into thin steaks, from which the fat and the membraneous parts were pared away, was dried in a malt-kiln over an oak fire until its moisture was entirely dissipated and the fibre of the meat became friable. It was then ground in a malt-mill, when it resembled finely grated meat. Being next mixed with nearly an equal weight of melted beef suet, or lard, the preparation of plain pemmican was complete; but to render it more agreeable to the unacclimated palate a proportion of the best Zante currants was added to part of it, and part was sweetened with sugar. Both these kinds were much approved of in the sequel by the consumers, but more especially that to which the sugar had been added. After the ingredients were well incorporated by stirring, they were transferred to tin canisters, capable of containing 85 pounds each; and having been firmly rammed down and allowed to contract further by cooling, the air was completely expelled and excluded by filling the canister to the brim with melted lard through a small hole left in the end, which was then covered with a piece of tin and soldered up. The meat in drying loses more than three fourths of its original weight; 35,851 pounds were reduced to about 8,000.\--- The natives of the Northwest dry their venison by exposing thin slices to the heat of the sun on a stage under which a small fire is kept, more for the purpose of driving away the flies by the smoke than for promoting exsiccation, and then they pound it between two stones on a bison hide. In this process the meat is contaminated by a greater or smaller admixture of hair or other impurities."

My men were employed in cutting up and melting bear's fat, which we pour into red deer skins and wooden troughs; but have collected such a quantity that we can find no place to store it, and the weather being sultry great quantities spoil. The raw fat will not keep many days, particularly when the weather is sultry, soon turning rancid; but when melted down and properly taken care of, it will keep good and sweet at any season.
Voyages from Montreal on the river St. Laurence, etc., by Mackenzie.

Corn is the cheapest provision that can be procured, though from the expense of transport, the bushel costs about twenty shillings sterling, at the Grande Portage. A man's daily allowance does not exceed ten-pence.

Travels and Adventures in Canada and the Indian Territories between the years 1760 and 1776 by Alexander Henry, Esq., New York, 1809. (called Alexander Henry, the Elder.)

Near Michilimackinac, 1761. The village of L'Arbe Croche supplies, as I have said, the maize, or Indian corn, with which the canoes are victualled. This species of grain is prepared for use, by boiling it in a strong lie, after which the husk may be easily removed; and it is next mashed and dried. In this state, it is soft and friable, like rice. The allowance, for each man, on the voyage, is a quart (1.75 pounds) a day; and a bushel (56 pounds, corn shelled weighing 14 pounds a bushel, systematized parenthetically by Mackenzie), with two pounds of prepared fat, is reckoned to be a month's subsistence. No other allowance is made, of any kind; not even of salt; and bread is never thought of. The men, nevertheless, are healthy, and capable of performing their heavy labour. This mode of victualing is essential to the trade, which being pursued at great distances, and in vessels so small as canoes, will not admit of the use of other food. If the men were to be supplied with bread and pork, the canoes could not carry a sufficiency for six months; and the ordinary duration of the voyage is not less than fourteen. The difficulty, which would belong to an attempt to reconcile any other men, than Canadians, to this fare, seems to secure to them, and their employers, the monopoly of the fur-trade.

Year 1765. It is in beaver that accounts are kept at Michilimackinac; but in defect of this article, other furs and skins are accepted in payments, being first reduced unto their value in beaver. Beaver was at this time at the price of two shillings and sixpence per pound, Michilimackinac-currency; otter skins, at six shillings each; marten, at one shilling and sixpence, and others in proportion.

To carry the goods to my wintering-ground in Lake Superior, I engaged twelve men, at two hundred and fifty livres, of the same currency, each; that is, a hundred pounds weight of beaver ($37. present day value, counting pound sterling at $5.). For provisions, I purchased fifty bushels (3500 pounds) of maize, at ten pounds of beaver ($6.20) per bushel ($310.00). At this place, specie was wholly out of the question, that in going to a cantine, you took with you a marten's skin, to pay your reckoning.


March 3. Thus, after I had used, in going up the river with my party the strictest economy, living upon two pounds of frozen venison a day, in order that we might have provision to carry us down in the spring, this fellow was squandering the flour, pork, and liquor during the winter, while we were starving with hunger and cold.

March 31. The provision to which I was obliged to restrict myself and men, viz., two pounds of fresh venison per day, was scarcely sufficient to keep us alive. Though I had not an extraordinary appetite, yet I was continually hungry.
Historical Society of Montana, Contributions, Volume VII. 1910.
(135) How an Early Pioneer Came to Montana by Frank H. Woody.
(158) (Fall of 1855, near Spanish Fork, Mormon settlement, Utah.)
They were building a dam and big canal to irrigate the farm they were
making for the Indians on this greasewood land. The work was hard and we
worked about twelve hours a day. For the first two or three weeks all we
had to eat was beef and potatoes. We were allowed 2½ lbs. of beef and
2½ lbs. of potatoes for each man. But after being continually hungry
for six or eight months (before getting this work) this did not satisfy
us. We had no bread whatever. So, one day about eighty of us went up to
the office. Dr. Hurt was not there, but there was an old gentleman by
the name of Kerr, a good-natured old Virginian, in charge. He asked
what was the matter and we told him we wanted something more to eat.
He said, "Aren't you getting 2½ lbs. of meat and 2½ lbs. of potatoes
each every day?" We told him we were, but that was not enough. He said,
"How much do you think you could eat?" We told him we thought about 3
lbs. each of potatoes and meat. He said, "Go to work; you shall have it."
They issued us that ration for a couple of weeks, and by the end of that
time we had gotten filled out and it was a little more than we wanted.
By this time they had gotten a little corn meal and added it to the
ration of 2½ lbs. of beef and 2½ lbs. of potatoes. There was something
over eighty men, divided into four messes. I was made the cook of one
mess and Sam was made cook of another. In the meantime, we had drawn
a little money and the Mormons were bringing in a little butter, and Sam
and I, our messes being adjoining, bought two or three pounds of butter,
and about this time they issued a small ration of flour, just enough to
make one biscuit a day for each man, and we would cook the biscuits for
supper. After Sam and I got this butter, we would make up our dough
and pinch off enough to make about three biscuits for each of us, and would
bake and eat them before the other boys came in, thus making their
rations somewhat shorter, but as most of them were Mormons, we were not
particular about that.

Mrs. Lucile Q. Mann, Lecture on Librarian Expedition of Dr. and Mrs. Mann
to Liberia, 1940, before Michigan Society March 31, 1941, stated: Black
boys on expedition ate one meal a day, consisting of 2 pounds of rice.

Travels and Works of Captain John Smith, 1580-1631, Edited by Edward Arber;
The Charge of setting forth a ship, Lib. 6. R. Whitbourne, April, 1622.
The charge of setting forth a ship of 100, tons with 40 persons, both to
make a fishing voyage, and increase the Plantation.
In primis, 10,000. (or rather 11,000) weight of Bisket at 15. shillings a
100. weight (i.e., 112 pounds.) 82 pounds 10 shillings:
26 Tun of Beere and Sider at 54 shillings 4 pence a Tun.
2 Hogsheads of English Beefe.
2 Hogsheads of Irish Beefe.
10 Fat Hogs salted with Salt, and caske.
30 Bushels of Pease,
2 Ferkins of Butter,
300 Waight (334 pounds) of Cheese.
1 Bushell of Mustard-seed.
1 Hogshead of Vinegar.

Life, Vol. 10, No. 12, March 34, 1941, p. 34.
Present food ration in Unoccupied France is ½ pound per day per person.
The "average American" eats 4 lb. a day.
AMOUNT OF FOOD REQUIRED, IN POUNDS, TO CONSTITUTE A RATION, WHITE & INDIAN.

Article 5 of the Act of Congress approved February 28, 1877 (19 Stat. at Large, 254) ratifying the Agreement entered into between the United States and the Sioux Indians of the Red Cloud Agency, Nebraska, September 26, 1876, provides for the following ration:
Also to provide the said Indians with subsistence consisting of a ration for each individual of a pound and a half of beef, (or in lieu thereof, one half pound of bacon,) one-half pound of flour, and one-half pound of corn; and for every one hundred rations, four pounds of coffee, eight pounds of sugar, and three pounds of beans, or in lieu of said articles the equivalent thereof, in the discretion of the Commissioner of Indian Affairs. (2.65 pounds ration, with beef; 1.65 pounds ration with bacon).

A Voyage Round the World, but more particularly to the North-West Coast of America: Performed in 1785, 1786, 1787, and 1788, in The King George and Queen Charlotte, Captains Portlock and Dixon, By Captain Nathaniel Portlock. London, 1789.

(11) Monday, September 26, 1785. Salt provisions were first served out to the crews on the 27th, at a pound a man a day, together with a half a pound of potatoes.

(45) Sunday, February 5, 1786. On the 5th I ordered the people one pound and a half of fresh pork a man, in addition to their allowance of salt provisions, together with an extra half allowance of brandy: this, and every indulgence in my power, I gave them with the greatest pleasure, as their behaviour has given me great satisfaction ever since they have been under my command.

(68) Tuesday, May 30, 1786. The unsettled state of the weather, and the uncertainty of our being able to water the ships at these islands, induced me to put the ship's company to an allowance of water, at the rate of two quarts (four pounds) a-man a-day.

(143) Saturday, October 14, 1786. The scurvy beginning to make its appearance on some of the people, the ship's company were served a pint of Port wine a-day instead of spirits.


(xxii) The provisions were issued with liberality, but the quality of some of them (notably the beer) was bad; and as a rule the men received only two thirds of their allowance. They were,

(xxii) however, paid for the third not issued to them. The full daily allowance for each man was as follows:

Beer, * ------------------------------------------------- one gallon (8 pounds)
* It must be borne in mind that no man drank water at sea until the beer was expended.

Biscuit or bread ----------------------------- one pound.

Salt beef, or salt pork with pease ---- one pound, on Sundays, Mondays, Tuesdays and Thursdays

Salt fish, ling, or cod -------------- 1 of a side on Wednesdays and Saturdays.

(one-eighth of a side on Fridays)

Butter, or olive oil ------------ 7 ounces on Wednesdays and Saturdays.

Cheese ---------------------------------- 14 ounces on Wednesdays and Saturdays.

3½ ounces and 7 ounces respectively on Fridays.**

** Prisoners received two thirds of the above allowance; or perhaps two thirds of the two thirds issued to the crew.

Many supposest any thing good enough to serve men at sea, and yet nothing sufficient for them a shore, either for their healthes, for their ease, or estates, or state. A Commander at Sea should do well to thinke the contrary, and provide for himselfe and company in like manner; also seriously to consider what will be his charge, to furnish himselfe at sea, with bedding, linnen, arms, and apparell; how to keep his table aboard, his expences on shore, and his Petty Tally, which is a competent proportion according to your number, of these particulars following. Fine wheate flower, close and well packed, Riese, Curtanda, Sugar, Prunes, Cinnamon, Ginger, Pepper, Cloves, Greene-ginger, Oyle, Butter, Olde Cheese, or Holland, Wine, vinegar, Canary Sacke, Aqua vitae, the best Wines, the best Waters, the juycie of Lemons for the Scruvy, white Bisket, Oate meale, Gammons of Bacon, dried sweetes tongues, Rosted bees packed up in vinegar. Legges of Mutton minced and stewed, and close packed up with butter in earthen pots. To entertain strangers, Marelelet, Suckets, Almonds, Comfits, and such like. Some it may bee will say, I would have men rather to feast then fight. But I say the want of those necessaries, occasions the losse of more men, then any English fleet hath bin slaine in any fight since 1586: for when a man is ill sick, or at the poynet of death, I would know whether a dish of buttered Rice, with a little Cinnamon and Sugar, a little minced meate, or roast beece, a few stewed Prunes, a race of Greene-ginger, a flap Jacke, a can of fresh water bruized with a little Cinnamon, Ginger, and Sugar, be not better then a little poore John, or salt fish, with cyle and mustard, or bisket, butter, cheese or oatmeale pottage on fish dayes, salt beece, porke and pease, and sixe shillings beere. This is your ordinary ships allowance, and good for them are well, if well conditioned; which is not always, as sea-men can too well witnesse: and after a storme, when poore men are all wet, and some not so much as a clotth to shift him, shaking with cold, few of those but will tell you, a little Sacke or Aquavitae, is much better to keepe them in health, then a little small beere or cold water, although it be sweete. Now that every one should provide those things for himselfe, few of them have either that providence or meanes. And there is neither Alehouse, Taverne, nor Inne to burne a faggot in; neither Grocer, Poulterie, Apothocary nor Butchers shop; and therefore the use of this petty tally is necessary, and thus to be imploied as there is occasion, to entertaine strangers, as they are in quality, every Commander should shewe himselfe as like himselfe as he can, as well for the credit of the ship and his setters forth as himselfe. But in that heerin every one may moderate themselves, according to their owne pleasures, therefore I leave it to their owne discretions. And this breefe Discourse, and my selfe, to their friendly construction and good opinion.

