

NOTES ON THE HIDATSA INDIANS
BASED ON DATA RECORDED BY THE
LATE GILBERT L. WILSON

BELLA WEITZNER

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PREFACE

Early in the 1930s, following the death of Dr. Gilbert L. Wilson, Miss Bella Weitzner undertook the task of preparing a considerable body of his field notes for publication. Dr. Wilson, financed by the American Museum of Natural History, had done his fieldwork among the Hidatsa between 1906 and 1918. The Museum had published several reports on various aspects of his work, but a substantial part of his field notes remained unanalyzed and unpublished at the time of his death in 1930. Since its initial preparation in 1933, Miss Weitzner's manuscript has remained in the archives of the Department of Anthropology, serving as an important source of information for students of Hidatsa culture who have visited the American Museum to consult it. Since the advent of the Xerox machine, the Department of Anthropology has received frequent requests for copies of the text from individuals and libraries. Scholars who have studied the manuscript have advised us that virtually all the information that it contained is unavailable elsewhere.

Such evaluations and the consistent demand for xeroxed copies indicated that the publication of the manuscript would be a valuable service to scholars. Moreover, its publication would bring it to the attention of those who were unaware of its existence, and thereby greatly increase the number of individuals who would have the opportunity of using it. I therefore asked Miss Weitzner, now Curator Emeritus in the Department of Anthropology, if she would revise her earlier work for publication. She graciously agreed, and has not only revised the entire manuscript but has also painstakingly verified its accuracy by comparing it with earlier versions and with Dr. Wilson's field notes. Consequently, this manuscript, completed in 1976, presents most of Wilson's hitherto unpublished data with the exception of his collected material on mythology. A considerable

corpus of mythology remains to be analyzed and published. In addition, one of Wilson's informants, Mr. Edward Goodbird, a Hidatsa, prepared a large number of drawings that illustrate various aspects of Hidatsa culture. These drawings were not considered suitable for publication at this time; however, they are available for examination in the Department of Anthropology of the American Museum of Natural History.

The scientific importance of Wilson's work is actually greater now than when it was undertaken. The information he collected can no longer be duplicated nor even be retrieved in fragments. Informants who could describe Hidatsa culture essentially as it existed prior to the period of intensive Euro-American contact have all passed away. Although Wilson's work was obviously not informed by modern theoretical approaches, its importance is not diminished thereby. Human societies are characterized by constantly changing forms as they adapt to changing conditions by processes that are as yet far from completely understood. The best evidence for the potential understanding of these processes is the description of specific societies at specific times. Of special importance are descriptions of a society on the eve of revolutionary cultural change. Such a moment passes quickly. Once gone, it can never be recaptured. It is because of considerations such as these that Miss Weitzner undertook the completion of a task begun by Wilson 71 years ago.

Miss Weitzner was aided by Ms. Susannah Clark and Ms. Priscilla Whiteman, who typed the manuscript, and Ms. Rona Mazer and Mr. Jeffrey P. Bonner, who assisted with proofreading and checking the typescript, principally bibliography, footnotes, and quotations from previous texts concerned with Hidatsa culture.

Stanley A. Freed
April 1977

ABSTRACT

Dr. Gilbert L. Wilson worked among the Hidatsa Indians in North Dakota between 1906 and 1918. At

his death in 1930, a large body of unorganized field notes remained unpublished. In the early 1930s, I

undertook the task of preparing a considerable body of Wilson's field notes for publication. The manuscript was not published at that time and remained in the archives of the Department of Anthropology for

more than 40 years. This report is my revision of the earlier manuscript. It presents most of Wilson's hitherto unpublished data on the Hidatsa with the principal exception of his collected material on mythology.

INTRODUCTION

Following Wilson's death in 1930 and the subsequent publication of the data on the construction of the earthlodge and other structures (Wilson, 1934) on the basis of his notes and the illustrations prepared by Mr. F.N. Wilson, there still remained in the form of unorganized field notes a large mass of miscellaneous data on Hidatsa culture. Unrelated in subject matter, these notes often varied greatly not only in content but also in significance. Some aspects of Hidatsa culture were recorded with an astonishing wealth of detail; in others the meagerness of treatment left much to be desired. Many subjects had received no attention. Yet, despite their shortcomings, the available data were deemed worthy of publication, filling as they do some of the lacunae in our knowledge of the Village tribes.

Like all Wilson's field data, these too were in the form of demonstrations and narratives by a few informants, usually lengthy, repetitive, and replete with circumlocutions. Obviously, because of their bulk, a continuation of the method of presentation preferred above all others by Wilson, that is, publication of the narratives essentially as he recorded them, was impractical. It became necessary, therefore, to condense, occasionally abstract, and otherwise coordinate related data as they occurred in the lengthy and diffuse narratives. Therefore, the method pursued was to select from the field notes all the narratives on a given subject, condense them as far as possible to their essentials without loss of necessary detail and then include the resulting topical sections with related subject matter.

Impressive though these notes may be in sheer quantity, there can be no claim made for their completeness in the sense that they present a well-rounded study of Hidatsa life for any single period of the tribal history. But despite their qualitative and quantitative inade-

quacies, when considered in the light of the previous publications on the Hidatsa by Wilson, (1917, 1924, 1928, 1934), we are, nevertheless, left with a rather more than satisfactory impression of the pattern and tempo of their culture as it functioned in the past.

No attempt has been made to seek comparative data for any but the closely related Village tribes. These comparisons have been confined, in large part, to the accounts of some of the early observers like Lewis and Clark, Catlin, Maximilian, and Matthews. As will be obvious from these parallels and close resemblances, Wilson's data do not differ markedly from older accounts insofar as they include discussions of the same phases of culture. This parallelism in itself is not surprising. His informants, all relatively of the same age group, were born in the first half of the nineteenth century. Since they relied largely on the memory of their own or observed experiences of the functioning of the culture, the majority of the observers, both native and alien, were dealing with relatively the same time period. As a result, when all the known facts are coordinated, we have a reasonably complete picture of the pattern of Hidatsa culture as it existed in the middle and latter half of the nineteenth century.

In the data so painstakingly recorded by Wilson during 12 summers in North Dakota (1906-1918), we are afforded only rare glimpses of their culture as it was then functioning. So intent was he to record vanished practices that the way of life then current appears to have been completely neglected and the glimpses are for the most part implied. Consequently, his field notes offer no clear conception of the proportion of old Hidatsa culture that still survived or how much was forgotten or overlaid by adopted white customs during the period of investigations.

These notes contain many unrelated fragments of tribal procedure, technology, or belief. Such minutiae have been retained as part of the record, specifically because of their possible comparative value.

Buffalo-bird-woman and her brother, Wolf-

chief, were Wilson's principal informants. Additional informants were employed from time to time, specifically Edward Goodbird (Buffalo-bird-woman's son), who served as interpreter and illustrator.

SUBSISTENCE

AGRICULTURE

Although Hidatsa agriculture has been treated in great detail in a previous publication (Wilson, 1917), it seems essential to record here some additional information not included there.

The gardens were cleared by burning over; that is, the roots were usually dug up and then set afire. Gardens were enclosed by fences built strong enough to withstand high winds. These fences, approximately 12 to 15 feet from the garden, were built with rounded corners and often encircled several adjacent plots.¹

SQUASH

Squash selected for slicing and drying were gathered before sunrise when they were crisp and firm. Buffalo-bird-woman described a method of temporary storage not previously noted. Strings of sliced squash (each string seven double arm lengths long or six double lengths, if measured by a man) were thoroughly dried and placed inside the earthlodge on a stage set up near the bend of the fire screen. The stage was constructed of two forked posts the height of one's head. A horizontal pole, 10 or 12 feet long, spanned the two posts. The strings of squash were looped over the horizontal pole where they were kept until ready to store in the cache pits (Wilson, 1917, pp. 87-88, 98-104; 1934, p. 391). To protect the squash from the possible drip of rain from the earthlodge roof or from other sources of moisture, as well as from the ever present dogs, a tipi skin was draped over them, its

edges tied at the bottom by threading a tying thong through the holes made by the tipi stakes. On sunny days such strings of squash were carried outside the earthlodge to dry in the sun. Squash spoiled easily; consequently it was necessary to protect them from dampness.

TOBACCO

Wilson (1917) recorded in considerable detail the essentials of the cultivation of tobacco, its planting, the care of the gardens, harvesting, and other details. The account, based on a narrative by Wolf-chief, deals not only with tobacco growing and its uses, but also clarifies Hidatsa practices and definitely emphasizes their nonceremonial attitude and usages, in contrast to those of, for example, the Blackfoot and Crow (Wissler, 1912; Lowie, 1919; Curtis, 1909, vol. 4).

Tobacco was planted early in the season. A patch about 9 yards long by 6 yards wide, particularly one in low damp ground, was always chosen. The area to be planted was prepared by raking it thoroughly with an ashwood rake. Usually the tobacco was planted where maize had previously been grown. Consequently, the soil was so soft that it was not always necessary to use either a hoe or a digging stick in planting. To prevent the penetrating odor of the tobacco from affecting the taste of the maize, tobacco was planted at least 10 feet from where maize was grown.

The tobacco seed was planted in rows 3 feet apart. The rake handle was held in a position that permitted the rake to press against the soil as the worker scraped a shallow furrow by dragging the rake after him as he walked backward or sidewise. The tobacco seed was

¹For a discussion of fences, see Wilson, 1917, pp. 108-109 and Will and Hyde, 1917, pp. 78, 84-87, 104.

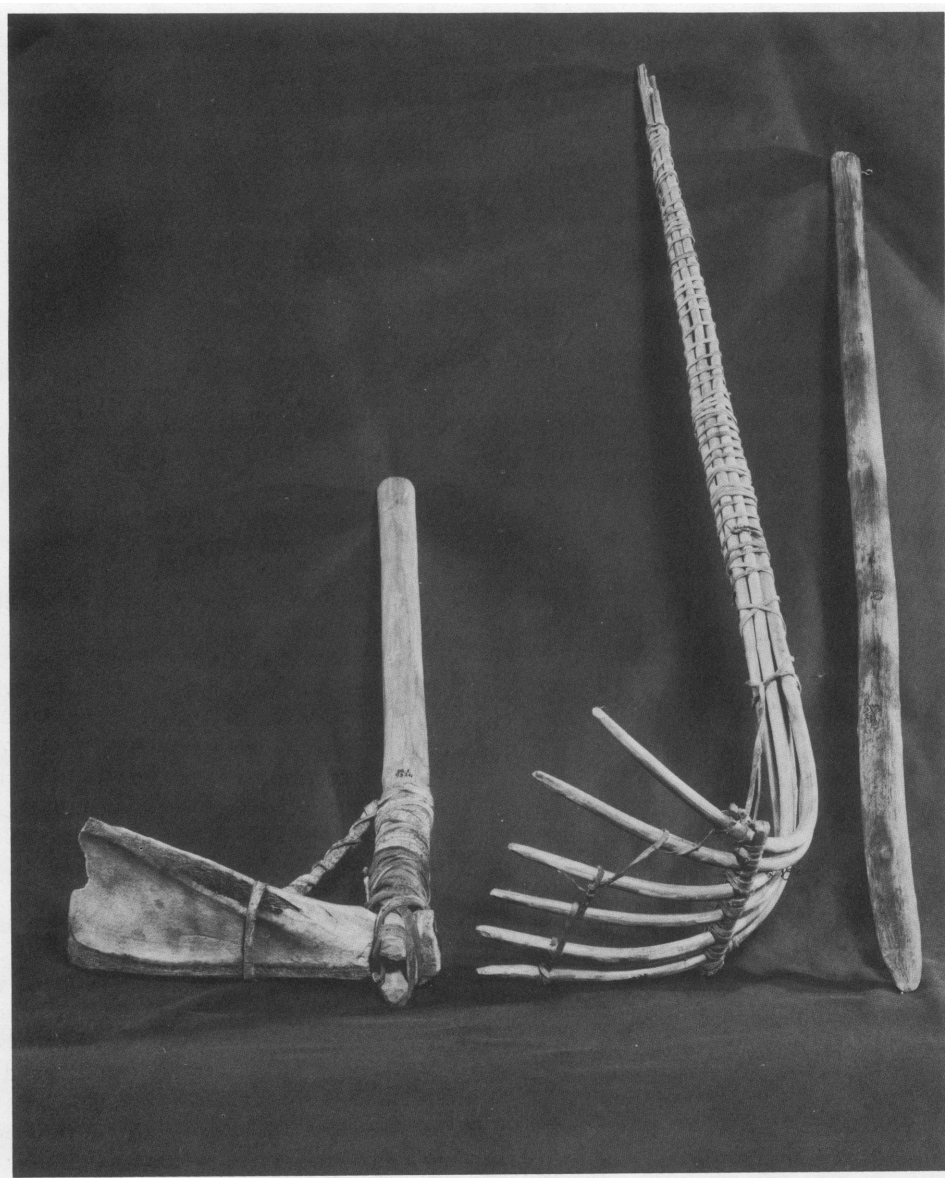


FIG. 1. Digging-stick, bone hoe, and rake. AMNH negative number 323365.

dropped into the furrow and covered lightly with earth raked over it. According to Wolf-chief, some old men scattered the tobacco seed when sowing it. However, confirmatory evidence for this specific method of planting was not obtained. Tobacco plants sowed in rows were believed to attain a greater height and

strength than plants not sowed in rows. Wood ashes were added to the soil of the tobacco gardens to assure that the plants flourished. Wolf-chief offered no opinion as to whether this procedure represented a modern or an ancient practice.

Some Hidatsa insisted that tobacco seed

should be only thinly covered by earth. Wolfchief, however, asserted that even when he plowed his tobacco under to a great depth, the plants would sprout the following year. He always grew tobacco in the field near his cabin, but he seldom planted seed because the plants came up anyhow. In a dry season, the tobacco yield was poor, but during a period of heavy rainfall the plants flourished. Weeds that sprouted in the tobacco rows were carefully pulled. The informant did not know whether the plants were ever thinned out. The tobacco rows were weeded, and the areas between the rows were hoed. These basic necessities of plant cultivation were, of course, tasks of the summer months. Though weeding was customary, unlike the maize plants, tobacco plants were not hilled up.

The Hidatsa believed the blossoms to be the best part of the tobacco plant. One reason given for sowing tobacco seed early in the

season was to make sure that the blossoms would appear early in the summer when they could be dried and smoked. The tobacco grower watched his garden carefully. When the blossoms appeared, he picked them every four days. If later he discovered that he had overlooked some blossoms, he did not disturb them but left them on the plants to produce seed. The blossoms were spread out to dry on a piece of rawhide either outside the earthlodge or inside in an area where the rays of the sun passing through the smoke hole reached the floor. The Hidatsa called this ray of sunlight the sunbeam. On a sunny, windless day the blossoms were spread on the hide, laid on the ground on a sunny side of the earthlodge entrance way, or on the flat roof; on a windy day they were dried inside the earthlodge. The hide was moved from time to time so that the drying blossoms would be kept within the range of the sun. The blossoms dried in about two days and



FIG. 2. Squash, cut into strips to dry. AMNH negative number 286448.



FIG. 3. Hoeing beans. AMNH negative number 286520.

were stored in a small skin bag somewhat larger than a tobacco pouch.

The tobacco blossoms, believed to be the best part of the plant, were smoked as soon as they were dried. They were mixed with kinnikinnick.¹ Some of the dried blossoms were stored for winter smoking. The bags of dried blossoms were hung above the beam that rested on the tops of the exterior posts of the earthlodge. The informant was firm in his belief that tobacco blossoms were never sold but were saved to be used, perhaps rather sparingly, by the grower and his friends. However, root tobacco and tender top tobacco were sold. Most of the old men raised tobacco. It was customary for those Hidatsa men who raised no tobacco to send a small boy to ask a tobacco

grower for some blossoms, a request that was honored only by a very meager offering.

The tobacco harvest was the last to be gathered in the early fall, about the middle of September, when the plants were dead and partially dry. According to Buffalo-bird-woman, the Hidatsa were careful to choose the best time. They never harvested tobacco after the seeds were formed. The plants gathered were taken into the earthlodge to dry because many of the stalks were still green and moist. Usually, four plants were carefully carried in each hand. Each plant was grasped by its roots, so that the seeds would not be shaken out. Some families did not follow this practice but piled the tobacco plants into a blanket; customarily, a man and his wife carried such a load, each holding the corners of the blanket.

To dry the plants, they were hung on tipi poles stretched on two of the exterior supporting posts of the earthlodge immediately back of the horse corral. Two poles were bound at either end to the two posts. The tie was made by lapping a lariat around the earthlodge post

¹Bradbury (1817, p. 91) writes that the Omaha smoked a mixture of the bark of red dogwood and smooth sumach, which they also called kinnikinnick. The Mandan, on the other hand, mixed the native tobacco which they also cultivated with red willow bark. Bearberry leaves were added to trade tobacco (Maximilian, 1906, vol. 23, p. 274).



FIG. 4. Corn husking: braiding the best ears. AMNH negative number 286439.

and the end of each pole. Tobacco plants were either straddled over the poles, roots up, or two plants were bound together by their roots and hung over the pole, a plant on either side. The two poles were covered by the tobacco plants end to end. The tobacco plants were left on the poles to dry for nearly two months or usually until November.

When sufficiently dried, the plants were prepared for winter. An old piece of skin was spread on the earthlodge floor directly under the drying vines. The plants were taken down one by one, the seed balls were crushed between thumb and finger and the seeds were scattered on the skin, which was lifted by its edges from time to time to shake them into the center.

The dried seeds were folded into a piece of tipi skin tied with a thong, making a package about the size of a man's fist. The pouchlike package was kept in the arrow tool bag. These seeds were stored for sowing the next season. The arrow tool bag was made from part of an old tipi skin, about 2½ feet by 1 foot, and was

tied with a thong drawstring. Such a tool bag was often hung on one of the exterior supporting earthlodge posts near the Big-bird's shrine because the ground around his ceremonial objects was held sacred and was in no danger of being disturbed.

The seeds disposed of, each plant was grasped in both hands, twisted, and broken in two. The top or more tender section of each plant and the lower heavy root and stem half were stacked separately at opposite ends of the skin. The tops of the plants were soft and ready to be smoked,¹ but the tougher roots and stems had to be macerated. The individual who shredded the roots and stems sat on the ground as he worked. For this purpose he used the edge of a rather flat stone, one conveniently held in the hand. As the roots were pounded, the mass was stirred occasionally. When the roots at one side of the pile were well macerated, the shredded mass was moved aside and pounding the rest of

¹Maximilian (1906, vol. 23, pp. 275-276) describes the Mandan method of preparation of tobacco for smoking.

the pile was continued until all the tobacco was shredded.

These macerated roots and stems were called root tobacco. Both the root tobacco and the top tobacco were stored in well-filled bags, each about 2 feet long and 18 inches in diameter. Such a bag was made by folding over a rectangular piece of skin which was sewed at the bottom and one side. Its top was then gathered and firmly tied. A bag containing each kind of tobacco was usually stored for future use.

Root tobacco was oiled before it was smoked whenever fat was available, but it was not oiled before it was stored. To oil the tobacco a small lump of buffalo fat was held in the palm of the hand. A small quantity of macerated tobacco was laid over it and repeatedly squeezed around and over the buffalo fat. When well saturated, the lump was laid aside and replaced by another handful of tobacco to be mixed with buffalo fat. The tobacco so treated was laid on a slab in front of the fireplace where it was exposed to the heat until the grease was melted, giving the tobacco a glossy appearance. At this point in the process it was removed, well rubbed in both hands, and again placed close to the fire where it remained until it lost its gloss and appeared to be dry. After it was chopped with a knife the tobacco was ready for use. The top tobacco was oiled only when taste preference or convenience suggested.

Kinnikinnick made of willow shoots was not stored. However, the willow shoots were cut and their bark dried as desired. The useless red outer rind of the bark was peeled off and thrown into the fire. The yellow bark beneath the red rind was scraped off and also discarded. Both the red outer bark and the underlying yellow bark were bitter. The white inner bark was shaved off the green shoots. It was loosely doubled or folded and laid on a drying frame held over the fire. In this way the bark was quickly freed of moisture. When not in use, the drying frame hung from the same beam as the tobacco bags. It was made of a kinnikinnick rod, 5 or 6 feet long, and split into three or sometimes four tines to spread them apart. Small kinnikinnick drying frames bound with bark were often made when camping.

Visitors from other tribes, it was said, were always eager to obtain Hidatsa tobacco by barter. A double handful of tobacco was exchanged for one buffalo hide—either a dried or tanned skin—or for a quantity of dried meat, 3 feet long and 1 foot thick.

The first tobacco brought to the Hidatsa by white men was said to have been chewing tobacco.¹ According to Wolf-chief, his father tried to smoke it, but disliked it because it made his head ache. This chewing tobacco was said to be issued by the government. The informant once saw a long plug of this chewing tobacco offered to a buffalo skull on the roof of an earthlodge.

HUNTING

Except for the narratives illustrating Hidatsa experiences, hunting with horses and dogs and incidental information concerned with both fishing and hunting in the reports previously published (Wilson, 1924, 1928),² data on hunting here recorded are confined in large part to the procedures followed by boys and youths when taking small game and birds. These notes, supplemented by details on practices in hunting, butchering, and fishing by adults, give a reasonably detailed presentation of the methods practiced by the Hidatsa.

Black-tailed deer were believed to be easier prey than white-tailed deer, because a white-tailed deer ran off when hunted. However, a black-tailed deer driven out of a rounded patch of timber in the Bad Lands would run to the foot of the hills, halt, and look around; its side would be exposed to the hunter, its head turned, and its eyes directed straight at the hunter, presenting a good target. Aware of this behavior pattern, the hunter waited to shoot when the deer turned and stopped. A white-

¹Matthews (1877, pp. 26-27) noted that trade tobacco for chewing in his time curtailed its cultivation. It was mixed with the inner bark of dogwood and the leaves of other plants (not named). He remarks also that dogwood bark was sometimes smoked without being mixed with tobacco.

²Bowers (1965, pp. 50-51) describes the initiation and planning for the summer hunt and the selection of the hunt leader.

tailed deer, when flushed, was immediately fired at. The experienced hunter knew that it would not stop. If too high a shot struck its antlers, the deer, often stunned, immediately ran off.

When fighting, black-tailed deer pushed with their horns. Little-bear, a Sioux, shot a deer in the Bad Lands; it fell into a gully. He thought he had killed the deer and went into the gully to get it. The deer rose and charged him with lowered antlers, but Little-bear caught it by the antlers with his hands and killed it with his knife.

In an explanatory sketch Goodbird represented a hunter on a horse carrying a load of deer meat and a deerskin. A blanket folded lengthwise was wrapped about the hunter's waist; a belt was tied around the blanket slightly below the fold. The blanket dropped down around the knees of the hunter.

When deer were butchered, the fresh raw kidneys and liver were frequently consumed on the spot.¹ Another delicacy, raw paunch, was usually cleaned with snow and washed with some of the fresh deer blood.

The deer was laid on its back and skinned. After the shoulders and legs were cut out, the carcass was cut open on one side of the breastplate bone, split down the abdominal walls, and the paunch and entrails removed, leaving the heart, lungs, and liver in the carcass. It was then turned on one side. A long strip of flesh was cut out on either side of the backbone; it was not completely severed from the spine but left to cling to it. Again, the carcass was turned on its back. Beginning at the rib nearest the head, a knife was drawn two or three times down the row of ribs, scoring them quite near their junction with the backbone. The ribs were then broken along the scored line. The side was also cut from the spine, the flesh being severed along the same scored line.

The opposite side of the deer was freed from the spine in the same way. The carcass was

turned over with the inner surface of the ribs downward. The outer surface of the ribs was scored close to the spine. A slit was cut in the abdominal wall. The butcher inserted the fingers of his left hand so that, with the carcass raised, it was possible to cut all the ribs off close to the backbone, with one exception; the first rib on either side was untouched, leaving a projecting thong for tying the carcass for transportation.

The spine was bisected between the liver and the lungs. Frequently, however, an alternate practice was followed. The pelvic bone was separated from the spine by cutting from the inside of the carcass through the joint. The tongue was not removed. Occasionally, the spine was divided into three sections.

Antelope were taken in a pound or trap. A sort of pen, constructed of poles and skins, was set at the base of a high clay hill; at its summit was an overhanging precipice. Above, on the hill, stones were laid out in piles to guide the antelope in the direction of the precipice. The antelope were driven to the top of the hill and were urged over its crest to fall into the pen, whence there was no escape.

Many hundreds of antelope were said to have been taken by this method. Apparently, this hunting technique was a component of an involved ceremonial procedure, but neither its details nor the presumed "power" of the trap were known to our informants.

A similar pound was also said to have been used to take buffalo in winter, but the informants were unable to provide an adequate description. One point, however, is of interest. The buffalo having been discovered, three fleet runners, called fire makers, drove them toward the pound. Each runner carried a burning buffalo chip in his hand. The owner of such a pound was said to possess a power that enabled him to draw the buffalo toward the pound. The fire makers, after driving the buffalo to the pound, had the power, it was believed, to increase the yield whenever bones were boiled to extract their grease or marrow. A little of the bone grease was dipped up in a horn spoon, and tasted by the fire maker, and the remainder was emptied into the fire. No prayer was offered during this procedure.

¹A confirmation of this practice is provided by a quotation from Maximilian: "When a hunter has killed an animal, he generally eats the liver, the kidneys, and the marrow of the large thigh bones, raw" (Maximilian, 1906, vol. 23, p. 346).

BUTCHERING AND TRANSPORTATION

When a deer or antelope was killed its hind and fore quarters were each removed in one piece. They were fastened together by a thong passed through each leg at the second joint under the tendon so that it was possible to sling the two pairs of fore and hind quarters over the back of a horse by the connecting thong. The two sides of the deer were then cut from the backbone. Finally, the backbone and neck were cut in two pieces. The two rib sides were the last slung over the back of the horse by a thong that pierced each rib section. The meat side was uppermost with the sharp ends of the ribs toward the rear, out of the way of the hunter's legs as he rode. All the meat rested on the deerskin which had first been spread on the back of the horse, hair side down, covering its neck. When the loading was completed, the part of the hide that rested on the neck of the horse was used to cover the meat.¹ It was said that a good worker took half an hour to butcher a deer. In winter, a deer was often dragged home by a rope tied around its neck, without even being disemboweled. Under these circumstances it might be butchered either outside the earthlodge or inside near the fireplace.

A different procedure was apparently followed when elk and buffalo were butchered and transported. When a deer was butchered its tail bone was not removed from the hide before it was brought to the earthlodge. It was a woman's responsibility to split the skin to the end of the tail and de-bone and de-flesh it. The fat accumulated near the juncture of the tail and the body of the deer was boiled and relished. The scrapings from a green hide were also boiled with the tail.

In dressing a buffalo carcass,² the thirteenth or smallest rib on a side was severed from the others and left on the hind quarter so that it

could be held by its rib when swung on the saddle bow. It was called *ixoka-ita-dúxa*, or "kit fox his bow." Of the twelve ribs on each side, the larger ones were called men's ribs, the smaller ones women's ribs, because they were served to men and women, respectively.

ROCKY MOUNTAIN SHEEP

These animals were not hunted by large groups; usually, a hunter went alone or might be joined by a single companion. Bighorn skins, when they were obtained, were not only handled with greater care than were hides from other animals, but the method of transporting them differed. A stick 2½ inches in diameter and the length of one's arm to the opposite shoulder was selected. The green hides, fur side up, were laid on the ground, one over the other. Beginning at the heads, the hides were rolled around the stick; the tails hung free and were handled with great care lest they be injured. The hunter carried the roll on his back as he would a quiver and bow case, supported by a shoulder burden strap.

BIRD HUNTING

Bird hunting, the typical summer occupation of boys between the ages of five and 15 or 16, was infrequent in winter. The birds were usually sought on the wooded banks of the Missouri River and among the weeds and other growths surrounding the village gardens, and only infrequently in the open prairies. Birds were not hunted on windy days principally because the wind carried the arrows away so that it became difficult to retrieve them.

When young boys set out on a bird hunt, little girls often sang a teasing song:

Those boys are all alike
Your bow is like a bent basket standard
Your arrow is fit only to shoot into the air
Poor boys, you have to go barefoot

When hunting, boys customarily wore leggings, a shirt, and a belt. When a bird was killed it was drawn under the hunter's belt at the rear, over the hip, so that there was no danger that it would be brushed off when passing through the bushes. When six or seven

¹Judging from Boller's description of the method of loading buffalo meat, there were no marked variations in the methods used to load different game for transportation (Boller, 1868, p. 229).

²At this point, incidental remarks on butchering buffalo in previous publications are worthy of comparison: Wilson, 1924, pp. 227-228, 236, 249, 251, 307; 1928, p. 181; also Boller, 1868, pp. 228-229.

birds had been killed they were strung together by breaking the leg of one bird and using the jagged end of the bone to pierce a hole in the lower jaw of the second bird and then drawing the dangling foot through the hole by pushing it from the feathered side of the jaw. The bird's leg formed a button that hung from the tendons of the broken leg. When 10 birds were secured and strung as described, the completed circlet was thrown over the left shoulder and under the right arm of the hunter. If two such circlets were completed, the second was hung over his right shoulder.

The bird hunt was governed by definite rules. For example, a boy hunting alone retained his entire kill. When two boys hunted together, each boy was entitled to the birds killed by his companion. When three or four boys composed the hunting party, each bird brought down became the property of the boy who picked it up, not of his companion who brought it down. When two boys, one older and one younger, were hunting companions, it was possible that even though more skilled, the older of the two might, when these rules were followed, have no birds at all. Under these circumstances, the younger, less accomplished hunter who had all the birds was expected to share with his companion. However, it was beyond the bounds of propriety to demand a share.

Wolf-chief, in describing bird hunting, mentioned a method by which lost arrows were recovered. Frequently, the first arrow failed to find its mark, so a second shot was necessary to down the prey. It was customary, then, to mark the spot from which the arrow was released by digging the heel into the ground. A third arrow shot from the same spot was carefully watched in its flight; it was assumed that the first arrow would be found near the spot where the third arrow dropped.

Customarily, the birds were given either to the boy's grandmother or mother, who would drop them into a hollow in the fireplace ashes and cover them with coals (Wilson, 1924, p. 166). When the roasted birds were removed from the ashes, the feathers and skin fell off. The carcass was broken open with the finger on a line between the abdomen and breast, and the

entrails were removed and discarded. Then the birds were ready to eat; they were considered a delicacy.

Nine of the birds were hunted in the woods. These were called: a "small brown bird"; "bird-yellow," or a "yellow bird"; a "breast-yellow"; "bird-fat," or "fat bird" (golden-winged woodpecker); a "small-cherry"; a "grape-eater"; a small bird, not as large as a meadowlark, dark yellow with white breast; a "cross-beaked," a "yellow-best," or "finest yellow one."

Two birds were named as having been hunted in the gardens: a "moccasin" and a "blackbird."

Two birds were hunted in the hills: a "buffalo bird" or "cow bird"; and a "heart-dark" (it has a dark spot on its breast).

In the bottom lands the Hidatsa found: a "skunk-bird," or "bobo-link," so-called because the bird was marked like a skunk.

Not far from Like-a-fishhook village in the local badlands was "white-spot-on-top-of-wing."

In winter many snow birds (the Hidatsa names were translated as "winter's children," or "winter's younglings") were killed. Because the Hidatsa were afraid to eat the meadowlarks, they were not shot. If they were shot at, they flew off, scolding. However, meadowlarks, when eaten, were believed to cure deafness and dumbness. In this connection Goodbird related the story of a man named White-face who had faith in this supposed special power of the meadowlarks. His brother, Bears-on-flat, could hear a little but could not speak. White-face took him hunting. They downed and brought back many meadowlarks. The boy ate them; he was soon able to talk.

Killing and eating various birds was prohibited for diverse reasons. Because wrens were considered sacred, they were never killed. The white-breasted swallows that nested in banks were never eaten because they were believed to be thunderbirds. Red-breasted swallows were not killed, because "the killer would be unable to urinate and he would die." Hawks and magpies, sacred birds, were neither hunted nor eaten. They were shot only for their feathers but not by boys who were insufficiently armed

to be able to kill such large birds. The Hidatsa did not kill the three woodpeckers—the red head, the yellow, and the winter woodpecker with black spots.

A small gray winter bird, found in the Hidatsa habitat throughout the year, makes a sound like *it-si-ki-ki*, and was so named. It was not hunted.

Doves were shot. Of all species of hunted birds, they were the most difficult to kill with blunt arrows. Often, when struck by such an arrow, a dove flew off for some distance before it was possible to overtake it and shoot a second time, which was often done.

Eagles were never eaten. Small boys never had an opportunity to hunt them. However, Wolf-chief, in describing an eagle hunt, states that he accompanied his father on such a hunt when he was 15 (Wilson, 1928, p. 142). Prairie-chickens, ducks, and geese were too wild for small boys to hunt. Prairie-chickens were snared, according to a previous statement by Wolf-chief (Wilson, 1928, p. 239).

Bird snares consisted of a horsehair noose sinew-bound to a slender sharpened stick about the size of a lead pencil. When not in use these snares were usually stored under the bed in bundles of 10. In use the sharpened end of each snare was thrust into the ground. Especially in late spring and early fall, the snares were set in open ground to trap a small gray bird called *itskopi*. A circular clearing about 8 feet in diameter was made by plucking out the weeds and grass so thoroughly that the ground would be left smooth and bare. In the center of this circular open space a rectangular section was fenced in by foot-high sticks set into the ground. The rectangle was bisected by a similar barrier. In openings left at intervals of a foot or more, a sort of gateway was arranged by leaning two sticks across each other. The snares were hung over these open spaces, bound either to one of the posts or to the crossed sticks which prevented the birds from hopping over the noose. The black seeds of a weed were scattered around the snares. A conical frame consisting of forked sticks was raised to a height of about 4 feet over the entire fenced area. The framework was scantily covered with weeds. A flock of birds flying over the trap,

alighting on the weed-covered frame, and discovering the bait, would hop down for it and were caught in the snare. Birds so taken belonged to the owners of the snares in which they were caught.

A bird hunter waiting for the birds to approach the trap shot arrows at them on the side away from the snares in an effort to drive them in the desired direction of the snares. When snared, the birds were killed by choking them between the thumb and first finger.

In winter when the ground was snow-covered, the small boys of the village caught snow birds in snares prepared by their elders. According to Matthews (1877, p. 58), horsehair snares were used to capture snow buntings (see also Maximilian, 1906, vol. 24, p. 36). These snares, made of either horsehair or from the long hairs found on buffalo legs below the knees, were bound with sinew to a stick about 5 feet long. On a small knoll or on the river bank, an area about 5 feet in diameter was scraped clean of snow. The snare stick laid in this cleared area was weighted with rocks. Black seeds collected from weeds were scattered about for bait. The snares were watched from a position outside the nearest earthlodge, about 50 yards distant. Lured by the seeds, the birds alighted to feed. Usually, they were caught either by the leg or the neck. When two or three birds were entrapped they were removed from the snares.

The snares were set to the accompaniment of a song: "My snare to come, hey, hey," or "Hey, hey, come to my snare!" The boys who watched the snares chanted a phrase which was translated as "snare-twisted-face," or, "twisted-face-snare." At a given signal, they all ran forward to the snares; the birds became the property of the boy who arrived first.

Flocks of birds arrived in March. Described as approximately the size of a snowbird, these birds had a weak, whistling call. They were gray with black spots and stripes and had two small feather tufts on their heads. Like the snowbirds, these too were snared but on the snow-cleared earthlodge roof. In summer, they were brought down with arrows.

A black-winged yellow bird was caught on sunflowers. The snare was bound to the stalk

above the sunflower head from which a few seeds were bound to the stalk as if taken by a bird. A bird alighting on the sunflower was caught in the snare.

In the summer, boys also hunted young ducks when they were not yet able to fly. The boys ran along the banks of a creek or pond carrying stones in a fold of their robes. When a duck was struck, a boy laid aside his blanket and waded into the water to bring it in. If he found it necessary to swim, he often untied his breech clout and left it loosely knotted to his belt at the back so that it floated behind him as he swam. Sometimes ducks were driven into the grass at one end of a long narrow pond where they were struck with sticks and killed. They were also frequently driven up grass-covered banks where they were either trampled or struck with sticks.

Ducks, like gophers, were roasted on green spits (Wilson, 1924, p. 166). The entire carcass, including the head, was plucked and the entrails removed.

SMALL GAME

Boys also killed both the spotted and brown gophers (Wilson, 1924, pp. 155, 165, 166, 168, 169, 170; 1928, p. 236). They were relished as good food. The Hidatsa have always eaten gray gophers. In the past, however, they refrained from eating spotted gophers because of their resemblance to snakes. In more recent times this distinction has not been made. Pocket gophers were not eaten because they were believed to be sacred. These gophers raised little earth mounds on the prairie; sick men often took some of the earth thrown up in these gopher mounds for their medicine. The medicine is not characterized in the notes as to whether it was intended to be a curative or connected with a ceremonial practice. Although not a customary part of the diet, prairie dogs were eaten under stress of hunger.

In winter, boys hunted cottontail rabbits with chokecherry wood arrows sharpened to a point. Although occasionally a boy hunter would kill several rabbits in a single day, two rabbits were believed to be a lucky kill for one day.

Mice were hunted for sport but not for food. Mice nested under garden weeds that had been plucked and cast aside in a pile. Small boys jumped on these to shake the mice loose, shooting them as they ran out. They were shot with wooden arrows sharpened to a point. Two kinds of mice were hunted in this way—bear mice, a small short-tailed type, and a white-bellied long tailed type.

When a boy killed either his first bird or game animal in the presence of his clan aunt, it was her prerogative to butcher the animal and claim the meat. The boy's father compensated her for this service by the gift of a horse or some other cherished object.

FISHING

The swift waters of the Missouri are not conducive to an abundance of fish life. To the Hidatsa and Mandan, who lived on its banks, fish were never an important factor in their diet. However, according to some informants, the Mandan preferred fishing to hunting. Because fish were a more important part of their economy, the Mandan, as a consequence, exposed themselves to Hidatsa mockery.

In modern times catfish, locally called "channel cats," are caught in considerable quantities, especially in August and early autumn. Active in the cold Missouri, they are a gamey catch. Their flesh is excellent. According to Buffalo-bird-woman, women never engaged in fishing. The only woman known to have done so became the object of derision. Nevertheless, women sitting on the river bank with homemade fishing poles and lines were not an unusual sight in the early part of the century, nor particularly, on an August evening, during the period of Wilson's summer visits to the Hidatsa.

FISH TRAP

The fish trap was the most important method of taking fish. A few traps were still in use in 1908 and 1909, and a trap of the river bank variety that had been constructed by Packs-wolf was photographed. To obtain a clearer understanding of the use of the fish trap and particularly its ceremonial significance, Dr. Wilson

spent the night of September 9, 1909, with Packs-wolf at his fish trap camp.

Wilson's field notes, insofar as we have been able to determine, included no information on the actual structure of the trap. The detailed description of the setting, the collection of the fish, the behavior of Packs-wolf (the informant), and many additional details provide what seems to be an accurate picture, that is, within its limits.

Because the air was rather chilly, a fire was built. Dry brush added to the fire provided some illumination. A light breeze stirred the leaves. According to Packs-wolf, fishing was, in all probability, more rewarding on a calm and windless night than under other weather conditions. The river had risen a few inches since the last fishing venture. Such a rise in the water level was believed to be a favorable omen because catfish will not readily enter a trap when the water is too shallow. The most desirable depth was about 3 feet, or the depth at which the water reached the loins. Packs-wolf was forced to make his trap secure; because the water had risen so high on the bank that it was possible for the fish to escape around the ends of the willow matting where it abutted on the bank. Packs-wolf fenced the exposed ends of the trap with some willow sticks and a few old barrel staves.

According to Packs-wolf, two kinds of fish traps were built. One, round or oval, was built in the river where it stood surrounded by the current. The second type, preferred by Packs-wolf, was built against the river bank and was examined by Dr. Wilson.¹ That part of the trap which faced midstream appeared to consist of a double matting made of willows. The informant explained that the trap was always constructed of four willow mats of a hundred osiers each. When Packs-wolf set the mats he was assisted by only two men. Since the work was arduous and the water chilly they had built a small trap to save labor; consequently, two of the mats overlapped. The mats were held in place by 12 posts.

¹While ascending the Missouri, Brackenridge (1816, p. 110) "discovered a curious place, contrived by the Indians, for taking fish; it was something like a fish basket—we found two fine catfish in it."

At dusk Packs-wolf doffed his trousers. He waded quietly into the trap. He thrust two slender poles topped with dry leaves into the mud of the river bed. The trap was soon filled with fish, their presence announced by the rustling of dry leaves as they were agitated by the fish swimming against the slender poles. Packs-wolf tied bait to two of the upstream posts that supported the mats to prevent the voracious catfish from swimming off with the bait.

The bait consisted of two fragments of the putrid carcass of a steer. In early summer it was customary to collect a fund in the neighborhood to provide for the purchase of an old pony or a diseased steer. The animal was shot and the carcass buried under a pile of fresh branches and leaves adjacent to the fish trap. On the evening of the fishing demonstration, a portion of the carcass was dug out and placed in the trap. The stench made the trap anything but pleasant, but Packs-wolf believed it did attract the fish. The chance for a good catch was better when the bait was well charged with worms because they escaped into the water and attracted the fish to the trap. The bait was not at its best the night the trap was examined. Most of the flesh had been eaten off the carcass during a previous fishing venture; the odor, however, was still very strong.

When the leaf-topped poles and bait were set in place, Packs-wolf went outside the trap and withdrew the gate which he carried out to the bank, leaving the trap open. As he emerged from the water he brushed himself downward with a bunch of sage, so tied to resemble roughly a round whisk broom. This action was intended to remove any inimical effects of the mystery power, because the fish trap and everything pertaining to it were believed to be very sacred. The Hidatsa spoke of the fish trap as being *alive*.

Packs-wolf warned that when entering the trap, voices must be hushed, and bared feet must be slid soundlessly along the river bed. When catfish are alarmed they erect their spines, so that sliding the feet on the river bed avoided the danger of stepping on a fish with its erected spines.

Upon their return to camp, Wilson gave the food he provided for the feast to Packs-wolf.

Custom required this of the individual about to purchase the mysteries of the trap. The very scant variety of the food offering was readily explained. The food had been purchased from the virtually exhausted stock at Wolf-chief's trading store. Packs-wolf intimated that a supplementary gift of 25 cents would be satisfactory.

As the feast foods were handed to Packs-wolf, the donor said, "I am glad to give the feast to my son. I hope he will tell me an interesting story." The donor of the feast belonged to the Four Bands. Packs-wolf was a member of the Three Bands. Its members were ceremonial sons of the Four Bands. Later, as the donor of the feast (Wilson in this case), and Packs-wolf sat around the fire, and Packs-wolf told the story of the origin of the use of fish traps and fishing customs. Pack-wolf's narrative follows:

My father, who knew all the lore of the Mandan gods, died nine years ago, when I was 33 years old. When I was a small boy, he began to instruct me in our old customs and beliefs. I paid for all the sacred objects he left to me. I want to tell my story accurately; I do not want to cheat my father's memory. I bought the right to construct the fish trap and its origin narrative. If a man wanted to learn how to construct a fish trap, he was expected to pay well for the instruction. The customary price was one horse. It was less expensive to hire someone to build a fish trap.

At this point in Packs-wolf's narrative, he went off toward the fish trap, followed by Wilson, who arrived in time to see him shut the trap. Working from outside the trap, Packs-wolf waded in and shut the gate very quietly. He returned to the river bank. He took one of his long baskets, and he entered the trap and dragged the basket, mouth forward, under the water close to the mats and along the bottom of the trap. He brought out four catfish; he dropped them into a shallow pit dug into the sand near the shore line. He closed the gate. He brushed some water over it with his bunch of sage, to purify it, Goodbird explained. Packs-wolf sang a mystery song as he came up from the trap. He continued his narrative:

The Indians at Shell Creek recently asked me to construct a fish trap for them; they gave me a pile of

unfolded calico, four full kettles of food, and some additional small gifts, all of which they had collected.

My father gave three of us power to build fish traps. I was the first and chief. I learned the greatest number of fish trap songs. My half-brother also possesses the power to build a trap. Now we are raising [*sic*] a third, Blow-stone, who bought the right from my father. He gave my father a horse in payment for teaching him the mysteries of the fish trap. However, my father did not pass on to Blow-stone as full power as he gave me. My father taught me the origin of our use of fish traps.

In olden times an Hidatsa village was situated near the mouth of the Heart River. The son of a chief, a young man who had never joined a war party, lived in the village. When other men went to war he stayed at home; consequently, he was reputed to be slothful. The villagers mocked him. They determined to send him, with some others, into the hills to seek buffalo. An old crier went through the village. He announced the leader and called out the names of those chosen to accompany him, including among them that of the chief's son. He did not want to go and hid.

His sweethearts, two young girls of the village, heard the crier calling him and ordering him out to scout for buffalo. The scouting party, as it happened, was bidden to go to a distant hill called End Hill. The two girls jested with each other. "Your beloved is bidden to go to End Hill. It is not far. Surely, he will go!" They knew very well that the chief's son would be unwilling to join the hunt.

The chief's son told a dear friend, a poor youth who loved him, "I hear that my two sweethearts mock me because I do not want to go scouting. However, End Hill is not far away. I will go there, but, my friend, I want you to go with me." His friend agreed. Now they were forced to hurry because the rest of the party had already set out. The two friends overtook them at a place called Big-squash-garden Hill.

When a war party set forth in olden times, scouts were sent ahead to prevent a surprise attack. The scouts were often exhausted because it was necessary for them to run long distances. It was not customary to send scouts in advance of buffalo hunting parties. However, the members of this hunting party were angry because the chief's son had no desire to accompany them. They decided to have some sport with him. The chief's son and his friend were among the scouts appointed. The members of the hunting party hoped the two friends would be tired out from running. They preceded the main party, going in the direction of Yellow-water Spring which was opposite



FIG. 5. Fish trap in the Missouri River. AMNH negative number 286382.

of what is now Coal Harbor, North Dakota. They passed the spring. They ran on to Rock Hill, the site of the town of Expansion. Finally, they made camp at Hairy Hill where they were joined by the rest of the hunting party. Hairy Hill is stony, and weeds grow like hair between the big stones.

The chief's son was tired; he had never in his life run so hard. Early in the morning, he and his friend were still asleep when the rest of the party arose and started off, saying, "Let them be, do not wake them!" However, four of its members returned. They seized the friend of the chief's son by an arm or a leg and carried him off. They took his arrows and those of the chief's son with them. Their rough handling awakened the young man. He cried to the chief's son, "Friend, awake!" But the four who had returned said, "No, let him sleep. He is now with his sweethearts in his dreams. The journey back to the village is not long; he can return there. Let him sleep." About daybreak, the chief's son awoke. He rose; he looked around him. He thought the members of the party had hidden for a jest. He ran into the high hills; he called to them, "Oo-oo-oo!" to show that he was lost. Such was the old-time custom.

The day was foggy. Several times, the chief's son believed that he spied his party through the fog only to find that he had seen a herd of antelope or some wolves. He wandered around quite lost. His companions had taken his arrows so he could not kill any game. Days passed. His moccasins began to wear out. He was compelled to cut pieces off his robe to mend them. Finally, he used almost all his robe. He could get nothing to eat; he was reduced almost to bones.

At last, he arrived in the south country where he found some pine trees. Exhausted and weary, he said to himself, "I thought I would find some means of escape from my troubles, but I perceive I must die. Yonder, in the west, whence the wind now blows, I see a high hill covered with tall pines. I will climb to the pines and die." Painfully, he climbed the hill and sat looking westward. He saw a great golden eagle flying from that direction. When it reached the hill it hovered overhead, circled downward, and swooped to the ground as if in search for prey. As the eagle touched the ground at the foot of the hill, suddenly it flapped its wings convulsively and disappeared. A second golden eagle hovered over the chief's son, swooped downward to the same spot,



FIG. 6. Man dismantling fish trap. AMNH negative number 286390.

and like the first also disappeared. A third and a fourth golden eagle appeared and disappeared like the first two eagles he had seen.

The chief's son thought, "Perhaps a dead buffalo is lying in a pit or a cave near here. The eagles may be entering the cave to eat it. I thought I was going to die, but I will go and see what I can find." As he staggered weakly to his feet, something big and black emerged from the spot where the eagles had disappeared. The eagles, too, came into view, for the black object carried them off and disappeared in a nearby ravine full of timber.

"I will go down and see what all this means," the chief's son said. Weakly, he made his way down the hill. At the foot of the hill, he came to a barren place where no grass grew. However, the grass was packed down as if it covered something. "This must be an eagle hunter's pit," he thought.

The chief's son had a bow with a spearhead set on it like an arrowhead. The Hidatsa name for this bow translates as "bow-spear-large." We shoot arrows with a short bow. A young man carried the spearheaded bow on his arm to enhance his appearance, or he carried it in war and sometimes struck an enemy or speared him with it.

The chief's son probed the area covered with matted grass with his bowspear. "Ah, I thought so," he said. "Somebody must be nearby. Here lies the path by which I saw that black one go. I may as well follow. If I stay here, I will die anyhow." Following the path, he arrived at the place in the timber where the black object had disappeared. There he found an eagle hunters' lodge surrounded by poles on which much dried meat was hung. He had found the eagle hunting camp of the black bears.

Standing outside the door of the lodge, the chief's

son overheard talking. He heard a voice say, "Let the worker, our servant, go outside and fetch wood for the fire." A small young black bear emerged. He saw the chief's son and cried out, "Here is an Indian!" At once there was commotion within, as if the occupants were all frightened and sought to escape. But their bear leader said, "Servant, young bear, you seem afraid of your elder brother. Ask him to come in." The servant came out again, and said, "Elder brother, come in."

The chief's son entered. The bear leader said, "Come, my son. I am sorry for you. You are thin. Come and sit on my knees." The chief's son sat on the bear leader's knee. The bear leader embraced him and passed him onto Good-shooter, a wildcat. A snare lay between the chief's son and the wildcat, but the leader cried, "Don't be afraid to pass the snare." The chief's son went to Good-shooter who also embraced him. In this way he was passed from one to another until everyone present had embraced him.

"Give him food," they said, "but first, feed him with broth." They gave him meat broth. Afterwards, they gave him meat. Because the chief's son was starving it would have been dangerous to give him heavy food first. After he had eaten and sat talking to his newly found friends, another man came into the lodge. Rabbits and prairie chickens were hung at his belt as if he had been hunting. When he saw the chief's son he bared his teeth, growling, "You are the one who disturbed my snares. I would like to strike you down and kill you!" The bear leader objected, "Do not do that. This man is our worker's elder brother." "Oh well," said the stranger, "if that is so, he is welcome." The stranger who had come into the lodge was a spider. Its snares are the webs that may be seen on the grass.

The chief's son stayed with the bears. He became a companion to their worker, his adopted younger brother. One day when the wind was favorable for hunting, the younger brother said, "Let us snare eagles."¹ The chief's son agreed. They went to the pit where the chief's son had seen the eagles disappear. They had no bait, but Little-black-bear spat on his hand, held it up through the covering of the pit and an eagle swooped down to seize it. Little-black-bear caught the eagle. Again, he spat on his hand. Another eagle swooped down and was caught as were a third and a fourth. All were young golden eagles. "Come," said Little-black-bear, "We have enough. Let us go." The chief's son demurred: "No, I too want to catch one." Little-black-bear objected:

"No, no, we have enough. Besides, you don't know how." "Yes, I do," replied the chief's son. Just then, a spotted eagle, an old golden eagle with mottled feathers, swooped down. "There," cried the chief's son, "I want to catch that eagle. Show your hand, I am sure I can catch it." Little-black-bear objected, "No, no, my father says it is not good to catch an old eagle. An old eagle is too powerful." "I can catch it," cried the chief's son. Little-black-bear showed his hand. The eagle swooped down and fixed its claws in his hand. He cried out with pain. He shook down the covering of the pit, climbed out, and went home, weeping, without stopping to take the eagles he had caught with him.

The chief's son said to himself, "I fear that I am no longer safe; the others love Little-black-bear. If I do run away, I will starve. I think I had better return to the bears' camp." He took the five eagles. He started out for the hunters' camp, weeping. When he reached the outside of the lodge he stopped crying. His wounded brother, Little-black-bear, came out and asked, "Brother, why do you not come in? The incense they are burning is out. They all await you." He led the chief's son to the door and called out, "Old-black-bear, we have returned." "I am glad," called Old-black-bear. "It is a good sign that you are outside. No doubt the hunting has been good." The two youths answered, "We have caught young ones this time."

Old-black-bear was glad. He took the four young eagles which he cooked and ate. He did not eat the old eagle; it was too old and tough.

Soon after this episode, Little-black-bear took the chief's son aside and said, "Brother, it is now time for you to go home. Your village is not far away. A chief who has two daughters lives there. I am sure he will give his daughters to you as wives. After you have married them you will learn that each of his daughters owns a white buffalo robe. I will take the robe belonging to the younger daughter. Give the robe belonging to the elder daughter to Old-black-bear. Go to Old-black-bear now and say, 'Father I am lonesome, I long to see my tribe. I want to go home.' He may say to you, 'When do you want to go?' You must answer, 'This evening'; if you say 'tomorrow' you will stay here another year." The chief's son did as he was bidden. Old-black-bear said, "Yes, my son, but it is almost sunset. You can go home tomorrow." The chief's son was unwilling to wait another day.

Old-black-bear then told the other bears in his camp, "Gather all the feathers." He was referring to young golden eagle feathers that were piled on top of the head of a live buffalo bull. The bears gathered the feathers into bunches of 12; each bunch consisted

¹For a discussion of Hidatsa eagle trapping see Wilson, 1928.

of the full plumage of one eagle. The feathers were bound together with sinew.

"My son," Old-black-bear said, "I will now tell you how to get home. Take four bundles of sage, put one bundle down lengthwise in the direction of your home, and step on it; lay the second bundle down and step on that, and repeat the action with the third and fourth. Pick the bundles up again carefully and carry them home with you. Do not look backward. When you arrive in your village make haste to marry the chief's two daughters. Then prepare to keep us (i.e., entertain the bears as guests). Take these eagle feathers with you." So numerous were the eagle feathers that they made a pile a foot high. The chief's son carried them home on his back.

As the chief's son set out Little-black-bear said, "I want to accompany my brother a short distance. Then I will return." He wanted to accompany the chief's son to the top of a nearby hill whence he was to start. When they arrived Little-black-bear said, "Do everything as quickly as you can, because we want you to keep (entertain) us. My father has already told you what to do when you are ready to return, and how to use the four sage bundles."

He pointed to a hill in the distance. "Go toward that hill; your home lies there. Your method of travel is sacred. Put the sage bundles down one by one. As you step forward on a bundle take care to pick up the bundle that has been stepped on behind you. Do not look back."

Following his instructions the chief's son stepped four times. At the fourth step, he found himself standing on Big-squash Hill. Sunset was approaching. He wanted to wait and steal into the village unseen under cover of darkness. As he approached, he heard someone in the village crying. It was his poor friend. He entered his father's earthlodge. He found both his father and mother asleep with their heads on the same pillow; their bodies, however, lay in opposite directions. "Father," cried the chief's son, "I have returned." "Yes, my son, I know you have returned," replied his father, but he did not rise. Then his mother said, "No, no, you think it is your adopted son, our son's friend. It is the voice of our own son." The old father rose. He was so overjoyed that he went out and announced to the villagers, "My son has returned! My son has returned!" All the villagers rushed to the earthlodge to see the returned youth.

The chief who had two daughters came with the villagers. He observed the young man was in good flesh and good to look upon. He thought, "This youth was lost for a long time; yet, he returns home in good flesh. He doubtless has great mystery power. Some gods must have helped him to overcome his

difficulties." Thoughtfully, he returned home. He called his two daughters to him and said, "Daughters, I should like you to marry that young man. He must be under the protection of the gods. Call him and marry him."

The younger of the two sisters went to the lodge of the chief's son to call him. "Come," she said, "we want you. Come." He returned with her. When they arrived at the earthlodge of the girls' father, he told his two daughters to sit together. To the young man, he said "Sit between them. My two daughters are yours." Then the chief told his daughters, "Give him food." They brought boiled pounded corn. Their father said, "Younger daughter, give your husband your white buffalo robe." She brought the robe and tried to put it on her husband's shoulders, but he objected, "No, lay it beside me, not over me. My younger brother shall have that robe." The chief then said, "Elder daughter, get up and give your husband your white buffalo robe." She brought the robe and tried to put it on her husband's shoulders. But he cried, "Lay it here. My father shall have it." "Do as your husband bids you," said the girls' father.

The chief's son went to his father's lodge. He brought all the gifts that Old-black-bear had given him to his father-in-law saying, "Father-in-law, take all these feathers and make a fan."

So the chief's son was married. In the morning he told his younger wife, "I am glad I married you and your sister. Now I want to ask your father if he has any buffalo skins." The two wives went to their father and asked him, "Father, our husband wishes to know if you have any buffalo skins?" "Yes," he answered, "tell your husband that I have many buffalo skins; if he wants them for a ceremony, there are plenty. I have cache pits here. The deepest is full of skins."

The two wives repeated their father's remarks to their husband. The young man answered, "Very good. Now pound corn and sunflower seed and cook them with squash and beans and make the dish we call four-vegetables-mixed. Mould it into a mass the size of a man's head and carry it with a medicine pipe" he said, speaking to his younger wife, "and we will go to my father." While he spoke, he filled a medicine pipe which he gave to his wife. He wanted to visit his adopted father, Old-black-bear.

The chief's son and his younger wife went to the top of Big-squash-garden Hill. He carried four bundles of sage. To his wife, he said, "As I put these bundles of sage down, step forward on them, but do not look back." He laid the four bundles down; his wife stepped forward as he directed. He followed; as he advanced, he picked up each sage bundle. When

he had gathered up all four bundles of sage he said, to his wife, "Look around!" She did; she discovered that they were near the camp of the eagle hunters.

They advanced toward the bears' lodge. The woman led. The chief's son followed, crying, "I want my mystery objects, I want my snares," just as Little-black-bear, his younger brother, had taught him. They entered the lodge. All the hunters were ready to receive them. The wife and husband stood just within the door at either side. They remained in this position for some time until Old-black-bear said, "My granddaughter, sit down." Addressing her husband, he said, "Son, of course, you shall have your mystery objects. You shall have your snares." The chief's son and his wife had reached the camp about sunset. It was now dark.

The bears gave them food. After they had eaten, the chief's son arose and spoke. "As I said, I want to have a god, I want to have a snare!" He passed the ball of four-vegetables-mixed and the pipe to Old-black-bear. But Old-black-bear said, "Oh, I am not good enough to receive these things. Pass them on to Good-shooter." He, in turn, cried, "Oh, I am not good enough to receive these things!" He too passed them on. The four-vegetable ball and the pipe were passed around the circle of the lodge three times. On the fourth circuit Little-young-bear, the man's younger brother, received the gifts, ate the four-vegetable ball, lighted the pipe, and smoked.

The next morning Old-black-bear called three of his party. He told them: "Take Little-black-bear, the man's younger brother, out of the lodge. Put your arms and hands on his ribs and tickle him under his arms. He will cry out; he will beg you to stop. Tickle him until he is dead. Then skin him, but do not split the legs. Gather short sage,¹ stuff the skin and bring it home to the lodge."

The bears carried out their leader's bidding and returned with the stuffed skin. "My son," Old-black-bear said to the chief's son, "This is your younger brother. He likes to eat corn and the other three vegetables, sunflower seed, squash, and beans. You must not let him go hungry. He is not dead. He hears and understands everything you say. And now, my son, how long will it be before you are ready for us?" "I am ready now," the chief's son answered. "I have prepared many skins." "Then we will come in four nights. Be ready then for the ceremony."²

The chief's son and his wife prepared to return to their home. They went out to the nearby hill and set

down the four bundles of sage. The wife led. The husband picked up each bundle behind them. After the fourth step, they found themselves near the village on Big-squash Hill. The chief's son notified his dance society that he was planning a ceremony to take place four nights hence. He asked the members of the society to assist him with the preparation of the feast.

After four nights, his fathers, the black bears, approached the village. When they emerged from the hills and approached the village, they stopped. The chief's son sent his younger wife to them with another ball of four-vegetables-mixed and the medicine pipe. She laid both before the fathers, who accepted them, ate, smoked, and sang mystery songs. They returned the pipe to their granddaughter (the wife of the chief's son). She carried it home. The bears advanced toward the village, pausing four times on the way. At each stop they sang the mystery song: "We are walking toward the village." After singing the fourth song they entered the earthlodge of the chief's son. There they sang more songs, feasted, and sang again. They taught their son many things, feasted, and continued to sing all night. They arrived at the village just after sunset.

In the morning they divided among themselves the skins their son, the chief's son, had given them. As each bear received his gift of skins, he taught his son some phase of trapping or snare craft. One bear would say, "I will show you how to make the eagle hunters' pit," another, "I will show you how to catch eagles as they fly in the air. It is not hard to do it. I can do it; I will show you." Other bears taught him how to make bird traps and spring snares that can trap birds, even eagles.

The bears' leader, Old-black-bear, taught his son the methods of fishing. "My son," he said, "I want to teach you how to build a fish trap. Get 12 poles for posts. Thrust the poles into the mud under the water. The poles will support the four willow mats. To make them divide 400 slender willows into four lots. Four mats, each woven of a hundred willows, are used to enclose the trap. The door to the trap is made of 12 willows woven together with string in the same way as the larger mats.

"To determine whether there are fish in the trap thrust two small rods, each topped by a little bunch of dry leaves, into the mud in the trap at a place where the fish will swim against them. If the dry leaves on the tops of the rods rustle on a dark and cloudy night when the visibility is poor, fish are sure to be found in the trap. If you hear the leaves rustle four times there are sure to be thousands of fish in the trap.

"My son, I will give you many rules to govern you when you are fishing. If one should go into the

¹This the feminine or woman sage, so-called by the Hidatsa because it is short and has no seeds on its top.

²The Hidatsa customarily do not count by days but by nights. Cf. also Fletcher and La Flesche, 1911, p. 111, for the Omaha practice.

fish trap neglecting to observe these rules, he will become weak and sicken to such an extent that he will not be able to raise himself from a reclining position. When you have finished fishing you and any companion must brush your bodies with a bunch of sage to purify yourselves from the poison or inimical influence of the mystery power of the fish trap. Then you will not become sick. Remember this fish trap is very sacred. My son, remember the whole fish trap. The two dipping baskets are my body.

"I will now give you four rules. First, if a dog should enter the fish trap no fish will be caught; the fish will not enter the trap. Second, if a menstruating woman enters the fish trap, again, the fish will not enter the trap. Third, if someone should ask for some of the fish when you have a large catch and you in turn, offer only a few small fish so that the one who asked for the fish moves away from you in anger, the fish will not return to the trap because of your selfishness. Fourth, quarreling should be avoided in a fish trap camp, because such contention will result in no catch.

"As a protection against misfortunes such as these, if at any time, any of these rules are transgressed, the mystery song I am teaching you should be sung. The fish will then return as in the past. If the mystery song has failed its purpose, and the fish do not come, take the two dipping baskets home; purify them by burning incense before them in such a way that the smoke will envelope them. Set them down, mouths downward. Holding a rattle in each hand, sing another mystery song. The baskets represent the body of the trap. The following night you will get a thousand fish."

A great many of these cleansing songs were known.

When the bears had completed their instruction in the mysteries of the fish trap, they gave the stuffed skin to their younger brother, the chief's son. "As we told you," they said, "you are to keep your younger brother. At times he will talk to you."

Wolf-chief, when 14 years old, had his first experience in fishing in a trap. Neither the observations here recorded nor the original narrative contain many of the ceremonially significant details. An abstract of his account of this experience follows.

According to this narrative, the right to the appropriate prayers and ceremonies was purchasable; all those who possessed these privileges were medicinemen.

On the occasion of his first fishing expedition, Wolf-chief accompanied his father to a

point 3 miles downstream from the village. A fire burned brightly among the willows at the edge of the timber about 200 yards from the river. There was no shelter.

Nine Mandan, five of them chiefs who possessed great power, sat in a semicircle in the light of the fire with a large wooden ceremonial pipe before them. Wolf-chief and Small-ankle, his father, sat at one end of the arc of the semicircle. A pipe (not the ceremonial pipe) was passed around and smoked repeatedly. Then the leader of the group spoke to Small-ankle telling him that they recognized the power of his gods and his prowess as a war leader. He asked Small-ankle to choose two young men to watch the fish traps. He also asked Small-ankle to pray for a good catch, saying, "Pray for these young men who act as spies at the trap. Carelessness is dangerous for us; the fish are powerful gods; they have great mystery power. Disaster will then befall us. Pray to your gods for us." Lighting the ceremonial pipe, Bite-nose placed it in front of Small-ankle. Its bowl was of box elder, its stem of ash. Just as the land east and north of the Missouri represents male and the land south and west female, so also does the pipe represent the world. Consequently, its bowl was female and its stem male. The juncture of bowl and stem represented the Missouri River. The pipestem was pierced through the pith canal with a piece of dry black sage sharpened at one end. The black sage was quite tough; if a piece were broken, another was readily substituted. In modern times the pipestem was hollowed out with a piece of wire.

Small-ankle held the ceremonial pipe, unlighted with its stem forward toward the Missouri River, and prayed "Grandfather, Missouri River, I have always honored you and held you sacred. I have offered you a sweat-bath, fasted for you, and offered you corn and calico. I pray to you. Protect us with your power and shield my friends from harm. Oh, you would hold all the fish, you know all the fish." These prayers were similar to the leader's prayers for the successful outcome of a war party, when near the enemy.

At the conclusion of the prayer Small-ankle lighted the ceremonial pipe and held it in the direction of the Missouri. He smoked. Then the

pipe was passed around to all the men in the circle and was returned when all the tobacco was consumed. Small-ankle removed the ashes with a small cleansing stick previously prepared. The pipe was then returned to the old men.

During this prayer the gate to the fish trap was open. Small-ankle appointed two young men to serve as spies for the fish trap. He admonished them to move quietly and approach the trap three times and at the fourth to enter the water and shut the gate to the trap. Walking side by side, the two young men set out in the direction of the trap. They approached, listened, and halfway to the fire retraced their steps, acting as if they were spies who were trying to surprise the enemy. When the presumed spies finally reached the river each stripped to his clout and even removed his moccasins.

After an hour or two the men who waited at the fire heard the two spies call, "wu-hwoo-o-o-a"—the coyote call—which signified that something had been found. The young men returned and reported to Small-ankle, "War-party leader, we have taken 80 fish; the trench in the bank is filled; there are more fish in the trap; we do not know how to dispose of them."

The whole party descended to the water's edge. Two men filled a blanket with fish which they carried back to the fire. One young Mandan brought water from the river. A big fire was built. Two iron kettles filled with water were set on it. The fish were cleaned, and except for very large ones, the heads were not removed. The fish were dropped into the kettles to boil. When cooked, the fish were served to each man placed on small mounds of leafy branches. The feast was followed by smoking. The ceremonial pipe was not used.

The remaining fish were strung on young willows and divided by the two spies among all those present. The bark was stripped off the willows up to the small twigs and branches at the top. The fish were strung through the gills. It was impossible for them to slip off the willows because they were held in position by the bunched branches which were folded over and tied loosely in a simple knot. Several additional branches from another willow were thrust

through and doubled through and over the first knot. Some of the small shoots were twisted and broken and the fiber used as a binding cord for the knot. Finally, the whole was tied with the bark stripped from the willow.

Despite the apparent importance of the fish trap and its ceremonial status, it was impossible to learn many of the obviously lacking details of procedure. However, the following meager notes on fishing customs, the implements used, the species of fish caught, method of cooking, and other details may serve in some measure to round out the picture.

The Hidatsa apparently never fished in the middle of the day but confined these activities to the early morning or to the evening. Trap fishing was carried on only at night. No satisfactorily adequate description of the fish trap was secured. It appears to have been constructed as a circle of willows set in the river mud. These provided a framework or foundation for the four covering willow mats, each made of a hundred willows. The trap was fitted with a gate which was opened and shut as need and ritual required. A bunch of sage was tied at each side of the gate.

In the early part of the twentieth century the carcass of a horse or steer was used as bait. In preparation for such use the carcass was cut into large sections, piled in a heap, buried, and covered with leaves. When needed for use as bait the necessary quantity was removed. Customarily, the bait was tied to two of the posts on the inner side of the fish trap mats—the post that supported the mat on the downstream and the post on the upstream side of the fish trap. The bait was tied to the posts to prevent the fish from carrying it off. When leaving the trap a sacred song was sung and the body of the fisherman brushed with sage.

The Amatixá (also known as Awatixá) villagers, in the old days, caught fish in a kind of hurdle or drag¹ made of weeds, apparently a

¹A somewhat comparable willow fish trap was used by the Omaha. It differed in that it was portable and was pushed through deep water by men and women. Its objective was to drive the fish to the shallows where they were caught by hand, shot, or speared. The Omaha apparently made no fishhooks (Fletcher and La Flesche, 1911, p. 312).

method pursued by boys rather than older men. The drag was constructed early in August when a weed (*atadidi*) had reached its full height and was still green. The weeds were laid out on the ground in overlapping bundles. All the roots and tops lay in the same direction until of the required length and about 20 inches high. The weeds were bound with bark from diamond willows to form a long cylinder.

Nine or 10 men, stripped to the clout, carried the drag thus constructed into the Missouri. Enclosing a space where the shore sloped off in a sandbank, they stood behind the drag, holding it down to the ground under the water, and slowly pushed it to shore. The fish caught in the drag were tossed out on the river bank.

TECHNIQUES, IMPLEMENTS, AND COOKING

The Hidatsa never used fish nets. None of the informants had any recollection of the use of bone fishhooks; they remembered only commercial iron fishhooks. Buffalo-bird-woman recollected that during her girlhood white or bony fish were caught on a small stick of wood sharpened at both ends. A bit of buffalo meat was attached to the stick with one end of the line which was wound around its center. The fish swallowed both bait and stick.

When trade fish poles¹ were not available any light straight long pole was used. To take catfish the fish pole was thrust into the mud at the river's edge and the fisherman waited quietly for a bite. Fishing for flat fish, he held the pole as he stood silently waiting for the fish to bite.

When Buffalo-bird-woman was young, fish lines were made of bark of a weed called "snare-in-the-woods." The weed was gathered in the fall. Its bark was twisted into lines. In the past the lines were baited with worms, frogs, grasshoppers, or with the soft flesh from a buffalo paunch. In the early days of the

twentieth century the Hidatsa used wheat flour dough sweetened with sugar, which was believed to be a good bait for some varieties of fish. To catch river fish, which bit rapidly, a bit of meat wrapped and tied with sinew was fastened to the end of the line and tossed into the water. Sometimes in the past, buffalo liver or the greenish flesh found on the outside of a buffalo stomach was used for bait.

The Hidatsa never attempted to preserve fish either by drying or any other method; the fish were eaten the day they were caught.

One fish found in the Missouri is called "whitefish" by the Hidatsa. They claim that it is not fit to eat because it is so full of bones. Usually, if one was caught, it was discarded. The Mandan however, are said to have eaten these bony fish. To cook them, they scaled the large ones, buried them in the ashes, and raked hot coals over them. When the fish were removed from the ashes their fins were charred and the skin peeled off like that from a baked potato. The back fin was removed with the small bones adhering to it. The flesh was stripped from the sides and eaten. The informant did not know whether the fish was gutted before it was roasted.

Catfish were caught in traps until 1912. Judging from the fish brought in for sale, those taken weighed from three-quarters to two pounds. The preferred method of cooking catfish (in Hidatsa the name means "fish-real," "channel cat," or "blue catfish") was by rapid boiling so that its flesh would remain firm and would not fall apart. The fish was considered ready to eat when its spines or any of the bones were easily plucked from the flesh. Although the broth in which a catfish had been boiled was drunk, the Hidatsa did not partake of the broth of other boiled fish.

On a hunt when no kettle or other utensil was available, catfish were broiled on a stick thrust through the cavity of the belly into and through the mouth of the fish. A large catfish could not well be broiled. After catfish were eaten their sharp bones were carefully burned; this was done primarily because if scattered around the lodge they were liable to wound the children's feet and secondly, because it was believed that the odor of the bones would at-

¹As has been remarked, few observers have left any record of Hidatsa fishing. Boller, however, does mention a blind Mandan who fished with a rod twice every day (Boller, 1868, p. 61).

Cf. also Wolf-chief's description of fishing for catfish with hook and line, Wilson 1928, p. 121.

tract snakes to the earthlodge. Catfish eat insects and soft roots.

Bullheads, a small variety of catfish found in the Missouri, were also taken. When they were so small that it was hardly worth the trouble to boil them, they were fried.

Eels were caught infrequently, mostly in summer. They were known to bite occasionally in the fall when the water was cold and were taken with the same bait as catfish, whitefish flesh. Eels cooked like catfish were eaten by the Hidatsa but with scant relish.

A flatfish, doubtless the carplike silvery-colored fish, about 8 inches long with big gold-circled eyes, was called locally "gold-eyes." Rather bony but well fleshed, the fish were caught with fresh meat or the dough bait described above. These flatfish were taken in rather clear water, especially at the mouth of a creek flowing into the Missouri. They bit rapidly. No sinker was used; the baited hook was thrown out, drawn up before it had sunk to the bottom, and tossed out again.

The people of Amatiá, one of the Five Villages at its mouth, frequently fished in the Knife River. They caught many buffalo fish which ran up into the creeks that flow into the Missouri. The fish were said to have been taken formerly with drags that were used like a seine. The fish were caught in the Missouri, especially in the warm summer months when they bit fairly well. The same bait was used as for other fish. A fisherman sometimes brought home two or three buffalo fish. Despite the fact that the fish were not especially liked, they were eaten. They were prepared by scaling with a knife and boiling them because they were difficult to broil. Like catfish, they were cooked with the heads, which have a little flesh on them. Customarily, when a large number of fish were prepared for cooking the heads were cut off. Boys speared buffalo fish in Shellcreek Lake with hay forks in the early years of the twentieth century. Taking fish by this method appears to have been a relatively recent innovation, for fish spearing was an unknown technique in ancient times.

Not many sturgeon¹ were taken. The inform-

¹The Mandan took catfish and sturgeon, as well as smaller fish and turtles along the river where unios and snails were also gathered (Will and Spinden, 1906, p. 121).

ant recollected only three having been caught with hook and line in as many successive summers. Sometimes, sturgeon were found stranded on the bank when the flow of water in the river dropped.

Although they did not believe it to be sacred, the Hidatsa seemed to have some fear of wolffish, or walleyed pike. Its name refers to its sharp nose and teeth which engendered fear, despite the fact that, as far as is known, no one seems to have been bitten or otherwise injured by one. If a walleyed pike got into a fish trap all the other fish fled. The Hidatsa never fished for wolffish, which were, however, occasionally caught on a line and hook baited for catfish.

Paddlefish were caught infrequently. The fish had a shovel-like nose with which the Hidatsa believed it undermined the river bank so that the consequent cave-in of earth killed the fish. The paddlefish were frequently found frozen in the ice.

Many river fish were caught, especially one variety about 5 inches long, which was dark near the head, with a long stripe running the length of the sides. This variety of fish, found in small streams like Shell Creek and Knife River, was caught with bait and sinew; these river fish tasted and smelled of mud and the Hidatsa did not like them.

Two or three other varieties of river fish were known. One was described as having its mouth under its head and was called "hollow mouth"; another was said to be about the size of a sardine.

If a fish bone lodged in an individual's throat the customary Hidatsa advice was, "Go to the place where you caught that fish and dive into the water four times." If anyone choked on a fish bone, they would laugh and say, "Beware, you will have to dive four times."

FOOD AND ITS PREPARATION

Previous publications on the Hidatsa contain innumerable incidental references to the food habits² as well as their cooking processes³ so

²See Wilson, 1924, pp. 166, 172, 210, 241, 252, 268; 1928, pp. 110, 114, 121, 127, 135, 142, 173, 179. Cf. Maximilian, 1906, vol. 23, p. 274, et seq.) for a list of Mandan vegetable and animal foods.

³See Wilson, 1924, pp. 159, 166, 235-236, 268, 301,

that the following section is necessarily supplementary to the data already recorded.¹

In Small-ankle's earthlodge, in Goodbird's youth, three meals a day were eaten. There were no established hours for meals. One was eaten in the morning, a second at about mid-day, and a third about sunset—in winter, about four or five o'clock, in summer at seven or eight. Usually, the main dish consisted of ripe corn pounded into a coarse meal boiled with beans, together with boiled dried meat and kettle baked bread (of wheat flour). Customarily, meat was eaten daily.

While eating, the members of the family either sat on the bed, the bench, or the floor. According to Goodbird, his grandfather's bed was between the two main posts near the door of the earthlodge. A long low bench stood between its two rear posts.

The food was served as the occupants of the earthlodge sat around the fire. Also according to Goodbird, the food was set on the earthlodge floor, in front of the group partaking of the meal in iron [*sic*] dishes he described as about the size of a washbasin. Goodbird's father, his mother, his father's other (?second) wife, and he ate from one dish. Customarily, Goodbird sat at one side of his father or mother, not between them. Each family, according to the informants, was served in a single dish. The food served directly from the cooking vessel was removed from it with a sharpened stick which also was used as a stirring paddle.

Goodbird also elaborated in detail his recollection of how Strikes-many-woman usually served a meal in the earthlodge. The dishes were piled up in readiness, either in front of her or on the opposite side of the fire where she sat occasionally. First, she removed the kettle of food from the fire, setting it down in front of her sitting place. With a stick that was also used as a stirring stick for the food in the process of cooking, she lifted the hot steaming meat from the kettle. As each chunk of meat was removed, she cut pieces from it with a knife, placing them in a bowl set at her side. As the steam from the hot meat rose to her

face, she would blow it away. Customarily, as Strikes-many-women filled each dish, she would give it to one of the boys of the household with instructions as to whom it was to be given. First, she served her son-in-law; however, in observance of the taboo against addressing him directly, she did not speak his name. Wolf-chief was served next, followed by Full-house and Flies-low, and finally, Small-ankle and his wife. If the supply of food proved to be insufficient to feed everyone, according to custom, the woman who was serving refrained from eating. Later, if more food became available, she might cook a portion for herself.

In the old days buffalo meat was apparently the mainstay of the diet² supplemented by the products from the gardens. In addition to these staples, antelope and deer appear to have been systematically hunted. Wolf, eaten whenever slain, was said to taste somewhat like buffalo. The wolf, however, was not hunted. Neither coyotes nor foxes were eaten. According to Goodbird, dog and beaver flesh were eaten. The flesh of both was parboiled and subjected to long cooking. Of dog flesh,³ that of a five-month old puppy was preferred. Snakes were never eaten because they were believed to be sacred.⁴ Fish were also eaten.⁵

Udders of antelope, buffalo, and elk were considered a delicacy. Udders containing milk

²Until eight or 10 years prior to Matthews' visit to the Hidatsa the buffalo provided their most important food (Matthews, 1877, p. 23). To this he adds fat porcupine and bear, and states that only under stress of dire necessity that foxes and wolves were eaten (Matthews, 1877, p. 24).

The Mandan preferred the flesh of buffalo drowned in the Missouri and taken during the spring break-up of the ice (Henry and Thompson, 1897, vol. 1, p. 341).

³According to Boller (1868, p. 250), "The Gros Ventres seldom or never eat dog. . . ." At a dance witnessed by Bradbury among the Hidatsa a feast of dog flesh was eaten (Bradbury, 1817, p. 147). Brackenridge (1816, p. 192) witnessed an Arikara feast where dog meat was served. Goodbird believed that the custom of eating dog flesh was adopted from the Arikara.

The informants disagreed on this point. We find a statement by Buffalo-bird-woman (Wilson, 1924, p. 200) which implies that dogs were not a part of Hidatsa diet.

⁴Matthews also notes that he had never heard of snakes being eaten, but gives no reason (Matthews, 1877, p. 24).

⁵Both fish and turtles are mentioned by Matthews (1877, p. 24).

302; 1928, pp. 112, 113, 123, 124, 125, 127, 133-134, 180.

¹In addition to the citations given in the accompanying footnotes the material presented in Wilson (1917) should also be taken into consideration in this connection.

were either roasted or boiled. An udder so prepared was served to Wilson, who described it as having a "milky taste." When an antelope in milk was killed, the udder was eaten raw. Buffalo testicles also were eaten as a delicacy.

The standard vegetable products were supplemented by cactus, wild turnip, willow root, wild cherries, almost any available ripe wild berry, and the buds of numerous wild plants that were not specified.

Women were prohibited from eating a cut of meat near the liver called *miteduwata*. A girl could eat this cut until she was about 15 years old. Then she was forbidden to eat it; she could not eat it again until she was past childbearing age. If she partook of it before that time, she was liable to be afflicted by spasms.

In fair weather in summer, it was customary to roast a side of buffalo outside the earth-lodge. The buffalo meat was usually propped up on three green ash stakes with the rib side turned to the fire. After roasting an hour or two the rib was turned with the flesh side exposed to the fire.

In winter, the side of buffalo was spitted on a green ash stick and suspended by a rope from the drying pole which hung over the fireplace. The spit was thrust through the soft flesh of the buffalo side at either end; the cook gave the roasting side a gentle swaying motion as it hung over the fire. When the rib side was cooked, the meat was turned over and passed under the fourth from the last of the smaller ribs and the third from the last of the larger ribs, exactly balancing the roasting side. Because roasting meat was so arduous a task, it was the work of the men.

At a feast, one rib with meat clinging to it was believed to be a sufficient portion for each participant. Frequently at a society feast, a number of sides of beef were roasted and piled together in readiness for serving.

Meat was dried either in the sun or partly roasted and dried over the fire.¹ Drying over the fire was the preferred method because the smoke from the fire served not only to cure the meat but drove the flies away.

Dried meat was frequently boiled or roasted,

¹Cf. Matthews (1877, p. 24); also Wolf-chief's narrative (Wilson, 1928, p. 126).

mixed with fat, and pounded with an ax. Meat was especially prepared by this method either for consumption by toothless old people or for younger individuals with worn teeth. The Hidatsa followed this method during the time of Wilson's fieldwork.