John Smith Writ this with his owne Hand.

Kane, Arctic Explorations, Volume I, page 190. Philadelphia, 1856. E.K. Kane. Resort to snow for the purpose of allaying thirst, was followed by bloody lips and tongue; it burnt like caustic.

Parry's Journal. Second Voyage for the Discovery of the Northwest Passage. (340) Parry made an experiment on a Esquimaux boy by giving him all he wanted to eat. The boy consumed ten pounds of solid food, mostly sea horse, in twenty hours.

Manual of Military Training, Second Revised Edition, Col. James A. Moss, United States Army. Menasha, Wisconsin, Third Impression, November, 1917. (437) (Hot Breda, Flapjack. 100 men for 1 meal) 1389. Dry mix in a large pan before issue, at the rate of 35 pounds of flour and three half pounds of baking powder. Add sufficient cold water that will make a batter that will drip freely from the spoon. Add a pinch of salt.
AMOUNT OF FOOD REQUIRED, IN POUNDS, TO CONSTITUTE A RATION. WHITE & INDIAN.


(105) Lawrence, Kansas Territory, November 22, 1855. The daily rations of all soldiers consist of beans; pork or beef (either one or the other), one pound of the former or one and one half of the latter; coffee; plenty of sugar; one and one eighth pounds of bread; rice, etc. You will see, therefore, that in this army provision is made that no man shall go hungry.


A Kilogram is 2.204 pounds. Emergency ration given by weight in Kilograms:
Rations (Sardines .100 Meat .400 - Canned meat .600 - Hardtack .800 - Chocolate .250 - Sausage or cheese .300 etc.) Two or three days ———
2.75 Kilograms. 2.75 Kilograms is 6.061 pounds. (3.03 pounds a day for 2 days, or 3.02 pounds a day for 3 days.)

Buffalo Days, by Colonel Homer W. Wheeler, U.S.A., retired, Late of the 5th cavalry, United States Army. (1876-1885).

(333) The government's allowance of grain for a horse is twelve pounds daily and for a mule, nine.


(785) Of the inorganic foods water is the most important, the body requiring about four pounds daily. (2 quarts).


(251) Here in the Latitude of 49 degrees, the snow, clear of drift, is three to three and a half feet in depth; and in the Latitude of 58 degrees North the snow has the same depth; but falls dry as dust, it adheres to nothing, and a cubic foot of well packed snow, when melted, yields only two inches of water. But in the former latitude, a cubic foot of well packed snow when melted, yields four to five inches of water.

(443) (1810) In fact a French Canadian has the appetite of a wolf, and glories in it; each man requires eight pounds of meat per day, or more; upon my reproaching some of them with their gluttony, the reply I got was, "What pleasure have we in life but eating."


Average. 131 grams 59 grams 510 grams 3,135 660

1 gram equals .0353 of an ounce. 1 kilogram equals 2.2046 pounds.
690 grams equals 1.49 pounds, or approximately 1 pound 8 ounces.

The Care and Feeding of Adults by Logan Clendening, New York, 1931.

(155) The average bulk of an average diet (400 grammes of starch, 185 grammes of protein, and 75 grammes of fat) is about a pint. It cannot be digested without about two and a half quarts of water.

(Concluded on back of this page, opposite page 178)
History of the Expedition of Captains Lewis and Clark, 1804-5-6. Reprinted from the Edition of 1814. Chicago, 1917. Volume I. (Hosmer). (330) (Saturday, July 13, 1805. On Missouri river, between the Great Falls and the mouth of the Dearborn river.) It requires some diligence to supply us plentifully, for as we reserve our parched meal for the Rocky mountains, where we do not expect to find much game, our principal article of food is meat, and the consumption of the whole, thirty-two persons belonging to the party, amounts to four deer, an elk and a deer, or one buffalo every twenty-four hours.

Adventures of Captain Bonneville by Washington Irving, Paris, 1837. Appendix, Keating's Narrative, inserted by "English Editor." (375) At lake Travers, it is estimated that (buffalo) cows generally yield from two hundred and fifty to three hundred pounds of good meat. This is exclusive of the head and other parts.

Some Memories of a Soldier by Hugh Lenox Scott, Major-General U.S. Army, Retired. New York, 1933. (November, 1877, near Bear Paw mountains) (81) A dressed antelope would weigh anywhere from fifty to seventy-five pounds. (Thompson's Narrative, p. 418: Average weight of meat, 59 pounds when fleshy; when fat 65 pounds.)

New Light on the History of the Greater Northwest. Henry-Thompson Journals. Edited by Elliott Coues. New York, 1897. Volume I. (171) (Saturday, February 27, 1801. On the Red river of the North.) It is common to see a (buffalo) bull exceed 1,500 pounds, but a (buffalo) cow is seldom over 700 or 800 pounds gross.

(446) (Sunday, August 7, 1806. On the Red river of the North.) A fat cow, killed in the autumn, weighs from 600 to 700 pounds. A lean cow seldom exceeds 300 pounds. I have weighed 150 cows, killed from Sept. 1st to Feb. 1st, and found they averaged 400 pounds each. Bulls in the same space of time average 550 pounds. Two-year-old heifers, in autumn, average 200 pounds. One-year-old calves, in autumn, average 110 pounds. These weights are exclusive of the offals. But the total edible meat of one full-grown bull, as received in the store-house, weighed 800 pounds. One thigh alone weighed 85 pounds. This bull was in full flesh, but had neither inside tallow nor back fat; which gives me reason to suppose that a full-grown bull, killed fat, about July 1st, would weigh about 1,800 pounds, offals included. Buffalo are cut up into the following 30 pieces by the hunter: 1 grosse bosse (hump); 1 petite bosse; 2 depouilles (strips of fat running down each side of spine); 2 shoulders; 2 lourdes epaulettes (shoulder pieces); 2 fillets; 2 thighs; 2 sides; 1 belly; 1 heart; 1 rump; 1 brisket; 1 backboné; 1 neck. The tongue generally belongs to the hunter.

(175) (Tuesday, April 7, 1801. Red river). I made up my pemmican into bags of 30 pounds each: 50 pounds of beef and 40 pounds of grease. Volume II.

(206) (May 3, 1814. On Columbia river near its mouth). Our men refused to eat any more dried smelt or salt sturgeon; the former would keep people alive, but that is all, and the sturgeon, not having been sufficiently salted, is rotten. I, therefore, ordered them, much against my inclination, to be given one quart of corn each per day, and they also had each a dram.

(207) (May 5, 1814. On Columbia river near its mouth). Our men found their rations short; I, therefore, gave them each one pint of pease, three lbs. of beef, and a dram.

The Publications of the Champlain Society, Toronto, 1916. XII. David Thompson's Narrative of his Explorations in Western America, 1784-1812. (408) On weighing (we) found the average weight of the thigh of a Red Deer to be thirty-two pounds, and the whole of the meat 160 to 170 lbs. *(Dépouiller: see facing page 198.*)
PLAINS TRIBES. NUMBER OF HIDES AND POLES REQUIRED TO MAKE LODGE.


(327) June 1, 1833, at Fort Pierre, among the Sioux. The tents are generally composed of fourteen skins, each worth two dollars.

Historical Society of Montana, Contributions, Volume III, Affairs at Fort Benton from 1831 to 1869 by Lieutenant James H. Bradley, U.S.A. 1897. (Footnote) At Flatwood in 1848, Maj. C. (Culbertson) saw a lodge of 40 skins owned by a Blood chief named Pe-in-ah Coo-yem (Seen from afar) - the lodge poles were 35 feet long, and it contained two fires. The ordinary lodge has from 8 to 12, sometimes 20 skins, with poles 15 to 25 feet - these were 30 poles - the ordinary lodge having from 15 to 20 poles. He was the greatest chief Maj. Culbertson ever saw among the Blackfeet - having 10 wives and 100 horses. He died in 1870 aged about 60. J.H.B. (James H. Bradley) (In the H.L. Scott collection of photographs, Bureau of American Ethnology, Smithsonian, Washington, is one of a very large ring of tipi stones, taken on the Blackfoot reservation in Montana. These stones, according to Gen. Scott, were used in former times to weigh down the inner lining of the tipi. The outer cover was pegged down. The ring in the photograph may mark a former camp site of old Seen from afar.)

The Indian Sign Language by W.P. Clark, U.S. Army. 1885. (372) Tepee. --- From fourteen to twenty six poles were used in a lodge, and one or two for the wing-poles on the outside; these latter for adjusting the wings, near the opening at the top of the lodge, for the escape of smoke (called by the Piegan the ears of the lodge); the wings were kept at such angles as to produce the best draught. The best poles are made from the slender mountain pine, which grows thickly in the mountains. The squaws cut and trim them, and carefully peel off the bark. They are then partially dried or seasoned, and are first pitched for some time without any covering of canvas or skin. By being thus slowly cured they are kept straight. The length depends on the size of the lodge of course, and varies from sixteen to thirty feet.

Court of Claims of the United States, No. E - 437, The Blackfeet (et al.) Indians v. The United States. Evidence for Plaintiffs. (June-July, 1936). (38) Q. State your name? A. Mrs. Horse Capture. Q. What is your residence; where do you live? A. Near Hays, Montana. Q. How old are you? A. Seventy-six years old. Q. Are you a Gros Ventre (Atsina) Indian? A. Yes. (39) Q. What did you make your tepee or lodges out of? A. Buffalo hides. Q. How many buffalo hides did it take to make a lodge? A. Personally, I think about nine hides. Q. How many hides did it take to line a lodge, about? A. It took about three hides. Q. How long would a lodge last till you made a new one? A. Every summer. Q. Did you use the old outside hides to line the new one with, or what did you do with it? A. I used it for a lot of purposes, such as for making moccasins and lining lodges. Q. What did you use for beds and bed covers? A. Robes. Q. Made out of what? A. Robes; tanned robes. Q. How many of these tanned robes did it take for your beds and bed covers? A. About four robes for a bed. --- (31) Q. What is your name? A. Mrs. Lame Bull. Q. How old are you? A. Eighty-three years old. Q. Are you a Gros Ventre (Atsina) Indian? A. Yes. --- Q. Do you remember at this time how many buffalo hides it took to make a lodge? A. It took 16 hides. Q. Did you ever line a lodge with buffalo hides? A. Yes. Q. How many would it take? A. Three hides to make one lining. Q. How many hides did you use for beds? A. About three hides for under and two for covers. Q. How long would these robes and hides last

Besides the (buffalo) robes which are traded to the whites by the Indians, each man, woman, and child requires from one to three robes a year for clothing.

Forty Sixth Annual Report of the Bureau of American Ethnology, Edwin T. Denig, Indian Tribes of the Upper Missouri, The Assiniboine. (1854). (585) We will now detail a few of the most common or everyday dresses among them, in different seasons, male and female, estimating the cost of each in buffalo robes at $3 each, their value in this country.

Summer and Fall Dress for Men. No. 1.

A buffalo robe, thin hair, or a dressed cowhide robe on the back 1 robe
Dressed deer or antelope skin leggings 1 robe
Cloth breech flaps and moccasins 1 robe

2½ robes @ $3 or $7.50.

No. 2.

A scarlet blanket 4 robes
Beads worked in same 10 robes
Dearskins shirt and leggings fringed and garnished with beads and porcupine quills 5 robes
Breach flaps of scarlet cloth and moccasins(s) 1 robe
Necklace of bear's claws 5 robes
Moccasins and handkerchief for the head 1 robe

26 robes @ $3 or $78.00

No. 3.

White blanket 3 robes
Calico shirt 1 robe
Neckerchief and cloth breech flaps 1 robe
Cottonade pantaloons 1 robe
Muskrat cap 1 robe
Moccasins 0 robe

7 robes @ $3 or $21.00

No. 4.