Formerly, the meat was pounded in a skin mortar.² To construct such a mortar a circular piece of green hide about 2½ feet in diameter was cut from the skin over the hump or hip of a buffalo bull. A shallow pit 4 inches deep and 1¾ feet in diameter was dug in the ground. The circular section of green hide was staked out over the shallow pit and secured with wooden pins. A heavy stone laid in the center of the pit served to sink the hide into the pit. When the skin dried, it formed a bowl. For pounding the roasted dried meat in this skin mortar, the skin, hair side down, was fitted into a shallow pit similar to the one in which it was formed.

Invariably, both on the hunt and in the village, cooked meat and fats were pounded with a long stone pestle manipulated with both hands. More recently, the meat to be pounded was placed on a stone laid on a piece of skin.

The Hidatsa distinguished between the pemmican³ prepared for immediate use and that compounded for consumption on a journey. For immediate consumption the pounded dried meat, either roasted or broiled, was frequently mixed with broth. For more assured and longer preservation bone grease was added to the dried meat. Broth pemmican was said to deteriorate in a week. The informants recalled that pemmican made of the roasted dried meat had a more delicate flavor than that made of the unroasted meat.

Bones⁴ were formerly split with a stone hammer. They were boiled to extract the grease

²Henry and Thompson remark on the Hidatsa proclivity to pound all their foods in a mortar, but they fail to describe the mortar (Henry and Thompson, 1897, vol. 1, p. 357).

³The recipe for pemmican as given by Matthews (1877, p. 24) calls for the meat to be broiled, pounded, and mixed with fat. Sugar and berries were then added to the mixture. Obviously, sugar was an ingredient added following contact with traders.

⁴Cf. Wilson, 1924, pp. 174, 301-302; also, Henry and Thompson, 1897, vol. 1, 329.

Brackenridge writes of the Mandan: "Very little of the

which was skimmed off usually with a Rocky Mountain sheep horn ladle. When not used immediately as an ingredient for pemmican, the grease was stored either in a hide bag, the large intestine of a buffalo, or a buffalo paunch or bladder. When on the summer hunt, a period of great activity, there was not much time for the preparation of bone grease. However, if prepared, it was usually consumed immediately or mixed into pemmican. The modern Hidatsa continued to prepare bone grease (i.e., bone pounded grease) and marrow fat. The process was demonstrated by Goodbird's wife during the 1910 field season.

The bones of a steer were broken into sections with an ax; its handle had been shortened to a trifle over 2 feet. Apparently this was a common practice, possible because the women often used an ax while in a kneeling position. The broken pieces of bone were placed in an iron pot containing some water. After the bones had boiled for a few minutes, the pot was removed from the fire. The oil or grease which had risen to the surface was skimmed off with a spoon. The pot was then returned to the fire.

If the water in the pot still contained some oil, it had to be drained off and allowed to stand until it cooled and hardened on the surface of the water. The water was drained off through a hole punched in the floating cake of grease which topped the water. Bone grease or marrow fat can be kept a long time but soon deteriorates if the water is not drained off. The grease was approximately the consistency and color of butter and was said to taste somewhat like fresh unsalted butter.

Bone grease was stored in the large intestine of a buffalo. The intestine was stripped of fat, turned inside out, scraped, and tied at both ends with sinew. The bag was about a foot long. A small aperture was cut near one end in the form of a tongue or flap that could be turned back. A buffalo horn funnel was inserted into this hole. Such a funnel invariably formed part of the equipment taken on a hunt. A ladle made of buffalo heart skin was used to pour the bone grease into the funnel. When

filled with the grease the flap over its opening was snugly folded down, the sinew-tied ends were neatly clipped, and the bag was ready to be stored in a parfleche like dried meat. The bone grease hardened rapidly to the consistency of butter.

Heart skins were valued and were never discarded when buffalo were killed. Stuffed with grass and dried, their edges were closed with a drawstring. When the heart skin had dried, the grass was removed, making it easy to grasp its edges with the fingers like a ladle. These heart skin bags were sometimes used to store bone grease but more often for tallow. A hole with a flap, like that described, was sometimes made in a heart skin when it was used to store tallow.

A buffalo bladder was often used as a storage bag for bone grease. When a buffalo was killed, the bladder was carefully handled so that it would not be injured when it was cut out. The fat was carefully removed. The bladder was manipulated with the hands to stretch it. It was also thoroughly washed. While the bladder was worked and stretched to distend it to its greatest capacity, air was blown into it. Its mouth was tied with sinew. The bladder was hung on the tipi to dry. It was inflated by holding it to the lips and blowing into it.

Inflating buffalo bladders occurred always during a period of relaxation and merriment, according to Buffalo-bird-woman. If there were a man in camp who had a physical peculiarity, a crooked back, square shoulders, knots in his back, or a protruding abdomen, he was handed a bladder to inflate. As he filled it with air the onlookers would cry, "Look, your breath has blown the bladder up to resemble your own shape; it too has a big belly!"

In contrast to other varieties of fats¹ which were prepared for use by boiling, paunch fats were invariably roasted. Kidney fats were boiled, partly dried, and stored. Fresh raw kidney fats were frequently eaten as an accompaniment to dried meat.

The Hidatsa also prepared numerous broths²

¹See Wolf-chief's narrative, Wilson, 1928, pp. 133-134, for the method of preparation.

²See also Wilson, 1924, pp. 238-239, for Buffalo-bird-woman's description of the preparation of blood broth.

buffaloe is lost, for after taking the marrow, they pound the bones, boil them, and extract the oil" (1816, pp. 177-178).

and liquid foods¹ which were drunk at meals.

Buffalo bones were pounded, cracked, and boiled for perhaps half a day. The yellow marrow fat that rose to the surface of the boiling water was skimmed off and stored; the remaining bone broth was relished as a drink. It was never discarded but was kept from meal to meal or shared with neighbors.

The water in which either dried or fresh meat had been boiled was often used as a warm drink at meals. A thin broth was prepared from dried meat. Fresh meat broth was also prepared.

Buffalo paunch, dried and boiled, yielded an excellent broth.

In early autumn when many catfish were taken in fish traps, the catfish, boiled without skinning, yielded a strong broth.

Best liked of all the native drinks was the liquid from the uterus of a buffalo cow or cow elk big with young. The unborn calf was always immersed in a yellow liquid. This liquid obtained from elk, bighorn sheep, antelope, deer, or buffalo, was never discarded.² From the first snowfall, about November first, until the first of December, a buffalo cow yielded a sufficient quantity of this yellow liquid to supply a family of 10 adults. By midwinter the yield sufficed for a second meal or enough to share with neighbors. To prepare for cooking, enough fresh water was added to the liquid from one buffalo cow to make about five cups to which the calf or a part of the cow's meat or both were added for boiling together. Ordinarily, this yellow liquid was not used uncooked. However, if very thirsty, hunters killed a buffalo cow, disemboweled it, drew the blood from the cavity, and opened its uterus to release the yellow liquid. A few handfuls of snow were melted in the liquid before they drank it.

All the broths described were formerly drunk from wooden dishes or bowls and spoons

of buffalo horn, Rocky Mountain sheep horn, or mussel shells. When a person was served meat during a meal, it was customary to add broth to his bowl; as he ate the meat he alternately drank the broth with his spoon.

A Rocky Mountain sheep horn spoon formerly served as a cup because the rims on clay vessels were too thick for such use. However, drinking of broth at meals was not an invariable custom; many individuals did not drink during meals.

Another drink, box elder sap, was available only in small quantities in the spring. To obtain the sap a small branch, 4 or 5 feet from the ground, was broken from the tree. The end of the stump was bent downward, thus slightly scarring its upper surface; on the ground beneath it a vessel was placed to catch the drops of sap. In one night approximately 2 inches of sap would be collected in a small vessel. The sap was slightly heated and drunk immediately. It was as sweet as sugar, but the sap was not sufficiently boiled so that it sugared.

A number of native teas are more or less modern additions to the various liquids that were a part of the Hidatsa diet. A taste for these infusions was apparently developed since sugar became obtainable. These native teas have become an indispensable part of the solid foods consumed. Some of them remained in use whenever commercial tea and coffee were not available.

The inner bark of the elm was removed while still green, bound loosely to form a ball, and boiled, producing a red-colored tea. The tea was an innovation; it followed the accessibility of sugar from the trader. The bark was not dried before boiling. In the past, the bark was chewed without preliminary boiling to extract its sweetish juice.

Rose bark was also a favorite. The red outer part of the bark of rose bushes was removed and the inner bark boiled. The resultant brew tasted very much like commercial tea. Unlike elm bark the rose bark was never chewed.

The preeminent drink for the Hidatsa was water from the nearby Missouri River. The few available springs were said to be alkaline. The water obtainable in the creeks in summer was not palatable.

¹The Mandan, according to Maximilian, 1906, vol. 23, p. 277, drank only water.

²Matthews (1877, pp. 24-25) notes that the liquid from gravid elk or deer was also preserved and boiled for soup in which the fetus was cooked. Cf. also Boller (1868, pp. 231-232) who claims that the calf itself was considered a great delicacy.



FIG. 7. Calf-woman by old-fashioned tripod. AMNH negative number 286514.

Boiled pounded corn¹ is mentioned repeatedly by Hidatsa informants so that we are led to assume that corn prepared in this way was an important item in their diet. A pot filled three-quarters full of water was set on the fire to boil. Meanwhile, 12 double handfuls of corn were pounded in a mortar, three or four double handfuls at a time. Pounding this hard ripe corn, yellow or white, was not an easy task. When crushed to the correct consistency the corn was added to the boiling water and stirred constantly with a smooth stick. The scum-like layer which rose to the surface was tasted frequently to determine whether the corn had reached the proper consistency for the addition of the beans. The corn was cooked for half an hour. Since it was virtually impossible to

pound the corn to an even texture, the finer grains cooked first. These small grains rose to the surface while the coarser corn took longer to cook. In the old days, the corn that rose to the surface was skimmed off, set aside, and later returned to the cooking pot when the coarser remainder was cooked. First, however, alkaline salt gathered at the mouths of springs was dissolved in a small vessel and added to the corn mush. The woman who was cooking strained the salt liquor through her fingers held over the cooking vessel to prevent bits of grass or other extraneous matter from dropping into the corn mush. Red, brown, and spotted beans were added. The boiling was continued until the beans too were cooked. A pot of corn and beans was said to be almost continuously on the earthlodge fire to be dipped into at will by all and sundry.

Owl-woman demonstrated the method of preparing old style chokecherry balls.² A stone

¹See Wilson, 1917, pp. 62, 63-64; 1928, p. 177 for the method of preparation of a corn ball loaf; also, Will and Hyde, 1917, pp. 158-159, for variations in the methods of preparation and use of pounded corn. Hiller, 1948b, pp. 25-26 describes the process based on information provided by Uta Wiaś, an old part-Crow, part-white woman some years prior to its publication.

²The Crow also made similar chokecherry cakes (Lowie, 1922, p. 210).

pestle and mortar were set on a piece of skin. The cherries, not quite ripe, were crushed three or four at a time, pits and pulp together. The resultant mass was brushed onto the skin. When a sufficient quantity had been mashed in this way, the cherries were patted between the palms of both hands into the form of a ball. Holding the ball in her left hand and covering it with her right hand, Owl-woman squeezed the chokecherry mass between the thumb and forefinger of her left hand and simultaneously drew her hands backward to deposit the cherries in an elongated lump on the board provided for the purpose. They were left there to dry before eating.

We have an interesting note from Buffalo-bird-woman anent the use of other than native cooking utensils. During her lifetime, although the Hidatsa owned a great many tin platters, iron pots, and various other utensils of Euro-American manufacture, they continued to use

their native wooden (feast) bowls. It was said that food cooked in a clay pot tasted better than the same food cooked in an iron pot. When food was passed around it became customary to smell it and say, "This is cooked in iron," and follow by eating only a little of it. According to Buffalo-bird-woman the Hidatsa were always able to recognize when food was cooked in iron vessels. Wolf-chief offered additional information to the effect that the Hidatsa owned copper or brass kettles before they had iron kettles which historically came into their possession more recently. Bruner (1956, p. 192), in discussing cultural change among the Hidatsa, makes the point that despite all the fundamental changes to which they have been subjected, the role of the women and their responsibilities have not changed; women are mothers and are responsible, as in the past, for the household and the gardens.

MATERIAL CULTURE

COSTUME AND PERSONAL ADORNMENT

No complete and detailed description of Hidatsa costume¹ is contained in the Wilson notes. Neither has it been possible to assemble such data from the literature. However, the random remarks of earlier observers² make it clear that their costume conformed to the generalized Northern Plains pattern; that is, except for ceremonial occasions, relatively few garments were added to the customary breechclout or apron, moccasins, and leggings. A robe, usually of buffalo skin, was always in readiness to be drawn over the shoulders.

The first three months of an infant's life were spent bound in its cradle bundle. Its wrappings were occasionally loosened in the

daytime to rest the infant; sometimes its arms were freed for a short period. At the end of its third month an infant was usually able to sit up and move about. At this time the wrappings of a girl baby were replaced by a carefully tanned deerskin dress. During this early period of its life, an infant was carefully wrapped about its loins and the lower part of its body with a double thickness of previously discarded skin. Should the child urinate or otherwise befool the earthlodge floor its mother was expected to clean it up. Frequently, a mother would help the child to urinate. She grasped the child by its thighs in such a way that its knees were held apart. She held the child with its knees spread against her own thigh, meanwhile producing an effective hissing sound.

When a year old, it was expected that a baby would begin to walk, so that it was allowed somewhat greater freedom. At this age, a little girl wore a dress, moccasins, and leggings. The moccasins usually had a strip of ornamental quillwork over the instep. Each legging was decorated with a horizontal strip of

¹But see Dr. Wilson's previous publication, 1924, pp. 157, 158, 165, 173, 232-233, 234 for additional data.

²See, for example Maximilian, 1906, vol. 22, pp. 359-360; Bradbury, 1817, p. 163; Boller, 1868, pp. 67-68; Brackenridge, 1816, pp. 150, 152; Jarrell and Hewitt, 1937, p. 88; Catlin, 1842, vol. 1, p. 192.



FIG. 8. A Hidatsa wearing a painted robe, foreground. A sweat lodge frame, background. AMNH negative number 288259.

quill embroidery. A costume like that described was worn only by the children in prosperous families.

A four-year-old girl,¹ if her parents could afford it, wore a one-piece dress, its upper part ornamented with elk teeth. Later, at the age of six, both boys and girls wore calfskin robes.

In Goodbird's time, small boys wore a shirt, moccasins, and leggings and, when made necessary by the weather, a calfskin robe. They wore no breechclout; their leggings were supported by a belt.²

¹Little girls, according to Kurz (Jarrell and Hewitt, 1937, p. 87) were nude until their third year, boys until their sixth.

²Maximilian (1906, vol. 23, p. 265) describes Mandan

COSTUME

Formerly, the seams on women's skin dresses were not closed from the shoulder to the elbow, resulting in a loosely fitting garment. To facilitate breast feeding, the under arm seam on one side was also left open to the waist. Elk teeth were much prized as ornaments on women's dresses. As many as 600 have been reported to have been used on a single garment. A blind Mandan who lived on Fort Berthold Reservation in 1910 used to make artificial "elk teeth" from the leg bones of oxen.

boys as customarily nude, but as wearing a robe in winter; girls, on the other hand, wore skin dresses during both winter and summer.



FIG. 9. Hairy-coat and wife. AMNH negative number 118774.

Pieces of bone of the proper size were sawed off and worked to the correct size and shape with file and sandpaper. He tested the smoothness and accuracy of his product by touching the bits of bone with his lips and the tip of his tongue. He was able to produce five such "teeth" in one day.

HOODS

In the old days caps were sometimes made from an old tipi cover and sometimes of buffalo

skin with the fur inside. Occasionally a man drew the side of his robe¹ up over his head so that it formed a hood. The robe was drawn up on its side in such a way that neither the tail nor the head formed the hood. Holes were made in the edges and a stick thrust through. Women were never known to wear their robes as hoods in this fashion.

An untrimmed buffalo cow hide was too

¹Cf. Maximilian, 1906, vol. 23, p. 263, for the Mandan method of wearing the buffalo robe.

large for a robe; consequently, when an animal was flayed, the pelt was usually split down the back. A strip about 6 inches wide was cut from the entire length of the back of each piece of skin or about four times the distance as measured between the tip of the thumb and the point touched by the second joint of the middle finger rolled forward. The strips thus removed were tapered to the head, which was considered ornamental and not enhanced by excessive trimming. The two half hides were then sewed together, completing the robe. When drawn around the shoulders so as to reach and cover the ears a robe should hang to a point just above the ankles.

A more modern form of hood for winter wear was attached to a cloth shirt. Such an attached hood was most likely to be found on the shirts of the younger men who wore them on summer war parties. The hood, drawn up over the head, tended to give a warrior the appearance of a wolf or coyote as he reconnoitered over the top of a hill.

MOCCASINS

In the village, moccasin-making was a woman's task, but, according to Wolf-chief, when the moccasins of a member of a war party wore out he made a new pair for himself from the neck skin of an antelope (cf. Maximilian, 1906, vol. 23, p. 383), slain specifically for this purpose. Such a neck skin was about 2 feet long and 1 foot wide. It was dehaired with a knife in much the same way as the hair was removed from a strip of buffalo skin for making a lariat (not here described). Antelope skin was much easier to dehair than buffalo skin. The skin was rubbed with a piece of natural brick (clay which has been fired by the heat generated by underground lignite fires) or a stone which was customarily carried thrust down into the folds of the robe under the belt. The various steps in making moccasins follow.

While still green, the skin was dehaired with a knife rather roughly and imperfectly. As the skin dried it was rubbed with a piece of natural brick. As a continuing process, whenever the war party stopped, the skin was laid out in the sun to dry and occasionally worked with the natural brick on both the hair and the flesh

side. Working the skin with the brick achieved two results; it served not only to remove the hair smoothly but also to whiten and soften the skin.

When an antelope was slain, care was exercised in removing the two large sinews from its back. While these sinews were still green, threadlike strands, each about 18 inches long, were stripped off. One end of each strand was twisted to a needle-like point and the opposite end tied in a knot. Fifteen or 20 sinew strands were tied in the middle and fastened to the belt at the right hip.

No pattern was used to cut the skins for moccasins. For a soft-soled one-piece moccasin a piece of skin was cut to the approximately measured desired size and folded over, hair side out, to form the exposed surface of the moccasin. Sewing of the unfolded open side was begun at the toe and continued to the heel. The sewing was accomplished by first puncturing the skin with an awl. Then, sinew thread, moistened by holding it in the mouth, was drawn through each opposing hole and tautened. Deer tendons which had previously been stripped off in strands, slightly thicker than a cotton thread, provided a good sewing thread. At this point in its construction the moccasin was fitted to the foot. The skin was cut to fit the heel and trimmed. The seams were sewed and then smoothed with the awl handle. Two holes were punched in the flaps of the moccasin upper to receive the lacing strings which were cut from a strip of antelope neck.

The Hidatsa believed that both their hands and feet are smaller than those of white men and that it would follow that a man with small feet would also have small hands. "You white men with big feet and hands!" was often spoken, not only in contempt, but to arouse anger. The Hidatsa also have an interesting explanation for this difference in size. They believe that the white man's use of his hands and feet, as in plowing and following the plow, enlarges them. Consequently, since the Hidatsa did not use them as much in hard labor, their hands and feet did not grow as large as those of white men. The Hidatsa also believed that a man who has deep lines in his palms will have a long life.

One August day in 1918, Goodbird's wife

demonstrated the making of a pair of double-soled winter moccasins under the direction of Buffalo-bird-woman. She stated that winter moccasins were made from both dehaired and undehaired skin. A furred sock was worn with both types of moccasins. The piece of skin cut for the sole should be somewhat smaller than that portion used to form the upper of the moccasin.

Goodbird's wife prepared to sew the moccasin with the customary sewing sinew taken from the back of a steer. It was necessary to strip threads off the sinew from the flesh side because a thin membrane covers its outer surface. To assure an even seam, the two halves of the skin were first firmly basted together. The bottom half of the moccasin, which would ultimately form the upper of this double-soled moccasin, lay uppermost. The edges were then joined by sewing, except for about an inch. The moccasin was turned inside out, not only to make sure the hair side of the skin would be exposed, but also that the seams would be neat, because they were sewn with the flesh side turned inward. (The skin used in this demonstration was from a dehaired hide).

Had the moccasin been of the furred variety (i.e., of undehaired hide), it would have been sewn flesh side out. It would not have been finished by turning the skins inside out, because it was intended that the fur be worn next to the foot. To cut out the moccasin upper it was necessary to find its precise middle by folding the sewed skin.

Buffalo-bird-woman marked the skin with a wet finger to guide the cut for the moccasin tongue. A small piece was trimmed off the heel portion to make it fit. A perpendicular heel seam was sewed on the inside of the moccasin for a distance of one inch. This was accomplished by turning the heel, but not the whole moccasin, flesh side out. Buffalo-bird-woman cut about an inch off the part of the heel that was not sewed.

A section was cut out of the flap. The flaplets were left on the outer side of the moccasin. The horizontal seam in the heel was closed by sewing. The moccasin was laid on a skin. Its second or outer sole was then cut to fit. The

outer sole was tacked down and sewed to the upper.

The winter flaps (not found on moccasins made for summer use) were cut by gauging with the eye and trimmed to a curve at their ends; a slight curve was also left along one side. This slightly curved border of the flaps was sewed to the top of the moccasin.

Formerly, moccasin tips were made from dehaired tipi covers. In camp, during the winter hunt, moccasins were turned inside out and tied together with string and hung over the fire to dry during the night.

Men and women also wore an inner moccasin or stocking made of buffalo fur. Resembling a bed sock these inner moccasins consisted of two pieces, a sole which extended upward over the heel and a toe piece sewed onto the sole.

HAIRDRESS

The marked admiration of the Hidatsa for yellow hair may refer to the yellowish brown hair of children and younger women. Actually, their hair color seems to vary from a dark yellowish brown to a nearly pure black. Traditionally, infants born into the world from the Babes' Houses—hills of yellow sand—had yellow hair.

Cactus spines were plucked from the flesh with the thumb and fingernails or, in Wolf-chief's lifetime, with steel tweezers. In the past the hairs of the beard and mustache were also pulled out with the fingernails. According to Wolf-chief a Hidatsa began to pluck out his beard at about his fortieth year, before which age it did not begin to grow. Removing this first growth was rather painful; subsequent plucking of the beard did not hurt very much. Old men sitting together talking often plucked out their beards with tweezers. In plucking out the beard a man thrust his tongue into his cheek, the better to give purchase to his tweezers against his tautened skin. As he pulled out the hairs he tapped the tweezers on the end of the nose; feeling the stubs of the hairs, he blew them off. Since all Hidatsa had sparse beards, removal of the hair did not require much labor.

For plucking out the beard, the Hidatsa (in the early part of the twentieth century) used metal tweezers of almost uniform design. These find their prototype in the elkhorn tweezers after which they are modeled. A long thin flat piece of elkhorn rendered soft and pliable in boiling water was bent over two sticks and bound in place with sinews. When the elkhorn had dried and set into the desired shape, the binding sinews were removed and the tweezers were ready for use.

For their first three years, little boys and girls had their hair cut short. A tuft left on either side of the head was said to resemble the horns of an owl. In Wolf-chief's time the hair was cut with scissors. As the cutting was rather unskilled the hair frequently seemed to be spotted, especially when the scalp was exposed because of excessively close clipping. Children sometimes wore their hair in this fashion until the age of 10.

Following the so-called owl haircut, both boys and girls wore their hair in a single braid hanging down the back. Girls changed to women's hairdress when about 12 years old, boys to men's styles at 16, at which time the hair was parted in a median line and each side braided and allowed to hang loosely over each ear.

Two descriptive accounts that dealt with the origin of the owl haircut were recorded. The first, related by Buffalo-bird-woman, follows:

Many years ago an owl saw an individual (name and sex unknown) who told him, "When your children are old enough to notice what is happening and to understand what is said to them (i.e., when two years old), cut their hair, leaving tufts like those on the owl. You must do so that they may look like owls, and I will make your children grow up strong and healthy."

Wolf-chief's account differs markedly in content and detail:

Grandson (the culture hero) once arrived at a large village. All its inhabitants were poor and emaciated; not a single well-nourished person was to be seen. "Why are you all so thin?" Grandson asked. "Because," they replied, "whenever we return from the hunt with an abundance of meat something strange happens. In yonder wood there is a hollow

tree, its top broken off. A hairless being lives in the tree. It has something that resembles ears. It pokes its head out of the hollow and cries, 'Bitter!' Then our meat becomes bitter and unfit to eat." Grandson advised the people in the village to hunt again, and he promised to do something for them.

The villagers went out on a hunt. They killed some buffalo and returned. Grandson (the culture hero) climbed the hollow tree, stretching his hands out in readiness. The dogs began to howl. All the boys in the village screamed. Then there was a scraping sound in the hollow and the "thing" stuck its head out and began to say, "Bitter!",¹ but Grandson began to choke the "thing" before it could make another sound. He pulled the "thing" out of the hollow trunk.

Its tail curled up over its back and reached its head. Grandson pulled the tail out and fixed it on the creature's head in two tufts, saying "It is now an owl. I have made two feather ears for it. You can call these 'ear tufts.' You shall cut your children's hair to imitate owl's feather ears." No one knew what the "thing" had been before Grandson transformed it into an owl.

Grandson directed the owl to build his dwelling near the people. He also told the owl, "Because you are near them, their children will grow up prosperously. If the children become peevish, their parents may warn them, 'The owl is coming.' The children will be frightened and behave." Grandson told the people, "I have transformed that bad thing into an owl, a good bird.² You may frighten your children with the owl which will never hurt them, but never say 'That bad thing with a tail is coming.' If you should do so, a mysterious influence will prevail over them."

Since then, the Hidatsa always warn a weeping child, saying "The owl is coming. He might catch you. Stop crying."

HAIR SWITCHES

When a young Hidatsa man was bent on philandering or singing on the earthlodge roof in the late afternoon, he was wont to display, mainly for the edification of the young women, all his finery, of which no part equaled in attractiveness the very highly prized hair

¹The voicing of this magic word, *adape-be*, or "bitter," was believed to cause the bitterness of the gall bladder.

²Owls, Maximilian (1906, vol. 23, p. 382) states, were medicine birds and were sometimes kept in the earthlodge.

switches. Beginning when 19 or 20 years of age, the men wore these switches. They were, however, never worn after 40.

This distinctive hair dress was common to the Crow,¹ Arikara,² and Mandan,³ as well as the Hidatsa. Apparently it aroused the interest and attention of virtually all the early visitors to the Upper Missouri region. Their descriptions, though agreeing in the main with our information, differ somewhat in detail and consistently fail to mention a cap such as that here characterized. It is not clear whether this omission is due to failure in observation or whether the cap-like headdress with its hair trailer is a modern evolution of an older type of hairdress in which the individual's hair was artificially lengthened.

The switches⁴ were made of human hair which was carefully hoarded. Men and women both saved their hair combings or the hair cut

¹Cf. Lowie, 1919, p. 228; 1935, p. 83, who describes the Crow method of increasing the natural length of the hair.

²Brackenridge describes the Arikara hairdress as follows: "They generally permit their hair to grow long; I have, in one or two instances, seen it reach to their heels, when increased by artificial locks of horse hair; and is then usually divided into several braids, matted at intervals, with a white tenacious clay; sometimes it is rolled up in a ball, and fixed on the top of the head" (Brackenridge, 1816, p. 151).

³Of the Mandan, Henry and Thompson write: "The men wear their hair long, twisted into small quaittes, hanging down to the rump; some of them have it of enormous length, trailing upon the ground; they seldom tie it, but allow the numerous small quaittes to flow in a more graceful manner upon their backs; they always daub it with white and red earth," (1897, vol. 1, pp. 341-342.)

Maximilian also describes various elaborate methods of dressing the hair by the Mandan (Maximilian, 1906, vol. 22, pp. 346-359). These involve braids, bead, shell, and feather decorations, and daubing with clay. "When the hair is not naturally long enough it is frequently lengthened with other human hair often that of enemies whom they have killed, which is fastened on with rosin" (1906, vol. 23, pp. 259-260; cf. also p. 256). See also Will and Spinden, 1906, p. 111.

⁴Henry and Thompson describe the hairdress as follows: "It is generally of great length, sometimes even trailing on the ground. They divide it, and plat from 10 to 25 tresses about one inch broad; on those quaittes they stick pieces of gum three or four inches square and an inch apart, which every morning, after washing and freshening, they carefully

off to indicate mourning. The switches were usually of two lengths; one type measured about 3 feet and hung from the crown of the head to the hips; the second hung to the heels. Midway of its length it was decorated with a horizontal band of bead or quillwork. The beadwork band was usually seven strands wide.

To make a switch, the first step was to draw the hairs out from the accumulated mass of hair which was usually 6 or 7 inches in diameter. The hairs were drawn out with the right hand and laid out on a piece of tipi skin in parallel symmetrical strands, each thick enough to be encircled by the thumb and forefinger. Usually these hair strands were thicker at the middle than at their ends. They were about 2 inches long and 5 or 6 inches wide. After the straightened hairs were laid out parallel to each other, the palms were moistened with saliva and with a pushing motion the hair strands formed into a roll. This process was continued until the apparent bulk of the hair was reduced and each strand was about 3 inches in diameter. The strand was then pressed between the thumbs and forefingers until it was flattened out to a width of 5 inches and a thickness of $\frac{3}{8}$ of an inch.

When the hair strand had been pressed into the desired thickness some pine (spruce?) gum was chewed. A small ball the size of the end of one's forefinger was stretched into a cylinder about 3 inches long. After the gum had been warmed over the hot coals, it was pressed down on the hair. These horizontal bars of gum were set on the hair strand at intervals of about a half-inch for its total length. A dish of hot coals was held near and over the bars of gum to heat them and partially melt them. As each bar of gum was softened, it was pressed into

daub with red or white clay, always painting the patches of gum one color, and the intervening spaces another" (Henry and Thompson, 1897, vol. 1, p. 347).

Maximilian (1906, vol. 23, p. 369) notes that the hair was often plastered with clay and frequently artificially lengthened, "by gluing false locks to it". Boller (1868, p. 68), Catlin (1842, vol. 1, p. 95), and Kurz also noted the lengthened hair affected by young men. He adds, however, that only those men who had counted coup were privileged to attach the additional strands (Jarrell and Hewitt, 1937, p. 88).

the hair with the moistened forefinger which had previously been dipped in water. Then the hair strand was reversed and similarly treated except that the gum was applied in small globules equidistant from each other. Sometimes the gum globules were placed in diagonal rows. To secure the hair in place the gum bars were warmed again and each hair strand folded over so that it was covered for its entire length with spots of gum, the bars being hidden within the strand.

When the requisite number of strands had been prepared, each was lengthened by gumming on long hairs that had been cut off for mourning. A small strand was gummed on the inside, another gummed onto the first, and the process continued in this fashion until the trailer reached its ultimate length. At the point of the initial junction of these lengthening strands, a piece of red cloth was wrapped and sewed on. The red cloth, in turn, was bound with a string of quill-decorated buckskin to a width of about 3 inches. Three strips of weasel skin 7 inches long were also attached.

The completed hair strands, most frequently seven in number, were then sewed to a band of soft buckskin about 3 inches wide. The folded seam was worn nearest the head. Thongs were drawn through the buckskin band at the first, fourth, and seventh strands; the ends of the thongs were to tie the switch to the three small braids of the wearer's hair provided for the purpose.

A porcupine quill-decorated rawhide pendant about 12 inches long and 1 inch wide slashed into three strips, but not cut through at the ends, was attached to the central strand of the hair switch about 7 inches below the band. A single tail feather from a young golden eagle was attached horizontally to the center of the porcupine quill pendant. The feather was either sewed or tied to the quilled pendant. The thong or sinew was drawn through a hole bored through the under side of the quill. The eagle feather, as used with the pendant, had no special significance. It was not considered to be a mark of honor. A strip of the highly prized otter skin was frequently, but not always, bound around the switch.¹

¹The informant, Wolf-chief, failed to clarify the point

After the hair switch was completed, the gum spots were painted with a mixture of white clay and vermilion which produced a shade of pink. The vermilion was placed in a bowl, wetted, and the paint applied with the finger on each spot of gum. However, the paint wore off when the switch was worn daily; consequently, it was necessary to renew it every three days.

PERSONAL CLEANLINESS

The Hidatsa seem to have laid considerable stress on personal cleanliness, especially in training their children. In ancient times, when the family was aroused at sunrise usually by the singing of war songs by the grandfather, old and young trooped down to the Missouri for the morning bath.²

Preceding the bath many bathers cleansed the lung and stomach by coughing up phlegm and saliva; others induced vomiting by irritating the throat with the wing feather of a goose, a duck, or some other bird.

In winter, water for washing was brought to the earthlodge by the women after they had prepared the morning meal. To wash his hands a man filled his mouth with water and blew it over them; he washed his face with more water expelled into his palms. The face and neck and sometimes the whole body were often washed with fresh snow as an efficacious means of withstanding the cold. To do this, a man would stoop and throw the snow over his neck and back and rub his arms and legs briskly. The bath in either the river or the snow was likely

as to whether the spots were painted prior to or after the quillworked parts were added.

²Kurz seems to have been deeply impressed by the daily bathing of the Hidatsa, stating that they were more likely to bathe twice a day than not at all (Jarrell and Hewitt, 1937, p. 149). Cf. Henry and Thompson, 1897, vol. 1, p. 348; Wilson, 1924, pp. 157, 167-168.

According to Boller, even in winter, both men and women took advantage of any air hole in the ice to take a bath (Boller, 1868, p. 275).

Arikara also bathed twice daily (Brackenridge, 1816, p. 152).

Although Maximilian remarks that he found the Mandan men cleaner than the women, they too bathed daily, regardless of the season (Maximilian, 1906, vol. 23, p. 290). Cf. also Henry and Thompson, 1897, vol. 1, p. 325.

to be followed by a vigorous application of white clay over the whole body, excluding the face. The white clay was believed to serve as a protection against the weather.

In winter, also, it was not unusual for young Hidatsa men to bathe in the Missouri through air holes in the ice. The bather stood at the edge of the air hole and stooped over to throw water over himself with his hands. If his ball of white clay froze in his hands he dipped it in the water to thaw it out. The bather usually went to the river wearing a breechclout, robe, and moccasins. The robe was laid aside on the ice while he bathed.

According to Wolf-chief, in old times the Hidatsa filed their fingernails on the whetstone used to sharpen knives. Old people stooped to file their fingernails on the hard earth floor near the fireplace.

PERFUMES

In years past, it was said that much attention was given to perfumes and scents. Some of these were used on the beds. Several kinds of wild seeds were gathered for this purpose, pounded in a piece of buckskin, chewed, and spat over the bed. Pinewood from Montana, found floating in the Missouri, was scraped until it formed a powder. Pine needles, obtained from the Crow, also provided a scent. Strands of sweetgrass were hung on the bed frame.

TATTOOING

Formerly, tattooing was common to both men and women. For women, the lower part of the face and neck were decorated, for men, the right side of the body from shoulder to finger tips. In preparation for the ordeal, a man would seclude himself, seek a vision, and fast for four days. The seclusion period completed, he partook of food and gashed his breast several times. When the wounds healed, he was tattooed. His skin was pricked, and charcoal derived from kinnikinnick bark was rubbed into the incisions. The tattooing was accompanied by singing and drumming. The process was continued between intervals of rest until the pricked pattern was completed. During each

rest period, the man who was being tattooed took a sweat bath.

It was said that no one in the village would dare to touch a person's tattoo marks not even in a fight. The tattooed person was always the one most determined to strike an enemy in battle.

Tattoo marks were displayed for the edification of visiting tribesmen, presumably as an example of Hidatsa endurance. Since tattooing was on the right side of the body, the robe or blanket was usually worn with the right arm and shoulder exposed.

Wolf-chief, in 1918, mentioned a Hidatsa tradition concerning a Mandan village which they called Tattooed-faces. They also believed it was from this village that they first received seed corn. However, the Tattooed-faces left the Hidatsa and moved southward. They followed the Missouri River until they arrived at the mouth of the White or Cheyenne River. These people, who were believed to have ascended the Cheyenne River, were never heard of again.

In 1909, so far as could be learned, Poor-wolf (or Lean-wolf) was the only surviving Hidatsa tattooed in the fashion common in earlier days. Wilson and his brother, Frederick N. Wilson, recorded a brief account of Poor-wolf's tattooing. Unfortunately, he was then almost 90 years old and a consumptive. Consequently, it was difficult to obtain a coherent narrative from him.

Poor-wolf's narrative describing his tattooing as recorded in September 1909 follows:

I was 19 years old, unmarried, when I was tattooed. My brother, who had planned to be tattooed, feared that he would not be able to endure the pain. I was not afraid. I took his place.

In preparation, the head man sent me out into the hills to seek a vision. I fasted for four days and four nights. I remained out in the hills, despite the cold. Part of the time I stood erect on a buffalo skull with no means of support. No matter how hard the wind blew, nor how difficult I found it to keep my balance, I was compelled to stand erect. My throat became dry. I was hoarse.

On the fifth night, I ate and drank. That night, too, I cut three strips of skin from my breast. Then, my father came. As a sacrifice, he cut four strips of skin between the elbow and the shoulder of the same

arm. When my arm had healed, I was again sent to the hills without food or drink to cry throughout the night. In the morning, I returned to my father's big earthlodge where a group of old men had assembled. They had to be repaid and feasted in return for their services in tattooing me.

To begin with, they cut some tin into four small pieces and sharpened them like the points of needles. The pieces of tin were tied together. All the points lay in the same direction. One end of a bone was hollowed out. The four sharpened pieces of tin were set into the hollowed bone end so that their points projected outward. The bone was painted red. A little bunch of owl feathers was attached to its upper end. There was no explanation for the owl feather decoration. Six additional small pieces of tin were sharpened and bound into a small roll. These six pieces, points outward, were thrust into a hole cut into the end of a piece of black wood. At its opposite end, the old men tied four long white swan feathers, each of which hung loosely from a piece of string. The quill of each feather had been sharpened to a point, a few grains of sand were dropped into the hollow stem, and the point of the quill was doubled back into the stem, thus closing the hollow. The grain of sand tinkled when the feathers moved. Kinnikinnick bark was then burned to form charcoal which was then strained in preparation for rubbing into the skin after it had been pricked. The charcoal provided the color.

No pattern was drawn on my body¹ before the men began pricking me. While some sang, two men always came forward to do the pricking. The group had four drums and many little bells.

Many stones were prepared for a sweat bath. After the day's pricking which made me bloody, I had to go into a sweat bath to wash the blood off. It required a whole day to finish less than a foot of the pattern. After I had been pricked for a day, I rested about two days, until the wounds were partly healed. On the third day, I was ready to continue. Each night preceding the resumption of the tattooing, I went out into the hills and cried. In the morning, when the men were ready, they sent for me. They worked a long time before the whole pattern was completed.

ASSINIBOIN TATTOOING

Buffalo-bird-woman, who was born about 1839, once observed the tattooing of an Assini-

boin. She described the procedure, in 1910, as she remembered it.

I never witnessed the tattooing of one of my own tribe, but I once saw eight men tattooed in an Assiniboin camp, four men one day, and four more men the following day.

A group of Assiniboin with more than a hundred tipis had come to visit us at Like-a-fishhook village or Old Fort Berthold. A double tipi was pitched. We were told that someone was going to be tattooed. A number of Hidatsa (presumably women) raised the base of the tipi cover. No one interfered with us; we sat and watched the tattooing. It was a rule that day that any young woman who went into the tipi should not repulse any young man who wanted to put his arm around her and sit beside her.

Five young men sat in the tipi. I heard someone say, "Those are the young men who are going to be tattooed." Kettles and other containers in the tipi were full of food ready for the feast. A handsome young man rose. He came forward to the place where the tattooers sat. The candidate lay down on his back resting on the blankets laid on the floor of the tipi. His body was bare from the breechclout up. His skin was very light. An old man stood over the young man. He spoke, but I could not understand the words. But when he finished the others present laughed as if at a joke.

Some time elapsed before the tattooing was begun. At last a handsome young woman wearing fine clothes and with her face painted red entered the tipi. She sat down, Indian fashion, with her feet to the right. She placed a pillow on her knees. The young man laid his head on the pillow. The young woman was embarrassed; she did not look at the young man's face. She avoided his eyes. We were told, afterwards, that she was a married woman and had in the past been his sweetheart. He had asked that she hold the pillow for his head, the privilege of one about to be tattooed. The young woman was embarrassed; she hesitated a long time before she consented to serve.

At this point a young man rose. He held a piece of charcoal in his hand. A plant that grows with little knots on it had been burned to produce the charcoal. Using the charcoal, the young man marked the tattooing pattern on the breast of the candidate. When the markings were completed another young man stepped forward.

He had a stick about 6 inches long and the

¹Whether Poor-wolf meant to convey that the pattern was pricked into the skin without being previously outlined or was outlined on the body only when the tattooers began

their work, is not clear. Perhaps only a section of the design was outlined each day. Poor-wolf was senile and was reported to wander considerably in his narrative.

diameter of a lead pencil. Because its bark had been peeled off, the stick appeared to be white. One end of the stick was forked. It bore quills; their ends were doubled back. Some grains of sand were placed in each stem. The sand in the hollow quill produced a tinkling sound. The other end of the stick was fitted with tiny sharp points. I do not know whether these were needles or porcupine quills, which the Hidatsa were accustomed to use.