White blanket 3 robes
Blanket capot 3 robes
Skin leggings, plain antelope skin 1 robe
Breechcloth and moccasins 1 robe

7½ robes @ $3 or $22.50

No. 5.

Scarlet or Hudson Bay blanket 4 robes
Beads worked on same 10 robes
Scarlet-laced chief's coat 6 robes
Black fur hat and three cock feathers 2 robes
Silver hat band and plate 2 robes
1 pair silver arm bands 2 robes
Scarlet cloth leggings and hawk. bells 1 robe
Black silk handkerchief and cloth breech flaps 1 robe
Silver gorget, ear wheels and hair pipe 2 robes
Moccasins garnished with beads 2 robes

30½ robes @ $3 or $91.50

Winter Dress for Men.

Hunter's winter dress of the plains.

No. 7.

Buffalo robe coat, hair inside 1 robe
Buffalo robe over it 1 robe
Skin cap and mittens, hair inside 1 robe

(continued, facing page 180)
Court of Claims of the United States, No. E - 427, The Blackfeet (et al.)

**PLAINS TRIBES. NUMBER OF HIDES AND POLES REQUIRED TO MAKE LODGE.**


(31) that you just described? A. Every year. ---

(44) What is your name? A. John Walker.

(45) How old are you? A. Seventy-one. Q. Are you a member of the Nez Perce tribe of Indians? A. Yes, sir. ---

(46) How many hides would it take to make a tepee? A. A different amount of hides to different tents; from 13 to 30 to each tent. ---

(53) Q. What is your name? A. Sally Wilber. Q. Are you a member of the Nez Perce tribe of Indians? A. Yes. Q. Are you a full-blooded Nez Perce Indian? A. Yes. Q. Have you lived with the tribe all of your life? A. Yes. Q. Do you remember the treaty of Walla Walla of 1855? A. Yes. Q. About how old were you at the treaty of Walla Walla? A. About 6 years. (77 years old). ---

(54) How many buffalo hides did it take to make a tepee? A. It depended on the size, averaging for a small one, 15 hides, for a large one 30 hides. ---

(55) Q. What is your name? A. Amelia Johnson. Q. How old are you? A. Over 70. Q. Are you a member of the Nez Perce tribe of Indians? A. Yes. ---

Q. What did you make your tepees out of? A. Buffalo hide. Q. How many hides did it take to make a tepee? A. It ranged from 15 to 18 hides. ---

(56) Q. What is your name? A. Eliza Miller. Q. How old are you? A. Eighty-five. Q. Are you a member of the Nez Perce tribe of Indians? A. Yes. ---

(57) Q. How many buffalo hides did it take for a tepee? A. Averaging different sizes of tents, from 13 to 30. ---

(63) Q. What is your name? A. Mountain Chief. Q. How old are you. A. Seventy-eight years old. Q. Of what tribe of Indians are you a member? A. I am a member of the Blackfeet tribe of Indians. ---

(66) Q. What did you make your lodges or tepees out of? A. Buffalo hides. Q. How many buffalo hides would it take to make a lodge? A. On an average of 14, but from 8 to as high as 15. Q. How long would these lodges last until you had to get new hides to build another? A. These tepees or lodges were good for two to three years, but after three years the top that was smoked was usually given to the mother-in-law and they usually wore them out. Q. What did you use for beds and covers? A. Buffalo robes for bedding and to cover with. Q. About how many robes were used for such purposes in each family? A. One to lie on and one to cover with, and then we usually used the older ones that were almost worn out to cover our feet with or as a pillow. ---

(71) Q. What is your name? A. Eagle Head. Q Are you a member of the Blackfeet tribe of Indians? A. Yes, sir. Q. How old are you? A. Ninety-three years old. ---

(73) Q. What was the principal food of the Blackfeet Indians before the treaty of 1855? A. Buffalo. Q. What did they make their lodges out of? A. Buffalo hides. Q. What did they use for bedding and covers? A. Buffalo hides. The women did the tanning and we put them on the bed.

(73) Q. At this time how many buffalo hides would it take to make a lodge? A. Sometimes some of these lodges required 16, 15, or 14. Q. How long would one of these lodges last until it had to be replaced with new hides? A. They got pretty old quick. They lasted about two summers and one winter, then in the fall of the season we would kill more buffalo to make new ones. The old ones we used for other purposes. ---

(91) Q. What is your name? A. Thomas Burd, Sr. --- Q. Are you a member of the Blackfeet tribe of Indians? A. Yes, sir. Q. Have you lived with your tribe of Indians all your life? A. Yes, sir. Q. Do you remember the occasion of the Stevens treaty on the Judith river in 1855? A. Yes, sir. Q. How old were you at that time? A. Fifteen years old. (86 years old) ---
Blanket breech flap, robe, moccasins, belt knife and fire apparatus—robe
Dressed cow skin leggings
1 pair snowshoes ——- 1 robe

3½ robes @ $3 or $10.50

No. 2.

White blanket coat with hood ——- 3 robes
White blanket over it ——- 3 robes
Flannel or calico shirt ——- 1 robe
Blanket leggings ——- 1 robe
Soled rope moccasins ——- 1 robe
Blanket breech flap ——- 1 robe
Skin mittens, hair inside ——- 9 robes @ $3 or $27.00

(587)

Women's Summer Dresses.

No. 1.

Dressed cow skin cotillion ——- 1 robe
Leggings of same ——- 4½ robe
Dressed cow or elk skin robe ——- 1 robe
Moccasins ——- 0 robe

2½ robes @ $3 or $7.50

No. 2.

Colored blanket ——- 4 robes
Blue or scarlet cloth dress ——- 3 robes
Garnishing of beads on same ——- 5 robes
Scarlet cloth leggings ornamented with beads ——- 2 robes
White deerskin moccasins worked with beads ——- 1 robe
Heavy bead earrings and necklaces ——- 4 robes
Brass wire wrist bands and rings ——- 1 robe

20 robes @ $3 or $60.00

No. 3. — Crow Indians.

Fine white dressed elk skin robe ——- 1 robe
Fine white bighorn skin cotillion adorned with 300 elk teeth ——- 25 robes
Neck collar of large brass wire ——- 1 robe
Fine antelope skin leggings with porcupine quills ——- 3 robes
Brass wire wrist bands and rings ——- 1 robe
California shell ear ornaments ——- 3 robes
Very heavy bead necklaces ——- 3 robes
Moccasins covered with beads ——- 3 robes

39 robes @ $3 or $117.00

No. 4. — Sioux.

Fine white dressed elk skin robe, painted ——- 1 robe
Fine white dressed antelope skin cotillion heavily ornamented with beads or shells on breast and arm ——- 30 robes
Leggings of same ornamented with beads ——- 3 robes
Bead or wire necklace ——- 3 robes
Garnished moccasins and brass breast plate ——- 1 robe
Ear bones ——- 3 robes

40 robes @ $3 or $120.00

No. 5. — Common Sioux, Assiniboin, or Crow Dress.

White blanket ——- 3 robes
Blue cloth cotillion or green cloth ——- 2 robes
Scarlet cloth leggings ——- 1 robe

6 robes @ $3 or $18.00

(588)

No. 6. — Winter Dress.

Buffalo robe ——- 1 robe
Dressed cow skin cotillion ——- 1 robe
Dressed cow skin leggings and shoes ——- 1 robe

3 robes @ $3 or $9.00

(continued facing page 181)
PLAINS TRIBES. NUMBER OF HIDES AND POLES REQUIRED TO MAKE A LODGE.


(94) Q. How many buffalo hides would it take to make a lodge? A. Eight hides to make a teepee, and as high as sixteen. That is as high as I know of. Q. Did they use these hides for bedding also? A. Yes, sir; they used hides. Q. What did they line their lodges with? A. Buffalo hides. Q. About how many buffalo hides did it take to line a lodge? A. About six. ---

(111) Q. What is your name? A. Red Plume. Q. Are you a member of the Blackfeet tribe of Indians? A. I belong to the Blackfeet. ---

(113) Q. Do you know whether you were born before or after the treaty of the Judith of 1855? A. Before the treaty. Q. Were you old enough to remember the occasion of the treaty of 1855? A. I remember there was a treaty, but I was not there personally. Q. How did you know there was a treaty made at that time? (73 years ago) A. My father was telling me all about it. ---

(113) Q. How many buffalo hides did it take to make a lodge or teepee? A. They were different sizes and it took from 8 or 7 to 16 skins for one teepee.

(114) Q. Before the 1855 treaty in those days how long did these teepees last before you used new skins and made another? A. They lasted about every summer and then we have a new one again. --- Q. After the time that your people quit hunting in the common hunting ground, how often did you rebuild or renew your teepees and lodges? A. They lasted longer and it took about two years to get enough to make another one and by that time we would get enough hides to make a new one. ---

(116) Q. What is your name? A. Wood Chief Woman. Q. Are you a member of the Blackfeet tribe of Indians? A. Yes. --- Q. How old or how big a girl were you at the time of that treaty of 1855? (73 years ago) A. I was pretty good sized and I know the camps where they moved to. ---

(117) Q. How many buffalo hides did it take to make a teepee or lodge? (118) A. They ranged all the way from 4 hides to 16, and some were different sizes. An old woman only got a 4-skin lodge. Q. Did you line your lodges with buffalo hides also? A. Yes. Q. Before the treaty of 1855 how often did you build new lodges? A. That depends on good shots and good running horses. Most of the people got new teepees every year, but of course there was the poorer class of people and their lodges would last a year or two. When we chase the buffalo we do not slaughter and what we kill we use every bit of it.


(578) The tent (tipi) is stretched on poles from 12 to 20 feet in length according to the size of it, each family making one to suit the number of persons to be accommodated or their means of transporting it; therefore their sizes vary from 6 to 23 skins each, the one being the smallest, and the other the largest size in general use, the common or medium size being 12 skins, which will lodge a family of eight persons with their baggage, and also have space to entertain two or three guests. The area of a lodge of twelve skins when well pitched is a circumference of 31 feet, and the space each grown inmate requires for bed and seat would be about 3 feet in width. People seldom stand upright in a lodge. They enter in a stooping posture, and moving forward in this way to the seat opposite, sit there until they leave. When sleeping the feet of everyone is turned towards the center of the lodge, where the fire is made, the smoke escaping at the opening in the top. The material will last with some repairs about three years, not longer. They usually make new lodges every third summer
No. 7. - Winter Dress - Crows.

Buffalo robe much garnished with porcupine quills ------------ 4 robes
Big Horn cotillion trimmed with scarlet and ornamented with
    porcupine quills -------------------------------- 3 robes
Leggings of elk skin, fringed and worked with quills ---------- 3 robes
Wrist, ear, and neck ornaments, say --------------------- 3 robes
    12 robes @ $3 or $36.00

(M89)
Mounted Warrior's Dress.

Buffalo robe painted with battle scenes and garnished with
    porcupine quills; best; 6 robes --------------- $18.00
Skin shirt and leggings garnished with human hair and
    porcupine quills valued at 1 horse or 10 robes ------- $30.00
War-eagle feather cap, largest kind; price 3 horses, 10 robes
each ---------------- $30.00
Necklace of bear's claws wrought on otter skin, 6 robes ----- $18.00
Feathers of the war eagle on shield, lance, and horse, 10 robes $30.00
Garnished moccasins, 1 robe ---------------- $3.00
Shell ear ornaments, 4 robes ---------------- $12.00

    Total ---------------- $171.00

Another fancy dress would cost as follows:

Scarlet blanket, 4 robes @ $3 --------------------- $12.00
Beads on same, 10 robes ----------------------- $30.00
Skin shirt and leggings garnished with porcupine quills and
    trimmed with ermine, 30 robes ---------------- $60.00
Bear's claw necklace, 6 robes ------------------ $18.00
Soldier's cap of magpie feathers, tipped with red and fringed
    with ermine, 10 robes --------------------- $30.00
Brass-wire arm bands, 3 robes ------------------ $9.00
Eagle feathers on lance and shield, 6 robes ------ $18.00
Shell ear ornaments and moccasins, 4 robes ------ $12.00

    Total ---------------- $189.00

Both of the above dresses are principally of their own manufacture; yet
if a trader wishes to purchase them he has great difficulty in doing so,
even by paying the above prices in merchandise, of which they always stand
in need; indeed, they seldom can be induced to part with them on any terms
unless forced to sell to supply some reverse by loss of property which has
happened to their families. The reason is that they are scarce, difficult
to replace, and also it is the wish of the warriors to wear them during
their lives on all public occasions and to be clothed with them when they
die. Two tails of the war eagle of 12 feathers each would be worth two
horses if wrought into a cap, or something more than a horse without.
Usually the value of the tail feathers of this bird among any of the tribes
of whom we write is $8 each in merchandise in this country, or 15 feathers
for a horse. Ten ermine skins will also bring a horse among the Crow
Indians, and 100 elk teeth are worth as much, there being but two teeth
in each elk which are suitable, and the tail feathers of the war eagle
are the only ones used. The elk are not killed in great numbers by any one
hunter, so that much time and bargaining are required for an individual
to collect 300, the number usually wrought on a Crow woman's dress.
The eagles are scarce and difficult to catch; hence the value of these
two ornaments.
PLAINS TRIBES. NUMBER OF HIDES AND POLES REQUIRED TO MAKE A LODGE.

Forty Sixth Annual Report of the Bureau of American Ethnology, Edwin T. Denig, Indian Tribes of the Upper Missouri, The Assiniboin, 1854 (578) and cut up their old ones for leggings and moccasins. Their lodges are always carried along when they travel with the camp, being packed on a horse in summer, or on a travaille in winter, in default of horses, and when the snow is deep they keep out wind and rain and answer all their purposes, but are cold, smoky and confined. Families of from 2 to 10 persons, large and small, occupy tents of different dimensions, say, one of 6 skins for the former and one of 16 skins for the latter number. Lodges of 36 skins are sometimes found among the Sioux, owned by chiefs or soldiers. These when carried are taken apart in the middle in two halves and each half packed on a separate horse. When erected, the halves are again joined by wooden transverse pins, the poles are dragged on the ground, being tied together in equal-sized bundles, and slung to each side of the horses. A tent of this size will accommodate 50 to 80 people on an occasion of feast or council, as they can sit in rows three or four deep; about 30 persons, however, could sleep therein with ease, independent of the space required for baggage, provisions, and utensils.


(50) (Crow camp on Big Horn river, 1877) I wandered into the huge buffalo-skin lodge of Iron Bull, head chief of the Crows, passing at once into a new world. The hide lodge cover was well smoked from the fire and the sun could not penetrate. —— Theirs was the largest and finest lodge I have ever seen. The cover of twenty-five skins was in two pieces. The poles were twenty-five feet long and five inches in diameter, and it took six horses to drag them.


(364) (Fort Union, Upper Missouri River, January 13, 1852.) Le Gras brought bad news from the Yellowstone. The river is out of bounds, has overflowed its banks and inundated Rottentail's camp. His largest tent, made of 35 skins put together, all his commodities but recently purchased, his stock of raw buffalo hides together with those already tanned, his clothing, decorations, everything was carried off by the high water. The American Fur Trade of the Far West by Hiram Martin Chittenden. Captain, Corps of Engineers, U.S.A. Three Volumes. Francis P. Harper, New York, 1908. Volume One.

(40) (Packs.) In transporting the furs to market, they were disposed in packs weighing about one hundred pounds. (3.) (Footnote 3.) A pack of furs contained ten buffalo robes, fourteen bear, sixty otter, eighty beaver, eighty raccoon, one hundred and twenty foxes, or six hundred muskrat skins.


A pack of beaver is made up of 80 average beavers, supposed to weigh 100 lbs., worth in New York at that time from $7 to $8 per lb.
I do not believe a soldier should be loaded down too much, but, including his clothing, arms, and equipment, he can carry about fifty pounds without impairing his health or activity.


I shall now leave these geographical notices, to give some further account of the people from Montreal. When they are arrived at the Grande Portage, which is near nine miles over, each of them has to carry eight packages of such goods and provisions as are necessary for the interior country. This is a labor which cattle cannot conveniently perform in summer, as both horses and oxen were tried by the company without success. They are only useful for light, bulky articles; or for transporting upon sledges, during the winter, whatever goods may remain there, especially provisions, of which it is usual to have a year's stock on hand. Having finished this toilsome part of their duty, if more goods are necessary to be transported, they are allowed a Spanish dollar for each package; and so inured are they to this kind of labour, that I have known some of them set off with two packages of ninety pounds each, and return with two others of the same weight, in the course of six hours, being a distance of eighteen miles over hills and mountains.


The boxes were packed to weigh seven pounds each and contained all the necessary staple supplies for three persons for one week; thus only one box needed to be opened at a time, and, moreover, if the party separated for a few days a single box could be taken without the necessity of repacking and with the assurance that sufficient food would be available.

On the Road to Ta-Li Fu We surveyed the tiny horses with dismay. As Heller vainly tried to get his girth tight enough to keep the saddle from sliding over the animal's tail he exclaimed, "Is this a horse or a squirrel I'm trying to ride?" But it was not so bad when we finally climbed aboard and found that we did not crush the little brutes. A seventy-pound box on each side of the saddle with a few odds and ends on top made a pack of at least one hundred and sixty pounds. This is heavy even for a large animal and for these tiny mules seemed an impossibility, but it is the usual weight, and the business like way in which they moved off showed that they were not overloaded.

Yun-nan We had had considerable trouble with the camera coolies since leaving Li-chiang. The first one carried the camera to the Taku ferry with many groans, and there engaged a huge Chinaman to take his place, for he thought the load too heavy. It only weighed fifty pounds, and in the Fukien Province where men seldom carry less than eighty pounds and sometimes as much as one hundred and fifty, it would have been considered as only half a burden. In Yun-nan, however, animals do most of the pack carrying, and coolies protest at even an ordinary load.
Voyages from Montreal, on the River St. Lawrence, through the Continent of North America to the Frozen and Pacific Oceans, in the years 1789 and 1793, etc., by Alexander Mackenzie, Esq., London, 1801.

(285) Each of the Canadians had a burden of about ninety pounds, with a gun, and some ammunition. The Indians had about forty-five pounds weight of pemmican to carry, besides their gun, etc., with which they were very much dissatisfied, and if they dared would have instantly left us.

New Light on the History of the Greater Northwest. The Henry-Thompson Journals, 3 Vols. Elliott Coues, New York, 1897. (Alexander Henry) (177) May 4th. (1801) -- At ten o'clock I sent off the canoes with 45 pieces of 90 pounds each per canoe, but only two men, there being no room for more on board.


(696) (We) embarked the Furrs, and with five men set off for the Rainy River House and arrived July 33 (1808), where we landed our cargo of Furr, then made up an assortment of Goods, for two Canoes, each carrying twenty pieces of ninety pounds weight.

(177) North West Company. The south east end of the Great Carrying, was in a small Bay of Lake Superior, in Latitude 47° 58° 1 N. Longitude 89° 44° 20 W of Greenwich. It was then, and had been for several years, the Depot of the Furr Traders; to this place the Canoes from Montreal came, each carrying forty to forty-five pieces of merchandise, including spiritsuous liquors; each piece of the weight of ninety to one hundred pounds; these canoes then were loaded with packs of furrs, the produce of the winter trade of the interior countries, and returned to Montreal; the Merchandise for the winter trade of the distant trading Posts was here assorted, and made up in pieces each weighing ninety pounds; the Canoes were of a less size, and the load was twenty five pieces, besides the provisions for the voyage and the baggage of the Men: being a weight of about 2600 pounds, to which add five Men, the weight a canoe carries will be 3700 pounds. These Canoes are formed into what are called Brigades of four to eight Canoes for the different sections of the interior countries.

(161) "Chepawyans" at Rein Deer Lake, winter of 1795-1796. Seeing a woman carrying a heavy child, and hauling a long, loaded sled; as she came to the bank, I desired one of the Men, who was remarkable for his strength to assist her, she gave the trace to him; thinking a woman could not haul any weight worth notice, he carelessly put two fingers to the trace of the Sled, but could not move it; he had at length to employ all his strength to start the Sled, and haul it to the House: the Sled and load weighed about one hundred and sixty pounds.

(441) Having furnished ourselves with leather Tents and dressed leather for shoes; we loaded our Horses in proportion to their strength from 160 to 340 pounds weight each Horse.

The Expeditions of Zebulon Montgomery Pike, Edited by Elliott Coues, New York, 1895, 3 Volumes. (II:787) (1808: Mexico) Some persons make large fortunes by being carriers from Mexico to Chihuahua, the freight being 8 dollars per cwt., and they generally putting 300 pounds on each mule.
Friday, November 39, 1940, at 6:55 P.M., E.S.T., over Station WJSV, Washington, D.C., Program: "World Today," Larry LeSueur speaking from London, England, British Broadcasting Company. The British soldier carries only 33 pounds as against 63 pounds carried by the United States soldier and 80 pounds carried by the German soldier.

Forty Years a Fur Trader on the Upper Missouri by Charles Larpenteur. Edited by Elliott Coues. (1833–1872) New York, Francis P. Harper, 1868. (7) (St. Louis, Missouri, March–April, 1833) To see the mules rolling and dusting is interesting and shocking at the same time; most of them, having carried their burden of 200 pounds weight for about 2,000 miles, return with scarcely any skin on their backs; they are peeled from withers to tail, raw underneath from use of the surcingle, and many are also lame.


They had a long file of famished dogs, loaded with their little provisions, etc. Every family has a band of six to twelve of these animals, and each dog carries from thirty to fifty pounds weight. They are the most wretched animals in existence; from their tender-hearted masters and mistresses they receive more bastinadoes than morseles, consequently they are the most adroit and incorrigible rogues to be found in the forest.


(398) Our trains from Nashville forward were operated under military rules, and ran about ten miles and hour in gangs of four trains of ten cars each. Four such groups of trains daily made one hundred and sixty cars, of ten tons each, carrying sixteen hundred tons, which exceeded the absolute necessity of the army, and allowed for accidents that were common and inevitable. But, as I have recorded, that single stem of railroad, four hundred and seventy-three miles long, supplied an army of one hundred thousand men and thirty-five thousand animals for the period of one hundred and ninety-six days, viz., from May 1 to November 13, 1864. To have delivered regularly that amount of food and forage by ordinary wagons would have required thirty-six thousand eight hundred wagons of six mules each, allowing each wagon to have hauled two tons twenty miles each day, a simple impossibility in roads such as then existed in that region of country. Therefore, I reiterate that the Atlanta campaign was an impossibility without these railroads; and only then because we had the men and means to maintain and defend them, in addition to what were necessary to overcome the enemy. Habitually, a passenger-car will carry fifty men with their necessary baggage. Box-cars, and even platform-cars, answer the purpose well enough, but they should always have rough board-seats. For sick and wounded men, box-cars filled with straw or bushes were usually employed. Personally, I saw but little of the practical working of the railroads, for I only turned back once (400) as far as Resaca; but I had daily reports from the engineer in charge, and officers who came from the rear often explained to me the whole thing, with a description of the wrecked trains all the way from Nashville to Atlanta.
ESTIMATE OF LOAD CAPACITY OF VARIOUS MEANS OF TRANSPORTATION EMPLOYED IN FUR TRADE AMONG INDIANS.


(570) These people have dogs like those in this country, except that they are somewhat larger, and they load these dogs like beasts of burden, and make saddles for them like our pack saddles, and they fasten them with their leather thongs, and these make their backs sore on the withers like pack animals. When they go hunting, they load these with their necessities, and when they move - for these Indians are not settled in one place, since they travel wherever the cows move, to support themselves - these dogs carry their houses, and they have the sticks of their houses dragging along tied on to the pack-saddles, besides the load which they carry on top, and the load may be, according to the dog, from 35 to 50 pounds.

Original Narratives of Early American History, Spanish Exploration in the Southwest, 1543-1706, Edited by Herbert Eugene Bolton, New York, 1916. (226) The Onate Expedition, 1598-1599, Report of Mendoza, 1599. The sargento mayor bartered for a tent and brought it to this camp. (237) and although it was so very large, as has been stated, it did not weigh over two arrobas (An arroba is twenty-five pounds). To carry this load, the poles that they use to set it up, and a knapsack of meat and their pinole, or maize, the Indians use a medium-sized shaggy dog, which is their substitute for mules. They drive great trains of them. Each, girls round its breast and haunches, and carrying a load of flour at least one hundred pounds, travels as fast as its master.