Drums were beaten by three drummers while other participants sang, drawing a crowd of spectators to gather. During the singing, the tattooer rapidly pierced a section of the marked pattern. Another young man held a piece of an old tent cover. About a foot square, it was smoke-soiled and brown and probably cut from near the smoke hole of the tent cover. He applied this skin, from time to time, to the candidate's wounds to absorb the blood. No pigment was rubbed into the wounds. The charcoal pattern had been heavily laid on so that pricking the pattern sufficed. The smoked and browned skin may possibly have helped to fix the pattern.

The Assiniboin tattooing patterns I saw were not all exactly alike, but they were very similar.

HIDATSA AND MANDAN TATTOOING

Buffalo-bird-woman also added a few notes on Hidatsa tattooing.

The Hidatsa did not use the pattern I saw tattooed on the young Assiniboin. A young Hidatsa chose the pattern he wanted and had it applied. If one of our young men had an agreeable, light-colored skin, a broad chest and shoulders, he was very likely to wish to have himself tattooed. Since the Hidatsa men did not wear shirts in the old days, the upper body was exposed and the tattooed pattern could be seen. When I was young, many of our very old men had been tattooed. An Hidatsa man was tattooed only on one side.

Women were tattooed only on the face. As their dress covered the upper body, it would have been useless to tattoo the chest. The lines of the pattern on the upper lip were not carried close to the nose because that part of the face is very sensitive; the pricking was so painful that the area around the nose was avoided.

A brief note on Mandan tattooing was obtained from Wounded-face, a Mandan full-blood, born about 1848. He recollected that when he was a small boy, one very old woman in his village had a tattooed face.

TATTOOING OF "POOR WOLF"

In the course of an evening's talk, Poor-wolf's name was mentioned. Hairy-coat showed Wilson a picture of Poor-wolf and remarked that he had been present when Poor-wolf was tattooed. His description follows:

Poor-wolf was my "oldest brother" as we call it; he was also my "band brother." He is 16 years older than I am. When he was a young man, he built himself a small lodge. He had a friend named, "He-lets-his-gun-take-care-of-his-house." They lived together. This lodge was small, like a winter lodge, with forked posts. Because he had begun to do woman's work, the people who observed what he was doing were afraid that he "wanted to become a woman." He also made garden tools; he planted his own garden in the spring. He called his friend; they worked in the garden together. They raked and cultivated and gathered up the squash, exactly like women. In the fall, he gathered the corn and squash. He built a stage to dry them. All the people heard what he was doing.

When the leaves turn yellow, the two-year-old buffalo cows have good fur. They provided the best robes the Hidatsa had. Someone gave Poor-wolf such a buffalo skin. He set a stake in the ground, borrowed a scraper from a woman, and proceeded to flesh the skin.

He lived with his friend; neither one was married. When the hide had dried, he got an ax; he cut and pounded the skin to straighten it out. Then he borrowed a toothed scraper. The woman who owned it offered to finish the robe for him, but he said he wanted to do it himself. He worked the hide and finished it himself.

He oiled the hide, and dried it in the sun. He heated water; when it had partly cooled, he moistened the hide. He made a frame on which he stretched it. When the hide had been tanned, he made a robe which he decorated with porcupine quilled designs.

When the robe was completed some good people told him that he was being talked about; they thought he was one of those who "Wanted-to-be-a-woman." "Your father, Tent-skin was a chief," they said. "And your brother Road-maker is a chief. Why do you want to do woman's work?" Others reminded him, saying, "Both your father and your uncle were chiefs. Why don't you want to be like them?"

They saw him doing woman's work, they were afraid that he wanted to become like those young men you have heard about. Road-maker went to him

and said, "Brother, you shame me. The whole village is talking about your doing woman's work." Road-maker said, "I will tattoo you; then you will become a man. You will become a chief, a good young man. I will begin to tattoo you. I will work on it gradually; then I will put my gods on your hand and that will make you a man."

"This shall be the design: I will put a bird's claw on your right hand and plumes on your wrist. I will tattoo two stripes from your jaw to your breast (on each side of the front of your throat) and down the right side of your chest." (I saw them tattoo him.)

I once told Poor-wolf that I had seen him being tattooed, but Poor-wolf said, "You were too young, I don't believe you." He asked me, "Do you know the songs they sing when they tattoo?" I said, "Yes, I know them, I was there and I heard them."

"Well, if you saw me when I was being tattooed, then tell me what you saw, I shall know if you are telling the truth." Then I told him what I had seen and still remembered. "What makes tattoo marks blue?" he asked. "They take kinnikinnick plants, the red variety, about the thickness of an arrow. The bark is removed; the stick is charred to make charcoal which was pounded fine." The thin belly portion of an old tent skin was used because it was soft and pliable. When the blood ran from the wounds, the skin was used like a blotter. Using a pattern made of board and a wet stick dipped into the charcoal, the design was marked off in advance on the body of the man to be tattooed.

Poor-wolf asked, "What did they use to cut the pattern on my skin?" I told him, "Tin." "Well, how did they prepare the tin?" I told him each piece of tin was sharpened to a point and then mounted in a dry but soft root.

The tattooing was begun on Poor-wolf's neck and chest; the board pattern was used two or three times down the sternum. The forked pattern was approximately the width of two open fingers.

Beginning at the throat, they worked down close to the umbilicus, then down the chest to the nipple, and finally to the last rib. The dry root with the points of tin was used to cut the skin. This root was about the length of my thumb. The sharpened points were stuck in one end; in the other were feathers with the quills filled with sand to make them rattle.

The center of the chest was tattooed first, then the part down to the end of the sternum, then the area at the collarbone and neck. The upper area reached the level of the larynx and continued until it encircled the area under the ears. (Hairy-coat admitted that he was not very sure at this point, explaining that he was just a boy, and not very close.) After

the center of the pattern was finished, the lines down the breast were drawn, then the back and the arms. (He was not sure about the exact order.)

"I do not want to make a mistake," he said, "but this is how I remember it, and I saw it done. The instrument may not be exact in every particular, but that is how it looked. The root may have been either larger or smaller, but the description of the feathers and the rattles is fairly accurate. It took about a year to complete the whole design because the freshly tattooed area would get sore and swell; it would take a long time to heal. Poor-wolf lay in a reclining position and his face was covered by a raven skin with its feathers. The singer had a stick about 5 feet long with hoof rattles on it and two or three hand drums.

Road-maker held the tattooing instrument in his hand and said, "The enemies will see his tattoo marks, but no one in the village will touch these marks." (The marks will never be touched in a fight, meaning that he would never fight his friends.) Road-maker repeated this remark every time he worked on the tattoo marks. He would continue, "This man is being tattooed because he has a great desire to strike the enemy. If he comes close to the enemy they will see the marks and so remember him. He will show them to visitors and provide feasts for them.

A feast followed each time the tattooing was done. Road-maker would make a speech. "This man wants to keep his life good; he wants to do no wrong to anyone. When his friends come to visit him, he will show these marks to them and will give them a smoke. If any man (visitor) wants his wife, he will give his wife to him and will not take her back again if the visitor wants her."

Following the speech Road-maker would begin to tattoo. Simultaneously, the tattooing, the shaking of the hoof rattles, and the singing were begun. At each beat of the rattles, Road-maker would strike with the sharp points of the tattooing instrument. Kinnikinnick charcoal, covered with earth to cool it, was powdered and poured into quills from which it was dropped in the tattooing wounds. A single line of the design at the center of the chest was finished at each song. The powder was dropped into the wound and blotted with the soft smoky part of a tent skin. The carefree boys danced to the singing. This tattooing was done in the spring.

When Road-maker came to the wider parts of the designs the drumming began. The beat became faster and faster as the blood flowed and the pain worsened. However, throughout the ordeal Poor-wolf did not move. He lay as if he were a dead stick. Road-

maker worked carefully on the straight lines; he used the tattooer as if it were a hammer. In other areas of the design he used the instrument like a scraper, faster and faster, rattling the sand-filled quills from side to side.

The design was one that was always used by everyone. Poor-wolf's tattoo had no special significance. It differed only in the design on his hand, which represented a bird's claw because Road-maker's god was a bird. Road-maker learned about the bird when he went out to seek a vision. During his quest, which continued for nine days, he neither ate nor drank.

The night after he returned, he reclined on a backrest, eating and drinking, surrounded by his friends, smoking. They passed the pipe to him from the right. As he was about to reach for it, an eagle's claw seized the pipe and held it out to him. He watched it. His companions said, "Hey!" to remind him to take the pipe, but he just watched the eagle's feet. Then they passed the pipe to him. He watched to make sure about what he saw, but it was only eagle feathers and feet. He alone saw this; he had just come back from the hills. That is why the eagles called to him.

So Road-maker tattooed Poor-wolf down to the hand; he took a whole year to do it. Two others, Bad-brave and Gum-takes-care-of-his-house were tattooed down the neck and to the end of the breastbone, then they quit. They had enough! Road-maker said, "If you are brave enough to let me tattoo you down your breast and back and arms, I will put my god on your hand, and you will be brave and strong." Poor-wolf was the only one who had the claw tattooed on his hand.

A man named Bobtail- or Short-tail wolf was a member of a war party. Poor-wolf, who had not yet received that name, roasted some buffalo guts and gave them to Bobtail-wolf. Because Bobtail-wolf always looked thin, they called him Poor-wolf. He said, "I am glad that you give me this roast of guts, so I give you a name. Turn around. I am not fat and you call me Poor-wolf, therefore, I call *you* Poor-wolf, just as you all call me!" They all laughed. This is the name he has kept all his life. These were all young "Wolves" and the leader, Old-wolf.

After he had been tattooed Poor-wolf never again engaged in woman's work. He became a brave man. Later, he married a young woman who had not learned to do woman's work, so he instructed her.

Poor-wolf became very brave, he struck two enemies, a first strike each time (the highest honor).

Heretofore, when he had been observed doing woman's work, people were afraid that he might

become like a hermaphrodite. They knew he wasn't one. Because he was such a good young man, they did not want him to become something else.

Wilson asked Hairy-coat to clarify what he knew about men who "have the heart of a woman," or who "want to be like a woman." However, he said he could not answer, because he was Poor-wolf's adopted son; it was a subject properly discussed between father and son. Hairy-coat noted that it was possible for a band brother to do so, he suggested Wolf-chief. Wilson had no opportunity to pursue the subject; consequently it has remained obscure.

The Hidatsa seemed reluctant to discuss the subject in precise terms. There never seemed to be many of this class in any one tribe, although some tribes are reported to include more than others. Wilson asked a Yankton Sioux if he had ever heard of such individuals among his people. He said that there were very few, if any, in his tribe, but that he had heard from the old men that it was quite common among the Plains tribes, especially among the Omaha, Ponca, Oglala, Brulé, Teton, Crow, and Black-foot.

Among the Yankton they were called *winkta*, and as among the Hidatsa, they did women's work, dressing skins, making moccasins, and doing quillwork and beadwork; in fact, they were said to have excelled in these arts at times. He also said that among the surrounding tribes these men associated more with the women, as a rule, and even wore women's clothes. In common talk they were referred to as "she." In general, they were apparently not held in very high esteem by the members of the tribe; they were the common prey of the jokesters. Hairy-coat also told Wilson of one man who, while riding out on the prairie, saw one of these individuals at a distance dodging about trying to hide, so he rode up to see who it was. Discovering that it was one of these *winkta*, he thought he would have some fun. He followed on his horse as "she" ran from one clump of grass or bush to another. All this time he pretended not to be aware of "her." Finally, when "she" rose from one hiding place in an agitated manner, he knew that it was more because "she" was coy

and bashful. He pretended that he was looking for "her" and called, "Oh, there you are, Black-eyes!"

Some Indians once came to visit the Yankton. Among them was American-horse, an Omaha, who was quite an important chief. When it was about time for him to return home, the Yankton chiefs arranged a feast and announced that it would be held in three days. But later that same day a blizzard began and raged for two days. So they told him that they would have to call off the feast because the weather was too dangerous. However, he told them not to worry. He entertained them with stories, telling them all about his having had relations with one of this class—"a real woman"—four times. It appeared that if anyone had this experience four times and tells about it, it will always bring a change of weather. The next day the weather cleared and they had the feast. Even though his daughter was present he did not feel ashamed to tell it but considered it something to be proud of. Among many tribes it was a sort of exploit, a thing to boast about, if one had consorted with members of this group.¹

WEAPONS

Bows

Wood, elkhorn, or Rocky Mountain sheep horn were used to fashion bows; they were made as needed, any time of the year, summer or winter; their construction was not hindered by seasons or by any ceremonial strictures. Wooden bows were made of young ash, chokecherry, wild plum, cedar, elm, and a species the Hidatsa called white wood.² Ash was

preferred principally because of the belief that an ash bow, especially when sinew-backed, would not only withstand a heavy blow without breaking but was, moreover, strong enough to use as a club in an emergency. When put to use in this secondary function as a club, the bow was usually braced; the bowstring, although strong, had a tendency to break the blow and thus prevented the wood from fracturing. Bows made of ash were the chief dependence in war and hunting.

Chokecherry, though it was said to be difficult to find a flawless staff, was considered the next best wood. Although utilized, elm was liable to split and actually was not strong enough to function well as a bow. The white wood (not identified more specifically) is close textured. It is not abundant in the Hidatsa region and was difficult to procure. The tree, said to resemble elm, grew no larger than a chokecherry tree with a trunk the circumference of one's wrist. The method of construction was applied with change to the several types of wood used. The bow staff was cut with its back to the bark. However, the soft wood underlying the bark was shaved down to a thickness approximating $\frac{3}{8}$ of an inch. If too little of the heart of the tree were cut away, the bow would probably crack. The proper length for an Hidatsa bow measured twelve times the width of the fist clenched around a bow.³ A longer bow would lack the necessary strength, and, as a consequence, the arrow would tend to fall short.

A good bow staff was constructed of wood that had no knots. Trimmed to its final thickness the green wood was bent to its correct shape and set in a frame of pegs to dry. On a

¹Bowers (1965, pp. 166-168) describes berdaches as an organized group. Its members had many dreams. They wore women's clothing and formed attachments to older men. Only two berdaches were remembered; in the past, there may have been 15 or 24. They were treated as a special class of religious leaders and were a most active ceremonial class in the village. The cessation of warfare also marked the disappearance of the berdache.

²Bows of both the Mandan and Hidatsa were made of elm or ash, with twisted sinew strings, according to Maximilian (1906, vol. 23, p. 354). See also Will and Spinden,

1906, p. 112, for a description of Mandan bows, which Bradbury (1817, pp. 159-160), states were made of Osage orange. The Arikara used willow, sinew-backed, for their bows (Brackenridge, 1816, p. 158).

³Discussing the length of Hidatsa bows, Curtis states that cedar bows were 4 feet long; elk or mountain sheep horn bows were shorter, "made of two pieces spliced together with sinew and strengthened with glue made by boiling the horns" (Curtis, 1909, vol. 4, p. 181). Arikara bows were short, according to Brackenridge (1816, p. 158).

warm day, the drying process ordinarily consumed six or eight hours. In the past, when a bow was made in winter, it was customary to lash the staff to a long piece of wood with pegs inserted at intervals to bend and hold the bow staff to its proper shape as it dried near the fire.

When the staff was partially dried it was removed from the confining frame of pegs. To prevent it from cracking or warping as the drying continued it was oiled with a piece of cooked suet which was believed more efficacious for this purpose than dry suet. At this stage in its construction the bow was ready for polishing. The grease and oil were wiped off and the bow smoothed and polished, first, with a lavalike stone (probably clinker, deriving from burned lignite coal beds)¹ that floats down the Missouri, and then with a rush called "ghosts' whistles." Incidentally, these rushes, green throughout the winter, were believed to provide excellent fodder for horses.

Wolf-chief demonstrated the construction of a model bow in the summer of 1911. He did not use the lavalike stone to polish the bow. However, he used the rushes, which were proven to be as abrasive as emery boards but not quite as coarse. Prior to the time when metal tools were available the lavalike stone was used to smooth any surface inequalities.

To give the upper arm of the bow a distinctly greater bend and more resiliency than its lower arm, which was relatively stiffer, it was shaved somewhat thinner. Further, to accommodate its more decided arch the upper arm of the bow was made somewhat longer than its lower arm. As a consequence, when braced and measured on the taut bowstring both arms of the bow would be equal in length. The bow handle was placed in the middle of the braced bow. The main objective was, of course, to assure the steadiest and straightest flight of an arrow. A bow with its upper and lower arms of equal length, as in the English bow, would

¹Brackenridge observed the remains of a hill of pumice near the Burning Cliffs and upon experimentation found that this substance floated (Brackenridge, 1816, pp. 97-98). Floating pumice was also reported by Bradbury (1817, p. 153) and, earlier, by Lewis and Clark (1904, vol. 1, pp. 305-306).

have been considered useless by the Hidatsa.²

A simple notch was cut in either edge at the end of the upper arm of the bow staff. These notches served to hold the permanent tie of the bowstring. At the opposite or lower end of the bow staff, a single notch on the left edge of the bow as it was held in shooting, arch inward, served to hold the bowstring. This method of notching the bow staff was not an invariable practice; either arm of the bow commonly had extra notches which were usually placed an inch or two closer to the center. Thus, in wet weather, when the bow was liable to weaken, it was possible to shorten the bowstring and to brace the bow over the extra nock and stiffen its cast.

Many wooden bows were sinew-backed, according to the informant. These bows seldom broke and usually outlasted the self bow. The technique of applying the sinew backing to the wooden bows was precisely like that described for elkhorn bows. Sometimes, a cracked or splintered bow was mended by whipping the staff with sinew.

Elkhorn³ bows were not functional but were ornamental and were intended to display in parades and to record the owner's honor marks. However, although they were not regularly used either in war or hunting, rabbits or other small game occasionally were taken with them. Furthermore, these elkhorn bows had a stiff draw and were easily broken. Ordinarily, they were constructed in summer, mainly because of the numerous difficulties attending their construction. The necessary and unavoidable steaming of the antler, for example, would be difficult to accomplish in winter. Wolf-chief, relying on his recollection, described the proce-

²A Teton-Sioux, when questioned, explained that a bow with its arms equally bent cast an arrow sluggishly and on a dead level; one with a greater arched upper arm cast the arrow with more speed and on a higher curve. The upper arm of a Japanese bow is longer and more arched than the lower. To Wolf-chief's great surprise, Wilson outshot him in a contest.

³In Kurz's time, according to his statement, elkhorn bows were a great rarity (Jarrell and Hewitt, 1937, p. 78). The Arikara made bows of elkhorn or buffalo ribs (Brackenridge, 1816, p. 158).



FIG. 10. Making a bow. AMNH negative number 288290.

dure his father, Small-ankle, had followed when Wolf-chief was 15 years old. They were encamped on the Little Missouri River early one fall. The bow was constructed over a period of two weeks.

Elkhorns to be used for compound bows were obtained in the badlands where they were readily found after elk had shed their horns, usually the previous season. First, with a butchering knife, the tines were trimmed from two horns by chopping around the root of each prong until it was possible to break it off. The inner or concave side of each arm of the bow staff was shaved down roughly to approximate its final thickness.

A trench, about 4 feet long, 1 foot wide,

and 12 inches deep, was dug and filled with water brought from the river. The two trimmed antlers were laid in the trench, covered with earth, over which more water was poured and more earth added. This process was repeated three times until the trench was approximately half-filled with mud, at which time dry earth was added to close it. A fire built over the closed trench was kept burning throughout the day. Steaming the antlers by this method softened them and rendered them easy to work. The following morning the antlers were removed from the trench to test them for flexibility. If the result was unsatisfactory, the antlers were placed in the fork of a tree and bent over as if to straighten them. If this test

produced a crackling sound it indicated that the antlers were not sufficiently resilient. The antlers were reburied in the trench; a fire was maintained over it throughout the day. A little before sunset the antlers were removed from the trench and tested again. After the second burial they were quite soft and readily bent to the proper shape which they retained. After this test the antlers, being still too wide, were trimmed again. They were laid aside, arch side up, until the following day.

The next morning the final size and width of the two arms of the bow were marked with charcoal and the elkhorn trimmed accordingly with a knife. The trimmed antlers were then slightly moistened, rotated above the glowing fire, and later weighted with large stones to bend them further into the desired form. They were left in this position from noon until evening.

The two arms of the bow were shaved down on the concave side. The convex or outer surface of the ultimate bow arch was merely smoothed off with a knife and polished. Occasionally, during this smoothing process, the bow maker moistened his finger in his mouth, wet the horn, and scraped at the damp place. The informant suggested that this dampening was intended to soften the horn.

In the next step in the construction of this compound bow, the joining of its two sections, four holes were bored in the flat surface of the meeting ends of its two arms. Four pieces of deer leg tendon were drawn through the perforations in such a way that the thinner ends of the tendon were at the inner side of the bow arch. The larger ends of the tendon were used to plug the holes on the back of the bow. These tendons were drawn through later. The flat surfaces to be joined were scored with a saw-edged knife to better hold the glue which was to be applied. The two sections were joined and the tendons tautened by drawing the thinner ends with the teeth. When dry tendons were used for this purpose, they were moistened before they were tightened. At this stage, the bow was left to dry. The ends of the dried tendons were trimmed with a knife close to the sides of the bow so that its surface would be hard and smooth.

The notches to hold the bowstring were cut at the same time that the holes for joining the two sections of the bow were bored. To accomplish this part of its construction the end of the bow that was to be notched was laid on a small log; the notches were cut with a careful chopping movement with the butchering knife. The upper arm of the bow, like that of a wooden bow, was notched on both edges; the lower arm had only a single notch cut on its left edge, i.e., in the position of the bow as it was held in shooting.

The next step in the construction of the elkhorn bow was the preparation of the sinew backing and its application to the elkhorn. The sinew, shredded quite fine, was piled in a fluffy heap with the fibers laid longitudinally. The back of the elkhorn bow staff was scored in a simple zigzag pattern mainly to provide a sufficiently rough surface to hold the glue. The glue was applied to the back of the bow, then a bunch of the shredded sinew was fastened on at one end and a sinew binding whipped snugly in the base of the notch. The sinews were pressed firmly into the glue on the back of the bow for a distance of about 8 inches. The remaining two or three inches were left free of the glue. Then the glue was spread freely over the first 8 inches of the sinew and allowed to soak in. Another section of sinew was applied to the bow. It was slipped under the loose ends of the first section and pressed down firmly to make a smooth and even joint. This, like the first section, was also soaked with glue. The process was repeated until the back of the bow was completely covered with sinews firmly glued down. The glue-saturated sinews were then polished with a buffalo rib and, to prevent them from scaling off, they were smoothed down in the same direction in which they were laid. Finally, the ends of the sinews were tightly bound with additional sinew drawn through and around the notch in the bow. The bow was laid aside to dry; later, when thoroughly dried, the transverse sinew bindings at the notches were removed.

To polish the bow some glue was melted in an earthen pot. A piece of mica was burned and so finely powdered that it resembled wheat flour or lime. A foot at a time, some of the

melted glue was daubed on the back of the bow, and some of the powdered mica was sprinkled over it. When the glue and powdered mica completely covered the back of the bow the mica was forced into the glue by pressure with a buffalo rib. When dry, the white of the mica contrasting with the dark surface of the glue gave the bow a speckled appearance.

With the attachment of the bowstring, which was tied permanently at the upper end and with a noose at the lower, the elkhorn bow was ready for light shooting. Often a tuft of dyed horsehair or, if the owner of the bow merited it, a section of human scalp was suspended from its upper end. This decorative or symbolic tuft was fastened to the bow by daubing a bit of glue on its end to hold the horsehair tassel to it. The end of the bowstring was tied over the tassel. Young men frequently tied a piece of quillwork at the upper end of the bow in such a manner that it dangled from the edge of the bow case when the bow was carried in it.

In winter it was customary to bind the middle of an elkhorn bow with buckskin. When exposed in freezing weather the horn had a tendency to become very cold; without the protection of the buckskin the hand was liable to be frozen. It was, of course, unnecessary to protect the hand in summer. In 1912, Buffalo-bird-woman observed that the Hidatsa made many elkhorn bows in old times. A bow fashioned by a good bowmaker retained its shape perfectly; one poorly made was liable not only to lose its form, but the sinew backing would peel off. Occasionally, small elkhorn bows were made in a single piece.

Willie Hale, a Mandan, who lived on Fort Berthold Reservation in 1912, had observed his father constructing elkhorn bows. According to his recollection, the horn was boiled for five days; first one end, later the opposite end, and finally the middle¹ was thrust into the kettle to boil. After boiling for five days the horn was easily bent. It was inserted between the projecting ends of two logs at the outside corner of a cabin and was twisted and worked into the desired shape.

¹As described by the informant, this procedure would have been possible if the bow were constructed of two pieces.

ROCKY MOUNTAIN SHEEP HORN BOWS

According to Wolf-chief, as recorded in July 1911, a bow of Rocky Mountain sheep horn,² or bighorn, was considered by the Hidatsa to be more valuable than one made of elkhorn and with 10 arrows cost a good horse, during a period when horses were scarce. Bighorn bows had a rapid cast. They were used both for warfare and the chase. However, they were chiefly valued by young men for their decorative qualities and, like the elkhorn bows, were treasured more for display in the village than for practical use. A bighorn bow was white on its inner curve; like the elkhorn bow previously described, the outer curve was reinforced with sinew. As was customary on the elkhorn bow, a decorative piece of quillwork or an enemy scalp was frequently hung on the tip of the upper arm of the bighorn bow. Sometimes red stripes were painted on bows to signify, "With this bow I struck an enemy."

Bows intended for practical use were never made of buffalo ribs. However, small boys frequently split a buffalo rib lengthwise, cast the inner half aside and scraped the outer or convex half thin, to make a small bow to use with grass arrows.

Wolf-chief had a very distinct recollection of the construction of a Rocky Mountain sheep horn bow by his father, Small-ankle, at a time when he was camped, early one fall, on a creek near Shot-nose Butte up the Little Missouri. Four bighorns with long beautifully curved horns rounded and blunt at one end had been killed. Each horn was chopped off close to the sheep's head.

Using a horn as a pattern, Small-ankle dug a shallow trench in the ground, following its outline. A fire was built so close to the root of the horn that it was scorched. The fire was allowed to burn until the horn smoked. Then its burned portion was cut down to the pith. The following day the horn was returned to the trench and the glowing coals from an adjacent fire laid in proximity to it. Again, the horn was removed

²The Mandan bows, according to Bradbury (1817, pp. 159-160) were short, made of three sections of Rocky Mountain sheep horn spliced together and bound with sinew.

from the trench and its burned section cut away with a butchering knife. The burned portion of the horn was, of course, quite soft. Proceeding slowly in this fashion it was a morning's work to trim the concave side of a single horn and remove the pith.

In the next step in the process some round stones, like those used in the sweatlodge, i.e., about twice the size of one's fist, were heated. When the stones were red hot, one was withdrawn with a stick. The horn was pressed down on it. As the smoke rolled upward the burned section of the horn was rapidly trimmed off. Stone after stone was removed from the fire to burn the horn and trim the two edges until the horn was cut down to a thin strip about the width of three fingers. Two horns were prepared.

The following morning Wolf-chief, accompanied by Small-ankle, went out into the hills where large rough rocks abounded. Here the surface of the rough outer layer of the horn strip, which was intended to form the back of the bow, was smoothed by rubbing it against the rocks. This slow, tedious task was not completed until midafternoon when the backs of the two horns were carefully scraped with a palm-sized piece of flint in preference to a knife.

Again, a fire was built. Two or three stones were heated. The two horns were rubbed with raw Rocky Mountain sheep fat. Using a piece of an old tipi cover to protect his fingers, Small-ankle held the horn over the fire, heating its two ends alternately. Then, resting one end of the strip of horn, 4 inches in diameter, on a log, pressure was exerted on the other end with the foot to test its resiliency. If the horn had not yet reached the required state of flexibility, the oiling and heating process were repeated until this was attained. Three pegs were driven into the ground and the now flexible sections of horn were bent into the shape desired for the bow. The sections of horn were allowed to remain in this position until the following day when they were bound to pieces of ash wood for transportation to the village. Upon their return to the village, the end of each arm of the bow was filed for about 3 inches with a wooden rasp until it attained the thickness of a thumb. The two ends ultimately to be joined were cut to fit each other. As in the construc-

tion of the elkhorn bow, the two surfaces to be joined were scored with a serrated knife to better hold the glue. These ends were pierced four times and daubed with glue. However, instead of passing tendons through the perforations to join the two sections of the bow, square-headed iron nails were driven in from the belly side. The ends were filed off flush with the inner surface of the bow.

The bow was reinforced with sinews¹ set in glue. When the sinews were dry and had set, their rounded ends were decorated with bird quills. The customary notches for the bowstring, a double one for the upper and a single one for the lower arm, were cut just beyond the quilled area around the ends of the bow. The handle of the bow, bare of covering, was smoothed and polished.

Like the elkhorn bow, the back of the bighorn bow was sprinkled with powdered mica. In both bows, the upper arm bent more than the lower but not to so great an extent as in the wooden bows. A bow such as described here was a powerful weapon, superior to any wooden bow. It was said to have a surprisingly long range, but no information as to its actual range was recorded. It was said that once having shot with such a bow it would be difficult to become reconciled to the use of a wooden bow.

In the course of gathering as complete information as possible on Hidatsa techniques it was occasionally expedient to have these demonstrated. Wolf-chief undertook to demonstrate the making of a bowstring.

Previously soaked in water to soften it, a sinew from the back of an ox was scraped clean of all the adhering flesh and fat. It was torn into strips $\frac{1}{4}$ inch wide. Two of these strips were knotted together. Wolf-chief grasped the knot in his left hand, and, baring his right thigh, he twisted the strands by rolling them against his bared thigh. The two strands were rolled together (but kept separated) under the right palm and on the knee, forward, twisting both strands separately; before the stroke forward was completed, the two strands were united with a continuous motion and rolled taut

¹Cf. Lowie's description of the Crow method of applying the sinew backing to a bow (Lowie, 1922, p. 231).

into a single strand. When the rolling stroke was reversed, the newly twisted string was rolled backward, thus untwisting it again to form two twisted strands; in the next step, the two strands were retwisted into a single strand, but this time the twist was the reverse of the preceding twist. As the twisting continued, the completed portion of the bowstring was slowly drawn to the left. The separate strands were spliced on as required merely by twisting on an additional piece.

When finally twisted to the required length the bowstring was pegged out to dry. After approximately an hour it was removed from the two drying pegs. The ends were grasped in either hand, the toe of the right foot raised slightly from the ground, and the bowstring was drawn back and forth in a sawing motion under the toe. By this method, it was polished

and smoothed by friction against the moccasin sole. The ragged fragments that remained after the polishing were clipped off the completed bowstring with a knife.

To string a bow, a simple knot was tied at one end of the bowstring and slipped over the lower (single) notch. Then with its lower end resting on the ground, the bow was bent with the left knee. The free end of the bowstring was drawn through and around the upper or double notch, passed around the left, across the back, and around the right side of the bow. Drawing the end around and under the taut bowstring it was whipped around the bow once or twice, through the upper nock, again above the bowstring, and again once or twice below the bowstring. Finally, the end was secured by two half hitches on the string.

To brace the bow its lower arm with the



FIG. 11. Making a bowstring. AMNH negative number 288293.

single notch on the right side was held uppermost, but arch in, as in shooting. The bow might also be bent with the left knee and braced by slipping the noose on the notch with the right hand.

In a better method of bracing the bow, it was grasped by the handle, arch out, in the left hand, the right forefinger thrust under the bowstring with bow between forefinger and second finger, pressing down with the left hand, thus bending the bow and drawing the noose home with the right forefinger.

To unbrace the bow it should be grasped in the left hand, arch in, and bent with the right knee. The noose is released with the thumb of the right hand during which action the lower arm of the bow is uppermost.

Another and more elegant method was to grasp the bow handle in the right hand, rest the upper arm against the ground, and with the left hand hooked over the end of the lower arm (now held uppermost) release the noose with a flint of the left thumb. In this method of unbracing the bow it was not bent with the knee but by pressing down with the right hand. The noose, when released, did not pass over the end but ran on the bow. It will be noted that the more elegant method of bracing the bow left it in the left hand in exactly the proper grasp for shooting.¹

FLINT-HEADED BOWS

Bows were sometimes fitted with flint heads,² placed at the upper end of the bow. In

¹According to a supplementary note by Wilson, any archer trained in the English school will observe that the eye ran on the lower arm of the bow instead of the upper, as is the American practice. Properly, the noose was not an eye, but the word is here used in the sense of an open or running tie. The noose was clumsier than the English eye, but unbracing was facilitated by the single notch into which the noose tied. At best, however, the Hidatsa method of bracing was inferior to that of the English. Further, the permanent tie of the bowstring was at the end of the upper arm, instead of on the lower horn as in English archery. Again, this tie was clumsier than the English timber hitch, but it was, at least, as secure, and once made did not often have to be re-tied.

²Culbertson (1851, p. 117) mentions bows with spears attached to the ends as observed by him among the Arikara. Cf. also Will and Spinden (1906, p. 113) for a description of the Mandan bow lance.

relatively modern times 4-inch steel heads were inserted in the split upper end of the bow and firmly bound with sinew and glue. These flint heads were larger than arrowheads but smaller than spearheads, which were about 4 inches long.

Bows so fitted with flint or steel heads were carried by the young men of the village when bent on courting. They were also embellished with eagle plumes and dried birdskins. However, such bows were also carried on war parties and might be used, like a lance, as a weapon of last resort after a warrior had shot all his arrows. Wolf-chief was in doubt as to whether the Hidatsa regarded the spearhead bow as useful a weapon as a coup stick. Apparently he never heard that anyone had ever been slain with such a bow. As a child, Red-feather counted coup on an enemy with such a bow and afterward carried it in the dance with the point painted red to represent blood. All the bows of this type that he observed in his boyhood were carried only in ceremonies and were definitely not fighting weapons. Red-feather also added that these bows were bound to the ceremonial bundles of their owners, and were in this way kept sacred.

Three officers of the Rough-woods³ society carried spearhead bows. They were known as "carriers of big arrowhead bows." Packs-wolf also described this weapon. If other carriers were elected, the bows passed to them.

DRAWING THE BOW

In one Hidatsa method of drawing the bow, it was grasped in the left hand with the left thumb extended. Many tribesmen, however, customarily held the bow in the clenched fist, that is, with the thumb around the bow and lying on the forefinger. However, when Hidatsa boys were instructed in archery they were invariably taught to hold the bow nearly upright with the thumb extended upward. As he shot, the archer threw his weight forward on his left foot, making him appear to be leaning forward so as to add the impetus of his body to the flight of the arrow. If very dedicated, the archer might lift his left foot in the act of

³This is apparently the society called Lumpwood by Lowie (1913, p. 259 *et seq.*).

drawing the bow and bring his foot down again as the shaft was released.

The arrow, drawn to the right breast, was both drawn and released with bare fingers. According to Wolf-chief the archer's fingertips were so toughened that the bowstring did not hurt them; the top of the left hand also hardened in the area where the arrow ran in discharge.

The arrow was drawn on the left of the bow. However, some men, although not left-handed, habitually drew the arrow on the right side of the bow. When an arrow was drawn on the right side of the bow the Hidatsa characterized it as "undershot." However, very few men habitually undershot. One man, End-rock, who used either method of drawing an arrow was reputed to have habitually killed buffalo at 4 yards while he was riding on horseback.

ARROW RELEASE

Both Wolf-chief and Goodbird demonstrated the Hidatsa release to amplify their verbal explanations. Boys old enough to shoot birds often used the primary release: the arrow, grasped between the thumb and doubled index finger of the right hand, was pressed between them. The secondary release, that relied on by adults, was exactly like the primary release but was strengthened by lapping the second and third finger over the bowstring. Goodbird used a slightly different arrow release. Instead of lapping both second and third fingers on the bowstring he lapped only his third finger on the bowstring. His second finger was lapped over the third finger, giving it added strength.

Wolf-chief, demonstrating his technique of arrow release, lapped the tips of all three fingers, first, second, and third, over the bowstring so that its pull was distributed over the three fingers. A noticeable peculiarity of Wolf-chief's method of release was the grasp of the thumb and forefinger which were far down the shaft, as far as the thumb and finger permitted. Wolf-chief believed that this method tended to make the fleshy area at the root of the first finger bear a portion of the strain of the pull as it pressed against the arrow which invariably had a bulbous form at the nock end in order to permit a firmer finger grasp.

Both Goodbird and Wolf-chief, in demon-

strating the arrow release, exhibited a fine disregard of any careful handling of the feathers of their arrows. In modern English archery, a bowman who handles his arrow feathers roughly is thought to be supremely careless. An arrow lacking true feathers soon flies dead. It must be understood, however, that the Hidatsa arrow was relatively heavier than the English arrow and was intended for short flights. In addition, its feathers were both absolutely and relatively longer and had a greater wind surface than the modern target arrow.

Both informants affirmed that some Hidatsa used the English or Mediterranean release in which the arrow is held between the tips of the first and second fingers, but they themselves drew with two fingers only, not with three, as English archers draw. The informants believed that the Hidatsa learned to use this release from the Assiniboin. It is not known whether the nock was cut deeper in the arrow, as in the English release in modern archery which demands a deeper notch than the primary or secondary release or its modifications.

Wolf-chief affirmed that whatever the form of release used, no Hidatsa ever drew an arrow with all four fingers.

ARROWS

Arrow shafts were usually made from Juneberry shoots, but split ash and snake wood¹ were also used.² Ash made excellent shafts for war arrows; these were tough, strong, and seldom broke. Snake wood, however, was believed to be a magic wood. It grew on the hillsides along the Little Missouri; it had sharp thorns resembling those on a rose bush. Usually, snake wood arrows were used only in war, although rabbits were sometimes shot with them. Snake wood grows in shoots about a finger's thickness and turns yellow when its

¹This is a shrub with slender shoots of a deep yellow when peeled and dried. It grows among rocks, on white-clay hills, and in gullies, especially in the badlands.

²According to Maximilian (1906, vol. 23, p. 354), service berry wood was considered best for arrows by both the Mandan and Hidatsa. In addition to the latter, Curtis (1909, vol. 4, p. 181) states that arrow shafts were also made of chokecherry, which our informants claim were used for blunt-headed arrows. Cf. Will and Spinden, 1906, pp. 112-113 for a description of Mandan arrows.

bark is removed. Because of its poisonous qualities, it was believed to be dangerous to handle it. If a man were wounded by a splinter when working the wood and the wound swelled, the injury might result in death for the victim. It was said that an Indian from Montana who had accidentally run a snake wood splinter into his thigh died the following day. The wound swelled, and so great was his pain that the injured man cried out and groaned. Snake wood arrows were purposely shaved down to an elongated point so that they would break off in the body of an opponent and poison him.

The shafts of blunt-headed arrows were made of chokecherry wood.¹ Though these blunt-headed arrows were actually intended to be used by children, they were also used to shoot small game and birds.

Bird arrows with thorns (Wilson, 1924, p. 162) or eagle quills bound to the sides of the shaft were apparently used principally by boys. Small pieces were cut from a thorn bush, each with a single thorn; three thorns were bound near the top of the arrow in such a way that they projected at right angles to the arrow shaft. The quill and thorn-tipped arrows were regarded as more valuable, principally because they were easily broken. Such arrows, however, were excellent for shooting into a tree; usually when the arrow fell, it remained sticking upright in the ground and so was easily recovered. In contrast, a blunt-headed arrow that lay flat on the ground was difficult to find.

Quill and thorn arrows were also used to shoot into a flock of birds; sometimes two or three birds were brought down simultaneously.

Traditionally, Hidatsa fought with blunt-headed arrows of ash and snake wood. Ash wood arrows were blunt-headed. The arrows were treated with bone grease and held over the fire until the shafts were burned brown, not black. The Hidatsa also learned that Juneberry wood was firm and strong; consequently, they made flint-tipped arrows from it. Wolf-chief, who was born about 1849, made it clear that he had no recollection of having seen wood or flint-pointed arrows; he remembered only metal

arrowheads. His description was based entirely on tradition.

Juneberry wood arrow shafts were more typical. According to a myth, Adapozic (Blunt-arrow) himself was not only a Juneberry arrow, but also a supernatural (Thunderbird). The Hidatsa traditionally learned to make Juneberry shafts from Adapozic. To make a Juneberry arrow shaft the shafts were cut four or five inches longer than the desired length of the finished arrows. The bark was peeled off with a knife. One method of measuring the correct length of an arrow (without its head) was to approximate six fist widths, or slightly wider. If the arrowhead was included, the correct total length would be almost seven fist widths. An alternate method of measuring the length of an arrow was from the shoulder joint to the tip of the thumb, which was about seven times the width of the fist as held in grasping. If an arrow was either too long or too short its flight was unsatisfactory. When the arrow shafts were completed 10 shafts were tied in a bundle with four cords in as many places to hold them straight. The bundle of arrow shafts was hung up in the smoke hole. At the end of the first day, the drying bundle of shafts was taken down and the shafts oiled to prevent cracking. The oiling was never repeated.