Early Western Travels, 1748-1846, Edited by Reuben Gold Thwaites, Volume XXIV, Part III, Travels in the Interior of North America, 1832-1834, by Maximilian, Prince of Wied, Arthur H. Clark Company, Cleveland, 1906. (51) Fort Clark, among Mandan and Minitari, December 26, 1833. These dogs, if they are not broken in, are quite unfit for the sledge; when, however, they are accustomed to the work, they draw a sledge over the snow more easily than the best horse. If the snow is frozen, they run over it, where the horse sinks in, and they can hold out much longer. They can perform a journey of thirty miles in one day; and if they have rested an hour on the snow, and had some food, they are ready to set out again. A horse must have sufficient food, frequent rest, and a good watering place, and when it is once tired it cannot be induced to proceed. I have been assured by some persons that they had made long journeys, for eight successive days, with dogs, during which time the animals did not taste any food. In the winter, when the Indians go to hunt the buffalo, they drive, in light sledges, over the frozen snow, into the midst of the herd; the Indian, with his bow and arrows, sits or kneels down in the sledge; and dogs that have been trained, cannot be held back when they perceive the buffalo herd. In the north three good dogs are seldom to be purchased for less than 100 dollars. A single dog, when it is very good and strong, costs sixty or seventy dollars; on the Missouri, however, they are by no means so dear.

Memoirs of General W.T. Sherman, 2 vols. New York, 1875, volume II. (389) An ordinary army-wagon drawn by six mules may be counted on to carry three thousand pounds net, equal to the food of a full regiment for one day, but, by driving along beef-cattle, a commissary may safely count the contents of one wagon as sufficient for two days' food for a regiment of a thousand men; and as a corps should
The aristocrat of early Mississippi River navigation was the keelboat, because by virtue of its keel, usually four-inch oaken timber, it could both ascend and descend the river. A typical keelboat was from fourteen to eighteen feet wide, fifty to seventy feet long, and pointed at both bow and stern. It carried up to seventy tons of freight in the cargo box, which utilized the four feet of the hold and extended another four or five feet above the level of the deck. A curved roof of heavy plank was built over the boat, which was decked at either end for a distance of eight to ten feet. On the forward deck was a windlass or capstan, which was used to pull the boat off sandbars and to help warp it through the rapids and stretches of swift water. Along each side of the cargo box was an eighteen-inch walk, with cleats from twenty-eight to thirty inches apart. The equipment of some of the keelboats included huge sweeps twenty feet long, requiring at least two men to handle them, which were hung in oaken frames over the sides. On the Ohio the keelboat, also known as the packet-boat, reached dimensions that were truly gargantuan. Many were more than a hundred feet long and twenty-five feet wide, with a passenger cabin aft and a huge cargo box forward. The monsters carried crews of from seventy to one hundred men, but even with every man working to the limit of his endurance a month was required to make the round trip between Cincinnati and Pittsburgh.

The craft principally used after the first few years had shown the utter impracticability of most of the designs were the flatboat and the keelboat, which were built in Ohio river towns and sold at the standard rate of a dollar a foot.

The flatboat varied in length from forty to one hundred feet, and in width from fifteen to twenty-five. It was constructed of massive timbers and thick planks and was designed to support the weight of from thirty to one hundred tons of freight. The hold was usually about four feet deep, and was built with a cargo box similar to that of the keelboat. Many of the flatboats were fitted with pens for horses, cattle and hogs, and great numbers of animals were thus conveyed to the markets of Natchez and New Orleans. These craft were also used to carry immigrants to the rich down-river country.

The early Mississippi River steamboats were built for carrying freight only, as it was presumed that everyone would be afraid to ride on the "swimming volcanoes." The contrary proved to be true, however, and almost immediately there was a great demand for passage. One of the first boats to cater extensively to this traffic and to provide suitable accommodations was the second New Orleans, designed by Robert Fulton in 1815 and built at Pittsburgh at a cost of $65,000, of which $30,000 was for machinery. She was 140 feet long and 28 feet wide, and was capable of a speed of four miles an hour upstream and ten miles downstream. Four-foot logs were used as fuel, and when steaming at top speed the furnace of the New Orleans consumed six cords of wood in twenty-four hours. She was manned by a crew of twenty-four, including four officers, and could carry two hundred tons of freight and about fifty passengers.

*The American Fur Trade of the Far West by Chittenden, vol. I.*

The Keelboat. The best known record for a long journey, say, a thousand miles, was eighteen miles per day, while the average was scarcely more than twelve or fifteen.
ESTIMATE OF LOAD CAPACITY OF VARIOUS MEANS OF TRANSPORTATION EMPLOYED IN THE FUR TRADE AMONG INDIANS.

Memoirs of General W.T. Sherman, 2 vols. New York, 1875, volume II. (390) have food on hand for twenty days ready for detachment, it should have three hundred such wagons, as provision-train; and for forage, ammunition, clothing, and other necessary stores, it was found necessary to have three hundred more wagons, or six hundred wagons in all, for a corps d’armée.

Contributions to the Historical Society of Montana, Volume IX, Missoula, Montana, 1923. Custer's Last Battle, by Edward S. Godfrey, Brigadier-General, United States Army, formerly one of General Custer's Troop Commanders. (appeared in Century Magazine, 1891. Campaign of 1876). (147) The wagon train consisted in all of about one hundred and fifty wheeled vehicles. In it were carried thirty days supplies of forage and rations (excepting beef), and two hundred rounds of ammunition per man. The two horse wagons, hired by contract, carried from fifteen hundred to two thousand pounds. The six-mule government wagons carried from three to five thousand pounds, depending on the size and condition of the mules. The Gatling guns were each hauled by four condemned cavalry horses and marched in advance of the train. Two light wagons loaded with axes, shovels, pick-axes and some pine boards and scantling, sufficient for a short bridge, accompanied the "pioneers" troops.

The American Fur Trade of the Far West by Hiram Martin Chittenden, Corps of Engineers, U.S.A. Three Volumes, New York, 1903. Volume I. (34) The Mackinaw. The mackinaw was a flat-bottomed boat pointed at both ends, sometimes forty to fifty feet long with twelve feet beam, and three or four feet depth of hold. The oarsmen, four in number, were bestowed in the bow, and the steersman on a high perch in the stern, while the cargo was piled up in the space between them. The current was the main reliance for propulsion. The cargo was about fifteen tons, the rate of progress seventy-five to one hundred miles per day, and the cost about two dollars per day, or about one (35) and a half mills per mile-ton. The boats were cheaply made, and were intended only for downstream navigation, being abandoned at St. Louis. They were the cheapest of all methods for carrying freight down the river. The Bull-Boat. The bull-boat was made of buffalo skins sewn together and stretched over a frame of willow and cottonwood poles. The size was commonly about twelve by thirty feet and twenty inches deep. It had the least draught of any river craft, and was therefore best adapted to such shallow streams as the Platte. The cargo generally consisted of robes, and amounted to two and a half tons weight, which caused a draught of only about four inches. These boats, in one form or another, saw extensive service on Western rivers.

History of Early Steamboat Navigation on the Missouri River by Hiram Martin Chittenden, Captain Corps of Engineers, U.S.A., Two Volumes, New York, 1903. (I:318) In the spring of 1859 the American Fur Company sent up two boats with its annual outfit, its own boat, the Spread Eagle, and a chartered boat, the Chippewa. The Chippewa was a light boat, and her owner, Captain Crabtree, contracted to take her to Fort Benton, or as far as it was possible to go. At Fort Union he defaulted in his contract and sold the boat to the Company for just about the charter price for the voyage. Such freight as the Spread Eagle carried for Fort Benton was then transferred to the Chippewa, making a total cargo of 160 tons.
Cost to the Government of the United States of the Transportation and Insurance of Annuity goods to the Blackfoot Indians up the Missouri River by steamboat from St. Louis to Fort Benton at the head of navigation, for the years 1855-1865. These annuity goods were due under the provisions of Articles 9 and 10 of the Treaty concluded October 17, 1855. (11 Stat. L., 857-862.)

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<th>Trans. &amp; Ins.</th>
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<td>$534,404.77</td>
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Balance of appropriation for transportation, etc., carried to the surplus fund of the Treasury, June 30, 1873 -- $12,953.92

TOTAL -- $547,358.69

(From Record of Blackfoot, et al., Indians v. United States, United States Court of Claims, Docket Number E. 427, Record Page 137, Report of the department of the Interior to the Attorney General of June 11, 1926.)

The United State paid 31 cents in Transportation and Insurance upon every Dollar's worth of annuity goods and provisions shipped from St. Louis to Fort Benton via steamboat up the Missouri River, according to the figures above given.


Blackfoot annuities, 143,853 lbs., freight St. Louis to Fort Benton, at 11 cents per pound, $15,714.83

Fifty Years a Fur Trader on the Upper Missouri by Charles Larpenteur, Edited by Elliott Coues, New York, 1898. (1833-1873.) Volume I, Map, facing p. 50, Sheet IX, Missouri River Commission, 1884: Places Fort Union site about five miles above junction of Missouri and Yellowstone Rivers on the north bank of the Missouri River.

History of the American Fur Trade in the Far West by Hiram Martin Chittenden. In Three Volumes. New York, 1903. (Vol. III, p. 984) The distance from St. Louis to Fort Union was about 1,700 miles.

(Vol. II, p. 764) About thirty-seven miles below the Great Falls, or two hundred and twenty-four miles below the Three Forks, is the head of navigation on the Missouri, (Fort Benton).

(Vol. II, p. 764) At the distance of 788 miles below the Three Forks is the mouth of the Yellowstone river, the largest tributary of the Missouri. (Note: Distance from St. Louis to Fort Benton, via Missouri River is 2,317 miles.)

*Indians did not receive annuities. Freight charge never paid.
ESTIMATE OF LOAD CAPACITY OF VARIOUS MEANS OF TRANSPORTATION EMPLOYED IN THE FUR TRADE AMONG INDIANS.

History of Early Steamboat Navigation on the Missouri River by Hiram Martin Chittenden, Captain Corps of Engineers, U.S.A., Two Volumes, New York, 1903. (II:333) A new boat was being built on the Ohio River by the Keokuk Packet Company, John S. McCune, President. Not proving satisfactory for their purposes, she was brought to St. Louis and offered for sale. La Barge found her well fitted for his work, and negotiated a purchase at forty thousand dollars. McCune retained a one-fourth interest. She was called the Effie means. - The boat was loaded with the usual assortment of freight, and left St. Louis March 22, 1864, with forty-nine passengers and a cargo of 160 tons.

Life, Letters and Travels of Father Pierre-Jean De Smet, S.J., 1801-1873, by Hiram Martin Chittenden, Major, Corps of Engineers, U.S.A. and Alfred Talbot Richardson. Four Volumes. New York, 1905. Volume III. (846) Letter written by Father De Smet, on board the steamer Ontario at Fort Benton, Montana, June 10, 1866. To whom the letter is addressed is not stated. You ask me to send you some word from time to time, and to keep you informed in regard to the occurrences of such a journey, and go into minute details upon the sort of life that one leads upon a long-distance steamboat in the "Far West." I shall endeavor to satisfy you. First as to the boat, on board of which I am. The steamer Ontario has a single wheel at the stern. It was built in 1863, carries 450 tons or 900,000 pounds, avoids rapids, draws thirty inches of water light, and has three boilers, which consume eighteen to twenty cords of wood daily. A cord of wood is eight feet in length by four in height and four in depth, and sells on the Missouri for $4 to $8 per cord. The Ontario has two engines of 132 horse-power, and is already considered as past its prime. The constant service in which boats are kept on our great rivers of the West, where commerce and transportation are very considerable and much varied, uses them up in a very few years. They have to contend with impetuous currents, to ascend rapids, to cross banks or bars of sand or mud, where the full power of the capstan has to be exerted to get them over. Snags, or forest trees which drop into the current by thousands from the crumbling banks, and whose roots become imbedded in the bottom of the stream, often form dangerous and formidable barriers or obstacles, upon which a great number of steamers are wrecked or seriously damaged every year. Going against the current, the Ontario makes five to six miles an hour; with the current, fifteen to eighteen miles. Her crew consists of a captain, two clerks, two pilots and an assistant, two engineers, two mates, a steward, two watchmen, one head cook and two assistants, one hotellier (barkeeper?), seven cabin boys, a porter or baggage man, eight deckhands (white), four firemen, nineteen negroes for all the work of the boat, and one chambermaid.

(847) The main cabin of the Ontario consists of thirty staterooms, seven feet long by six wide, and with two berths each. There are thirty-two first class passengers, fifteen gentlemen, twelve ladies and five children.

History of Early Steamboat Navigation on the Missouri River by Hiram Martin Chittenden, Capt. Corps. Engineers, U.S.A., New York, 1903. Volume II. (376) Freight rates from St. Louis to Fort Benton in 1866 were 12 cents per pound. Insurance rates were 8% per cent. in the case of sidewheel boats and 8 per cent. with sternwheel boats. The fare for cabin passengers was $300. --- The master of the boat received $200 per month; the clerk $150; the mate and engineer each $125. The pilot was the only member of the crew who could command what salary he pleased. So indispensable were his services that as high as $1200 per month was paid for the best talent.
By most persons the capacity of the Indians has been greatly underrated. They are generally considered as low in intellect, wild men thirsting after blood, hunting for game or plunder, debased in their habits and groveling in their ideas. Quite the contrary is the case. They show order in their national government, order and dignity in the management of their domestic affairs, zeal in what they believe to be their religious duties, sagacity and shrewdness in their dealings and often a display of reasoning powers far above the medium of uneducated white men or Europeans. Their religion, as a system, is far superior to that of the inhabitants of Hindostan or Japan: therefore to overcome this and establish the truths of Christianity, both their reason and feelings must be wrought upon by teachers pur-

(1064) suing such a course of life and occupation as will convince them of the sincerity of their beliefs and endeavor.

(304) (1853, West coast of Vancouver Island, the Nootka Indians.) I now began singing for the amusement of the old chief and to impress him with my indifference to our situation for all the Indians I had seen seemed to entertain a more favorable feeling for a good natured, careless person, than one who appears steady, calculating and ill tempered; the latter class they always regard suspiciously.

New Light on the Early History of the Greater Northwest. The Manuscript Journals of Alexander Henry and David Thompson, 1799-1814. Edited by Eliott Coues. In Three Volumes. Vol. I, The Red River of the North. New York. Francis P. Harper, 1887. Chapter VII, The Pembina River Post. (355) (Kamanistiquia, October 37, 1804.) One of my men having beaten his woman, she went into the woods with a piece of rope and attempted to hang herself, which she would actually have done, had she not been discovered just as she was climbing the tree to throw herself off. Instances of this sort are not uncommon among the Saulteur (Chippawa) women. An old woman belonging to Chamard (Michel Chamard, voyageur, employed by Northwest Company, 1804), one of my men at Portage la Prairie, last winter in a fit of despair hung herself in the woods and was found next day dead and stiff. This old woman had lost two grown daughters within a short time; she lamented them sadly, and one day, having quarreled with her old man and been beaten, she put an end to her troubles. I have known on this river several women who hanged themselves, having lost their husbands and been ill-used by their relations.

(See Note facing Page 187, Cocking and Gerrick Mallery.)

(354) (The Stag, eloping with a woman, issot in the belly while taking a horse or two from Saskatchewan Trading House) The next morning finding himself dying he took his sharp dagger in his hand, and held it ready to plunge into the heart of the young woman who had accompanied him and who was sitting beside him (she did not wish to die with him) "I see you do not love me and I must go alone, tell my brother of what has happened and that I die by my own hand," then with his dagger (he) cut his belly from side to side, and with a hysteric laugh fell dead. (Piegans Indians)

(356) (An Indian woman, tribe not named, kills herself because her husband struck her in the presence of Thompson and others.)

(363) (Suicide of Sioux woman captive on seeing head of her husband.)
The Indians of North America, selected and edited by Edna Kenton from
The Jesuit Relations and Allied Documents: Travels and Explorations
of the Jesuit Missionaries in New France, 1610-1791, edited by Reuben
Gold Thwaites. Two Volumes. New York, 1931;
(Biard's Relation, 1618, vol. I, p. 33) The nature of our savages is in
itself generous and not malicious. They have a rather happy disposition,
and a fair capacity for judging and valuing material and common things,
deducing their reasons with great nicety, and always seasoning them with
some pretty comparison. They have a very good memory for material things,
such as having seen you before, of the peculiarities of a place where
they may have been, of what took place in their presence twenty or thirty
years before, etc.; but to learn anything by heart—there's the rock;
there is no way of getting a consecutive arrangement of words into their
pates. ----- You do not encounter a big-bellied, hunchbacked, or deformed
person among them; those who are leprous, gouty, affected with gravel, or
insane, are unknown to them. Any of our people who have some defect, such
as the one-eyed, squint-eyed, and flat-nosed, are immediately noticed by
them and greatly derided, especially behind our backs and when they are
by themselves. For they are droll fellows, and have a word an a nickname
very readily at command, if they think they have any occasion to lock
down upon us. And certainly (judging from what I see) this habit of self-
aggrandizement is a contagion from which no one is exempt, except through
the grace of God. You will see these poor barbarians, notwithstanding
their great lack of government, power, letters, art and riches, yet
holding their heads so high that they greatly underrate us, regarding
themselves as our superiors.
(Biard's Relation, 1611-1616, vol. I, pp. 34-35) They set themselves
up for brothers of the King, and it is not expected that they will
withdraw in the least from the whole farce. Gifts must be presented and
speeches made to them, before they condescend to trade; this done, they
must have the Tabagie, i.e., the banquet. Then they will dance, make
speeches and sing Adesquidex, Adesquidex. That is, that they are good
friends, allies, associates, confederates, and comrades of the King and
of the French.
(Letter of C. Laflamant to Jerome, 1616-1639. vol I, pp. 55-56) From
morning until night they have no other thought than to fill their
stomachs. They come to see us only to ask for something to eat; and if
you do not give it to them they show their dissatisfaction. They are
real beggars, if ever there were any, and yet proud as they can be.
They consider the French less intelligent than they.
(Le Jeune's Relation, 1632, vol. I, pp. 81 and 82) If you press them,
they are not very obstinate. They follow a certain routine in their
superstitions, for which they can give no reason. ----- for the savages
agree very readily with what you say, but they do not, for all that,
cease to act upon their own ideas.
(Letter of Vivier, 1750, among the Illinois. vol. II, p. 469). The
savages, and especially the Illinois, are of a very gentle and sociable
nature. They have wit, and seem to have more than our peasants, —as
much, at least, as most Frenchmen. This is due to the freedom in which
they are reared; respect never makes them timid, as there is neither
rank nor dignity among them, all men seem equal to them. An Illinois
would speak as boldly to the King of France as to the lowest of his
subjects. Most of them are capable of sustaining a conversation with
any person, provided no question is treated of beyond their sphere of
knowledge. They submit to raillery very well; they know not what it is
to dispute and get angry while conversing. They never interrupt you in
conversation. I found in them many qualities that are lacking in
civilized peoples.

(106) (September 29, 1800. Park River Post on Red River. Henry, Chippewas.) Woods and canoe Indians. When they conceive themselves to have been revenged, they are careless as to consequences, and in a manner have no sense of fear. Even when death seems certain, they scorn to avoid it; but should the assailant fail in his undertaking, he may rest assured the consequences will be fatal to him some day. I attribute to this impulse of ferocity the many instances I have witnessed in which Indian, having failed in a premeditated murder, and being well aware of the consequences, will inure or kill all who come in his way, until his passion is satisfied, when he will suddenly throw down his arms and give himself up to the judgment of the camp. Sitting with his head between his legs, he will allow even a child or an old woman to dispatch him, without saying one word in his own defense. If lenity is shown him he afterward becomes a mean devil, and in almost every drinking-bout will do some black deed, until he receives his death blow; this happens generally very soon, but sometimes immediately—particularly should he not belong to the clan (totem).

(393) (July 25, 1806. Mandan and Cheyenne Indians. Quarrel. Henry.) Having reached the eminence whence we had first seen the Schian camp we stopped, and formed into line abreast. Here both parties again disputed and argued with each other until many worked themselves up into such a frenzy as to foam at the mouth, especially the Schians, who appeared quite undaunted, and I believe, would have fought like heroes.


(113) (December, 1772) 33. Wednesday. A Young man, who came to us yesterday, shot himself through the lungs; the reason very trifling. This rash action was nearly the death of two of his friends, who intended to stab themselves, but were prevented by myself, & other bystanders. The Asinepoet (p. 97, footnote 3, supra, Asinepoet refers to Assiniboine) Natives are oftentimes guilty of Suicide, on very childish grounds.


(131) 1784-'85. No.1. A young man who was afflicted with the small-pox, (132) and was in his tipi, off by himself, sang his death-song and shot himself. Suicide is more common among Indians than is generally suspected, and even boys sometimes take their own lives. A Dakota boy at one of the agencies shot himself rather than face his companions after his mother had whipped him, and a Pai-Ute boy at Camp McDermitt, Nevada, tried to poison himself with the wild parsnip because he was not well and strong like the other boys. The Pai-Utes usually eat the wild parsnip when bent on suicide.

(See Note facing Page 108, Alexander Henry.)

(Henry, August 1, 1806, vol. I, p. 364. Assiniboia, Chipewa, Cre in Red River country.) At this they said among themselves that I had "almost as much sense as an Indian"; and if I had added a few kegs of rum I should have been considered fully as wise as themselves. (He had just given a war party of Chipewas 9 gallons of powder and 100 pounds of balls to help them revenge his Indian father-in-law, just killed by a Sioux war party.) This method of comparing a white man to an Indian is the highest compliment they can pay. Let no white man be so vain as to believe that an Indian really esteems him or supposes him to be his equal. No - they despise us in their hearts, and all their outward professions of respect and friendship proceed merely from the necessity under which they labor of having intercourse with us to procure their necessities.

(Henry, Minisari village on Missouri, July 31, 1806, vol. I, p. 347) They do not appear to be of such sociable and affable disposition as their neighbors (the Mandans); they are proud and haughty, and think there is no race upon earth equal to themselves; they despise other nations. --- (i.p. 350) They (the Minisari) were disgusted at the high-sounding language of the American captains (Lewis and Clark) bestowed upon themselves and their own nation, wishing to impress the Indians with an idea that they were great warriors, and a powerful people who, if exasperated, could crush all the nations of the earth, &c. This manner of proceeding did not agree with these haughty savages, who have too high an opinion of themselves to entertain the least idea of acknowledging any race to be their superiors.

(Minisari, vol. I, p. 363, July 31, 1806, Henry) However ridiculous this story (Minisari creation myth) may appear, argument has no weight with them. They say bluntly that if you don't believe it, you're a fool.

Forty Years a Fur Trader on the Upper Missouri, the Personal Narrative of Charles Larpenteur, 1835-1875, edited by Elliott Coues. New York, 1898. (Vol. II, pp. 408-409. Indians of Upper Missouri) On being very hard pressed for a statement expressing their ideas regarding resurrection, most Indians would finally say that they thought once dead was the last of a person. In conversation with them I found much pleasure in hearing their stories, which they relate with great eloquence, using a great many figurative expressions. I had some books printed in their language, which I brought with me from St. Paul. These were religious books, gotten up by missionaries of Minnesota, containing Noah's Ark, Jonah swallowed by the whale, and other miracles; at which they would laugh heartily when I read them, and then say, "Do the whites believe all this rubbish, or are they stories such as we make up to amuse ourselves on long winter nights?" They were very fond of having me read them such stories; that big boat tickled them, and how could Noah get all those animals into it was the question. Then they would say, "The white man can beat us in making up stories." Telling stories is a great pastime with Indians.


(Fort Union, September 28, 1861) "Indians at this post place little value on us whites," says the bourgeois (Denig). They maintain that we are capable of doing just anything for the sake of getting buffalo robes - we lie, we cheat, we work in the dirt even, just as their wives do. We are poor people who could not exist without them, because we must have buffalo robes or we should perish from cold. To impress them, therefore,
Strong's History of Oregon. Copied from handwritten manuscript in files of the H.H. Bancroft Library, University of California. (Judge William Strong came to Oregon in August, 1850. The manuscript was dictated in Judge Strong's chambers at Portland, Oregon, Thursday evening, June 20, 1878, for and in the presence of Bancroft, the historian. A copy of this manuscript is in the archives of Georgetown University, Washington, D.C.)