At the end of two days, the shafts were ordinarily well dried. Buffalo-bird-woman added that she had observed an arrow maker rub the shafts with blood until they were well soaked, after which they were wiped clean and rubbed with grease. The application of blood was believed to make the arrows solid and to increase their weight. The bundle was taken down and the four tying cords removed. Each shaft was thrust through the hole of a bone arrow polisher or straightener. This implement was usually made from a section of buffalo rib that had been perforated or from a buffalo neck vertebra. An arrow shaft was smoothed and straightened by drawing it repeatedly through the circular perforation in the straightener and twisting the shaft against its sides. The concave side of the bone straightener was held toward the worker. The Hidatsa assert that a hunter, in preparation for their use, commonly examined all his arrows at the evening campfire. He warmed the warped shafts over the fire,

¹Cf. Wilson, 1924, p. 162, for a statement of the comparative merits of the various woods used for arrows.

straightening and polishing them by twisting them back and forth in the arrow straightener.

The arrow shaft, after polishing, was still rough and uneven and needed additional smoothing. Two pieces of cottonwood bark were now selected. Several grooved arrow smoothers made of sandstone were found in the village sites near the present town of Mandan. A groove was so cut in two of these to make an arrow shaft smoother so that when fitted together, the channel would accommodate the arrow shaft. The groove was coated with glue. In preparation, flint held on a solid rock had been pounded with a quartz stone to shatter it into fragments. The flint chips were sprinkled over the glue and allowed to dry and set. The arrow shaft was drawn through these two pieces of bark. The pounded flint lining served as would sandpaper.

Thus smoothed, the shaft was subjected to a final polishing with a native abrasive that consisted of a piece of tipi cover, about 8 inches square, coated with glue which had been topped by powdered flint. With one end enveloped in the abrasive, the arrow shaft was held in the left hand and rolled with the right hand on the right knee with an alternating rotary motion back and forth. A fine polish was produced. It was impossible to make a good arrow in haste without the exercise of special care.

In the past, three wavy marks were incised down the length of the arrow shaft from the feathers to its head. These incisions were made with a sharp flint held pressed against the first and second fingers by the thumb; the shaft was drawn between the two fingers with a rocking motion. The Hidatsa explained that these incisions were made in the arrow shafts to represent lightning and that the practice was based on a myth in which it is related that Adapozic (or Blunt-arrow, a Thunderbird) used three lines like these and called them lightning. It followed therefore that Adapozic taught them to reproduce his lightning lines on their arrows.

A notch was cut in the shaft to hold the bowstring. In more modern times an old saw-toothed butchering knife was used. In the past, such a notch was presumably cut with a flint knife. To attach the (iron) arrowhead, the shaft was split for a short distance with a serrated knife. The base of the arrowhead was coated

with glue and bound in place with sinew which was whipped on while wet.

Girls were not taught to use bows and arrows; boys, however, began to shoot when about three years old. A very small boy was given a bow of chokecherry sapling or ash about a foot long, a size which sufficed until he was about seven years old. He was then provided with a bow about 2 feet long. Boys' bows, like those of the adults, were so constructed that the upper arm had greater spring than the lower arm. Sometimes, a tally of the number of birds killed with the bow was kept by notching either the upper arm of the bow or the bracer. The arrows used with these bows were made from a tall red large-jointed grass found in prime condition for gathering approximately when ears began to form on the corn, or generally, the first week in August. Small boys organized parties that went into the hills to gather grass for these arrows. In use, a long leaf at the joint was left to approximate a feather. These grass arrows lasted only a day or two; they dried quickly and became useless. The arrows were shot freely even within the earthlodge.

In winter, when the grass for arrows used by small boys was not available, they were made from thin shoots of broom brush (buck brush). The freshly cut shoots were trimmed and thrust singly into the hot ashes (usually by the boy's mother). When sufficiently heated, the loosened bark was removed by twisting it off while the shoot was held in the left hand, wrapped in a piece of buffalo skin. Arrows such as these were not feathered.

No arrows used by very small boys were provided with iron heads; ordinarily they were all of wood, blunt-headed. Birds were brought down with chokeberry wood arrows that had large rounded heads that did not injure the flesh. Three or four arrows were believed to suffice for a day's bird hunt. For gophers, rabbits, or other small game, the arrows were made of Juneberry shoots, their shafts shaved down to a point and hardened in the fire. The latter were heavier and carried better in the wind than arrows of the same pattern made of lighter wood.

According to Goodbird, bird arrows were also commonly mounted with thorns from the

wild plum. Three thorns from which the points had been cut off and shortened somewhat were bound on the shaft just back of its point. Occasionally, bird quills that had been doubled were fastened to the arrow shaft in much the same manner as the thorns.

Boys' arrows, like those used by adults, were feathered. Sometimes, a single feather was split, mounted, and glued spirally around the shaft; occasionally, two feathers were bound flat on the shaft, one on either side, or two split feathers were attached in the customary manner. Split feathers were used when the supply of feathers was scant. Most commonly, the feathers on boys' arrows were not attached with glue but were bound in place with sinew.

ARROWHEADS

The Hidatsa differentiated between two types of arrowheads, a barbed head for war,¹ and a head called "forehead-wide" for hunting. The name stemmed from the Hidatsa belief that when laid flat the point resembled a man with a wide forehead. A barbed arrow was withdrawn from a wound with a forward and backward rotary motion of the shaft as it was held between the palms. Usually this procedure resulted in increasing the size of the wound. According to the available information, arrows do not seem to have been poisoned.² Wolf-chief, the informant, recollected the use of iron arrowheads.³ During his father's youth, flint arrowheads were still in common use.

Arrows with flint points were thrust into the quiver, feathers down, so that the points projected from the quiver. The reason given for this practice was that it prevented the arrows from rattling against one another in the quiver

in such a way that the arrows would be apt to break off. To provide added protection a bit of hair from a buffalo head was twisted around each flint point. When the arrow was drawn from the quiver the tuft of hair was jerked off.

Wolf-chief remembered his father's description of flint-headed arrows and arrows with wooden points (i.e., a pointed shaft) as well as arrowheads made of the large yellow tendon in a buffalo's neck.⁴

Such arrowheads made from a tendon were said to have preceded the use of flint for arrowheads. The Hidatsa also made arrows of the yellow tendon. In this connection, Black-chest, a Mandan, volunteered the information that many years ago, an old Mandan told him that when he was a young man (about 1837), the Mandan still made arrows of tendons. The tendon was cut into five strips. A peg was inserted in a hole made in either end of each strip which was pegged out to dry. A head of the usual shape was carved at one end and the shaft was trimmed to the correct size and feathered. These arrows were said to have been very strong, so strong that even if a buffalo fell on one it would not break.

The Hidatsa also had great faith in the strength of these buffalo tendon arrowheads. They were believed to be excellent for buffalo hunting. If such an arrow struck a rib it was said that the point would pass around the rib without breaking; under the same conditions a flint arrowhead would break off from its shaft. The Hidatsa method of making these arrowheads apparently differed somewhat from that described above. According to Wolf-chief, the tendon was held near the fire to harden before it was shaped.

The flint to fashion arrowheads was obtained from deep pits along the Knife River. When found at great depth, the flint was soft and easily workable with a section of buffalo rib. When the flint implements had been worked into the desired shape they were dried in the sun to harden them. Flint arrowheads varied in size; they were often quite small.

Arrowheads were also made of buffalo

¹Arikara war arrows, according to Brackenridge (1816, pp. 157-158) differed from hunting arrows in that the points were so fastened to the shaft that once an arrow entered its mark, it could not be removed with the shaft.

²In a detailed description of the costume of the famous Mandan, Matope, Catlin (1842, vol. 1, p. 147) states: "The *Quiver* was made of a panther's skin and hung upon his back, charged with its deadly arrows, some were poisoned and some were not. . . ."

³Cf. also Maximilian's comparisons of the Mandan and Hidatsa arrowheads (Maximilian, 1906, vol. 23, pp. 354-357).

⁴An arrowhead of this type was purchased from Packs-wolf. It is now in the Museum collection. Wilson notes that he made several such arrowheads from the tendon of an ox.

horn.¹ Wolf-chief knew of only one man who, as the result of a vision, used buffalo horn arrowheads. Traditionally, in a dream, a boy was taught by the gods that he would kill an enemy with arrows and buffalo horn points. Such were believed to be poisonous and, therefore, efficacious in war, although they were also used in the hunt.

Many years ago, at 16, Buffalo-bird-woman observed Seven-hands, Hairy-coat's father, as he fashioned buffalo horn arrowheads. He used the points or tips of the horns. These were cut off with a saw-edged knife and split into sections about 2 inches long. Presumably, the horn was cut off with a flint knife. First the small section of horn was dipped in thin warm grease and held over a few coals from the fire until it was softened. To protect his hand from the heat the arrow maker wrapped it in a piece of buckskin. When softened, the horn was cut into the desired form and laid aside to cool and harden.

The horns of elk and Rocky Mountain sheep were also said to provide material for arrowheads. Wolf-chief, however, had never heard of this specific use of elkhorn. Elkhorn was believed to cut very easily after soaking in water for two days.

Buffalo-bird-woman had also heard that arrowheads had been made from a sharp fragment of buffalo rib, as well as of catfish bones, but had never heard of any made of buffalo shoulder blade.

No Hidatsa informant had any recollection of the use of bone as a material for arrowheads. However, in the past arrowheads were said to have been made of beaver teeth. The informants, however, never actually saw any. The beaver teeth, following a lengthy boiling, were pressed into shape with a heavy stone. The boiling, succeeded by pressing, was repeated until the tooth was straightened. Naturally sharp, it was unnecessary to grind a beaver tooth to a point. When an arrow with a beaver tooth point was released it readily entered the flesh of the target animal.

Hairy-coat's father used to shoot a short arrow with a head made from the blade of a butcher knife. Such an arrow did not have a

great range, but when it struck a buffalo it nearly cut the animal's inside [*sic*] in two.

According to Black-chest, a Mandan, his people did not trim iron² arrowheads to a long fine point, but rather to an obtuse point with a sharp cutting edge. The objection to arrowheads with long fine points rested on their lack of durability. If they struck a bone in winter they broke off; in summer they tended to bend double.

In making iron arrowheads Small-ankle used a stone anvil sunk level with the earth floor of the lodge. The anvil was set near the fireplace between it and left of the two rear main posts as it would be viewed from a position in the earthlodge facing the door. The informant was under the impression that every lodge in the village possessed such an anvil. The iron was heated red hot in the lodge fire, laid on the anvil stone, and the arrowheads shaped with a chisel and hammer made of elkhorn. Elk shed their horns every year so that their antlers were easily obtained. The pounding surface of a fresh elkhorn was quite hard. The iron, the chisel, and a pair of tongs used in handling the red-hot iron were all purchased from traders.

Arrows feathered with eagle feathers, usually wing feathers, were believed to be perfectly winged. Eagle tail feathers were said to have been very expensive; only a few affluent families could afford to use them on arrows. To obtain eagle feathers, eagle-hunting parties were organized in the autumn (Wilson, 1928). Poor men used raven and other bird feathers for their arrows.

Duck, goose, and hawk feathers were all

²We find an interesting statement in Lewis and Clark (Lewis and Clark, 1904, vol. 1, p. 242) which throws some light on the date when metal tools were already well known among the Mandan. On December 31, 1804, Clark remarks that the blacksmith of the expedition mended the axes, hoes, and other metal tools belonging to the Mandan, for which service they made payment in corn. Such service is referred to repeatedly so that there seems to be little doubt that metal tools were in common use at Fort Mandan at that time.

Again, Lewis notes that the Mandan exchanged seven to eight gallons of corn for each 4 square inches of sheet iron (Lewis and Clark, 1904, vol. 1, p. 255).

The Mandan destroyed a corn mill from which they made arrow points, according to Henry and Thompson (1897, vol. 1, p. 329).

¹Cf. Matthews 1877, p. 18, who notes that they possessed both flint and horn arrowheads.

used to feather arrows. However, prairie chicken feathers were not used. Based on the fact that prairie chickens are adept at hiding in the long grass, the Hidatsa believed that arrows so feathered would also be lost in the grass.

Feathers for arrows were prepared in advance. They were split and the line of cleavage scraped with a knife. In Wolf-chief's lifetime the split feathers of small birds were held in the mouth for scraping. In earlier times, however, when eagle feathers were commonly used, these sacred feathers, because they were assumed to be poisonous, were never held in this fashion. In the past, a small round stick was slipped under the toe of the moccasin so that its end projected slightly. The quill end of the eagle feather was slipped under this stick and pressed down to hold the feather firmly. The split surface was scraped, or preferably ground smooth with a piece of the natural red brick that is carried downstream on the Missouri. After a considerable quantity of these feathers had been prepared, they were stored in a feather case together with the glue stick and other arrow-making implements. All these tools were brought out, the feather case opened, and the feathers laid out conveniently, ready to be fastened on the arrow shafts. According to Buffalo-bird-woman, arrow shafts were oiled before feathering.

The arrows used by an adult had three feathers. With a piece of moistened sinew, the feathers were first bound to the shaft at its end nearer the notch, that is, the upper end of the arrow. It was believed to be unnecessary to use glue because a jagged end or projection of dried glue was liable to injure the hand when the arrow was discharged. To render it threadlike, the sinew was wetted and drawn through the teeth. One end was held there and the arrow was revolved in the two hands as the sinew was whipped on and pressed flat and even with the thumb; this was the most delicate part of the feathering process.

The feathers were then bound at the end of the arrow shaft, nearer the arrowhead, in exactly the same way. As the feathers were secured, each arrow was leaned against a small log in front of the fire to dry the sinew. When quite a number of arrows reached this stage in the feathering process, they were ready for

glueing. Taken from the feather case, the glue stick was dipped momentarily into a small pot of water set nearby.¹ The newly moistened glue was revolved over a few hot coals raked from the fire and dipped in the water, a process repeated about four times. The alternate moistening and heating resulted in a soft, thin coating of glue on the outer surface of the thin mass of glue on the end of the stick.

In the next step, the arrow maker held a feathered shaft in his left hand. With a small stick that had been shaved down to a thin blade, a little of the softened glue was scraped from the glue stick and passed under each feather which was pressed down into the newly formed glue bed by running the thumb along the feather toward the notch. The arrow was then leaned against the log near the fire for about half an hour to dry. After about three feathers had been glued in this way it was necessary to soften the surface of the glue held on the glue stick by reheating it.

Each arrow was then laid on a flat slab and one after another, the feathers were trimmed with a knife. A few of the barbs at either end of the feather were left untrimmed to correct any slight irregularity which might otherwise prevent a perfect flight of the arrow.

Feathering arrows, as described, with a single long feather bound flat and a single very short feather was believed to provide sufficient balance for the heavy arrowhead. Two long feathers were liable to retard the arrow, giving it a sluggish flight. It was customary to fashion arrows rather heavily so that their flight in the prairie winds was assured.

The Hidatsa name for a spirally-feathered arrow was "wing-twisted around." When referring to the feathers on an arrow shaft the Hidatsa customarily called them "arrow wing" but never "arrow feather." When the first spirally feathered arrows were given to a boy he was told, "this is Adapozic, Burnt-arrow, and should fly straight. Adapozic was a thunder-bird. You should keep this arrow sacred and pray to it." This admonishment was intended as a reminder of the story of Burnt-arrow.

¹A variant practice was offered by Butterfly: the glue stick was first moistened in the mouth, then thrust into the ground near the fire to warm and soften the glue.

Formerly, a few Hidatsa carried two such spirally feathered arrows in their quivers. These arrows were not used under ordinary circumstances. However, if a warrior came in too close proximity to the enemy, these arrows were used. They were drawn and prayed to before releasing them, "Kill this enemy!" Wolf-chief never saw this type of arrow used in this way.

QUIVERS AND BOW CASES

If intended for use in war or hunting, the quiver and bow case were ordinarily made as a unit. However, when bent on courting, a youth carried a quiver without a bow case. His war or hunting arrows were thrust into the quiver, points upward, feathered ends down. The quiver was shorter than the arrows; consequently, the arrowheads projected an inch or two above its open end. The sinew-backed bow, its lower arm down, was carefully thrust among the upturned arrows. Usually the bow was made for parade, ornamented with porcupine-quilled bands or horsehair tassels and also decorated with the honor marks to which the owner of the bow was entitled.

Apparently there were no restrictions as to the materials from which quivers¹ were made. Although buffalo skin seems to have been preferred, quivers of otter, puma, badger, and beaver skin have been described. Such quivers, unlike those of buffalo skin, served no utilitarian purpose and were carried when visiting or on dress occasions. They were considered to be very valuable and were owned and worn only by rich and influential Hidatsa.

A combination quiver and bow case, with a shoulder thong worn fur side outside, consisting of an entire otterskin, split and decorated, was described. The bow case was made from the greater part of a second otterskin. The quiver was made from the remainder of this skin and a third skin. Three otter tails, fringe, and porcupine quillwork decorated the quiver. A sinew-backed elkhorn or Rocky Mountain

sheep horn bow was carried with this quiver and bow case.

Quivers of puma skin were made fur side out; the tail hung like a tassel. Badger skin, strong and tough, made an excellent quiver in which arrows were adequately protected in wet weather. It is presumed that in this type of quiver the fur side of the skin was exposed. Like the puma skin quivers, those of beaver skin were also made fur side out. Although none of these quivers was intended to be carried in warfare, it was believed to be a mark of courage to go into battle wearing elaborate apparel, such as an eagle feather warbonnet or porcupine quill-embroidered leggings, or to carry an unusual decorated quiver. Obviously, the enemy fire was certain to be drawn, if for no other reason than that everyone coveted such wearing apparel or equipment.

The one-piece buffalo skin quiver and bow case was the actual service equipment used by the Hidatsa both in war and hunting. Both were made fur side in because the arrows, with their heads caught in the fur, were less liable to slip out of the quiver if the hunter fell or stumbled. The bow was carried in the bow case with its straighter and lower arm downward. In this position it was easier to draw the bow out quickly, as the left hand grasped the handle as the bow was drawn out, and also to brace it with no delay if attacked. Afoot, the hunter braced the bow by resting the end of its upper arm on the ground and slipping his right index finger under the bowstring at the end of the lower arm (now held uppermost). With the bow held between the index and second fingers, the noose was drawn quickly to the notch. It was possible to accomplish all these movements serially, rapidly, and almost simultaneously, the upper arm of the bow smartly striking the ground as the noose was jerked to the nock. As demonstrated by Wolf-chief, the noose consisted of an ordinary slip knot.

On horseback, the combined quiver and bow case was carried with the shoulder thong passed lightly over both shoulders and across the breast but not under either arm. The quiver rested on the rider's back. In this position the arrows, like the upper arm of the bow, lay with their feathers to the left.

The shoulder thong or carrying strap that

¹Hidatsa and Mandan quivers were of panther or buffalo skin; quivers for dress occasions were of otterskin (Maximilian, 1906, vol. 23, p. 354). See also Wilson, 1924, p. 161, for an illustration of a combination bow case and quiver.

supported the quiver was attached at two places, at each of which a band of fringe was sewed across the front of the quiver. In the event of an attack, the left arm was thrust quickly through the shoulder thong; the quiver and bow case swung around so that it rested across the breast, with one fringed band on the right near its open end and the other on the left of the warrior; the arrows lay feather end to the right. The shoulder thong was passed over the right shoulder and under the left arm. If the wearer wanted the quiver to be always ready for instant use, it might be unchangeably carried across the breast. An extra bowstring coiled neatly in a ring, 2 or 3 inches in diameter, was always tied on the upper or right-hand fringe. A wristguard was tied to the lower left-hand fringe band.

In summer, when actually in the pursuit of enemies or engaged in hunting buffalo, an extra belt, in addition to the one over the clout, was worn. The quiver was often thrust down through the left side of the belt. In winter, an extra belt served to hold the warrior's shirt down; thrusting the quiver under the belt would have been too cumbersome when added to all the extra winter clothing. The shoulder thong was then drawn up under the belt and lightly tied to it. During extremely cold winter weather a mounted hunter customarily wore a robe or blanket fastened across his breast with a cord. Frequently, the hunter, to keep his bow warm, thrust it down his back, under his blanket or robe, close to his body. He did not want the bow to become cold.¹ A wooden bow exposed to intense cold would lose its spring and might break.

In battle, at close quarters with the enemy, when shooting rapidly was urgent, two arrows were held in the teeth, feathers to the right; a third arrow was held in the left hand, against the back and slightly athwart the bow, with the feathers downward and visible below the hand, slightly to the left; a fourth arrow lay on the bowstring. Sometimes, a fifth arrow was added to the one grasped in the left hand. Instead of being pressed against the arrow already in that hand, it was held between the first and second

finger, a position liable to interfere with the warrior's grasp of the bow.

In battle, when shooting, the arrow in the bowstring was the first to be used, followed by those held in the teeth. The arrow grasped against the back of the bow was the last to be shot.

A very brave man, or sometimes two such men, who had no fear of a close approach to the enemy when engaged in battle, always found it easy, if his arrows were all spent, to have his quiver replenished with arrows in recognition of his valor by the other members of the war party.

During a conflict, the arrows lost by the opposing group were never picked up. The Hidatsa believed that if they followed this practice they would be struck by such an arrow as a penalty for having touched it. However, if an enemy were pursued and shot at, it was permissible to pick up the arrows that failed to reach their mark.

Arrows were handled carefully. They were easily warped or the sinew bindings loosened by dew, rain, or water from a leaking roof. To repair the arrow bindings, the sinews usually were not removed; they were merely pressed down with the thumb while the shaft was revolved in the hand, and then dried. It was necessary to straighten, repair, and oil arrows frequently. In a Hidatsa tradition an arrow is believed to enjoin them as follows: "If you oil me and keep me well, I will serve you; otherwise, I shall become useless and my flight will become heavy." To straighten a warped arrow it was laid in the teeth and bent to its proper form. In winter or during stormy weather, such an arrow was dried at the fire; however, drying in the sun was the preferred method because fire was liable to melt the glue.

On one occasion Wolf-chief remarked that in his time there were few good arrow makers among the Hidatsa, and that the younger men showed little disposition to maintain the art. The Hidatsa, in the old days, believed that arrow makers had poor sight because the eagle feathers scrapings got into their eyes causing injuries. The forward half of the arrowshaft painted red signified for its owner "I shot an enemy with an arrow."

Occasionally, an arrow maker made a bow

¹The winter thermometer in northern North Dakota drops occasionally 40 degrees below zero, F.

and 10 arrows. He would give them to his wife, saying, "Take these. Give them to one of your brothers." It was understood that this reference was to the wife's clan brothers or to a member of her husband's clan or society. If she carried out these instructions, the arrow maker received a horse in return.

Arrows snaked readily if shot at anything on the ground, and the thorn or quill points were liable to break off.

When a war party left the village in the old days, it was a common practice for a warrior to carry two blunt-headed bird arrows to be prepared to shoot birds and gophers if he were hungry en route.

WRISTGUARDS

Bracers or wristguards were ordinarily made of partly softened buffalo skin that had been prepared by dehairing and pounding with an ax or a stone. Elk or deerskin was too soft and was never used for this purpose. Two forms of wrist guard were made, one triangular, the other square. A triangular bracer was the more efficient. The corners of the tongue in the square form of wrist guard were liable to curl.

The wrist guard was bound to the wrist with its tongue pointed toward the palm. In the triangular form, a bracer was commonly bound with a double thong. Both strands passed through one of the holes pierced in the base of the bracer and were fastened there; only one strand of the thong was drawn through the opposite hole. This arrangement served to secure two ends that passed from opposite directions over the back of the wrist, where they were united in the knot of a single bow. The tie, just behind the knuckle of the wrist, was made by holding one of the two ends in the teeth and handling the other with the right hand. Only a single thong was used in the square wristguard. Its tie did not differ from that for the double wrist guard.

The wrist guard was tied to the fringe that customarily hung where the shoulder thong joined the bow case at the lower end of the quiver. When the quiver was drawn forward in readiness for use, the wrist guard was brought within convenient reach of the left hand.

ARCHER'S GLOVES

No gloves were worn to protect the hand or fingers from the friction of the bowstring. On a hunt in winter, buffalo skin mittens, either of dressed skin or fur, were worn. However, when the bow was handled, the mittens were jerked off and left to dangle from a thong that not only passed around the neck, but was also supported by a shorter thong across the chest. The thong was long enough to permit the hunter to stretch his arms on either side, full length, without embarrassment.

In winter, the snow-covered prairie did not provide very firm footing for a pony. If not well mounted, the hunter frequently found it extremely difficult to approach his quarry closely. Under these circumstances, it was possible that he might miss his mark with an arrow or two or might fail to strike a vital spot. In the time required to discharge three arrows at a fleeing buffalo, a hunter was liable to freeze his bow hand because he had bared it to handle his bow effectively. Under these circumstances, he would dismount and rub his frozen hand with snow; when it thawed he would replace his glove. The right, or arrow hand, did not freeze because the friction of the string and loosed arrows maintained the circulation of blood.

A supplementary narrative by Wolf-chief relates his personal experience on a hunting expedition in his youth.

"I first hunted buffalo when I was 16 years old in about 1865. My father had made some small arrows for me. I was not then strong enough to draw a man's bow. I killed some calves with these arrows.

"The following winter my brother-in-law offered to teach me to kill adult buffalo. We set out on a hunt together. We came upon a large herd of buffalo. We gave chase on horseback. It was January; the ground was covered with snow.

"As we pursued the buffalo herd, my brother-in-law watched for the fattest buffalo. He knew the signs by which it was possible to recognize one. Later, I learned how this was done. A fat cow will have a hump caused by a layer of fat.¹ In the spring

¹According to Goodbird, his father, Son-of-a-star, believed that the fattest cows were also the fleetest, and also that the lean and slower animals were, in all probability, weakened by the shortage of food during the winter season.

Boller (1868, pp. 60-61) gives a spirited description of men and women swimming and playing in the river after

a fat bull was frequently marked by black hair along the spine and just back of the eyes. It was believed that the shedding of the hair first in this area was caused by the underlying layers of fat.

"My brother-in-law called to me to approach his left side. As I was not yet an expert hunter it was necessary that I shoot from the right side of the buffalo. Few men, only exceptionally expert bowmen, were able to shoot right or left as was needed. I was only a novice.

"I galloped up to the side of a fat cow. I came up from behind her right flank. At a distance of 15 feet, I prepared to shoot. 'No,' my brother-in-law cautioned, 'Go closer—closer!' I drew nearer. Again I prepared to shoot; but my brother-in-law called, 'Don't be afraid. She won't hurt you—closer, closer!' I struck the sides of my horse with my heels. I rode so close to the buffalo that the point of my arrow was scarcely over a yard away from it. I released the arrow.

"Directed by my brother-in-law, I shot at the buffalo. I wanted to pierce its lungs. We preferred to kill cows because the meat was more tender and also because cow hides were more valuable. As the arrow struck, the buffalo leaped up, and turned back in her tracks. My brother-in-law shouted to me, 'Never mind, follow another one.'

"I moved on, but looked back as I rode. The buffalo cow I had shot slackened her pace and dropped to a slow walk. I had continued onward perhaps a hundred yards when the cow dropped. Later, we found her lying on her left side with the arrow protruding from her right side. She was the fattest cow in the herd.

"A buffalo shot by an arrow almost invariably leaped back and turned in the direction from which it had come.

"My brother-in-law bade me pursue another buffalo. I overtook a cow and shot when about 20 feet away. My arrow buried itself about 5 inches in its carcass; but the buffalo continued to run. I followed. I shot whenever I had an opportunity until I had released about 10 arrows. All these arrows now projected from the buffalo. Some of them stuck upright in its hide; some hung down. The buffalo became enraged. Whenever I approached, it turned, forcing me to retreat.

"At this point my brother-in-law approached, laughing heartily. 'You are certainly causing the cow to suffer,' he said. 'What are you doing? Are you trying to kill her by torture? I will show you how to finish her.' He galloped around the buffalo cow in a circle. The buffalo turned as he turned and tried

repeatedly to charge him. Finally, the buffalo stood still. My brother-in-law drew in his pony. He released a shaft. I saw the arrow bury itself half the length of its feather. The buffalo stamped its right hind leg against the ground and ran a short distance. Then, with blood pouring from its nostrils, quivered, drew up first one foot, then another, knelt on its front legs, sank, and dropped on one side.

"Let us return to your first buffalo,' my brother-in-law suggested. 'I will dress that carcass first, because it is the fattest. I myself have killed seven.' He did not count among these the buffalo he had finished for me, because a buffalo was the property of the hunter who first wounded it."

LANCES

Before the Hidatsa obtained horses, the lance, like bows and arrows and shields, were all part of equipment for war. After they obtained horses and learned to ride they fought on horseback with lances. An old tale recounts the origin of the use of lances.

"A man informed the dream interpreter that he had dreamed of riding a new horse. The interpreter, explaining the dream, foretold that he would capture either an enemy horse or an unidentified object the following autumn. Another person dreamed that he had seen green grass, a dream that signified that the dreamer would live through the winter. A third man dreamed of a large sunflower plant, its base painted red. The interpreter admonished the dreamer to be prepared to spear an enemy about the time that the sunflowers bloomed. He was instructed to make a shield and a lance and to paint the border of the shield yellow to resemble a sunflower.

"The village was attacked the following summer. One of the enemy fell, wounded in one of the village gardens. Before he could be rescued, the man with the shield and lance speared and killed the fallen enemy. Ever after, the warrior painted the head end of his lance red. Following this incident, the successful slayer was believed to be possessed of sacred power. Young warriors came to him to hear him relate the dream of the sunflower, to have him make lances for them, and to be prayed over. The dreamer was compensated for these services."

The Hidatsa believed that their use of lances originated in this dream. Other spearlike weapons also had a dream origin.

Wolf-chief, the narrator, probably meant to imply that the lance and the spearlike weapons were made not so much in response to their practical value as weapons but because the war-

the day's work was done. See also Catlin, 1842, vol. 1, pp. 186, 196.

rior had seen them in a dream which he interpreted as an admonition that he use them. He was careful to make the weapons after the pattern of that seen in his dream. Wolf-chief also observed that he did not think that a long lance was ever in general use, principally because of the obvious difficulty of using a bow and arrows and simultaneously caring for a lance.

Lances were made of ash. The wood, cut green, dried when it hardened. The lance heads were made either of flint, the tine of an elk antler, the long horn of a young elk, or of buffalo horn. Lacking any of these materials, the Hidatsa sharpened the end of the lance shaft to a point and hardened it in the fire. More recently, lance heads were made of iron.

When prepared for use as a lance head, the tine lying nearest the head in an elk antler was cut off with a flint blade to a length of about 7 inches and sharpened to a point. A buffalo horn lance head was worked into shape by burning on its convex side, removing the core, and straightening it while still hot.

TRANSPORTATION

Crossing the Missouri or descending it in bullboats following the tribal winter hunt proved to be a slow and tedious method of travel. Some men who had participated in the hunt drove the horses along the bank while the rest of the group rode in the bullboats. Household and other property was transported in a bullboat lashed to the boat in which the members of the family rode.

The possessions to be transported were frequently also tied into a tipi cover and floated across or down the river as need demanded. To prepare such a bundle a hide noose or loop was laid out on the ground and a tipi cover spread over it. The articles to be transported were heaped upon the outspread skin. The noose was tightened, enclosing all the paraphernalia in the tipi cover so that the whole resembled a voluminous ball.

A long rawhide rope was looped over the neck of a horse, passed down its back, and knotted on its tail to make sure that the bundle would not float off and drag the horse by the neck. Five feet farther on, the end of the rope was firmly tied to the open end of the floating bundle, an arrangement that allowed the horse

to use its legs in swimming. Towed by the horse, the large bundle was guided by swimming men and women.¹ Sometimes young children or older people, perhaps the feeble or those incapacitated by illness, rode on top of such bundles. However, every able-bodied person was expected to swim.

During the descent of the river in bullboats, when arriving in an area where the current was rapid or the waves choppy, the bullboats were drawn together, the occupants of each clutching the gunwale of the neighboring boats. In that way it was possible for the clustered group to pass through a dangerous area.

BULLBOATS

To arrive at an accurate description of the construction of a bullboat² it was decided to have one built. Late in July 1912, the necessary

¹For the Mandan, see Catlin, 1842, vol. 1, pp. 96-97; Maximilian, 1906, vol. 23, pp. 290-291. Among the Omaha swimming was also a favorite pastime (Fletcher and La Flesche, 1911, p. 369).

²For additional information on the Hidatsa bullboat, its construction, use, etc., see Wilson, 1924, pp. 185, 209-211, 216, 232, 248-249, 253-256, 258, 271-272, 276-277, 285-287, 294-295, 296, as well as the footnotes accompanying these citations. See also Boller, 1868, pp. 75-77.

Henry and Thompson (1897) describe the Hidatsa bullboat as having a rounded end and a square end, with "the ferryman sitting in the round end. . ." (Henry and Thompson, 1897, vol. 1, p. 349). They describe the Mandan bullboat as follows: "Their canoes [i.e., bullboats] are of singular construction; a stranger would scarcely dare to cross such a deep and rapid stream in them. They are of circular form; the timbers are only a few bent willows, about three inches in circumference, over which is stretched a raw buffalo hide with the hair inside, sewed fast to the gunnel; this is generally of willow, about two inches in diameter. . . In lieu of a paddle they use a pole about five feet long, split at one end, to admit a piece of board about two feet long and half a foot broad, which is lashed to the pole and forms a kind of cross; there is but one for each canoe" (Henry and Thompson, 1897, vol. 1, p. 331). Cf. also Maximilian 1906, vol. 23, p. 279 and Will and Spinden, 1906, p. 113.

Brackenridge's description of the Arikara bullboat tallies in every way with what is known of the Hidatsa. He writes: "These canoes are made of a single buffaloe hide, stretched over osiers, and of a circular form. There was but one woman in each canoe, who kneeled down and paddled in front. The load was fastened to the canoe and dragged along" (Brackenridge, 1816, p. 136).

green hide was bought at the ration house. Owl-woman, a Mandan, born about 1840, agreed to demonstrate. Owl-woman was too feeble to dress the hide. Consequently, her daughter, Many-growths, was employed to help her. One morning, Goodbird and Dr. Wilson spent two or three hours on the opposite banks of the Missouri cutting the willow poles that were to be used for the ribs of the boat. Thirteen poles, approximately the size of sweat-lodge poles, were brought in. Owl-woman began her work about four o'clock that afternoon.

All the bark was peeled from the willow poles. Owl-woman shaved their larger ends flat and bound the spatulate surfaces together with the bark stripped from the poles. The smaller ends of the poles were bent around and bound together so that the two poles formed a single hoop. A second smaller hoop, one that could easily be laid inside the first, was made of two additional willow poles exactly like the first.

The measurements of a bullboat varied with the stature of its maker. Owl-woman measured the larger of the two hoops by standing it against her body in such a way that its diameter

matched her own height to her lips. The smaller hoop reached to her breast. These criteria for its measurements were adequate for a cowhide-covered bullboat. In a bullboat with a steer hide cover, the larger hoop, when measured, would reach one hand breadth above the head, the smaller hoop, to the forehead.

The hoops, as bent into shape by Owl-woman, were rather irregular, because the green willow poles were liable to give at their weakest points. She staked the larger hoop out on the ground in approximately circular form and drove five wooden pins inside and four outside its rim to maintain its rigidity and hold it firmly in place. The smaller hoop was then fitted inside the five inner pins that held the larger hoop. Finally, four additional wooden pins were driven inside the smaller hoop to hold it firmly. This ingenious arrangement permitted the five pins within the greater hoop to serve as the outer pins of the smaller hoop, exhibiting an admirable economy of labor. The hoops, staked out in this way, were dried over night.

Owl-woman then began to prepare the ribs of the bullboat. She shaved each pole flat on



FIG. 12. Building a bullboat: the ends of the upper ribs are bent. AMNH negative number 286495.

one side of its larger end, bending it over the flat side and lashing it with willow bark. Notches customarily cut in the larger ends of the rib poles were later used to retain the lashings when the ribs were bound to the hoops.

The following day Owl-woman began to work at 9 A.M. She removed the temporary willow bark lashings of the hoops and replaced them with lashings of green rawhide. When Owl-woman examined the green hide the previous evening, she trimmed off the legs and part of the head, including the ears, and laid them aside. With a butchering knife these pieces of green hide were cut spirally into thongs about a half-inch in diameter. They replaced the temporary willow bark lashings of the hoops.

In the old days, Owl-woman reminisced, if she had participated in a buffalo hunt and had to construct a bullboat she would not bother to

replace the bark lashings with skin thongs. The bark lashings were strong enough to hold the hoops firmly. However, the green rawhide thongs were preferred because they tautened as they dried and never slipped off the hoop.

Ordinarily the hoops were pegged out for approximately three days or until they had thoroughly dried. However, in this demonstration of bullboat construction the hoops were dried one day only, principally because the hide was rapidly decomposing. The hoops were pegged out in such a way that they did not form quite a full circle but were slightly elliptical. When the hoops were quite dry the pegs were removed and the ribs, still green enough to bend them to the desired shape, were bound to the hoops. The bark was not peeled from the poles selected for the ribs because it is essential that they be green when bound in place.



FIG. 13. Trimming edge of bullboat cover: boat skin stayed by ends of ribs. AMNH negative number 286500.

Owl-woman began to whip the hoop joints with a thong. She fashioned a loop in one end simply by thrusting a butcher knife through one end of the thong and drawing the opposite end through the slit, of course, around the hoop. Working either toward or away from herself she lapped the thongs over and to the left, hair side out.

In about an hour the hide was brought out of the issue house. Owl-woman gave it to her daughter, Many-growths, a woman about 60 years old. Many-growths drove a stake 3 feet 4 inches high into the ground. The hide was thrown over the stake, flesh side up. She fleshed it, using a flesher made from a section of gun barrel that had been flattened and serrated at one end.

The thin layer of flesh removed from the hide was hung on an adjacent stage to be cooked later for dinner. Small fragments of flesh still adhering around the edges of the hide were also carefully trimmed off with a butcher knife, and these too were hung on the stage to await cooking. Myriads of flies swarmed about the hide and the hanging pieces of meat. The green bottle fly and the common housefly seemed equally numerous. Occasionally, as Many-growths worked, she cleaned the flesher by running the edge of her knife between its teeth. She also sharpened her knife on the flesher occasionally as if it were a sharpening steel.

About 11:30 that morning Owl-woman began actually to build the bullboat. She laid the lower hoop on the ground. She broke a piece of a stick to serve as a rule; it equaled in size the distance from her knee to the ground. The stick, she explained, was to be used as an aid in gauging the depth of the bullboat. All bullboats were said to be knee deep, measuring from bottom to edge. She removed the bark lashings from the bent end of the first rib pole. She placed her foot on the pole and bent both ends upward, testing them carefully to be sure that they would not break.

She began to arrange the lower series of four ribs for the frame of the boat on the ground, placing them with ends alternating, that is, the first rib with the butt end to the left, the second with the small end to the left, until all the ribs were laid out. After each rib was

laid on the ground Owl-woman tested and bent it to determine whether it was liable to break.

Owl-woman, at this point, prepared to bind the four ribs to the lower hoop. With her gauge stick, she measured the length on the larger end of each rib and bound it to the lower hoop at the proper place as measured off, to make sure that the bullboat would have the desired depth. Only the larger end of the rib was measured because it was easily bound at a corresponding place on the smaller end of the opposite side of the hoop. The object of this arrangement is obvious; since the ribs were cut longer than necessary, their smaller or weaker ends would be eliminated in the final trimming.

Meanwhile, Many-growths continued fleshing the skin cover. The tail, which was not removed from the hide, was turned wrong side out and skinned. It was not split but was cut off 17 inches below the vent. Ordinarily, a hide dressed for use as a bullboat cover was not split entirely up to the vent, but rather up to and under the legs. The hide prepared for the demonstration had not been treated in the customary manner, so the split below the vent was sewed up.

The vent was now drawn closed by a sinew cord. However, before the cord was tautened a small stick was woven in and out of the lips of the opening. Then a sinew was tied under the stick to form a knot. Finally, the severed end of the tail was also drawn together with a sinew cord.

Then the five upper ribs were laid, measured, and bound to the lower hoop in the same way as were the lower ribs, except that they lay over the lower ribs and at right angles to them.

Owl-woman drove four stakes the height of her knee into the ground outside of the lower hoop. To hold the upper hoop in place as she worked she bound the upper hoop to these stakes. The ends of the upper ribs were bent upward and bound on the outside of the upper hoop and the inside of the lower hoop. Unlike the upper ribs, the lower ribs were not bent upward and bound to the outside of the upper hoop. After all the lower ribs were bound to the upper hoop, the smaller ends of all the ribs, purposely cut longer than necessary, were neatly trimmed off. One of the ribs that proved

to be too weak at one end was strengthened by lashing a green piece of willow lengthwise over the weak section. With strips of cloth the upper ribs were then bound firmly to the lower ribs at each intersecting point. At this point, the four stakes were unbound from the upper hoop and removed. The frame of the bullboat, now completed, was turned over, bottom up.

The construction of the framework, thus far, occupied about three and a-half hours. After a rest, the work was resumed at about two o'clock in the afternoon. The green hide was stretched tightly over the completed frame which lay on the ground bottom up. However, before this was done Many-growths had sewed with sinew, both inside and outside, a bullet hole in the green hide. She reached down and, feeling with her fingers, cut two or three holes in the hide at points where the ends of the ribs protruded beyond the upper hoop (in the present position of the bullboat, the lower hoop), and thrust these ends through the holes. At this point she turned the bullboat bottom down; the rib ends protruding through the holes in the skin cover held it loosely in place.