(65) Ogden was telling me one thing about the management of the Hudson's Bay Co. I travelled with him somewhat, in boats. When they were building a fort up at Fort Langley in British Columbia, he was sent up there to build the post. When they build new posts they did it at the request of the Indians. It was always their desire that the H.B. Co. should build a post there, because they got goods from them in that way, & it made them important among their neighbors. One day a man who had been putting in posts at the stockade came & reported that the Indians had stolen his axe. It was a little Canadian axe, a queer thing that they brought here. They work was immediately stopped. The Indians were called together, & a council was held on the axe; it was worth about 50 cents. The Indians denied having stolen it. Ogden however insisted that they should find it. Finally as they did not find it he made them pay a lot of furs before he would go on & threatened to abandon the fort. The next day the workman came in and said: "I have found that axe; it was covered up in the hill." "Well," said Ogden, "you go, take it & bury it where it will never be found again." "What for?" "We told them they stole it, & if we should tell them now that we were mistaken we never could make them believe anything again." Our western people could not understand the use of this kind of policy, for they hated an Indian as they do a rattlesnake.


(320) Firmness is essential in dealing with all inferior races, and they must have perfect confidence in your word. I might make a promise which circumstances afterward would not allow me to fulfill which I could explain to you but not to an Indian or a Moro. The only answer forthcoming would be, "You promised to do it, and you didn't do it"; and the only way certainly to protect one's word is not to make any promises, but if possible to be always better than one's word - do for them what one is able with sympathy and kindness, but without promises.

(167) If he (the Comanche) had been a timber Indian he would have been apt to kill me a year afterward, if the right opportunity occurred. I was warned in the Choctaw country that if I ever had a quarrel with a Choctaw or Seminole to kill him right away or he would kill me, if it were years afterward; but the Plains Indian are entirely different, some (168) being very jolly, others more reserved and stately, but all good-tempered. The Kiowas were more difficult than the Comanches, who were remarkably open and friendly, although our literature makes them appear otherwise.

(283) We have each a certain amount of energy like a charged machine. If most of it is used up in friction, there is little power left to do work, and so it is with many men. They use up their power in talk; when they say something they feel that they have actually done something, and their desire for action is satisfied. When negotiating with armed and angry Indians I am never anxious over the voluminous talker, but I watch the silent one over in the corner. His desire for action is not dissipatéed in talk, and he may act. When they talk out all their opposition there is no power of resistance left, and they must fall like ripe fruit into your hand. I have seen this happen times without number, not only in Cuba, but in Mexico, in the Philippines, on the Plains of the West. One only needs an unfailing and sympathetic courtesy and an unconquerable patience.
on our part, we think it best to assume a proud, reserved attitude, to act as though we took no notice of them, and refuse to imitate them either in dress or manner. The instant we should seek them, treat them in an intimate free-handed manner, they would only believe that we were courting their friendship for the sake of protection, and accordingly would give them a more exalted idea of their importance and a more significant proof of our own helplessness. In that event we should have to pay dearly for their friendship and their so-called defense, for there would be no limit to their demands. Among themselves Indians value liberality, "largesse," very highly as a virtue; in consequence, every gift is designated, even as a "coup," on the buffalo robe. But generosity on the part of a paleface wins neither their friendship nor their respect. They do not look upon a white person as one of themselves or as a recognized friend; his liberality shows his dependence; he seeks protection. The paleface owns no land; he is obliged to get permission to found his fort, to trade with the native race; and he is required to pay formal tribute for the privilege. Accordingly, if one presented an Indian with a gift every day in the year — this morning, a horse; tomorrow, a gun; the day after tomorrow, a blanket; the next day, a knife; and so on until the last day in the year — and then might forget or simply neglect to give him anything at all on the 365th day, he would be all the more angry on account of the omission. The same is true of an Indian woman; the more one gives her to win her good will, the more convinced she is that the donor is in her power. She does not respect him, much less love him; only treats him kindly for the sake of the gifts. An Indian woman must fear her husband; she then esteems him for his manliness. She desires a warrior — no good natured pantaloons. Therefore several sound lashings or other rough treatment is necessary from time to time to keep alive her respect and affection. Besides, an Indian woman loves her white husband only for what he possesses — because she works less hard, eats better food, is allowed to dress and adorn herself in a better way — of real love there is no question. After the third or fourth child, when they are getting too old for their Indian dandies, they begin to devote themselves entirely to the father of their children. If an Indian woman runs away, one is not to pay the least attention to her nor show the least grief; one is to forget her. To go after her, to beg her to return, is beneath the dignity of a brave — is not considered to be worth while.

Indian Tribes of the Upper Missouri, The Assiniboin, by Edwin T. Denig, edited by J.M.B. Hewitt, 46 Annual Report of the Bureau of American Ethnology, Smithsonian Institution, Washington, 1936-1939, pp. 525-526; (Assiniboin, Fort Union, 1853-1854) Laying aside the advantages of education, of knowledge acquired by conversation with superior men, and the increase of ideas gained in travel by the European, and drawing a comparison between the ignorant white and the savage, we feel bound to award preference to the latter. In all their conversation, manners, government of families, general deportment, bargaining, and ordinary occupations they exhibit a manliness, shrewdness, earnestness, and ability far superior to the mass of illiterate Europeans. Even their superstitions and religion present a connected, grand chain of thought, having for its conclusion the existence of a Supreme Power, much more satisfactory and sublime in the aggregate than the mixture of bigotry, infidelity, enthusiasm, and profanity observed in the actions and language of the lower class of Christians. An excellent opportunity offers in this country to draw a comparison between the Indians and the engagess of the Fur Company, and what can never fail to strike the mind of the observer is the superior manliness and energy of the Indian in thought, word, and action, as evinced in their patience, contempt of death and danger, reverses of

(66) I used to travel a good deal with the Indians, up & down the Columbia River, in canoes. There is a great deal of romance about them; or else they think we like romance, and tell us the kind of stories we like. I had one Indian in particular that always used to be telling me some romantic stories that had been handed down to them. We never could pass any prominent point, but that he would tell me some stories connected with it.


(67) According to the statistics in the Report of the Commissioner of Indian Affairs, which in part are compiled by the Office of Indian Affairs and in part are taken from the report of the Census Bureau, the Indian population numbers approximately 355,000, excluding the Freedmen and the inter-married whites of the Five Civilized Tribes, with both of which non-Indian groups the Service has something to do.

(306) Hiawatha Hospital for Insane Indians, Canton, South Dakota, patients present in June, 1857:
Epilepsy, 16; Dementia Praecox, 31; Imbecility, 17; Constitutional Infirmity, 3; Idiocy, 8; Senile dementia, 7; Paranoia, 1; Intox. psychosis, 4; Manic-depressive, 3; Undiagnosed, 3; TOTAL, 93.
(No locomotor ataxia and no paresis.)


(201) Their arms were the northwest guns, and bows and arrows. On all solemn occasions, when I met the Indians on my route, they were arrayed with the utmost care. My duties in the field did not allow the same attention on my part; and the Indians sometimes complained of this, saying, "We dress up to receive you, and why do you not wear the dress of a chief?"

(For note facing Page 190, Witiko Psychosis and Witiko. Witiko is a supernatural being, a giant, who vomits ice and is a cannibal. A witiko is a person turned into a witiko or possessed by a witiko. Native cure: Kill the patient and burn his body.) (33C)


(500) The Plains-Ojibway. The Windigokan or Cannibal Cult. Right to become a windigokan is acquired by dreaming of a paguk, or skeleton being with glaring eyes sometimes seen flying through the air. Costume and dance same as Assiniboine Fool Dance, and Assiniboine may have borrowed same from Plains-Ojibway, who in turn may have borrowed ideas from Iroquois. Windigokan like masks are healing society. Some Plains-Ojibway regard dance as burlesque.
(Witke: Dakota word for fool. e.g. Witke-win, fool woman, a prostitute.)
fortune, in their affection for their children, government of their families, their freedom from petty vexations, and useless bursts of impotent passion. The Indian reverences his unknown God in his way. Though the principle be fear and the object Creation, it leads to reliance and resignation when his own resources fail, whereas the whites spoken of vent their displeasure for most trifling grievances and accidents in eternal curses on the Great Disposer, the Virgin Mary, and all other holy persons and objects they deem worthy of their execration. These Indians are capable of pursuing a logical train of reasoning to a just conclusion. If the subject be one with which by experience they have become acquainted, they can argue it point by point with any person. Even the Assiniboins, who are the most ignorant of all these tribes, can pursue a satisfactory mode of conversation. Clear sightedness is more observable in matters touching their own personal or national welfare, the utility and expediency of war or peace, camp regulations, or the advantage of trade. On subjects in which their actual experience and observation are at fault, even if supported with good arguments, they are suspicious and incredulous. They listen, doubt, but say little. On all such topics their minds receive a bias from their superstition and lack of appreciation of motive. They can not conceive of any efforts made through motives of charity, benevolence, or pity, nor realize any other disinterested action, even if it be for their benefit, because all they do is in expectation of reward, and being destitute of the above principles of actions are disposed to attribute interested views to everyone else. In reviewing such subjects with them, and supporting the moral principle by argument, they are silenced, though not convinced; they do not grasp it, but will not contradict, for the thing may be so. Hence their thoughtfulness and apparent apathy, also their uninterrupted deliberations in councils and conversation, all arising from a desire to hear the subject in all its bearings, either with the view of forming an opinion or of the propriety of expressing it.


(Meeting Piegan Indians on Teton River, October 30, 1858) Selecting a good place we soon had camp and breastworks in order. Both McKay and myself were certain if the Indians we had seen belonged to Little Dog's outfit that he would pay us a visit that evening, and expecting this visit we each put on our best rigs, viz: we changed our everyday buckskin suits for a caribou suit with double fringes at every seam. Both suits were tony and costly. Many might think no object could be gained by this change, but not so. Imagine yourself appearing before some prominent person with a plain, dirty suit of clothes on. What would he think of your plebeian appearance? It has the same effect upon an Indian chief, or at all events I always found it so. I have appeared before many different tribes, and I always found that when I was dressed up in my fancy suit, both the chiefs and others received me as some person above the common order. The aged Col. Vaughan had informed me that Little Dog was considered one of the bravest and proudest Indians on the plains, hence the greater necessity of change in dress.

Indians of the Enchanted desert by Leo Crane, New York, 1939, pp. 104-105, 147, 193-194, 309, 319, 354:

(104-105) But following the sacred customs of their forefathers, the Hopi were still making trouble for their guardians. My predecessor told me how he had sought to quiet this antagonism. At great expense he had taken the old chief, Youkeoma, and several of his retainers, on a trip
Wiskahoo was naturally a cheerful, good-natured, careless man, but hard times had changed him. He was a good Beaver worker and trapper, but an indifferent Moose Hunter, now and then killed one by chance, he had been twice so reduced by hunger, as to be twice on the point of eating one of his children to save the others, when he was fortunately found and relieved by the other Natives; these suffering had, at times, unhinged his mind, and made him dread being alone, he had for about a month, been working Beaver, and had now rejoined Tapappahunt; and their Tents were together; he came to trade, and brought some meat the other had sent. It is usual when the Natives come to trade to give them a pint of grog; a liquor which I always used very sparingly; it was a bad custom, but could not be broken off: Wiskahoo as soon as he got it, and while drinking of it, used to say in a thoughtful mood "Wee weet to go" "I must be a Man-eater." This word seemed to imply "I am possessed of an evil spirit to eat human flesh"; "wae see go" is the evil spirit, that devours humankind. When he had said this a few times, one of the Men used to tie him slightly, and he soon became quiet; these sad thoughts at times came upon him, from the dreadful distress he had suffered; and at times took him in his tent, when he always allowed himself to be tied during this sad mood, which did not last long. Three years afterwards this sad mood came upon him so often, that the Natives got alarmed. They shot him, and burnt his body to ashes, to prevent his ghost remaining in this world. Apistawahshish (the Dwarf) was of low stature, but strongly made and very active, a good Beaver worker, and a second rate hunter of Moose deer; he was careful and industrious; When the leaves of the trees had fallen, and winter was coming on, he had parted from the others to work Beaver; at first he was successful; but the third house he attacked, the beaver had worked many stones into it, (so) that he broke his ice chissel and blunted one of his axes useless; the other was all they had to cut fire wood; the edges of the Lakes were frozen over and canoes could not be used. Distressing times came, and they were reduced to use as food the youngest child to save the others. They were so weak they could barely get a little wood for the fire; sitting in sorrow and despair looking at the child next to lose it's life, a Rein Deer came and stood a few yards from the tent door; he shot it and (it) became the means of saving them, and recovering their strength; and for the winter he was a fortunate hunter. Both himself, his family, and the Natives believed that this Deer was sent by the Manito in pity to himself and family; he kept the skin, which I saw. The Indians did not hold him culpable, they felt they were all liable to the same sad affliction; and the Manitou sending him a Deer, showed a mark of favor. As the strong affection of an Indian is centered in his children, for they may be said to be all he has to depend upon, they believe the dreadful distressed state of mind which necessity forces on them to take the life of one of their children to preserve the others, leaves such sad indelible impressions that the parents are never again the same (as) they were before, and are liable to aberrations of mind. It is only on this Region and the Lakes westward to near the great plains, where there are Horses, that the Natives are subject to this distress of hunger, their Dogs are starved and do them very little good. ---