Using butcher knives Owl-woman and Many-growths working together trimmed the

edge of the hide quite closely around the upper hoop. Holes were cut along the edge of the hide at intervals in preparation for the final lashing of the cover to the upper hoop. The women worked together but on opposite sides.

Owl-woman cut a slit for a loop in one end of a green thong about one-half inch wide. She drew the opposite end of the thong under one of the ribs just below the upper hoop and passed it through the hole in the opposite end, drawing the loop taut. In this way the thong was firmly fastened around the rib. Owl-woman passed the free end of the thong through one of the holes on the edge of the hide, from its under side, out and around the upper hoop, down and through the next hole in the edge of the hide, and out and over the hoop again. When the next rib was reached, the thong was passed under the rib and out through the hole again under the hoop and from the inner side of the hide, out and over the hoop again. This procedure was continued until the edge of the hide was whipped to the upper hoop completely around its circuit.

A green stick thrust into the tail or stump of the tail was bound to the bottom hoop and two of the ribs so that the tail was held rigid. A



FIG. 14. Completed boat leaning against fence post and facing sun to dry. AMNH negative number 286504.

strip of cloth was tied to the end of the tail which was drawn in toward the boat and held there by the strip of cloth tied firmly to one of the ribs in the bottom of the boat. Later, when the skin cover of the boat had thoroughly dried, this strip of cloth was removed. The tail with the enclosed stick was held rigid and firm.

Two thongs that hung loosely from the upper hoop at this point were removed and discarded. These thongs had served to bind the hoop to the four stakes and had not been removed when the stakes were taken down.

To hold the bullboat in shape while drying, one green rawhide thong was stretched across the mouth of the bullboat at its narrowest diameter; a second thong across its greater diameter served the same purpose. The construction of the bullboat was completed at 2:30 P.M. However, Owl-woman insisted it must be dried in the sun for three days and that it should rest against the side of the earthlodge or some other convenient structure with its interior facing the sun. She cautioned that it must be carefully sheltered from rain. In the old days, Owl-woman said it was important to keep careful watch that neither dogs nor coyotes chewed the green hide of the drying boat.

The tail was cut to a length of about 17 inches. In the past, when buffalo hides were used as a bullboat cover the entire tail was left, with the tuft of hair on its end. However, it was not used as a handle. The bullboat was always paddled with the head end of the hide forward; consequently, the tail projected in the rear.

When not in use, a bullboat was always kept under cover. If a short stop were made when paddling down the river, the boat was taken out of the water and if possible placed in the shade under a tree. In the village, the bullboat was taken into the earthlodge where it was protected under an old skin or a worn-out tipi cover. Exposing a bullboat, especially when wet, either to the sun or wind, warped it out of shape and might even tend to split the hide covering.

According to Buffalo-bird-woman, the Hidatsa usually selected a variety of willow for a bullboat frame. Ash was next in order of acceptability. When neither of these woods was obtainable, chokecherry or red poplar or a tree designated as cottonwood or "red-poplar-of-the-

kind-like-cottonwood" was used. These two trees which Goodbird called poplar were not further identified.

SKIN RAFTS

To construct the so-called skin raft,¹ a hoop of green ash or willow sticks approximately the size of that used in building a bullboat (p. 148-149) was firmly tied into the desired shape with a skin thong. The hoop was laid on a piece of skin, usually ripped from a tipi cover that had presumably outlived its usefulness. The piece was about the size of six animal skins. Saddles, bowls, food, and any other paraphernalia to be transported were heaped on the improvised raft. The borders of the skin were drawn up over the heaped-up possessions and tied firmly. A rawhide lariat about 12 feet long was fastened to the raft and stretched from the raft to the tail of the horse chosen to drag it. The man of the family usually led the horse in crossing the river or any body of water.

BURDEN CARRIERS

Bark² and skin provided the basic materials for making burden carriers. In the past, when buffalo skins were readily obtainable, undecorated bucket-like containers were constructed of the dehaired skin occasionally mounted on a frame similar to that used for bark baskets but sometimes on a special frame reserved for skin baskets.

Apparently there was an age distinction in the use of these burden carriers. According to Buffalo-bird-woman, older women preferred skin carriers; young women favored the more attractive bark containers. These had a high exchange value; the Hidatsa were accustomed to pay a woman's belt, its full length decorated with brass nail heads, or a calico dress for one bark container.

The Hidatsa convention that any instruction

¹Cf. Wilson, 1928, p. 228. Kurz gives an animated description of such a raft, its packing, and propulsion across the river (Jarrell and Hewitt, 1937, p. 167).

The Crow also made use of a similar raft. See Lowie, 1922, p. 219.

²According to Curtis (1909, vol. 4, p. 140), the inner bark of the box elder was the material used for burden baskets.

in basket-making must be properly compensated resulted in resentment over the presence of any observers to that activity. One informant stated that on such occasions when an onlooker insisted on being present she worked so rapidly that it would be impossible to follow her movements. Consequently, there are said to have been very few basket makers on the reservation because, as the informant elaborated, "They do not want to pay to learn and we (the basket makers) do not want to instruct them when they do not pay."

The most important uses for bark and skin¹ containers seem to have been as burden carriers to transport the harvest of squash and corn from the gardens to the village and to carry snow and ice for melting in winter. The bark containers also served to transport pottery vessels and other cooking utensils during the annual migration from the summer to the winter village.

Willow bark baskets were woven in three sizes. The bow or framework was made of willows, the white bark (splints) were of box elder, and the black dyed splints were of willow bark, which were believed to be the strongest of these materials.

The common practice in weaving bark baskets was to weave a design for the back that differed from those on the front and two sides. The simplest pattern was always chosen for the back of the basket because that portion usually rested against the shoulders of the owner when it was used as a burden carrier.

Baskets were always carefully loaded. Corn, for example, was piled in a basket to a depth of about three or four inches from its rim, and then a row of ears was placed perpendicularly around the rim. Additional ears of corn were heaped within this framework which prevented any of them from spilling out of the basket. To raise a basket full of corn to the height of her shoulders, the woman knelt, passed the carrying band over her head and rested it across both shoulders above her breasts. Usually, she was assisted as she rose by another woman who held the rear standards of the basket in each hand and raised it in place.

¹For additional uses for skin baskets see Wilson, 1924, p. 161.

WATER CARRYING

In Like-a-fishhook village it was the duty of the girls of the household, especially those between the ages of 13 and 18, to fetch water.² In Goodbird's lifetime, metal or wooden pails were used for this purpose. Two girls usually carried a pole or stick on their shoulders with the bucket hung between them.

Occasionally, two women carried food for a feast in this manner. Under these circumstances two or three pails were slung on a pole borne on their shoulders. When the carriers tired, the carrying pole was shifted from one shoulder to the other.

MANUFACTURES

SKIN DRESSING³

Whenever in modern times it became necessary for a Hidatsa to use a flesher in dressing a skin it was most commonly improvised from a section of a gun barrel that was pounded flat at one end and toothed at the opposite end. Formerly, a flesher made of bone was used to remove the bits of flesh that clung to the green hide which was thrown over the top of a post, hair side down, and scraped clean. In the old days a bone flesher was rubbed into shape and its teeth filed with a stone; later, after white contact, a steel file was used. The scrapings from the green hide were boiled with the tail or broiled on the coals. A flint-bladed elkhorn tool was used to scrape and dehair dry hides.

Customarily a girl began to scrape hides when she was 14 or 15 years old. According to Buffalo-bird-woman, working almost continuously one winter she dressed a hundred hides.

During the winter hunt when the Hidatsa customarily camped in the timber, hides were dried and stretched on frames⁴ set up flesh side

²In winter, Maximilian states: "They likewise cut blocks of ice from the river, which the women carried home on their backs, in leather baskets, in order to melt them to obtain water" (Maximilian, 1906, vol. 24, pp. 71-72; see also p. 31).

³Hiller, (1948a, pp. 7-8) observed and recorded a demonstration of soft tanning by Uta Wiás, an old part-Crow, part-white woman. As a child she had lived at Like-a-fishhook village. The elkhorn scraper used in the demonstration was steel bladed.

⁴Bradbury (1817, p. 122), when among the Arikara, witnessed the dressing of skins which were stretched on

toward the sun. On the summer hunt, or in the village at Like-a-fishhook, no frames were used. A green hide was always staked out horizontally on the prairie. To prevent the dogs from chewing the hides, girls guarded them. The drying frames were, however, used in winter primarily because the ground not only was frequently frozen but was so covered with underbrush and shaded by trees that it did not lend itself to staking out a hide.

The two forms of drying frame used seem to have varied only in size and the method of lacing the hides to them. As a demonstration two frames were built to dry a full-sized cowhide split into two sections. For a two-year-old bull or a heifer hide a single frame was provided. If it became necessary to dry a number of hides simultaneously a semicircle or three-quarter circle of such frames was erected around a central fire. For this arrangement two adjoining frames were served by a single post. In extremely cold weather hides were dried inside the winter earthlodge.

The first step in the erection of a drying frame was to collect the forked upright posts and the 3-inch cross poles. Either green or dried wood was used. The frames were attached to posts sunk quite deep into the ground. The women, kneeling, dug these post holes with long ash digging sticks. Kneeling was the preferred posture because it was possible in this position to raise a digging stick and bring it down sharply into the bottom of the excavation and, with a quick turn of the digging implement, scrape up the soil in the bottom of the excavation. The loosened soil was removed with the hands.

In the next step the posts were set into the excavations which were filled with earth, well rammed down. Short sharpened sticks, about 2 inches in diameter, were driven in around the base of each post to assure its solidity. The top horizontal beam was then raised to rest on the forked posts and tied with thongs. Notches cut in the lower end of each post held the lower

horizontal beam. Each beam was about 3 inches in diameter.

A drying frame for a single skin was approximately 8 feet long; its lower horizontal beam was about 5 inches from the ground; the upper beam was about 6 feet from the ground. The upper beam of the larger type of drying frame was 16 or 18 inches higher than that for a single skin.

The methods of lacing the split and whole hides into frames varied. In general, the process was simple; the holes in the hide were prepared beforehand and the flesh around them scraped away. If an entire skin was to be placed on the frame it was first tied to the four corners of the frame by the four leg skins. To sustain the great weight of such a skin, in practice, the first tie was made, not as might be assumed on the end of the leg skin but at the uppermost foreleg through a hole at the knee where the skin was always heavy and thick. The second suspending tie was made through the skin of the second joint of the hind leg. Then the upper end of the hide was laced with the two long ends of the thong looped about the middle of the upper beam. Lacing proceeded first toward the foreleg, then toward the hind leg. The temporary ties at the legs were unfastened and the two thongs drawn through holes pierced at the ends of the leg skins.

In the succeeding step, the hide was laced on the head end down to the neck skin, but no farther; finally, the tail was laced to the frame. Additional temporary fastenings at the knee skins on the lower edge of the hide were next untied and drawn through holes on the lower extremities of the two leg skins as had been done at the upper corners.

Lacing of the hide now continued upward: on the edge of the lower foreleg, up to the skin of the neck, but no farther. Throughout this lacing process the skin was continually stretched downward. Next, the hide was laced upward on its opposite end to the tail. A long thong was looped over the middle of the lower beam and the hide laced to the beam with the two long loose hanging ends.

An extra pole leaned against the upper fork of the frame post on the proper side was used to lace the head and neck skin. Finally, the tail

frames placed on the meat-drying stages. Brackenridge (1816, p. 148) also observed such frames in front of the Arikara lodges.

was stretched. Three splints or skewers were thrust into the tail on the fur side. The hair was knotted to hold a thong tied over the tail which was now lashed to the upright post of the frame.

The actual fleshing of a hide followed after it was stretched in the frame. The work was begun on the upper half of the hide. The sheet of flesh removed was held in the left hand by the woman, who stood in front of the drying frame. If the frame was too high for her to reach its top, the woman stood on a log lashed to one end of the upright posts with its opposite end resting on the ground. The thick sections of flesh removed from the hide were hung up to dry in a tree or on the skin-drying frame and were consumed later. The complete fleshing of two half hides a day was considered to be a good quota for a hide flesher.

When a complete hide was fleshed, the head, when removed, was hollow like a bag. To stretch the head skin flat, a section from the eye to the aperture of the horn was cut out on either side and sewed up.

PAINTING A SKIN

Buffalo-bird-woman agreed to construct a model of her husband's, Son-of-a-Star's, bed decorated with his war honor marks. Buffalo-bird-woman's comments and observations recorded August 18, 1912, at Independence, Fort Berthold Indian Reservation follow:

In preparation for painting the war honor marks, Buffalo-bird-woman scraped the flesh side of a steer hide. She used the scrapings as a sizing to set the pigments. She sharpened the iron blade of an elkhorn scraper, occasionally, either on a flat piece of quartz or on the back of her butcher knife. She placed a handful of these scrapings in the small tin bucket that hung from a wooden tripod over a fire in the yard. When the scrapings had boiled for five minutes the sizing was ready for use. The sizing was used not only to set the pigments in the designs but also to mark white lines on a skin, leaving a deposit of a gluey substance. A hide, when painted, is clean and white. Wherever the sizing, which is transparent, is applied without pigment the underlying white surface

shows through. As a hide becomes soiled with use, the lines drawn in with the sizing appear white in relief. The sizing was applied over color designs to set the pigments but never over the black paint made by the Hidatsa because this paint was self-setting.

To paint the designs, Buffalo-bird-woman made a pen or stylus which consisted of a small stick¹ shaved flat at one end. Ocher was mixed with a little water in a saucer; the flattened or whittled end of the stylus was dipped into the pigment. The design motives were not drawn on the hide but were pressed firmly on it with a small round peeled section of a willow sprout. This method of pressing in the outlines of the motives was used only with geometric designs. The pattern was actually drawn in with the ocher-dipped end of the stylus held flat side down. To rub the pigment well into the skin, the point of the stylus was drawn over the original impression a second or third time. With a wedge-shaped piece of bone, cut from the porous joint of an ox bone with an ax and whittled to an edge with a butcher knife, the sizing was applied over the basic markings after the pigment had had a brief time to dry. The wedge was dipped into the hot liquor. Buffalo-bird-woman put the bone applicator to her mouth and sucked it vigorously along the edge over the newly marked sections of the design. The bone was laid aside and the wooden stylus picked up; this time it was free of pigment. With the flat of the stylus, Buffalo-bird-woman rubbed the sizing well into the pigmented designs. The stylus was laid aside. A finger was drawn lightly over the completed section of the pattern to determine if the pigment had set and, incidentally, to smooth any irregularities in the wet pattern.

The Venetian red furnished by Wilson for red pigment failed to pass the test. After one or two attempts, Buffalo-bird-woman substituted a native darker ocher.

Following each use of the bone, the wedge was sucked to cleanse it of any of the accumulated pigment as it was drawn over the painted

¹As observed by Maximilian (1906, vol. 24, p. 32) a sharp pointed piece of a stick was used to paint a buffalo robe.

design to work in the sizing. If this were not done the paint would drift into those areas of the design where only the glue sizing was to be applied. Buffalo-bird-woman also explained that she sucked the bone clean following each use because the bone was porous and the glue sizing would solidify and fill its pores where it would harden.

Buffalo-bird-woman elaborated on the use of the sizing and the wooden stylus. She whittled out a lozenge-shaped piece of wood to serve as a pattern which she laid on a piece of hide. She dipped her stylus in the warm sizing and drew it around the wooden pattern and then filled the lozenge-shaped design unit with sizing. The completed design was said to represent a feather. After a painted robe had been worn a long time the sizing-filled section of the decoration stood out as pure white, as the clean skin showed through it.

BLACK PAINT

In 1909, Wilson obtained from Leader a small quantity of the powdered black earth used to make the native black paint. The sample was taken from a butte near Fort Stevenson. The black earth also occurs at a place near the Knife River and may possibly be found elsewhere. When dug from the ground the soft earth was worked into a ball, wrapped up, and subsequently powdered. It was used to delineate designs on a skin in preparation for embroidery with quills. Skins were also painted with the black paint. For this use the earth was mixed with a sizing prepared by boiling scrapings from a hide. The sizing served not only to fix the color of the paint but gave it a glitter like glass. When the black paint was used to draw the design motives for quill embroidery, it was diluted only with water; treated either way, a non-fading black pigment was produced. Designs drawn in this paint were a deep black.

QUILLWORK

Gull wing quills were used to embroider tipi covers, moccasins, belts, leggings, and thongs. However, when these birds became scarce their

use was discontinued. In the fall the women collected the feathers on the shores of the northern lakes, or the men on a buffalo hunt would stop to fill their leggings full of the feathers carried in by the waves and deposited on the lake shores.¹

Porcupine quills were also used for embroidery but only when bird quills were not obtainable. However, porcupine quillwork² was believed to have been smoother than bird quillwork.

The bird quills were prepared for use by removing the web and the aftershafts of the feathers by drawing the point of an awl down on either side of the quill after the vane had been stripped. The dull underside of the quill was used; the upper glossy portion was discarded. The part of the quill retained was, in turn, separated into two strips, each of which was scraped free of the pith clinging to its inner surface and smoothed by drawing it against a piece of natural brick held under the thumb. Porcupine quill smoothers or pressers of elkhorn were also made and were of the same shape as those made more recently of iron. The shiny outer half of the quill shaft was not a very desirable material for embroidery. It was utilized only when there was a dearth of flat quills.

The technique of embroidering with bird and porcupine quills apparently differed somewhat. When bird quills were used the larger or quill end of the stripped piece was the first used, and the work continued downward to the smaller end of the shaft.

Buffalo-bird-woman recollected that in her lifetime she had seven buckskin shirts and nine robes, seven embroidered with bird quills and two with porcupine quills. Moccasins, leggings, and belts embroidered with bird quills, all subjected to hard usage, were believed to have been more durable than those decorated with porcupine quills.

¹The information here is somewhat vague. It is not at all clear from the recorded statements whether gulls were actually captured for their feathers, as were eagles (Wilson, 1928).

²Cf. Fletcher and La Flesche, 1911, pp. 345-347 for the Omaha technique.

The thongs by which bird-bone whistles were hung around the neck by the members of the Crazy Dogs and Dog Imitators societies were whipped with bird quills. The thongs used by the Dog Imitators were made of double-ply rawhide. The decorative quills were held in place by sinew, the ends of which were passed through the two sides at each lap. The Crazy Dogs' thongs, cut from soft-dressed skins, were merely wrapped with quills in such a manner that stitches would be superfluous.

Leader, a Hidatsa woman born about 1856, made a pair of quill-embroidered leggings for the Museum collection. Incidentally, she enlarged on the technique. During her lifetime, steel needles always had been used for quill embroidery. In the past, elkhorn or Rocky Mountain sheep horn awls were the only implements available for such use. The end of the sinew used for sewing was moistened, rolled between thumb and fingers, and dried to a hard serviceable point that would readily penetrate the hole made by puncturing the skin with an awl. Formerly, it had been customary to combine porcupine and bird quills with grass roots in a single decorative pattern.

Because grass roots were easily damaged they were used only where their natural black color was desired for either black lines or bars. Grass roots and quills were stored in moist earth to render them soft and pliable. Good-bird's wife usually moistened the quills in her mouth. Grass roots when sewed to the skin were pressed flat with the finger nail.

CLOUD STONES AND BEADS

In the summer of 1904, Wilson accompanied E.R. Steinbrueck to the old village sites at Fort Clark, North Dakota. In the course of excavating earthlodge sites, a grave was uncovered that yielded a number of beads of white and blue glass, others cut from nuts, and a perforated ornament, apparently of blue glass, with white decorations, consisting of a cross and a straight line. The ornament was identified as a cloud stone on the Standing Rock Reservation. A former Indian agent at Fort Yates, Major Bingham, also pronounced the excavated speci-

men a cloud stone. He had once described to Wilson the Sioux practice of melting glass beads¹ from which they made highly prized ornaments they called "cloud stones."

In 1905, Wilson visited Fort Yates, where he met Mrs. Marie L. McLaughlin who told him that the cloud stone was worn over the forehead by the child of a leading family. The hair was gathered at the front of the head and the ornament tied on with a string.

According to Mrs. McLaughlin the cloud stone was said to have been fashioned with much ceremony. Only a woman of lifelong chastity and against whom no word of reproach could be uttered was eligible to make a cloud stone. The procedure occupied a whole day. The maker or makers withdrew to a secluded spot in the woods where they pulverized glass beads bought from the trader. Mixed with a little water, the powdered glass became malleable. The claylike mass was molded into the desired shape on a flat piece of bark. A clay pot was inverted over the ornament, fuel was heaped over it, and it was fired. The molded powdered glass fused under the intense heat. Using both powdered blue and white beads it was possible to work a decorative design into the cloud stone. Large beads were also made by the same process.

According to Buffalo-bird-woman, the powdered glass was melted in an iron ladle and poured into a mould cut into a stone. Another stone or a weight of some kind was placed over it and pressed down. When chilled, the ornament was removed from the mold and grooves cut for the cross and stripe. Then, white glass beads were pounded up, melted, and poured into the grooves. The white cross on the cloud stone was said to represent the morning star; occasionally, the figure of a deer was used on the cloud stone. The Hidatsa name for cloud may be translated as "stone-bluish tied-on-forehead."

¹Cf. the detailed account of the process given by Lewis and Clark, 1904, vol. 1, pp. 272-274. Maximilian also noted the manufacture of beads from glass: "They powder those which they have obtained from the traders, and mould them into different shapes" (Maximilian, 1906, vol. 23, p. 278).

In ancient times these cloud stone ornaments were made of a stone; no perforation was made to hold the string. Instead, the upper or smaller end of the stone was grooved. In the resulting channel a thong was bound around the stone and the braid of hair, holding the ornament in place.

WOOD WORKING

The ancient method of bisecting a log¹ was to burn its middle and hack out the charred and softened sections with a stone ax. This process was continued until the log was cut, a long drawn out laborious task.

Buffalo horn wedges (Matthews, 1877, p. 18) were used to split wood. To make a wedge, a buffalo horn, with its bony core intact, was driven into the ground point down. In this position its larger end was burned down to the middle of the horn. Then the point was scraped or filed to an edge with a rough stone until the finished wedge was as straight as was possible to achieve. To split wood the wedge was driven into a log with a wooden maul. Sometimes the blows loosened its bony core, causing it to fall out. Under these circumstances a section of ash wood was driven into the wedge, rendering it more serviceable than it had been in its original state.

A maul made of ash was used to drive a horn wedge into a log. Its construction was relatively simple. A small log with its roots intact was selected from the mass of driftwood carried in the Missouri current. The roots were burned back to a hard knobby stump excellent for striking a heavy blow. Wolf-chief, the informant, had never seen nor used either of these tools; his description is based entirely on hearsay.

WOODEN BOWLS

Wooden food bowls and their use have been described in the account of Hidatsa eagle trapping (Wilson, 1928, p. 149). Wooden bowls with handles were common. Apparently, there was no sex distinction recognized in the mak-

ing of wooden bowls; the descriptions of their manufacture include accounts both of men and women making them. The bowls were made of nubs or knots of cottonwood or box elder.² Ash does not seem to have been used. The knots from which a bowl was to be made were cut out in the autumn; knots cut in the spring were believed to have a tendency to crack.

One winter when he was a child, Wolf-chief watched his father carve a bowl from a cottonwood knot. A tree was felled. The knot, about 18 inches in diameter and 6 or 7 inches thick, was cut out with an ax. With a large butcher knife wielded with a chopping motion, the knot was rounded off. In the next step, it was hollowed out with a short-handled ax. The wood was shaved down slowly and carefully. Sometimes, a light red stone (natural brick), found along the Missouri, was used to smooth the walls of the bowl. Additional polish was achieved with ghosts' whistle rushes. We have no data on the time required to finish such a bowl. According to Small-ankle, long before the Hidatsa possessed either iron axes or knives, wooden bowls were hollowed out with coals of fire; the breath served as a bellows. In the next step, the bowl was rubbed into shape with rough stones.

Occasionally box elder trees were 15 inches or more in diameter. To make a box elder bowl, a yellow (not red) section of the trunk was cut out, split down the middle, and hollowed out with a large knife. When the desired depth of the bowl was attained by the first hollowing it was scraped smooth with a piece of steel with one end wrapped with a piece of skin which served as a handle. The outside of the bowl was shaped before the inside was hollowed out.

Each Hidatsa family was said to have owned five or six wooden bowls, varying in size. The largest, reported as being somewhat elliptical, was 20 inches long by 17 inches wide. The

¹Cf. Fletcher and La Flesche 1911, pp. 338-339 for the Omaha technique of wood working by burning.

²"Large and small utensils were made from box elder wood, hollowed out from solid blocks by charring and by cutting with stone knives" (Curtis, 1909, vol. 4, p. 140). Cf. also Matthews, 1877, p. 18 who states that they made "wooden bowls so durable that they last for many generations."

smallest bowl approximated the size of a coffee cup but was very shallow. The family bowls were customarily stored in either of two places in the earthlodge, in a skin basket hung on one of its beams or in a bag that swung from one of the rafters. Sometimes, however, the bowls were stowed under the bed closest to the fireplace.

Wooden bowls were highly valued primarily because it was possible to carry them on journeys without danger of breakage. When it became necessary to transport a bowl from place to place it was wrapped in a piece of old tipi skin. Its usual position was on top of any load to lessen the danger of crushing.

Wolf-chief remembered that when he was about 16 years old he had seen a very shallow wooden drinking cup about 3 or 4 inches in circumference. Such cups were frequently carried on war parties. They were tied to the belt at the right side by a thong pulled through a perforation in the cup.

CRADLES

A cradle swing and a hammock customarily hung from the rafters in the earthlodge in both summer and winter. It was hung about 4 feet inside the circle of outer supporting posts and about 2 feet above the floor. The cradle bundle, about 2 feet long, was usually made of buffalo calfskin¹ folded over, fur side in. The head and tail of the skin were also turned inward. The two sides were then rolled inward toward one another and bound with a rawhide lariat, its end trailing to the fireplace from which vantage point the child's mother could jerk the cradle and swing it. Thus wrapped in its cradle bundle and tied in the swing, an infant spent most of its days from the time it was 10 days old until it learned to walk.

At night the cradle swing was taken down, unfastened, opened, and the calfskin laid aside for retying in the morning. The swing was taken down because of the Hidatsa fear that

¹According to Wolf-chief, a baby was wrapped in any convenient covering, except an old tipi skin. It was said if the tipi skin were used for such a covering a child would lose all its potential mystery power and would, moreover, be displeasing to the spirits.

evil spirits might snatch the infant's spirit if the cradle bundle were allowed to remain in its daytime position.

STONE IMPLEMENTS

According to Wolf-chief, the Hidatsa first obtained metal axes at the beginning of the nineteenth century. These initial metal tools were said to have been sold to the Hidatsa by Ojibway mixed-bloods. However, this somewhat arbitrary statement lacks confirmation. Prior to the acquisition of metal axes they used stone axes called black axes, which were said to have been much like iron ax heads in shape, but which were grooved for hafting. No information was obtainable as to the method of manufacture of these axes or any other stone implements. However, a sketch of one presumably old-time implement, a hafted flint whetstone, was drawn to illustrate its rectangular form. The tool was described as usually about 2 inches long, about the thickness of a thumb. Whetstones were used to sharpen knives.

PIPES

A unique form of pipe used in the Wolf ceremony was made of a complete buffalo tail. The tail was skinned and dehaired. One end was bound to form a bowl. Its hollow interior was filled with earth. When the skin dried, the earth fill was shaken out. Presumably, a stone bowl was inserted to hold the burning tobacco. Other pipes² were made of wood bound with buffalo skin.

FLINT BLADES³

The flints for use with flintlock guns were made, according to Small-ankle, by inserting the flint in a vise to hold the stone firmly as it was struck with a piece of steel.

According to Buffalo-bird-woman, traditionally, elkhorn scrapers had flint blades. When the flint blade was worn down and

²For Mandan pipes and smoking customs, see Maximilian, 1906, vol. 23, pp. 275, 319.

³Bowers (1965, p. 166) writes that flint workers not only lived alone but that flint flaking was done in secret.

dulled from repeated use, the women customarily chipped a new sharp edge on the blade. According to Buffalo-bird-woman, she would draw the sleeve of her dress (which was open at the neck) down until its edge rested on a stone set up for the purpose. She then would lay the flint blade on the sleeve to renew its chipped edge. Usually the bone flint chipper was well worn down from use. Consequently, it became the basis of the Hidatsa measure of comparison which found expression in such a phrase as "he is as short as my bone flint chipper."

We have neither a definite nor a detailed description of the actual technique of flint chipping with a bone. We do have the statement that the sleeve of the skin dress worn by a woman who dressed many skins was usually well worn and frayed at the wrist end as the consequence of repeatedly resting the flint against its edge.

POTTERY

Although during the period of this investigation pottery making¹ was no longer practiced by the Hidatsa, in August 1910, Hides-and-eats agreed to demonstrate the making of a pottery vessel, for which purpose she came to Wolf-chief's cabin. Hides-and-eats was a Sioux, then about 85 years old. When she was a little girl, she had been captured and adopted by the Mandan.² The following description refers mainly

¹Bowers (1965, pp. 165-166) describes Hidatsa pottery making as a sacred rite which was accompanied by the singing of sacred songs. The potter worked in secret. The right to make pottery and to use the designs to decorate a vessel were both purchased.

²Henry and Thompson describe Mandan pottery and its manufacture as follows:

"They use large earthen pots of their own manufacture of a black clay which is plentiful near the villages. They make them of different sizes, from five gallons to one quart. In these vessels nothing of a greasy nature is cooked, every family being provided with a brass or copper kettle for the purpose of cooking flesh. Whether this proceeds from superstition or not I cannot pretend to say, but they assured us that any kind of flesh cooked in those earthen pots would cause them to split. One or more of the largest kind is constantly boiling prepared corn and beans and all who come in are welcome to help themselves to as

to the observations made in 1910 (cf. Wilson, 1977). Wherever necessary, however, contradictions or information added by Buffalo-bird-woman during the same field season have been interpolated.

On the first day, Hides-and-eats explained that the best clay then obtainable was to be found at a place on the Little Missouri about 25 miles distant from the Reservation. In the past a superior clay was secured within a short distance of Like-a-fishhook village (Old Fort Berthold). It was important that the clay be free of dirt or sand, or the vessel would crack when fired. According to Buffalo-bird-woman, who remembered many of the details of pottery making, the clay pits near Like-a-fishhook village were still identifiable. The dark-colored clay obtained there was translated as "earth-sticks-small," because the clay when wet adhered to everything; when dry it crumbled into fragments. Another informant, Not-a-woman, added that a different variety, a yellow clay, was smoother and better adapted to pottery making. Since none of this assumedly preferred clay was available for the demonstration by Hides-and-eats some blue clay from outcroppings along the Missouri under the banks near Wolf-chief's cabin was obtained. In the old days it was customary to dig the clay at least a half a foot below the surface of the clay bed to insure both its cleanliness and freedom from roots and sod. About a peck of clay in a skin bag made a single load.

The clay was taken to Wolf-chief's cabin.

much as they can eat of the contents. The bottoms of these pots are of a convex shape; much care is therefore required to keep them from upsetting. For this purpose, when they are put to the fire a hole is made in the ashes to keep them erect, and when taken away they are placed upon a sort of coil made of bois blanc fibers. These coils or rings are of different sizes, according to the dimensions of the several pots. Some pots have two ears or handles, and are more convenient than those with none" (Henry and Thompson, 1897, vol. 1, p. 328).

Catlin agrees with other observers that the Mandan pottery was made of a tough black clay "baked in kilns which are made for the purpose. . . ." The vessels were said to be very hard (Catlin, 1842, vol. 1, p. 116). See also Will and Spinden, 1906, pp. 116-117 and De la Verendrye as quoted by DeLand (1908, p. 322).

The greater part of the morning was spent in preparing the clay and the other materials needed for the demonstration: water, an old gunnysack, and pounded-stone sand, the last actually made from a piece of rotten granite taken from the fire pit in Wolf-chief's sweatlodge. The sweatlodge fire pit, according to all accounts, was the customary place where the stones were obtained in the old days. The granite stones were fist size. (When red hot, water poured over them produced the steam for the sweatbath.) Hides-and-eats did not know whether the stones were ever burned especially to soften them. Stones for the sand used by the potter, according to the Hidatsa, must be burned until they "explode." Apparently, they were burned until they cracked or flaked, possibly with a sharp report. In all probability the sweatlodge firepit was the source of supply for most of the needed stones.

Hides-and-eats broke up a chunk of the rotted stone, a little larger than a fist, and set the resulting sand aside. In the old days, according to Buffalo-bird-woman, a stone hammer for this purpose was used. Hides-and-eats continued her preparations, spread the gunnysack, and laid the clay on it. Formerly, all informants agreed that a dehaired skin or a piece from an old tipi cover served this purpose. Then Hides-and-eats flattened the lump of clay with her palm and sprinkled it with the sand. The flat clay mass was folded over and kneaded for about 20 minutes; sand was added or a little water sprinkled on it with the palm as seemed necessary.

It was essential that the clay be kneaded to the correct consistency, soft, yet not too soft; it must be freed of lumps. Buffalo-bird-woman remembered that the clay was moistened before the sand was added and further, that the kneading was continued until the sand was thoroughly impregnated.

Hides-and-eats rolled the clay into a cylinder of the size she judged sufficient for the pot she was making. She set the clay roll on end and began to hollow out the inside with her thumb,¹

¹Maximilian's description of the Mandan method of pottery making, though obviously lacking in detail agrees, in the main, with the data recorded for the Hidatsa. "The

her palm meanwhile pressing lightly against the side. According to Buffalo-bird-woman, a fist-sized lump of clay was removed at this point.

She began to swell out the walls of the pot by placing her right hand inside the hollowed lump of clay and pressing with her knuckles. The neck of the vessel was shaped with the right forefinger and thumb; the finger was pressed into the soft clay to shape it. Sometimes, according to Buffalo-bird-woman, four equidistant knobs were formed on the rim of the pot, partly for decoration and partly to prevent the rawhide carrying thong from slipping off when the vessel was used to carry water. Occasionally, Hides-and-eats dipped her finger into water to make it run smoothly over her work. As the bowl swelled into shape, she tied a band of cloth around the neck to strengthen and protect it as she worked.

When she had rolled the lump into a cylinder to begin shaping the walls of the vessel, Hides-and-eats had also laid aside a smaller lump of clay for repairs during its construction as they might be needed. She now held the pot in her lap and molded and smoothed it, strengthening its walls occasionally with the repair clay as was required. She smoothed and

clay is of a dark slate color, and burns a yellowish-red. . . . This clay is mixed with flint or granite, reduced to powder by the action of fire. The workwoman forms the hollow inside of the vessel by means of a round stone which she holds in her hand, while she works and smooths the outside with a piece of poplar bark. When the pot is made, it is filled and surrounded with dry shavings, and then burnt, when it is ready for use. They know nothing of glazing" (Maximilian, 1906, vol. 23, p. 279).

Bradbury describes an entirely different technique for the Mandan: "I noticed over their fires much larger vessels of earthenware than any I had before seen, . . . They were sufficiently hardened by the fire to cause them to emit a sonorous tone on being struck, and in all I observed impressions on the outside seemingly made by wicker work. This led me to enquire of them by signs how they were made? When a squaw brought a basket, and taking some clay, she began to spread it very evenly within it, shewing me at the same time that they were made in that way. From the shape of these vessels, they must be under the necessity of burning the basket to disengage them, as they are wider at the bottom than at the top" (Bradbury, 1817, p. 158.)

polished the pot, dipping her forefinger in water and working the surface, but, at the same time, kept the fingers of her left hand inside the vessel under the place upon which she worked to strengthen it.

Hides-and-eats' eyes were dim. She asked Goodbird to point out any inequalities in the surface of the pot so that she could correct and polish them evenly. When the pot was shaped to her satisfaction, she removed the cloth band, shifted it a little, retied it, and set the pot aside, saying that she would let it partly dry before she continued to work on it.

By special request she undertook to add an ornamental design on the rim of the pot. She twisted a sinew into a single cord. She asked Goodbird to press the cord into the still soft rim of the pot with his thumb, thus adding a very simple pattern. Hides-and-eats believed that the decoration on the rim of a pot was always made with a single sinew. However, judging from the rim decoration on sherds from the old sites around Mandan, it is difficult to believe that designs on pots were always made by this method. Apparently, the many sherds examined were decorated by several such cords laid side by side on a paddle-like piece of wood with which the decoration was pressed into the soft clay.

It took Hides-and-eats about 20 minutes to pound the stone for the sand to mix with the clay. She spent an hour shaping the pot to the point where the sinew was pressed into it to form the design. At this point she requested that the pot be allowed to dry for a time.

If Wolf-chief's scales read correctly, the pounded stone weighed 24 ounces; only 10 ounces of the sand that resulted from the pounding were used. The wet clay (undried) pot weighed 4½ pounds.

After two hours when Hides-and-eats resumed the demonstration, she remarked that the pot had been left to dry too long and that it had dried more quickly than she had anticipated. With her bark beater¹ she began to pat or beat

the sides of the still moist vessel against a smooth quartz stone held inside in the area where the beater was being applied. She beat the walls of the pot until they were firm and dense, carefully smoothing its outer wall with her finger. After 10 minutes she set the pot aside to dry to a greater firmness.

After a lapse of 20 minutes she smoothed and polished the rim with a small smooth stone. The gentle beating with the bark beater was continued as she worked from top to bottom reinforcing any weak spots with a scrap of clay, wetting her finger to do so. At this point Hides-and-eats wrapped the pot in a piece of gunnysack to prevent it from drying too rapidly. She continued to smooth the interior with her finger and thumb.

On the second day of the demonstration Hides-and-eats resumed working with her bark beater at ten in the morning. She explained that she had to beat the pot at intervals until the following day when it would be polished with a stone. She continued the beating. Neither the stone nor the beater were moistened at this stage of the demonstration; wetting was unnecessary because the clay was now drier. The drier clay did not cling either to the beater or the anvil. According to Hides-and-eats accidents were liable to happen on the second day; the pot might crack. For this reason it is beaten all day as a preventative measure.

Wolf-chief believed that the best ancient pottery was beaten almost uninterruptedly from the first shaping of the vessel until the clay became firm and nearly dry, a process that continued for two or three days. Another informant ventured the opinion that thinner-walled vessels outlasted those with thick walls. A thick-walled pot provided an example of poor workmanship.

Curtis writes that the Hidatsa pottery was undecorated, made of blue clay tempered with granite or some other hard stone. After kneading, the clay was "rolled into a sheet, which was then turned up at the edges and modelled into final shape. . . ." A stone was held inside against the walls of the pot as it was beaten on the exterior with a wooden paddle. Then it was dried for a few days and then fired "in the open air with wood placed all around it." (Curtis, 1909, vol. 4, p. 140).

¹According to Buffalo-bird-woman, the beater was of cottonwood bark; its smooth side had a pattern of shallow grooves. These corrugations were intended to continue to knead the moist clay as the vessel was beaten.

After beating, the pot presented a much more finished appearance. Hides-and-eats discovered a slight imperfection in the interior which she dug out with her finger nail and mended with a bit of the repair clay, first spitting on it to make it stick. The inside was smoothed with a stone. In this case a smooth quartz pebble was used as a polisher.

Usually a pot was completed in three days; it was fired on the fourth day. After firing, the pot was rubbed with fat and finished.

According to Hides-and-eats this was the first time she had ever made a pot inside the house (or earthlodge). She had been taught to work unobserved¹ and had always gone out in the hills to make pottery. Her statement that only one pot was made at a time was not confirmed.

On the morning of the third day Hides-and-eats sent word that she had dried the pot under Wolf-chief's stove so that it was ready to be fired sooner than she had anticipated. From the timber along the Missouri she had collected about a bushel of bark, chiefly cottonwood, which lay near Wolf-chief's sweatlodge fire pit.

Hides-and-eats scooped up about a half-pint of burning charcoal from the fire with an old skillet used like a shovel. She dropped the burning coals into the pot, shifting it around from time to time so that the pot would be heated evenly. After five minutes she raked additional coals out of the fire and dropped them into the pot. In the old days, the pot was usually set in a bark ring during this preliminary heating. A ring, improvised with a wire bent into a circle approximating the size of the base of the pot, was wrapped with cloth. Hides-and-eats set the pot in the ring, making it convenient for her to shift it about in a half recumbent position. The pot was sufficiently heated in 10 or 15 minutes.

Then at Hides-and-eats' request Goodbird set the pot, still half-full of burning coals, on the fire. A handful of dry grass which she thrust into the pot caught fire. Coals were heaped

outside the pot more than halfway up its walls. Because the clay used for this pot was inferior in quality, flakes flew off its sides like a minor explosion.

The vessel was removed from the fire before it became red hot because the poor quality of the clay prohibited prolonged firing. After standing about two minutes the coals were removed; the pot, still hot, was well oiled inside and out with a piece of uncooked suet. The outside was oiled first, then the inside. The left hand was protected by a cloth. To reach the hot interior of the pot the suet was impaled on the end of a stick. Buffalo-bird-woman had no recollection whether or not pottery vessels had been greased in this way. However, her description of the firing process included additional details which may clarify the procedure at this point.

When a number of vessels² were ready, dry bark was brought from the woods, set afire, and burned to coals which were spread, and the vessels were set on them, mouth up. The glowing coals were raked up around the pots and more bark added to the fire. This fresh bark, however, was not allowed to come in contact with the pots. When their firing was completed the vessels were glowing and a bright red. However, they were not removed from the fire until it had burned down to ash and the vessels had cooled. Buffalo-bird-woman did not recall whether either live coals or dry grass were placed in the pots before they were set on the fire, as Hides-and-eats had demonstrated.

Occasionally a pot was damaged during firing by exploding flakes of clay. The informant believed that this was caused either by an inadequate mixing of the sand and clay or an insufficient beating. Such a damaged pot was unsaleable. It was used to parch corn.

When a pot had been fired and it had its first use to boil pounded corn, leftover cooked corn was rubbed over the new vessel to be absorbed into its porous sides.³ This procedure was be-

¹Compare a similar statement with reference to making baskets, in which connection the reason given was the desire to withhold knowledge of the process unless payment was received therefor (p. 253).

²It is implied at this point that a number of pots were made at one time and were fired simultaneously. Contrast the contradictory statement by Hides-and-eats (p. 252) that only one pot was made at a time.

³Curtis's description of Mandan pottery making varies

lieved to make the pot firm. The informants failed to agree on the details at this point. According to Buffalo-bird-woman, the boiled corn with which the pot was rubbed consisted of the thick liquor which rose to the top when pounded corn was being boiled in another pot and was then applied to the newly finished vessel. However, since she also offered the information that the residue of any boiled corn was rubbed over the pot in which it had been cooked to make the vessel look better and last longer, it is quite possible that both informants were correct.¹ They also offered a prayer to the pot: "I pray you to try to be strong, to try to last long!"

Pottery vessels were always stored in a safe place, in the rear of the earthlodge, close to and under the lean-to puncheons, customarily near the place where the family's sacred objects or shrine was kept. Pots were never placed on the bare ground. Pot rests were made of willow rings bound with bark. The pots were set into these rings, one in each ring. When setting a clay pot on the fire a hollow was dug in the ashes to fit its base to obviate the possible danger of its falling over.

Clay pots were sacred objects to the Hidatsa. When a pot set in a safe place cracked, it was believed to be a warning of approaching death. The Hidatsa believed that

somewhat from his account for the Hidatsa previously quoted. The Mandan mixed the clay with powdered granite or sandstone. Instead of rolling the mass out flat, a depression was made in the lump of clay and the pot modeled with the aid of a piece of bark and a smooth stone. The pot was then dried and fired. It was daubed with scum from boiling corn to render it less porous. Before drying, the pots were often marked with a decorated paddle, a cord, or a piece of coarsely woven cloth. He also notes the use of pot rings made of willow bark (Curtis, 1909, vol. 5, pp. 11-12).

¹See also, Wilson, 1917, p. 61. "The Riccarees and Gros Ventres [Hidatsa] were, however, in more respects than one, in advance of the other prairie Indians. Out of a peculiar kind of clay they fashioned large pots of various shapes; after a time, from the effects of heat and use, these became hard and black like iron, and so strong that an ordinary blow with a stick or stone caused no injury. Some of the Rees still possess a few of these curious vessels, and regard them as relics of great value" (Boller, 1868, p. 259).

any pots that were being made during a thunderstorm were certain to crack. For this reason, pot making was suspended during a storm.

The Hidatsa kept a sacred pot, a very large one, at the Knife River villages. It was in the custody of the Awaxawi or Peaked-hill villagers. During a drought the men beat the pot and sang songs to bring rain. Incense was burned in front of each of the four great supporting posts of the earthlodge. The empty pot was carried from post to post, where incense was offered, the pot was beaten and sacred songs were sung until all four posts had been visited.

During the smallpox year, the keeper of this sacred pot buried it in a cache pit. He died without revealing where he had buried the pot. Consequently, it has been lost to the Hidatsa.

HORN SPOONS

Spoons made of Rocky Mountain sheep buck and ewe horn and buffalo horn² were formerly in common use. Old buck horn was the preferred material. A spoon made from the horn of a young sheep was softer and had a tendency to return to its original form. Buffalo horn spoons were made only of bulls' horns; cow horns were too small; moreover, these were also easily bent out of shape. The spoons varied in size.³

An identical routine was followed in fashioning a spoon from either material. According to Buffalo-bird-woman, who had observed her father, Small-ankle, making spoons, the horn was roughly blocked into shape after boiling. Then its pointed end was removed with a serrated knife. In the next step, a cone-shaped section was gouged out to hollow the horn. It was heated again in boiling water. During this heating process, a hole the size and shape of the horn was dug in the ground. A stone approximating the desired depth and form of the bowl of the spoon was placed in the hollow of the horn, which was set into the prepared hole

²Ladles were also made of these materials (Matthews, 1877, p. 18).

³The horn spoons of the Mandan held as much as two or three pints. Cf. Catlin, 1842, vol. 1, p. 116; Maximilian, 1906, vol. 23, p. 274; Will and Spinden, 1906, p. 114.

in the ground. By standing on the stone until the horn was cold, the person making the spoon exerted pressure on the horn, expanding it, and also insuring its permanent retention of its new form. In the next step, the edges were trimmed, and the handle was bent into shape, oiled, and held over the fire to soften. To accomplish this shaping, Small-ankle customarily thrust the smaller end of the horn into the eye of an old iron ax head and held it in the desired position until it no longer retained any heat but would hold its shape. The shaping stone varied with the size of the spoon needed.

Sometimes a buffalo horn was used as a mortar in which ripe juneberries were crushed with a stick used as a pestle. The resultant pulp was said to resemble jam. A stick with one end that had been chewed to break the grain of the wood was used to collect the berry pulp from the horn. The pulp was eaten directly from the stick.

BUFFALO HEART SKIN BUCKETS

A bucket-like container made of the pericardium of a buffalo was the typical vessel for carrying water. Two forms were in common use. The Museum collections contain models made by Wolf-chief and Buffalo-bird-woman.

One of these vessels is bound at its mouth with a wooden rim. It has a long handle, presumably to facilitate dipping the bucket in a stream or spring without stooping. This prevents being caught at a disadvantage in a surprise attack. The second bucket is an example of the form commonly used in the household. Two small sticks sewed to its mouth served both to strengthen it and to act as points of attachment for the sinew handle. When dry and soft and not in use the buffalo heart skin bucket was rolled up and stored in a pouch. It was also often used¹ as a food container carried on the hunt or on a war party.

Wolf-chief, reminiscing on the various uses of the type of bucket, stressed the importance and danger of the position of the "worker" or water carrier of a war party. Carrying water for

a war party was believed to be a deed of honor subsequently to become the source of an enviable boast in the public gathering which followed its return to the village. On such an occasion a man might rise to vaunt his prowess, saying "I was out on a war party. I asked to carry the bucket. I supplied the camp with water. When an enemy was shot down, I ran forward and struck him with my bucket." Another participant in a war party might brag, "I was a member of a war party. I asked them to make my bucket. I always carried it faithfully. I went forward as a scout. I was the second man to spy the tipi of a Sioux."

An old tale relates that Itsikamahidic, or First-Worker, supplied water whenever a society ceremony was held. The heart skin bucket was believed to have been one of the medicine objects Itsikamahidic hung inside his earthlodge near the door. In the earthlodge the heartskin bucket was hung on a hook.

BUFFALO PAUNCH BUCKETS

The buffalo paunch or its inner skin was also frequently used not only as a bucket or water bag,² but occasionally also as a cooking vessel. All those resorts to a buffalo paunch container were regarded as temporary. During hunting excursions, according to Wolf-chief, the buffalo paunch vessel had a special value. Frequently meat was cooked in it with water and hot stones. Three or four members of the hunting party held the paunch at the corners while the hot stones brought the water to a boil; sometimes its corners were held up by sticks driven into the ground, or it was laid in a hole dug in the ground. In winter, if water was otherwise unobtainable or the water holes were coated with ice, snow was melted in the paunch this way.

The paunch also frequently served as a bucket or water-carrying vessel. According to Goodbird's wife, a Sioux, she recollected that, as a child (about 1878) when the family was engaged in a hunting excursion, her old grand-

¹Cf. Buffalo-bird-woman's narrative in which she explains its use both as a water vessel and container for meat (Wilson, 1924, p. 269).

²Cf. Henry and Thompson, 1897, vol. 1, p. 349; also Wolf-chief's narrative, Wilson, 1924, p. 225; 1928, pp. 110, 111, 112-113. For the Crow use of the buffalo paunch see Curtis, 1909, vol. 4, p. 21.

mother customarily filled a fresh buffalo paunch with water and slung it over a pony. When on the march, water-filled paunches were loaded on the travois so that both the children and the dogs could quench their thirst. In camp, the water buckets were hung beyond the reach of the dogs.

In the earthlodge, it was not an uncommon practice to store the day's water supply in a buffalo paunch bucket. The paunch bucket was hung on a wooden hook tied by a thong to one of the outer supporting posts of the earthlodge roof or at any place where the roof rafters were within reach. Sometimes two or three water-filled paunch buckets were hung in this way, insuring as much as a two-days' supply of water. When its contents had been used up the paunch bucket was carried down to the river to be refilled with water. Customarily, it was only about half-filled with water to prevent the membrane from breaking by the weight of the water in the unavoidable jolting as it was borne up the steep river bank on the back of the water carrier. After the half-filled paunch had been hung in the earthlodge, it was filled quite or nearly full with water fetched in the smaller buffalo heart skin buckets.

Pottery vessels were in constant use but were not very often used to carry and store water because of the obvious danger of breakage.

If carefully handled, a buffalo paunch bucket lasted about a month. It was necessary to keep it in constant use, lest it spoil, because it was impossible to dry it and use it again, as was the customary practice with a buffalo heart skin bucket.

Wolf-chief made a model of a buffalo paunch bucket from a steer paunch to illustrate its use. He fashioned it by merely thrusting a skewer through the membrane at the mouth of the bucket. A thong passed over and around the skewer ends served as a carrying strap. The completed model of the paunch bucket, filled with water from the Missouri River, was used about one day. After the water had been in the paunch about an hour it turned a filthy green, presumably from the juices of the grass the steer had eaten. Despite its appearance, however, the water was pure and wholesome in

taste, apparently unaffected by whatever had caused its uninviting color.

DICE BASKETS

Small platters¹ or flat shallow baskets were used to play a dice game. Similar baskets with a hole in the bottom were made to use in the ceremony of the adoption of the sacred child.

Dice baskets² were woven from small willow shoots or, preferably, from the roots of the same plant. The baskets made of the roots were softer and more pliable than those made from the willow shoots. In the spring, when the Missouri River was free of ice, long willow roots were easily obtainable along the river bank. These were recognized by their sweetish taste. Children sometimes chewed the roots and relished their sweetness.

STORAGE SWINGS

A storage swing hung inside the earthlodge a little behind the left of the two rear main posts seen as one faced its door. Such a swing was also suspended at any convenient spot between the beds and the four main posts but never within the square enclosed by the four main house posts. Buffalo-bird-woman, the informant, did not know whether more than one such storage swing was ever used in an earthlodge. The swing consisted of two looped lariats suspended from one of the lodge rafters. A circular rawhide shield about 18 inches in diameter, hung above the stored bags, was intended to serve as a guard to prevent mice from descending along the lariats.

BACKRESTS

The willows intended for the construction of a backrest were cut in late May or early June. Straight shoots, pencil thin, were selected. Usually two individuals were capable of carrying all the willows necessary to construct a backrest. The bark on the willow shoots was

¹It is not clear from the context whether platters were made of wood or were woven.

²"They make wicker work very neatly, flat and in baskets" De la Verendrye wrote of the Mandan as quoted by DeLand, 1908, p. 322.

stripped off with the teeth and the resultant rods were tied in bundles of 10. Three bands of the bark were peeled from each willow, one at either end and one in the middle, to assure that each shoot dried without warping. Bundles of willow rods, spread on the corn-drying stage, dried in a day. Because white rods were the most desirable, these were protected from any moisture that might discolor them.

A fragmentary account of the method of straightening these willow rods as practiced by the members of the Dog Imitators society was recorded. A feast either followed or preceded the straightening of the rods. Neither confirmation nor dissent for this sequence was recorded. In the customary procedure the man sighted along the rod to determine its condition; if it was crooked, it was straightened either between the teeth or with the hands. It was claimed that when the former method was followed the rod remained permanently straight; when the rod was straightened with the hands it had a tendency to warp.

The actual construction of the backrest¹ was a woman's work. The completed backrest consisted of two willow mats, one at the head and one at the foot; each rested on posts. Four twoply sinew strands the desired length of the mats were prepared. With an iron awl, four equidistant holes were pierced in each willow rod. The sinew cords were threaded through the holes. A tiny ball of black cloth threaded on each sinew cord between each three willow rods served as a kind of brake between the rods. The construction continued for a distance of about 2½ feet, after which point the mat was completed without the cloth balls. As the willows were strung they were carefully alternated so that the root end of one rod would be to the right and the root end of the next rod would be to the left, until the two mats had attained the desired size. Upon completion of the two mats one was laid on a tipi skin prepared for the purpose. A line of native hemp was dipped into some red

paint and stretched along the side of the mat to mark the place where the willows were to be trimmed to give the mats their correct shape. The ends of the willow rods, two or three at a time, were laid on a small log and chopped off by striking the back of a knife with a stick. A third mat, either of willows or rushes and somewhat wider than the greatest width of the two end mats, was placed on the floor between the two end mats. At the lower edge of either end mat the ends of the four sinew cords were knotted to prevent the willow rods from slipping down.

The backrests hung from two pairs of posts, each approximately 6 or 8 inches higher than a man's head. These posts were sunk into postholes about 1 foot deep. Each pair of posts sloped not only backward from the backrest mats but also toward each other. The top of each post was carefully rounded off with a knife. The upper end of each of the end mats was lapped over the top of the post against which it hung; two thongs bound to the last two willow sticks were tied around the posts to hold the mat in place. The lower ends of the mats touched the floor.

The central or floor mat was about 6 feet long and was ordinarily covered with a buffalo robe, hair side up.

GRASS CORD

As described in the publication on Hidatsa agriculture (Wilson, 1917, pp. 73-74), squash were dried and stored for winter use. To prepare them for drying on a scaffold they were sliced and strung on a twisted grass cord. Owl-woman, in 1916, demonstrated the making of such a cord from beaver grass (as she named it). The beaver grass previously gathered in preparation had been carefully dried and then dampened.

First, two strands, consisting of two or three stalks each, were tied together at their root ends. Owl-woman tied the end of her loosened moccasin string over this knot. Then, with her right hand, she twisted the right-hand strand several times toward the right; then she shifted, or lapped, the twisted strand back to the left and over the other, untwisted strand. The left-

¹The Mandan backrest was about 10 feet long and 4 feet wide. It was made of willow sticks of equal diameter held together at intervals of about a foot "by threads of their own manufacture" (Henry and Thompson, 1897, vol. 1, p. 340).

hand strand now became the right-hand strand, which was twisted to the right and lapped over to the left over the first strand, which now again became the right-hand strand. The latter was seized in the right hand, twisted to the right, and lapped over to the left, as before. The process was continued until the cord had attained the required length. Thus the string was twisted by the continued twisting of each single strand to the right; by lapping these single strands over each other, the two doubled strands were automatically twisted to the left. As the work proceeded, each strand was lengthened as required by adding more grass stalks. These were always laid with root ends toward the moccasin.

As the length increased Owl-woman wrapped the completed section around her foot, not only to keep it out of her way but also to facilitate drawing the untwisted ends of the strands taut as she worked. In this way, the untwisted ends were maintained at a convenient length.

SAGE

The Hidatsa recognized three varieties of sage that grew on their reservation. The first, "no-top sage," was used as incense in the sweatlodge and in the fish trap to brush over oneself as a means of warding off evil influences. The sage also had a special function in the eagle hunter's camp. If a menstruating woman happened to be in such a camp, she was called into the conical bark and earth-covered hunters' lodge (Wilson, 1928, pp. 168-169). Four balls of "no-top sage," painted red, were set on live coals of fire at four different places in the lodge. As these balls burned, the menstruating woman walked from one to the other. She stood over each burning sage ball in turn covered by her blanket and inhaled the smoke from the burning sage. Then she left the lodge. The directions east, north, west, and south marked about the lodge were ceremonial. Thus, no matter how the lodge was pitched, the right as one entered was reckoned as the east.¹

¹Wolf-chief, in his account of eagle trapping (Wilson, 1928, p. 168) refers to this custom with respect to a menstruating woman. A diagram in the publication (Wil-

son, 1928, p. 144) represents the hunters' lodge as opening to the north. It is possible that the lodge did in fact face north. Careful inquiry was made by Wilson to clarify this point. However, in his account, Wolf-chief has reversed the order of the woman's passage about the fire pit. When Bad-horn chose the site of the hunting lodge in the newly founded village at Like-a-fishhook bend, he faced the lodge northward because his gods were bears, and "mouths of bears' dens always face the north" (Wilson, 1934, p. 353). To the Hidatsa a "bear" signifies a grizzly. The eagle hunters were said to be under the patronage of the black bears.

When the woman had purified herself through this ritual, the hunters would perhaps catch an eagle the next day. However, if the menstruating woman failed to inhale the black sage smoke the hunters believed that the virtue of all their sacred mystery objects would be diminished.

"Sage-that-has-top" is precisely like "no-top sage" except that it has a head and bears seeds. It was customary for members of the Goose Society to carry a bunch of this variety of sage under the left arm.

"Sage-at-lake" or "lake-sage" is again the identical plant. However, it grows in old water beds and damp places. It was frequently mixed with white clay and used by warriors as body paint when on a war party. It was believed to give them strength. After an individual had painted himself he smelled of the sage if he sweated. Mixing the sage with white clay was believed to be a religious or ceremonial procedure. The mixture was said to give power to a man and made him run successfully. Wolf-chief's father habitually burned this kind of sage for incense. He would set the burning sage on the ground between his feet, draw his robe over his head, and inhale the smoke. After a few moments of exposure to the smoking sage he threw off the robe and vomited. He believed that inhaling the aroma of the sage helped to maintain his health. Wolf-chief claimed that inhaling the smoke of burning sage was very efficacious and also that it enabled one to run long distances.

"Sage-of-the-kind-that-is-straight," or "straight sage," was worn by the Sun Singer during any sacrifice² made to the sun. In Big-

²Goodbird, interpreting, often used "sacrifice" as a syn-

bird's ceremony the singer bound a bunch of this type of sage on his head; in the Sun ceremony a single plant was fastened to the back of the head. The crown was made of the big feltlike flakes of hair shed by a buffalo. These sections of matted hair that flapped in the wind could be observed during the spring buffalo hunt as the buffalo galloped along. The spots of white clay represented hail. One end of a string was embedded in a fragment of wet clay molded into a little ball. When the clay ball dried, the string was held fast and it was then possible to tie it to the buffalo hair crown. The sage plume worn in the Kadúteta ceremony was an exact replica of the Sun Singer's sage plume.

When boys burned their wrists to test their courage they used "black sage." So far as Wolf-chief was able to recollect it was used ceremonially only in the Sun offerings. When a flag was offered [*sic*] a little bunch of "black sage" was bound to the top of the flag pole. Because of its aromatic odor, it was also frequently used as a perfume.

In old as well as modern times, Hidatsa doctors used "black sage" charcoal as a cure for rheumatism. One or two pieces were placed on the rheumatic area. The sparks were allowed to burn down to the flesh, in exactly the same way as boys in the past used to do in play.

MUSICAL INSTRUMENTS

The Hidatsa made whistles¹ of the wing bones of birds and from reeds; the first-named were used by the members of the age societies, the latter by boys.

Red-wing, a blind Mandan who lived in the village at Like-a-fishhook bend, played a flute. It was made of wood, about 2 feet long and

about 1¼ inches in diameter; it had one large stop and four small stops. He frequently played at lodge doors in the evening and often lent the flute to young men to serenade their sweethearts.

Wolf-chief, in 1910, showed Wilson a one-stop flute made of a reddish cane and about 3½ feet long. Two eagle plumes were attached to the flute. It had a quill tongue with which it was blown. The flute had belonged to Wolf-chief's father who said that it first had appeared to him in a vision during which he was told to call it undying-wood. He always carried such a flute; he never laid it down carelessly. If he found himself in a situation that made it impossible for him to carry it, he hung it up. Wolf-chief recalled that once the flute was broken. His father mended the flute with wood splints bound to it with sinew. In a few days, the broken place in the flute had vanished and had "healed like a wound." Wolf-chief carried the flute when, on various occasions, he was courting, standing on the earthlodge roof, or wandering through the village. Finally, the flute was destroyed in a fire.

GLUE

A buffalo neck skin that had been stripped off quite close to the head was used to make glue. The skin of a very old bull furnished the best material for glue. It was cut into inch-wide strips each 2 or 2½ feet long. The hair on these strips was singed with a brand from the earthlodge fire. The scorched surface was carefully scraped to remove every adhering particle of charcoal.

The large tendons of the bull's leg and its penis cut into similar strips were also used. The penis was used because the Hidatsa believed it to be charged with a gluey substance; ordinarily, it was discarded after a kill. If a large quantity of glue were needed the tendons of all four legs of the bull were used. Usually the tendons from two or three of the legs sufficed. The yellow-white tendons between the knee and the toe were also taken.

The cut strips of skin, tendons, and penis were hung on the drying pole over the earthlodge fire. For convenience, the drying pole

onym for the self-torture of a "faster," especially when he cut off a finger or strip of skin as an offering.

¹See also Matthews, 1877, p. 18. Boller, 1868, p. 83, mentions a drum which he states was very much like a large tambourine. For the Mandan, Maximilian (1906, vol. 23, p. 298) lists the flute and drum. Will and Spinden (1906, p. 114) note various types of whistles. Densmore describes not only a number of whistles and flutes of box elder attributed to the Mandan and Hidatsa, but a variety of rattles, the latter used mainly by the age societies (Densmore, 1923, pp. 8-11).

was swung about 7 feet above the earthlodge floor, high enough to escape burning and yet within reach. A slow fire was kindled and kept burning. In the course of two days and nights the strips dried in the smoke.

On the third morning, when sufficiently hardened, the strips were taken down and placed in a pot in which they were boiled throughout the day, the following night, and all the next day. With the approach of evening, the pot was removed from the fire, and its contents were cooled but not permitted to become quite chilled. In the next step, a stick about 2 feet long was cut. One end was left flat for a distance of about 5 inches. This flattened area was shaved thinner and broader than the remainder of the stick, which was approximately the thickness of a finger and terminated in a point. The glue was collected on the spatulate end of the stick; its pointed end thrust into the ground as the work continued. Four or five such glue sticks were usually prepared simultaneously.

By the time the sticks were ready, the glue mass, well-boiled, had partly cooled. With one of the glue sticks held in his left hand and a convenient small stick in his right hand, the glue maker collected the floating glue on the stick and, with a twisting motion, transferred the glue to the spatulate end of the prepared stick. When glue to a depth of two fingers had been transferred to the glue stick, it was completed. Its sharp end was thrust into the ground to await the coating of the additional glue sticks. When all the sticks had been properly coated, they were gathered up and tied into equal-sized bundles to the opposite ends of a short thong, a foot or two long. The thong was cast over the drying pole. The glue sticks dangled over the fire for a day and a night. The glue solidified and became as hard as stone.

Despite the fact that the glue-coated ends of the sticks were in contact, they did not adhere to one another, because as soon as the glue was taken from the pot and began to cool a crust began to form on the outside of the glue coating it.

The glue stick was stored in a feather case which consisted of a small mat made of grass

stems in which feathers were rolled up with other materials for arrow making.

According to Buffalo-bird-woman, the glue required to back a bow was skimmed directly from the boiling glue in the kettle. The glue stick was not used for this purpose.

FIRE AND FUEL

The Hidatsa seem to have practiced conservation of fire. When a fire in the earthlodge was not needed immediately, for example, or when cooking had been completed, a small log with one end still burning was buried in the ashes. When it became necessary to rebuild the fire, the smoldering log was withdrawn. Small sticks laid against its burning end were fanned into flame either with a goose wing or a piece of hard dried skin.

Buffalo chips, which burned almost as well as dried wood, were gathered in blankets or robes and brought into camp for fuel.

The scarcity of wood suitable for fuel near Like-a-fishhook village made the driftwood in the Missouri River especially desirable. In early spring and in June, when the melting snows caused the Missouri to rise and incidentally carry with it an abundance of driftwood, the Hidatsa spent the short 10-day season gathering as much wood as was possible.¹ Later in the season when the river had fallen, driftwood was frequently found deposited on the sandbars and sandbanks. On such an occasion, men, women, and children worked incessantly all day at the river. Customarily, a wooden hook cut from a small ash fork (Wilson, 1924, p. 209) and lashed to a tipi pole served to draw the logs in as they floated by. Frequently, it became necessary to wade into the river up to the neck, nor was it unusual to swim out into the river to capture an especially desirable log. The women piled up the wood that was dragged in from the river and thrown ashore. If the logs were very heavy the men helped the women to carry them. Up to this point the

¹Cf. Boller, 1868, p. 321; Maximilian, 1906, vol. 24, p. 78. The Mandan also followed this practice (Henry and Thompson, 1897, vol. 1, p. 341; Will and Spinden, 1906, p. 128).



FIG. 15. Frame of old-fashioned earthlodge. AMNH negative number 15981.

whole procedure was a cooperative family affair that involved no marked division of labor. However, cutting the wood and transporting it to the village was definitely woman's work. The logs were cut into varying lengths and were carried to the village, either on the dog travois which were loaded at the river's edge or on the backs of the women. Unusually long sticks of wood were not laid on the travois principally because they were liable to be caught on the drying stages when the dog travois were led through the village.

It is possible at this point to form a mental picture of a Hidatsa woman plodding along, carrying a log or a bundle of sticks on her back, followed by her dogs dragging her loaded travois.¹ Customarily, she dropped her own burden under the corn-drying stage, and left the logs there to dry in front of the earthlodge. Unloading the travois, she tossed the sticks up to the platform of the drying stage. Dried wood

was frequently stored on the corn-drying stage platform. By removing the ladder the Hidatsa woman placed the fuel out of reach of some lazy woman who might be tempted to steal it from a neighbor's pile. Wood was also stored on the roof of the covered entranceway of the earthlodge. These were the only two storage places outside the lodge. Fuel was removed indiscriminately, as needed, from either of the two storage places. The woman customarily mounted the stage by means of the ladder and threw down some sticks. She carried them into the earthlodge in her arms, depositing them in the first two sections behind the posts back of the corral. The sticks were not stacked in any special order but were merely kept from rolling into the lodge by retaining stakes set up in front of the pile.

The wood supply in the summer earthlodge was small compared with the quantity necessarily stored in the winter earthlodge. During the summer an emergency supply was stored for possible use during inclement weather. In the winter earthlodge the woodpile was necessarily large.

¹See Boller 1868, pp. 193-194 for an animated description of gathering and cutting wood. Cf. also Maximilian, 1906, vol. 24, pp. 65-66.

LIFE CYCLE

CHILDBIRTH AND INFANCY

A child is born because begotten by a man; yet the Hidatsa say its real origin is in a spirit, a belief for which no additional elaboration was recorded. They know that a woman conceives following intercourse with a man, yet they say the spirit of the child has its origin elsewhere—an animal, a bird, or some not identified object. Two-shields and Son-of-a-star professed to remember the very camp whence they had come as spirits to choose mothers and enter them to be born. The birds and animals that chose mothers did not come from the children's or babes' houses¹ but from some other place or places. Some infants had their origin in these babes' houses. The Hidatsa believe that in olden times there were several such houses. One was a sand hill near the mouth of the Knife River, whence, in the mornings, children's tracks would be found in the sand, and the ground would be worn smooth.

Married women visited these places to deposit offerings and to pray for their desired sex preference of an infant. It was said that such prayers were always answered by the birth of a child. Barren women also prayed at these babes' houses; under these circumstances a pair of moccasins was deposited on the hill, and the women prayed, "You see, I am poor. I want a boy baby (or a girl baby). I am lonesome. Come to me, one of you. I want a child."

Because the children's or infant's house was

¹Matthews's (1877, p. 51) account of the House of Infants, as he names it, varies partially in detail. The infants lived in a cave; they emerged only at night. A man desiring progeny fasted in the vicinity of the cave; if his fast resulted in a vision of the infants, he knew he would become a father within a year. Under similar circumstances a woman deposited an offering consisting of a tiny ball and bow and arrow. If subsequently, the ball was missing, she believed that she would soon become the mother of a girl; if the bow and arrows disappeared her child would be a male. See also Long's account (James, 1823, vol. 1, pp. 274-275).

actually a sand hill, it was said that an infant, when born following the prayer and offering, was almost always light-skinned and its hair almost yellow, resembling the color of sand.

According to Buffalo-bird-woman, the Hidatsa recognized that the easiest births occurred when the mother was about 20 years old. She herself was 30 when Goodbird, her only child, was born, following prenatal pain.

When the birth of an infant was imminent,² preparations were made in the earthlodge. All its occupants were dismissed except the expectant mother, her mother, the woman who acted as midwife, and her assistants. Every movement was as subdued as possible; voices were hushed. A similar restraint was also enjoined for 10 days subsequent to the birth of the infant.

Two light posts each about 3 feet high and 2½ feet apart were driven into the earth floor of the earthlodge where the bed was to be set up. The bed was 4 to 6 inches thick. It consisted of dry grass which had been especially gathered. The bed was covered with a buffalo robe. The parturient woman knelt on the robe, grasping the two posts with her hands for support. A buffalo calfskin, invariably a tanned skin, was placed in readiness to receive the infant after it had been washed with the warm water that had also been prepared.

A Hidatsa tale purports to explain the use of the tanned hide. It relates that Itskamahidic once asked his wife, "After I kill a buffalo and flay it, the skin will be ready to wear, will it not? What do you think?" "No," she answered, "in that event, we women would have too easy a time. I want to work!" "Good," said Itskamahidic, "So be it! The hide will be

²Matthews (1877, p. 50) mentions various food taboos in connection with child-bearing: a pregnant woman must not eat of a mole or shrew lest her child have small eyes; if she eats porcupine, her offspring will sleep too much when grown up; if she partakes of turtle, the child will be lazy. See also Bowers, 1965, pp. 126-129.



FIG. 16. Wolf-chief's earthlodge. AMNH negative number 286350.

useless until it is tanned; it shall be woman's work to tan it."

The Hidatsa believed that childbirth would be more difficult if the mother were in a reclining position and that she was liable to be injured. However, some women did recline and did not kneel in the more customary position. Sometimes accidents happened during childbirth. Sometimes the mother was torn or the womb became everted. Sometimes this was remedied as the woman sat on her heel and pressed upward on the parts, forcing them into place.

Some women functioned as professional midwives. The expectant mother notified the midwife in advance as to the time when her services were likely to be required. She was summoned when the pains began and hastened to the scene. One of her duties was to straighten the infant's head. To the Hidatsa, the head of a newborn infant often seemed misshapen and out of proportion—either too long, too short, or asymmetrical—so the mid-

wife kneaded the infant's head with her palms to bring it to normal shape. It was believed that if this were not done, the deformity would continue throughout an individual's lifespan.

A medicineman¹ might also be present at the birth; if they were able to do so, the family often sent for one. He sang sacred songs, he prayed to animal and other sacred spirits, and he might even administer medicine to the woman in labor. The medicines were presumed to relieve pain. Buffalo-bird-woman stated that there were many pain-killing medicines, but she named only one, called "big medicine." She described it as a plant that grew in the timber to a height of 5 feet, used as a kind of universal cure-all by her people. Both the songs and medicine were presumed to ensure a nor-

¹Maximilian (1906, vol. 23, pl. 382) implies that the medicineman was summoned when delivery was difficult. Under these circumstances, the medicineman smoked with the husband and rubbed the patient's back with a fox or wolfskin cap, singing and rattling, simultaneously.

mal birth. The medicineman never handled the new-born infant but departed immediately after its birth. Wolf-chief related one version of the origin of the medicineman's power and influence in childbirth as follows:

"Two men of unknown origin, one foolish, the other wise, traveled everywhere. At a specific place they discovered a boy whom they called 'grandson.' The two men were butchering a buffalo cow when the boy came to them and stood nearby.

They opened the buffalo's uterus; they found a foetal calf with short yellow hair. The boy was frightened. One of the men ran toward the boy, playfully, as if to seize and drag him to the calf. The boy ran to a tree. As the man gained on him, the boy climbed the tree and hung, clinging to the branches. The man acting playfully hung the buffalo calf in the tree beneath the branch where the boy was suspended.

"The two men ate raw kidneys and liver of the buffalo cow. They departed. They went all around the world. Finally, they returned to the place where the boy had climbed the tree. 'Let us see how the boy fares,' they said. They found the boy in the tree, alive, but very thin. He had passed a year in the tree. The buffalo calf, now dried to a hard skin, hung in the branches below the boy. The foolish man said, 'We will take the boy from the tree if he will pray to us and perform the ceremony we will teach him. However, he must collect many robes and summon the medicineman and provide a feast.' They instructed the boy. 'Yes,' he answered, 'I will summon all the medicinemen and conduct a ceremony. You two shall be my gods.'

"The two men lifted the boy down from the tree. He was very thin and poor of flesh as if he had starved. The wise man drew an arrow, fitted it in his bow, aimed it high, and said, E he! He shot the arrow over a nearby hill. The two men and the boy climbed the hill. On the other side in the valley, they found a fat buffalo that had fallen with an arrow in its back. They butchered the buffalo and anointed the boy with the fat. He grew stronger.

"Now," the men said, 'return to your grandmother and collect many hides. When everything is ready, we will come, and you shall have a ceremony for us. We will not come alone but will be accompanied by our friends.'

"The boy hunted for a year; he collected many hides. Then he called, 'You two men, come! I have prepared everything.' They arrived with their friends, with birds, snakes, and many animals. When all had assembled, the two burned incense and called to the boy. 'Come!' The boy obeyed. The two men held him in the incense with one hand on either side of

the boy. As they sang mystery songs, they motioned upward with their hands, and repeated these gestures four times. The boy was now strong.

"The two men told the boy, 'We adopt you as our grandson. We will endow you with sacred power. When a woman is about to become a mother you must gesture with your hands, with the palms held upward, and draw your hands upward. The infant will then be born easily and normally. You may transmit this sacred power to others if they too collect hides as well as other offerings to pay for it.' The individuals who purchased these sacred rites were called medicinemen."

Wolf-chief stated definitely that an expectant mother called upon one of the men's or women's societies to pray for her when in childbirth, that the child might be born as desired. If the birth was successful the promised reward to the society, customarily a feast, was forthcoming. The owners of sacred bundles or individuals who had experienced visions or possessed unusual mystery power were also besought to pray for the successful birth of the infant. Several ceremonies were believed to aid women in labor; among these were the River, the Corn, and the Buffalo ceremonies.

Women often died in childbirth when overtaken in labor while on a deer hunt or where assistance was not readily available.

After the infant was born and the afterbirth had been expelled, the umbilical cord was severed about 4 inches from the body. The Hidatsa believed it to be unsafe to tie the umbilical cord or cut it close to the body. However, it was also said in times long past they did tie the umbilical cord. To prevent bleeding, a circular piece of dehaired dressed skin with a hole cut in the center was well greased. The umbilical stump was drawn through the perforation in the skin protector, bent over, and covered with a band or broad belt. Experience had demonstrated that this method of treating the umbilical cord was preferable to tying it. The mother was bound with a wide skin band.

Sometimes the mother attributed an infant's crying to pain in the area of its umbilical cord. At such times the infant was unbound and the circular piece of protective skin examined to see whether it had slipped from its proper position. If necessary, the skin guard was adjusted and the infant bound up again.

The first day of its birth the infant was washed in warm water.¹ Still weak, the infant was not washed again until the second day following its first bath. From that time onward, the baby was bathed daily. The bath water was heated in a clay pot.

During its first 10 days the infant was dressed in a clout and the band that covered the umbilical stump. After 10 days the sand bag was added. After four days the umbilical stump will have fallen off. Up to this time the infant's arms, which have been allowed to fold naturally over its breast or abdomen, were straightened at its sides. The infant was bound in its cradle bundle by passing the binding thong around three times instead of twice, but with the same kind of binding tie.

After 10 days a kind of bag was prepared to hold the infant. A piece of skin, convenient in size, was cut from an old tipi cover or some other piece of hide of no special value. It was roughly trimmed to a square. It was folded over once. Its edges at the lower end were joined with sinew to form a baglike container open at one side. This wrapping was especially designed to hold heated sand at the infant's feet. The heated sand was an important necessity during the cold winters of the Hidatsa habitat.

The infant was wrapped² in a finely dressed buffalo calfskin.³ The skin was laid on the floor of the earthlodge, fur side up, so that its head

¹But see Kurz (1937) who writes: "The mother bathes herself and her newborn babe in cold water, so long as the water is not cold enough to freeze" (Jarrell and Hewitt, 1937, p. 149).

Among the Mandan, also, the mother bathed in the river immediately after the infant was born, even when the river was frozen (Maximilian, 1906, vol. 23, p. 280).

²Curtis (1909, vol. 4, p. 181) gives us a somewhat different description of an infant's wrapping: "Two pieces of old, soft buffalo skin between which were placed cattail-down and powdered buffalo-chips were wrapped around the infant, who was then strapped on a board, at the top of which projected a hood of fox or wild-cat skin."

The Omaha, on the other hand, used a cradleboard, padded with a feather or deer hair pillow over which skins were placed. The board was used principally for transporting the child from place to place, though it was occasionally hung in a tree (Fletcher and La Flesche, 1911).

³See Wilson, 1924, pp. 267, 270, for a variant of this type of wrapping.

end was at the infant's feet. A second skin of the same size, older or perhaps worn and less valuable, also fur side up, was placed over the first skin. Neither of these skins was ornamented. Pieces of old smoke-browned tipi cover were never used either as an infant's wrapping or for a clout. Sand, heated by rolling a hot quartz stone the size of one's fist over it, was dropped into the pocket-like end of the sand bag and covered with a small piece of skin to prevent the infant's feet from touching the sand. If sand for heating in this way was not available, dry powdered buffalo chips were heated and substituted.

The infant was laid on its back. A small buffalo skin breechclout, fur side in, was passed between its legs. The ends of the breechclout were drawn up so that they rested on the infant's abdomen and back. A broad band, also fur side in, was passed under the infant's arms and around its body. Worn constantly, this band served to hold the ends of the infant's breechclout in place. It also protected its armpits from perspiration and prevented chafing. Buffalo hair was often placed under the infant's armpits and between its legs to absorb moisture and prevent the occurrence of sores. When the infant was four days old, buffalo fat mixed with red ocher was rubbed over its legs and other parts of its body.

Each morning the clout was removed and discarded. Sometimes cattail down was substituted for the clout. Careful mothers found it expedient to collect down in preparation for the infant's birth. Cattail down was absorbent. It balled up into a wet mass when the infant urinated and prevented the moisture from fouling the skin wrappings. The soiled cattail down, like the clout, was removed and discarded each morning. The sand in the bag also served as an absorbent.

The infant, wrapped in its skin band, its buttocks protected by the clout or cattail down, was placed in the sand bag. Its feet rested on the skin that covered the warm sand. The infant, enclosed in the sand bag, was then laid on the two calfskin robes described above and wrapped. The robes were folded (from the perspective of one sitting at the infant's feet) left over to right, bottom up; and right, over to left; the final bottom corner of the right side (the

last side folded) was tucked in neatly. Finally, the binding thong was passed around the resultant bundle, twice for a very young infant and three times for one somewhat older. Except for the adjustment of the binding thong, the exterior appearance of the completed cradle bundle did not differ from that of an infant less than four days old.

If a woman died during childbirth, the infant was given to a sister, the wife of a brother, or to any other relative who happened to be nursing an infant. However, if no woman capable of nursing was available the infant was fed with finely pounded cornmeal which had been boiled a long time to produce a thin mush. The infant was usually fed with a mussel shell spoon.

A child was not suckled¹ by its mother for at least the first two days following its birth or until such time as the mother had sufficient milk. Such a dilemma was a hardship when an infant was born during a hunting trip. Under these circumstances, as described above, the woman's mother or sister suckled the child, or failing this, a stranger was hired. An infant born during a hunting trip was frequently kept alive solely on water for its first few days.

Infants were often sung to sleep by patting them and crooning a lullaby consisting solely of two vocables *ahó iló ahó*. Apparently these had no meaning. However, *ahó*, principally because of its association, can possibly be defined as a word used by a mother singing to a child or by a little girl singing to her doll. According to Buffalo-bird-woman, this lullaby was also common among the close neighbors of the Hidatsa, the Mandan and Arikara, as well as among the Assiniboin, Dakota, and Crow;

however, the accuracy of this statement has not been verified.²

CHILDHOOD

LEARNING TO RIDE HORSES

An essential part of training³ for boys and girls after the Hidatsa had acquired horses was to learn to ride. Girls were said to ride only gentle horses that could be led; boys, on the other hand, rode any horse, even the most spirited. One explanatory reason for the necessity that girls acquire skill in riding was to facilitate their capability to escape in time of danger, from a tribal enemy, for example.

Early morning or early evening, when the horses were driven to or from pasture, was the customary time for a riding lesson. A girl was taught to ride by her father when she was about 10 years old. She was seated on a wooden or horn pack saddle. The skirt of her dress was drawn under her; even its front was pushed back and under her. With legs pressed tightly against the horse, the girl held the reins in one hand and clutched the horse's mane with the other as her father led her mount, first slowly, and then, gradually increasing its speed, until she was able to ride at a gallop. When she had become an experienced horsewoman she was permitted to ride bareback. Mature women used either pack or flat saddles interchangeably for riding. Sometimes, however, a girl learned to ride by sitting on horseback behind her father.