(Lake of the Woods) I called to Mr. Cadotte's attention a sad affair that had taken place a few months past on the shores of the Lake of the Woods. About twenty families were together for hunting and fishing. (Continued, facing Page 191)
to and through the East. At Washington they were honored by an audience with President Taft. The power and glory of the American nation, it was thought, would overwhelm the savage, he might as well have taken a piece of Oraibi sandrock to see the Pope. Not even the size of President Taft impressed the old spider-like Hopi prophet, as he afterward told me in diplomatic confidence. Youkeoma returned as sullen and determined as before, made some new medicine with corn meal and feathers, and then repudiated the whole negira, including President Taft, telling his people that he had seen nothing of importance, received no counsel that contained wisdom, and that he sincerely doubted those men were chiefs of anything. Certainly they were not the mythical Bohannas that the Hopi—following their own version of the Messianic legend—expect to come and rule them. And then, having refused to do that which Washington had urbanely decreed, he sat down in his warren of a pueblo, amid the sand and the garbage, to await whatever the white man might see fit to do about it. That was my inheritance.

(147) The Hopi had so acted at other times, and the methods adopted to correct them had not been of the happiest. Officials had threatened and, when the native did not stir, had offered bribes. "Your bones will bleach in the sun!" one set had promised—to be followed by: "Won't you come in and be good, for a nice new contract store?" How the bleaching process had affected only those so unfortunate as to die naturally, and the Hotevilla people were content with their piki stones and adobe fireplaces, the Indian does not respect those who seek to buy him. When a threat proves as empty as it is boastful, he is strengthened in no small degree.

Washington has been given to bluffing and buying.

(193-194) One cannot play with an Indian in the morning, and expect to summon him to judgment after noon. The poorest stick of an Indian Agent I have seen is he whom the Indians address by his first name, or familiarly without a title. When one lowers himself to an alien's social level, he seldom achieves more than the privilege of dipping his food out of the same dish. It was my job to manage all things for their (the Hopi's) best interests, against their strenuous efforts otherwise if that were necessary—as it often was; and I hoped to restore to them a confidence in white men, whereas they had come to believe that all white men were a mixture of abnormal curiosity and treachery, coupled with an astounding rudeness.

(209) (Dakota) There is no use in trying to bluff an old Indian. He can see through a hypocrite quicker than any man I know.

(319) (Hopi and Navajo) Indians cannot be rushed to a decision. They must have their talk out, and through talking always weaken their grievances, But untrustworthy interpretation has caused more than one man's death. "I will fix it up for you," silently decides the ignorant mouthpiece, thus hastening his poor intentions on the one who will have to accept responsibility in the end, and sometimes he foaxes it entirely too well. Seldom it is that he interprets the full value of the discourse. He avoids completely translating unpleasant orders, for that might involve him among his people; and when the break comes he will surely prove a traitor, and may be found largely responsible for the break. His sympathies well-up when least expected, and the emotions of my interpreter in this affair had begun to display partisanship.

(354) (Hopi) An Indian, of whatever tribe, will always chance a test. They are a great people for solid experiments.

(NOTE: Rev. J. E. Palladino told my mother that the body odor of the white man is offensive to the Indians. In February 1931, Bob Hamilton, a delegate of the Blackfoot paid me the compliment of saying "you think like a Blackfoot." March, 1939, Arapaho delegates told me what they thought of the meaningless grimaces, gestures and laughter of whites when talking.)
One morning a young man of about twenty two years of age on getting up, said he felt a strong inclination to eat his Sister; as he was a steady young man, and a promising hunter, no notice was taken of this expression; the next morning he said the same and repeated the same several times in the day for a few days. His Parents attempted to reason him out of this horrid inclination; he was silent and gave them no answer; his Sister and her Husband became alarmed, left the place, and went to another Camp. He became aware of it, and then said he must have human flesh to eat, and would have it, in other respects his behaviour was cool, calm, and quiet. His father and relations were much grieved; argument had no effect on him, and he made them no answer to their questions. The Camp became alarmed, for it was doubtful who would be his victim. His Father called the Men to a Council, where the state of the young man was discussed, and their decision was, that an evil Spirit had entered into him, and was in full possession of him to make him become a Man Eater (a Weeteego). The Father was found fault with for not having called to his assistance a Medicine Man, who by sweating and his Songs to the tambour and rattle might have driven away the evil spirit, before it was too late. Sentence of death was passed on him, which was to be done by his Father. The young man was called, and told to sit down in the middle, there was no fire, which he did, he was then informed of the resolution taken, to which (360) he said "I am willing to die"; The unhappy Father arose, and placing a cord about his neck strangled him, to which he was quite passive; after about two hours, the body was carried to a large fire, and burned to Ashes, not the least bit of bone remaining. This was carefully done to prevent his soul and the evil spirit which possessed him from returning to this world; and appearing at his grave; which they believe the souls of those who are buried can, and may do, as having a claim to the bones of their bodies. It may be thought the Council acted a cruel part in ordering the father to put his Son to death, when they could have ordered it by the hands of another person. This was done, to prevent the law of retaliation; which had it been done by the hands of any other person, might have been made a pretext of revenge by those who were not the friends of the person who put him to death. Such is the state of society where there are no positive laws to direct mankind. From our exploring notes; it appeared to us that this sad evil disposition to become Weeteego; or Man Eaters, was wholly confined to the inhabitants of the Forests; no such disposition being known among the Indians of the Plains; and this limited to the Mahathaway and Chippeway Indiana, for the numerous Natives under the name of Dinnas (Chepawyans) whose hunting grounds are all the Forests north of the latitude of 56 degrees, have no such horrid disposition among them. The word Weeteego is one of the names of the Evil Spirit and when he gets possession of any Man, (Women are wholly exempt from it) he becomes a Man Eater, and if he succeeds; he no longer keeps company with his relations and friends, but roams all alone through the Forests, a powerful wicked Man, preying upon whom he can, and as such is dreaded by the natives. Tradition says, such evil Men were more frequent than at present, probably from famine. I have known a few instances of this deplorable turn of mind, and (361) not one instance could plead hunger, much less famine as an excuse, or cause of it. There is yet a dark chapter to be written on this aberration of the human mind on this head.

See Also: Primitive Man, published by The Catholic Anthropological Conference, Washington, D.C. Vol. III, Nos. 3 and 4, pp. 69-71, Witiko among the Tete-de-Boule by Rev. Joseph E. Guinard, and Vol. VI, Nos. 1, 3 and 4, The Witiko, Cree and Montagnais, the Witiko Psychosis, and the Northern Algonquian supreme Being by Dr. John M. Cooper, pp. 11-12; 30-34; 52; 56; 90-93; 99; and 101.
NORTH AMERICAN INDIAN. TRAITS OF CHARACTER AND DISPOSITION. ATTITUDE TOWARD WHITE MEN.

Bourke on the Southwest, XI, Edited by Lansing B. Bloom, Chapter XXI, New Mexico Historical Review, Volume XII, Number 1, January, 1937.

(S6) (San Juan Pueblo, July 22, 1881) And I cannot refrain from believing that my estimable friend Santiago (interpreter and informant) lied, a trait noticeable among all the Rio Grande Pueblos who will stand up an lie by the hour rather than impart the least information concerning their religion or interior administration. Their experience with the Spaniards had taught them to be cautious and dissimulative and at no time are they so little to be trusted as when conversing with freedom and apparent ingenuousness upon these forbidden topics. But in many of his statements, I must concede that I have found strong corroboration of Santiago's general truthfulness. He impressed me as a man too inert to contemplate harm and who would not lie when he could be persuaded that he would gain something by telling (61) the truth.


(139) How Lindsay Turned Indian. You could take one of these savages up to the Missouri River an' by a wave of your hand stop the flow an' back her up a mile; an' if he didn't want to, he wouldn't change expression; he wouldn't even look interested. His old insides might be boilin' with astonishment, but you'd never know it. On these people it don't show through the hide.

(31) The Trail of Reel Foot. The minute they sight his feet, every buck's hand goes to his mouth, an' when an Injun does this, he's plenty astonished.


(14) When he (Tahirussawichi, a leader of the Hako ceremony) was in Washington in 1898 he was taken to the Capitol and the Library of Congress. While the vastness and beauty of these structures gave him pleasure, they did not appeal to him, for such (15) buildings he said were unfitted to contain the sacred symbols of the religion of his ancestors, in the service of which he had spent his long life. He admired at a distance the Washington Monument, and when he visited it he measured the base, pacing and counting his steps. Then he stood close to the white shaft and looked up, noting its great height. After going inside, he was asked which he would take, the elevator or the stairs, and replied: "I will not go up. The white man likes to pile up stones, and he may go to the top of them; I will not. I have ascended the mountains made by Tirawa (the Creator)." Equally characteristic was his interview with the Commissioner of Indian Affairs. When introduced, he said: "I am glad to see you and take you by the hand. Many chiefs of my tribe have done so. I never expected to do it. I came here to talk of the religion of my fathers, which I follow. You can ask my sister (referring to me) what I have said." Tahirussawichi had never been east of the Mississippi River until he came to Washington to engage in the preservation of this rite.


We found the squaws in high glee, surrounded by the choice buffalo meat which our companions had brought in. The best meat of all was the depuyer. It may not be out of place for me to describe this depuyer. It is a substitute for bread, but much more nutritious. It lies on each side of the backbone next to the hide, running from the shoulder blade to the last rib. The upper edge, according to the condition of the animal, being from one to two inches thick, decreasing to the lower edge from one half to one quarter of an inch thick, and averaging in width from twelve to fourteen inches, and being from eighteen to twenty-two inches long. The average weight is about nine pounds. It is cured by dipping in hot grease and then exposed to the air to dry. If properly cured it will keep indefinitely without taint. This depuyer, together with the hump and the tongue, are the choicest parts of the buffalo.

(Note facing page 182.)


(1032) (From Letter to the Editor of Precis Historiques, Brussels, dated August 3, 1854, College of St. Xavier, Cincinnati, Ohio, Digger Indians.)

The principal portion of the Shoshoco (Ute or Diggers) territory is covered with wormwood, and other species of Artemisia, in which the grasshoppers swarm by millions; these parts are consequently most frequented by this tribe. When they are sufficiently numerous, they hunt together. They begin by digging a hole, ten or twelve feet in diameter by four or five deep; then, armed with long branches of Artemisia, they surround a field of four or five acres, more or less, according to the number of persons who are engaged in it. They stand about twenty feet apart, and their whole work is to beat the ground, so as to frighten up the grasshoppers and make them bound forward. They chase them toward the centre by degrees—that is, into the hole prepared for their reception. Their number is so considerable that frequently three or four acres furnish grasshoppers sufficient to fill the reservoir or hole. The Shoshocos stay in that place as long as this sort of provision lasts. They, as well as other mortals, have their tastes. Some eat the grasshoppers in soup, or boiled; others crush them, and make a kind of paste from them, which they dry in the sun or before the fire: others eat them en appalas—that is, they take pointed rods and string the largest ones on them; afterward these rods are fixed in the ground before the fire, and, as they become roasted, the poor Shoshocos regale themselves until the whole are devoured. As they rove from place to place, they sometimes meet with a few rabbits, and take some grouse, but seldom kill deer or other large animals. The contrast between the Indian of the plain and the destitute Shoshoco is very striking; but poor as he is, like the Hottentot, he loves devotedly his native soil.


(418) (February 1610) By weighing we found the average weight of the meat of an Antelope to be fifty nine pounds when fleshy, but when fat to be sixty five pounds. (To be placed under note facing p. 178.)