Boys who began to ride at eight or nine years were usually self-taught. Frequently, they rode double on a pony and ran races in pairs in this fashion, a practice that provided excellent training to cope with an emergency in battle. In

¹The only available statement as to the duration of the suckling period is one by Goodbird who was certain that his mother nursed him until he was about seven years old. He elaborated, explaining however, that had his mother had other children the nursing period would not have been so extended.

Kurz (1937, p. 89) observed children of six who were still nursing and was greatly amused by boys of four or five who carried bows and arrows, but were still being suckled (Jarrell and Hewitt, 1937, p. 209).

Culbertson (1851, p. 117) also noted four- or five-year-old children nursing among the Arikara.

²Lowie (1912, pp. 218-219) has published a wolf lullaby which, however, bears no resemblance to that recorded on the basis of the information offered by Buffalo-bird-woman.

³Cf. the statement by Curtis, 1909, vol. 4, p. 142, and the detailed account for the Omaha given by Fletcher and La Flesche, 1911, p. 329. Among the Mandan, Maximilian observed no attempts at discipline (Maximilian, 1906, vol. 23, p. 281); the Arikara, on the contrary, were said to have laid greater stress on training and discipline of their youth than did the Mandan and Hidatsa (Maximilian, 1906, vol. 23, p. 388).

such an encounter if a rider lost his mount, it became vitally important to possess the necessary skill to leap on the horse of a companion. Boys also learned to lasso ponies by roping them over their necks; ponies were roped by their forelegs.

TRAINING OF GIRLS

Serious training was begun when a girl was 13 years old. At this time a mother taught her daughter skills to meet the exigencies of a Hidatsa woman's life, including, among many others, to chop wood, to hoe the garden, to dress skins, to embroider with beads and quills, and to prepare and cook food. According to Buffalo-bird-woman, girls usually learned to cook by observing their mothers, not through direct, even informal instruction.

LEARNING CORRECT SOCIAL CONDUCT

Correct social conduct was the ideal. Buffalo-bird-woman's concrete experiences may serve as an example of the Hidatsa ideal. She was admonished by her mother to obey her parents, marry in accordance with their wishes, and, moreover, never to meet young men at night or transgress convention by smiling at them. Her grandfather also besought her never to resort to quarreling or to theft. After she was married her father cautioned her not to wander from home and to be a good worker.

Customarily, a scolding sufficed as punishment for a recalcitrant child. However, if a child were persistently obdurate and disobedient, the parents summoned a clan member—a man for a boy, a woman for a girl—saying, "Brother, take your bad brother down to the Missouri and throw him in." The clan member made a pretense at carrying out these instructions, frightening the child and obtaining a promise of future obedience. Sometimes, the clan member thrust the child's head into a bucket of water, or in winter, tossed him into a snowbank (see Wilson, 1914, p. 23-24). Again, he might threaten the culprit with an arrow, saying, "I will pierce your skin with this arrow."

Occasionally, parents struck a child with the hand, pushed him to the floor, or whipped him

with a stick; the last was said to be an unusual method of chastisement. The Hidatsa believed that too frequent punishment was harmful. They tended to place greater reliance on patient and gentle admonishment of the wrongdoer.

Quarrels among the children of the three tribes (Hidatsa, Mandan, Arikara) who lived at Like-a-fishhook village often resulted in clawing, kicking, and stone throwing, but invoked no parental interference. However, if a child were injured, under such circumstances, payment was demanded and received from the transgressor.

CHILDREN'S STORIES

Many stories were known and narrated to amuse the children. The tales told to young children were short and simple and were readily memorized by them. The first story taught was a short dialogue which the child learned to dramatize for the edification of the older members of the family. The child pretends to invite an old man to the earthlodge to smoke, as for a feast. The old man asks about the food he will receive. The questions and answers are given in a high treble voice as if the host and guest were far apart and were unable to hear each other. The dialogue follows:

Child: Old Man, come and smoke.

Old Man: Why do you call me? What food have you?

Child: I will give you a freshly roasted buffalo rib with fat dripping down on the coals.

Old Man: I do not like that food. It does not fill my stomach and smears fat all over my mouth.

Child: Old Man, corn and smo-o-oke.

Old Man: What is i-i-it you will give me?

Child: Freshly cooked corn mush.

Old Man: When I eat that my stomach is soured. It comes up in my mouth and hurts it.

Child: Old Man, come and smoke.

Old Man: What is it you will give me?

Child: A buffalo foot boiled with corn.¹

Old Man: That smears glue all over my lips and sticks them together when I eat that.

Child: Old Man, come and smoke.

Old Man: What will you give me?

¹Wilson writes in his notes that he had been served boiled steer's feet and found that only the inner part was edible.

Child: Parched corn pounded fine in a mortar and boiled with sunflower seed, beans, and squash, and set away over night. Now it stands in a bowl (evidently a variation of four-vegetables-mixed level as a ball ground).

Old Man: That is the food I like.

COURTSHIP AND MARRIAGE

Although the most dignified form of marriage recognized was by purchase,¹ according to the informants, relatively few such marriages were consummated. Three variant forms of marriage were more popular: by mutual consent of the individuals involved, at the command of the parents of the principals, and marriage initiated by proposal by a woman. The conventions of courtship, like those of marriage, varied. The proper marriage age for both sexes fell between 18 and 20.

In its most acceptable form, (that is, marriage by purchase), the parents of the young people involved customarily acted as intermediaries; either the father or mother, or both, undertook the negotiations; apparently there was no sex distinction nor have we any evidence of a preferred negotiator. Consequently, if a young man expressed his admiration of a girl, either his father or his mother made the correct customary overtures to the girl's parents, approximately as follows: "We remind you of all your kindness. We have a son who wishes to marry your daughter. We know she belongs to a good family. We ourselves are poor, but we appeal to your kindness. Remember your son and your daughter who died. Pity us and help us; we are poor and humble." If the girl's parents were unwilling to agree to the marriage, they harped on her youth or trumped up other unfavorable arguments. However, if the offer were acceptable, the tenor of their reply would be more or less as follows: "That is very good. We are poor. We want you to

help us with gifts. We shall be happy to have our daughter join your family." The young man's parents then proceeded to accumulate their gifts. According to tribal standards, the gifts were sometimes quite valuable: a warbonnet, a gun, and from a single pony to 10. If the prospective bride's family were unable to gather a significant number of presents they were assisted in securing the desired quantity by their relatives.

The morning of the day on which the marriage² was to take place, the groom's parents brought their gifts to the earthlodge of the bride's parents. The gift ponies were tied outside the earthlodge. Toward evening, the bride went to the earthlodge of the groom's parents bearing the reciprocal gifts and the food provided for the feast. Two kinswomen who accompanied her carried between them, swung on a long pole, the kettles containing the marriage feast. Sometimes these feast kettles were not carried on a pole but on the arms of the bearers. The feast consisted of dried meat which had been cut up, boiled, and covered with bone grease. Boiled pounded corn was also provided. Often the bride herself preceded them, leading a fine pony and sometimes wearing a warbonnet, all intended as gifts for her future husband.

²Although the authenticity of LeRays's journal which recounts his visit to the Hidatsa villages on the Knife River in 1802 has been questioned (Stewart, 1974, p. 293), his detailed account of the marriage ceremony is worthy of mention:

"Proclamation was made, by one of the relations, that on the next day, in the morning, the marriage would be celebrated . . . The company assembled at her father's lodge, where the chief of the village attended. He informed the company, that the young man, calling him by name, intended to take the girl, calling her by name, to be his wife. He then asked each of them if that were their intention, which each of them answered in the affirmative. The chief then handed them a small rod, which was broken between them. The groom then broke his part into a number of small pieces, and handed them to the men who stood near to him. The bride did the same with her part of the rod, which consummated the marriage. Fire was then brought, and the sacred pipe was lighted. After all the men had smoked in it, the dance commenced, which was continued for several hours" (Quoted by DeLand, 1908, p. 341.)

¹Cf. Lowie, 1917, p. 46; also Matthews, 1877, p. 52; Curtis, 1909, vol. 4, p. 183. This is true of the Crow according to Lowie, 1917, p. 75; see Maximilian, 1906, vol. 23, pp. 279-280, for an account of Mandan courtship and marriage; also Curtis, 1909, vol. 5, pp. 62-63 and Brackenridge, 1816, pp. 152-153, for the Arikara. Cf. also Bowers' more recent detailed statements on courtship and marriage (Bowers, 1965, pp. 138-163).

The participants, friends of both contracting parties and especially members of the young man's clan, were invited by his parents. Members of the bride's clan were not invited. Each guest was expected to bring a gift for the bride: a robe, a dress, leggings, a painted robe, and calico. There were no restrictions on the type of gift, and such offerings were acceptable. However, no stigma seems to have been attached to any participant at the feast who was unable to contribute a gift. There were more women than men guests. The women and the men sat opposite each other at the feast. It was served by young men or any other participants invited to do it. The food was quickly served and eaten. Then all the guests, both men and women, departed. The bride's and the groom's parents were left alone in the earthlodge. The groom himself had not been present at the marriage feast; he was out in the village. The bride's parents gathered all the gifts brought by the participants in the feast. Their daughter divided them among her relatives, her parents taking them home for distribution. The bride, however, carefully retained for her own use whatever she needed. Generosity was admired and encouraged. After the guests and the bride's parents departed, the bridegroom returned to the earthlodge. According to one informant, before marriage and cohabitation the husband-to-be was obliged to seek a vision through torture by suspension.

The details of the preliminary procedures in marriage by purchase were apparently in actual practice far from fixed as the information offered by Buffalo-bird-woman will reveal. In the specific marriage she described, the father of the prospective groom suggested to the parents of two sisters that a marriage be arranged. The girls' parents demurred because of their extreme youth. However, the same day, the young man's father, accompanied by his wives and other relatives, brought four blankets, saddled horses, and three good guns to the girls' earthlodge. Despite their father's protests, the gifts were left behind. However, they were later returned to the donor. Two days following this incident, the young man's father returned with the horses, having substituted two fine hunting horses for two of the horses previously

offered. His persistence prevailed. The father of the two girls consented to the proposal and accepted the hunting horses and other gifts.

The girls' family was occupied for six days in collecting the return gifts and the food for a feast. Then the two girls were bedecked—one with a feather warbonnet, and her sister with a weasel skin bonnet. They marched to the earthlodge of the proposer, followed by relatives who led three horses. The women carried provisions for a feast. Arriving at his earthlodge, each girl went to the prospective groom as he sat on his bed; each girl removed her bonnet and placed it on his head. The prospective husband sat on his bed; the two girls sat on the earth floor nearby. Each girl was offered pemmican served in a wooden bowl; each carried the remains of the food home in her robes. The young man's relatives and his clan relatives were invited to partake of the feast. They came, bringing gifts, which were subsequently taken to the girls' earthlodge by two women relatives of the young man and were distributed among the girls' relatives who had helped to provide the feast. The horses, robes, and the bonnets were believed to be the equivalent in value to five horses. In the evening, following the feast, many gifts were brought to the girls' lodge by the relatives of the young man.

The mother of the two girls arranged the bridal bed with a backrest in front of it. When the preparations were completed, the girls were instructed to go to the bridegroom's lodge, sit on either side of him, and invite him to accompany them to their own earthlodge. In the meantime, the groom's relatives had gathered at his lodge to await the call. The groom sat on his bed with a girl on either side of him. He asked them to account for their visit; they replied that they had come to call him. They returned to their own home and were soon followed by the young man.

One of the girls sat on her bed where she was joined by the groom signifying that he had selected her to be his wife. A feast had been prepared. As they ate, the girl told him that a horse was tied to the corn-drying stage. Thereafter, the groom lived in the girl's earthlodge. If the girls had not gone to summon the young man to their own earthlodge, they would have

lived in his lodge. After two years, the second sister also became the young man's wife.¹

When a young man acquired a wife through purchase he often became the object of mockery by his friends who taunted him telling him that because he was ugly no woman would accept him (except by purchase). However, when the women laughed at a bride who had been purchased, she retorted, "Yes, I was bought. You want a man to run after you. I was bought. I was handsome. I was married in the earthlodge."

In the old days when a man who had a marriageable daughter was known to own an exceptionally fine horse, a selfish father might urge his son to marry the girl in expectation that her father would present the horse as part of the marriage payment. The Hidatsa did not approve of this mode of action as absolutely good form, believing it to be a self-serving act which no good man would tolerate.

A man who tired of a spouse and abandoned her found it difficult to purchase a new wife. Such an individual was frequently forced to pay from one to five horses for a wife for the simple reason that any woman approached would undoubtedly say, "You will tire of me soon and you will want to leave me. If you do, I shall at least want to be able to say, 'I have some property!'"

More commonly, marriages were arranged between the individuals involved. Such marriages were preceded by a courtship period of varying duration which was terminated when the young woman consented to go to the young man's earthlodge as his wife. A young man, for example, attracted by an industrious young woman about his own age, would watch her for any betraying indications of interest in him. Such a period of mutual observation was likely to continue for a long time or until the girl vouchsafed some secret sign of encouragement. Only then would the young suitor come and talk with her and touch her. A girl did not always yield readily. When the young man's

interest was not reciprocated, he would send a succession of intermediaries to intercede in his behalf. In these circumstances a girl might agree to marry the young man. Often, however, she was in no haste to comply; he might already be married and want to forsake his wife. Such a girl—a good girl, according to Hidatsa opinion—would refuse the suitor because she did not want to run the risk of being abandoned herself. Ordinarily, such a marriage, by consent of the individuals involved, aroused no objections on the part of their parents; sometimes, however, the girl was censured by her parents.

Some women did not marry. Other women, on the contrary, lived with a succession of men, deserting one man only to pass on to another. Such a woman permitted men to take liberties with her. A good woman, however, did not yield readily but would insist on a lengthy period of courtship. If a girl permitted a man to put his arm around her she would immediately become a subject for criticism by the other women.

The Hidatsa observed no age distinction in following the first two forms of marriage; both old and young members of the tribe were likely to use either forms indiscriminately.

The third form of marriage, consummated at the command of the parents,² occurred when a girl's parents were acquainted with a man whom they considered to be a good match; or when a girl displayed a tendency toward promiscuity, and a widower reputed to be a good hunter and an industrious worker was urged upon her by her parents (even if she did not care for him). Objections from the girl were of no avail if the parents insisted that the man would give her a good home, protection, and as the Hidatsa expressed it, "Would treat her just like a daughter."

Again, a woman might herself propose marriage. Under such circumstances she would go directly to any man she admired and tell him that she wanted him to be her husband. Even if she learned that he did not care for her, she

¹Cf. Maximilian (1906, vol. 23, p. 278) who states that the Mandan were generally monogamous; polygamy was, however, practiced, the number of wives never exceeding four.

²"Parents sometimes, by persuasion, but rarely by any harsh coercion, endeavor to influence a daughter in the reception or rejection of an offer" (Matthews, 1877, p. 52).

would persist in her suit until he agreed to marry her. However, no good woman would demean herself by such a proposal; such behavior was expected of a woman who was inclined to promiscuity.

It may be of interest at this point, to interpolate an abstract of Wolf-chief's statements related to courtship¹ and marriage, especially since his version of Hidatsa procedure varies somewhat from the conventions described above. When a young man admired a girl he would seek opportunities to attract her attention. If she seemed to reciprocate his interest, he was encouraged to go to her earthlodge after sunset and wait for her. When she emerged he would approach her quietly and say softly, "I have come to you." "Have you?" she would ask. He would draw his robe over her shoulders. They would walk a short distance from the earthlodge where they stopped and stood face to face talking. The girl would put her arms around the young man's waist and he, in turn, put his arms around her neck. She did not remain with him for any great length of time. They kissed at parting. A courting in this fashion might be repeated two or three times before the young man asked the girl to marry him. Sometimes, the girl would consent with the provision that he give her a horse.

A young man might also visit a girl frequently in the evening and also follow her to the field where she worked during the day. A direct proposal of marriage was not unusual in the course of the first evening's visit, nor was an immediate acceptance with the conventional request for a horse unprecedented. Often, the young man agreed but argued against delay, at which point upon consent of the girl, they repaired to his parents' lodge and were married.

Sometimes, when a young woman made it clear that she did not care for the young man, he persisted and endeavored to arrange a marriage by purchase. In this eventuality, the young man's father, mother, or sister proposed a marriage to the girl's parents. If the girl's parents consented, the marriage was arranged. The young man's family might under these cir-

cumstances take a gift of several horses to the girl's family. The family and friends of the girl believed it to be a point of honor to make a return gift of an equal or greater number of horses to the young man's family. On the other hand, the young woman's father might offer his best horse to a young man as an inducement to become his son-in-law and come to live with him. Again, a young woman's brother might offer a good horse to a young man as an inducement to become his brother-in-law and to join him and live in his lodge. The young woman's father and brother would present such a bridegroom with a gun, a knife, or a hunting outfit. The young man, in reciprocation for the friendly welcome, was anxious to do all that was possible for his father-in-law and his brother-in-law. He hunted, bringing as much meat as was obtainable. Sometimes, he joined a war party; if, in Siouan territory, he stole horses which he presented to his father-in-law or brother-in-law, causing them to rejoice for having been so kind to him.

Goodbird described another kind of courtship technique that was termed "catching a girl." Under these circumstances the suitor endeavored to throw his blanket over the girl's head as she emerged from the earthlodge. If the girl rejected his attentions she would push him aside; however, if she accepted, they went off a short distance to talk. The young man encircled the girl's neck with his arm as they sat with a blanket sheltering both of them; however, the girl made no reciprocal gesture of affection.

Goodbird also mentioned a courtship custom not described by the other informants. Often, a boy followed a girl he admired when she went for water. He would ask for a drink. Her compliance indicated that he was favored. If, however, she gave him a drink but threw out the water remaining in her bucket and filled it anew, her action served as a signal that his attentions were not desired.

Wolf-chief's personal experiences in courtship and marriage may serve to provide added elucidation of Hidatsa usage. He had his first sweetheart when he was 18. The girl was 16 years old. He loved her and wanted to marry her. However, she saw another handsome

¹Cf. Will and Spinden, 1906, p. 132, and Curtis, 1909, vol. 5, pp. 14-15, for accounts of Mandan courtship.

young man whom she married, thus saddening Wolf-chief. He believed himself to have been good-looking as a young man. He wore a switch in his hair, painted his face red, and wore a bead necklace with round shells hanging down his breast. He also wore brass armlets and a shirt made of white sheeting. The borders of the neck opening were decorated in red; the shoulder seams were also outlined in red and further decorated with a pendant of red fringe. He wore leggings made of blue-black cloth, and a blue blanket; his moccasins were not decorated.

One day in the latter part of June, a little before noon, dressed as described, Wolf-chief recalled that he went down to the river. Goes-back-to-big-bunch, a young girl he favored, was alone, climbing the bank, carrying a bucket of water in her right hand. It was not unusual for a young man to meet a girl at the watering place; however, Wolf-chief recalled there was no specified hour for such a rendezvous. He looked at Goes-back-to-big-bunch and smiled. She laughed encouragingly. He did not attempt to touch her but resolved to go to her lodge in the evening and try to "catch her."

A little after dark, Wolf-chief went to her lodge. He stationed himself in the covered entranceway, a good vantage point from which to observe anyone passing in or out. A young man who lingered near an earthlodge in this way was neither an infrequent nor an unusual observable occurrence in the Hidatsa village. Such a young man often hid the lower half of his face with his blanket, leaving only one eye uncovered. Wolf-chief was frightened as he huddled in the entranceway and overheard the conversation inside the earthlodge. He was eager to hear the girl's voice. He was afraid of a scolding by the girl's mother. Her mother emerged first and walked straight ahead. Apparently she noticed no one, perhaps because the entrance was dark. The girl followed. They returned soon. The girl's mother stopped outside the entrance. Wolf-chief heard her order her daughter to go to the earthlodge roof to check to see if a dog was prowling around there. The girl's mother entered the earthlodge, passing Wolf-chief. Again she failed to notice him.

He rushed out from the entranceway. The

girl, out on the roof at the left of the entrance was throwing a clod and calling, "C-c, na' na'!" (C-c at this point represents the sound sh-sh.) "Go away!"

Wolf-chief walked toward the girl. She turned simultaneously and moved toward the door; he met her only a step or two from the place where she had been standing. He was so frightened he was unable to swallow. His breath was labored and he choked.

He approached the girl; she saw him. He uncovered his face, threw his blanket¹ over her, and flung his arms around her neck. The girl encircled his waist with her arms. So they stood, as they teased each other about the morning incident. Finally, although she warned him that her mother would come out soon, she gave him permission to come to the earthlodge the following evening. He kissed her at parting. He was very happy, and went home. He was so excited he could not sleep.

The earthlodge of Goes-back-to-big-bunch was a short distance from that of Wolf-chief's parents. Early the following morning Wolf-chief went up on the roof. The girl he was courting also arose early. She emerged from the lodge, and looked over in his direction smiling. She went back into the lodge. Wolf-chief wished that he could sit on the roof throughout the day and watch for her to come out of her lodge again. She did come out often to talk and laugh with some of her friends. Wolf-chief believed that she loved him and appropriated for himself all her gestures of friendliness to others. They continued to watch each other all day.

Evening came. So eager was Wolf-chief to return to his sweetheart's earthlodge that he arrived a little before dark. Every villager passing by stared at him. At last it grew dark. He took his station in the entranceway as he had done before. He listened to the family as they ate their evening meal of parched corn. Then the girl came out to the door again; he "caught her" (threw his blanket over her); they talked.

¹As narrated by Wolf-chief, the text reads "over her head." There is, however, some uncertainty as to his meaning, that is, whether he meant to imply "over her head" in the English sense, or, that the blanket (or robe) was thrown high up around her neck.

She warned Wolf-chief of her mother's displeasure should she discover their philandering.

The courtship continued. Wolf-chief visited the girl's earthlodge quite often. However, he did not "catch her" every evening because she was accompanied by her mother much of the time. Neither did he make any effort to meet her at the river when she went for water, especially if someone was with her. Sometimes in the evening, the courting couple sat on the ground near her earthlodge door but only for a short time because the girl's mother was constantly on the alert. Her mother often called to her. She would go, fearful that her mother would whip her. Hidatsa mothers were afraid their daughters might elope. Consequently, a girl's mother would often call her daughter into the lodge if she were meeting a young man. Mothers in the past kept a close watch over their daughters. In the modern Reservation schools, this oversight became impossible, so that girls were not as well guarded and sheltered as in the past.

During that summer Wolf-chief coaxed the girl to marry him. She was willing, but she wanted him to pay for her with horses. He wanted her to accompany him to his parents' earthlodge and marry him. She would not consent.

Wolf-chief refused to give her the horses she demanded. He was a very young man. He was embarrassed at the thought that he give many horses in exchange for her. Whenever they met, however, they kissed and talked at length. He hoped he could coax her to join him without the gift of the horses. She was willing at any time to join him if he would give the horses, but Wolf-chief was ashamed to tell his family.

The summer passed. One day in the fall, Wolf-chief overheard his mother tell one of his clan aunts that Small-bull wanted to marry Wolf-chief's sweetheart. Her parents were willing because Small-bull's sister had offered three of their best horses and three horses in addition for the girl. Wolf-chief, overwhelmed by the news, visited his sweetheart that evening and chided her for her inconstancy. The girl protested; she was acceding to the wishes of her parents who wanted to be compensated in horses. Wolf-chief then agreed that he would

give four horses for her. The girl went into the earthlodge to obtain the consent of her parents as Wolf-chief waited, but she failed to return. He went home. He suspected that her parents refused to give her to him and that she would not meet him again because she had been promised to Small-bull.

The girl was married the following day. Small-bull's mother, Many-growth, led four horses through the village. Soon after, Goes-back-to-big-bunch led a horse to Small-bull's earthlodge; her mother followed, leading another horse; valuable blankets covered both horses.

Bitterly disappointed, Wolf-chief found it difficult to fall asleep that night. He went to Hairy-coat's earthlodge where the Lumpwoods Society met and where many older men were gathered telling stories. He listened to them for a long time. Finally, Wolf-chief departed distraught. He went to bed crying as he recalled the girl's yellowish hair and fair complexion.

Whenever Wolf-chief met the girl by chance, even after she was married, they would smile at each other. He knew that she continued to think well of him. He never touched her again because there were villagers nearby. One day, about a year after the girl's marriage, she was on the way to her garden with her husband's sister, Female-black-bear. At that time Wolf-chief was on the roof of the family earthlodge. As she passed by, the girl looked up and smiled at him; he too smiled. She carried her hoe on her arm. Female-black-bear led; consequently, she failed to see her sister-in-law smile at Wolf-chief.

Wolf-chief knew the location of their garden. He watched them as they set off. He was determined to meet the girl again. Half an hour after she had passed him, he went to the woods near the garden. He watched until there were no observers. Then he skipped past the trees until, walking slowly, he saw the two women at work in their field. He waited and watched until the girl turned in his direction. He beckoned to her, holding his hand up, palm outward, calling softly, "Come!" He hurried back into the shelter of the woods.

He waited. He overheard the two women laughing. Presently, Goes-back-to-big-bunch abandoned her hoeing. She went into the

woods in the opposite direction from where Wolf-chief signaled to her. Soon she emerged from the shelter of the trees and came to the place where Wolf-chief waited. He put his arms around her, kissed her, and told her how lonely he had been throughout the fall and winter. She too had been lonely. She did not like the young man her parents had compelled her to marry. Wolf-chief asked her to leave her husband and marry him. At first she agreed but later returned to her garden. They never married each other.

Some women were promiscuous taking numerous lovers. When an illegitimate child was born to a woman, it was customary for her to announce the name of the child's father. Consequently, the child was called the daughter or son of So-and-so. Such a woman was called a bad woman. According to Hidatsa convention, the child's father was not under compulsion to marry the mother of his illegitimate child. Usually, he did not; moreover, he was believed to have had no great respect for her.

DIVORCE

Divorce among the Hidatsa entailed no social stigma. Matthews claims that divorce was rare "among the better class of people in the tribe" (Matthews, 1877, p. 53). It was possible for either the husband or the wife to initiate a divorce without being exposed to criticism. When a husband and wife separated the earth-lodge remained in possession of the wife, since she had built it (according to Wilson's notes). The husband had the right to take all the children should he wish to do so, or he might take only a favorite child, leaving the rest of the children to his wife; or again, all the children might be left with the wife. Many couples, however, lived harmoniously in monogamous union until the death of one or the other.

If a married woman left her husband, he had the right to bring her back if that were possible. Such reconciliations were rarely successful; moreover, the Hidatsa were very critical of such a man. They were wont to say, "He is just like a dog." On the other hand, if a man was deserted by his wife and made no attempt

to get her back, despite his grief, he was considered good and brave and a person meriting great respect.

Curiously enough, the man most admired was one who successfully abandoned one wife after another, marrying a new spouse following each abandonment. The adulation of a man married repeatedly may have stemmed from the fact that polygamous marriages¹ seem to have been the Hidatsa ideal. It would follow, quite naturally, that any man who married repeatedly would be praised for his conformity to the accepted code. Wolf-chief stressed the fact that the Hidatsa marriage practices during the early years of the twentieth century, the period during which he was offering his recollections so freely, conformed to the standards generally accepted at that time. When he was a young man he had married repeatedly.

Later he became a Christian and was appointed as a judge. In the exercise of his official prerogatives he took the second wife away from any man known to have a wife. Wolf-chief asserted that it was his practice to sentence to the guardhouse a philandering male who pursued a woman already married.

In the old days, when a wife left her husband, he frequently assembled all the good people of his acquaintance, his wife, and her new husband. The abandoned husband made a speech and gave a horse to the wife's new husband saying, "I have no hard feelings against my friend."² Wolf-chief was an observer of this ceremony twice during his life-

¹According to Matthews, polygamy was restricted to the wife's sisters, or those cousins belonging to the category of sisters (Matthews, 1877, p. 53). Brackenridge has recorded polygamy as the common practice among the Arikara; four or five wives were frequently noted by him (Brackenridge, 1816, p. 152).

²According to Matthews (1877, pp. 53-54), the husband was at liberty to take possession of all the property possible of the man with whom his wife had eloped, as well as that of his friends, although the latter often offered compensatory gifts. Rarely was an unfaithful wife slain by the husband, with impunity. Matthews adds, however, that once the husband had accepted compensatory gifts or seized the abductor's property, he was enjoined from any injury to his wife.

time. The first time, in about 1861, he was 12 years old. He was a messenger of one of the men's societies, the Midaxici or Basket society, an organization of older men. The leader of the society, Bob-tailed-bull, had a fine-looking wife and two children. A fellow member eloped with his wife. The abandoned children wept for their mother. Bob-tailed-bull himself cared for the younger child. Two weeks after his wife had left him, a crier passed through the village calling all the members of the Basket Society to Bob-tailed-bull's lodge. Wolf-chief hastened there. He found not only the society members but many other people. Bob-tailed-bull sat on his bed with his runaway wife at his left.

Quiet reigned; all the men smoked. Finally, Bob-tailed-bull arose and spoke: "Good people and all the members of my society: I have determined on my course. This woman loves my friend. He is a member of this society and he loves her. They are now married. No longer do I call her my wife, but my friend's wife. He can keep her. I do not care to look at them all their lives. (Presumably he meant with longing for his wife's return.) I have two children here. Although I am poor, I will keep them. I will stay with them as long as they live."

Some good old men were part of the assemblage in the lodge. They were all very happy and sang glad songs. One man said, "Bob-tailed-bull, your course is good. You do not want to take your wife back while you live. Do not feel discouraged. Hold to your promise."

Bob-tailed-bull's wife was deeply moved.

Infidelity among the Mandan has been variously reported as being punishable by death, by cutting off the woman's nose, or by requiring payment of a horse by the abductor (Will and Spinden, 1906, p. 131). Curtis (1909, vol. 5, p. 15) also offers information on the Mandan attitude toward marital infidelity that appears to be in general agreement with that for the Hidatsa. According to Maximilian (1906, vol. 23, p. 282), however, the Mandan was infrequently punished for his transgression of established custom. The property of the man who eloped with a married woman was seized by the offended husband.

For Arikara attitudes toward, and punishments for, adultery, see Curtis, 1909, vol. 5, p. 63.

She hung her head and wept. Everyone in the group sat very quietly. Bob-tailed-bull arose. He combed his wife's hair, arranged it, and painted her face. From the rear of his earthlodge he brought out a red cloth dress trimmed in white and elk's teeth. He presented the dress and a horse to his wife.

Then one of the spectators in the lodge said, "Bob-tailed-bull, you have done a good thing. We will mount your wife on the horse and lead her through the village so that everyone may know what you have done." They led the horse, with the woman mounted on his back, through the village to the earthlodge of her new husband. The members of the Basket Society followed singing glad songs. All the villagers knew that Bob-tailed-bull was a brave man.¹

Subsequently, Wolf-chief observed a similar ceremony. One of the chiefs, Bull-man, then about 40 years old, had married a young woman of 20. He loved her very much; he treated her as if she were a daughter. She, however, admired a young man in the village. She eloped with him. Some 10 days later, Bull-man organized a war party consisting of 10 men. They set out against the Sioux. It was winter. Bull-man killed² one Sioux. He returned to the village. He prepared a feast and invited his former wife as well as all the members of his war party to his lodge. He covered his wife's face with charcoal. He gave her the scalp of the dead Sioux to carry on a long stick. Accompanied by all the members of his war party, he led her as she carried the scalp all through the village singing glad songs. From time to time, Bull-man announced, "This young man may keep this woman as his wife. He has nothing to fear from me!" Everyone in the village heard him. He was happy. Bull-man also announced, "I adopt this young man and shall call him 'younger brother.' We will eat

¹Brackenridge (1816, p. 184) relates a tale with a very different conclusion. A Mandan chief had eloped with the wife of an absent warrior. Upon his return, he demanded that his wife return to him. The husband was slain by his wife's lover.

²The notes are not clear whether Bull-man or the war party of which he was leader killed the Sioux.

together, sometimes in his lodge, sometimes in mine. We will be good friends. I shall not fail to keep my promise." The two men were good friends until both died. Everyone knew that Bull-man kept his word.

These two versions of the ceremonial related to wife surrender do not differ to any great degree. The bare essentials seem to consist in a public surrender and demonstration. The feast is apparently optional and not a fixed requirement.

The marital history of a Mandan family in which divorce was a frequent occurrence, as recounted by Buffalo-bird-woman, may be of some comparative interest.

Bear-looking and his wife, Corn-woman, had twin daughters, Eagle-woman and Cedar-woman, and a son, Coyote-looking.

A Hidatsa, Big-man, had a wife named Nuwica.¹ They had four daughters. The eldest was named Otter; the second, Root; the third, Itsikitac or Hissage-is-different; and the fourth, Soft-berry.

Otter married Bear-looking's brother, who died. Bear-looking then wanted to marry Otter because she had been his brother's wife,² but she refused him. Consequently, he married her by purchase through which he also became the husband of Otter's three younger sisters³ so that he had five wives. Bear-looking and Otter already had one earthlodge; Otter and Nuwica built a second. The two younger sisters, Root and Soft-berry, although wives of Bear-looking, continued to live with their parents.

Two daughters, Crow-again and Bird-woman, and a son, Blue-bird, were born to Otter. Root had a son, His-snare-is-red, and a daughter, Not-a-woman. A daughter, Itupawiac or Blackberry-woman, was born to Soft-berry. To her sister, Different-kind-of-sage, a son named Flying-eagle was born. Bear-looking

was the father of these six children. More children were born but they did not survive. Bear-looking, a jealous man, whipped his wives. He treated them harshly. He stabbed Soft-berry in the hip. Following some difficulties with his wives, he left the earthlodge, saying "Next time I come in here I will use some of my sharp instruments on you," a warning and threat that he would wound Different-kind-of-sage and Soft-berry with a knife or arrow. That very night Bear-looking's wives ran off to the Crow with a Hidatsa named Bear-heart. Their children remained with their mother's sister, Otter, and their grandmother, Nuwica.

Bear-looking was unconcerned. He married an Arikara widow, Eagle-woman, whose husband, Garter-snake-coat, had died, leaving her two horses which she kept as her own property. Later, Bear-looking married another woman, Goes-along-digging-turnips (a name probably suggested by a dream of a bear digging wild turnips). Bear-looking brought the number of his wives again to five. He never married again.

Wolf-chief's views on polygamy may also be of interest. He stated that he had had 26 wives in the course of his lifetime. In one period he had two wives simultaneously. Apparently he found it quite difficult to manage his family affairs successfully under these circumstances. If he slept with one wife one night, she would be angry because he had slept with his other wife the preceding night. He failed in his attempts to keep both wives happy and contented. The two wives were not sisters, but it was well known that even sisters married to the same man quarreled frequently. If Wolf-chief found his wife running after another man, he made no attempt to restrain her, as he said, "I just let her go; I did not bother with her anymore."

DEATH, BURIAL, AND MOURNING

Upon the death of a Hidatsa, the body was laid out in the earthlodge. The corpse was dressed in an elaborate costume brought in by the clan fathers and aunts of the deceased (cf. Lowie, 1917, pp. 51-52; Bowers, 1965, pp.

¹Nuwica is a kind of goose, not the Canada gray goose, but a white goose with a black beak and wing feathers terminating in black.

²We have here a hint of the levirate which is not specifically noted in Wilson's data.

³In the data on marriage by purchase among the Hidatsa there is no indication that a marriage to one woman is tantamount to a marriage with all her sisters.

168-173). Additional gifts of clothing, later appropriated by the widow and children and often distributed among the deceased's blood relatives, were laid at the side of the corpse by the clan relatives. The blood relatives also brought many gifts; these were, in turn, divided among the clan relatives. We observe on this occasion an actual exchange of property¹ between clan and blood relatives, though the informants were apparently not aware of this state of affairs.

The corpse, unflexed,² wrapped in robe or blanket, was borne in a blanket to the burial place by the clan fathers and aunts of the individual. Usually, there were four bearers, but if necessary, two or three more individuals assisted. Relatives and friends followed the bearers. The clan relatives constructed a scaffold platform;³ the body was laid on its floor. Upon raising the corpse to the burial scaffold,⁴

the clan fathers and aunts paused to address it, adjuring it to proceed directly to the ghost land. It seems to have been the general belief that only the clan relatives were capable of expressing this admonition to the spirit and that they, moreover, were the only ones whose petitions would be obeyed.

Sometimes the procedure differed. A grave⁵ was dug and lined with a blanket or robe that had belonged to the deceased. The robe-wrapped corpse was laid in the grave. Split planks or puncheons were placed over the body, each plank resting against the wall of the grave. An old tipi skin or hides covered the wooden planks. The burial cavity was then filled with loose earth.

In the graveyard at Like-a-fishhook village the Hidatsa dead were buried on scaffolds. However, a stillborn infant, one who survived only a few days, or one who died before it was

¹Maximilian (1906, vol. 23, p. 362) mentions, for the Mandan, that the body, as it rested on the scaffold, was covered by relatives or friends, for which service a horse was presented by the family. This practice may possibly have some relation to the reciprocal gifts here noted.

²The information on whether or not the body was flexed is contradictory. One informant stated that in the past a corpse was spoken of as "the four bends" (or four joints), presumably, a reference to the method of preparing a body for burial. The body was flexed at four joints: the ankles, the knees, the hips, and the neck. It was then bent double, with the knees on the breast and the head bent forward, and finally, wrapped in a robe or tipi skin. The ends of the bundle were tied to a long pole which two men carried to the burial field on their shoulders.

³Scaffold burial was still current when Culbertson visited Fort Berthold in 1850 (Culbertson, 1851, p. 118). A few years later, in 1854, Matthews (1877, p. 9) observed both scaffolds and graves near the Hidatsa village and noted that interment in graves was then rapidly replacing the earlier practice. Other early visitors to the Hidatsa also recorded the use of scaffolds, i.e., Bradbury, 1817, pp. 139, 147; Maximilian, 1906, vol. 23, p. 384, stated that the corpse of an individual slain as the culmination of a quarrel was laid in the ground and not placed on a scaffold; see also Maximilian, 1906, vol. 24, p. 24, vol. 23, pp. 360-361.

According to Catlin (1842, vol. 1, p. 90) when the scaffolds disintegrated and the bodies decayed and the bones fell to the ground, the bones were buried and the skulls set up in circles on the plains.

⁴Brackenridge (1816, pp. 185-186) describes the burial

scaffolds observed by him scattered on a hill about 2 miles from the Mandan village. "The scaffolds were raised on forks about ten feet, and were sufficiently wide to contain two bodies; they were in general covered with blue and scarlet cloth, or wrapt in blankets and buffaloe robes . . . we could see a great number of valuable articles which had been left as offerings to the manes of the deceased."

According to Henry and Thompson, the burial stages of the Mandan were 8 feet high (Henry and Thompson, 1897, vol. 1, p. 324).

For further accounts of scaffold burial among the Mandan, see Maximilian, 1906, vol. 22, p. 350; Thwaites, 1904, vol. 1, p. 208; Catlin, 1842, vol. 1, pp. 89-90. Curtis, 1909, vol. 5, p. 18, cites three methods of burial for the Mandan: on a scaffold, in the ground, or in a cairn.

⁵Kurz reasons that the Hidatsa did not bury their dead in graves, first because they did not possess the necessary digging implements, and second, because the graves had to be dug deep enough to withstand the marauding wolves, hence, the scaffolds. He gives a vivid description of the disintegrating scaffold burials he observed (Jarrell and Hewitt, 1937, p. 76, cf. also pp. 75-76). Later, however, Boller (1868, p. 225) witnessed the building of a scaffold in the dead of winter when it was necessary to thaw the frozen ground before digging the post holes.

The Omaha in Bradbury's time (1811) interred their dead (Bradbury, 1817, p. 67); the Arikara also practiced grave burial, according to Brackenridge (1816, p. 186). Culbertson, who visited the Arikara in 1850, states that they had abandoned the scaffold method and were burying their dead in the ground (Culbertson, 1851, p. 117).

old enough to have teeth, was deposited in a tree in the timber. Tree burial was accorded infants in the belief that in the event that one died before it cut its teeth its spirit did not go to the ghosts' town but returned to the place whence it had come, either to one of the babes' houses or to live again in the form of a bird or animal; whether it was to be reborn or not, no informant knew. An infant who died after it had cut its teeth went (as did the elders) to the ghosts' town.

A tree near Like-a-fishhook village was full of infant burials. On one occasion, when the Missouri River was in flood, Small-ankle discovered that the burial tree was being undermined by the current. He believed that he heard the infants crying. He returned to the village. He asked each mother whose child was in the tree to move the body to another tree.¹ The

women failed to be deeply impressed by this request. Some of the babies had been dead a year, some two years, some longer; consequently, the mothers of the dead infants were not very much concerned. During the following night the tree fell into the river; it floated downstream with the current.

If a member of a hunting party died, he was buried in a tree (cf. Matthews, 1877, p. 9). However, if the hunter died in the village, a burial scaffold was erected. It consisted of four posts joined at the top by stringers. The body was securely tied to it with rawhide ropes. Tree burial was still a common practice in Wolf-chief's childhood.

As an expression of mourning a Hidatsa widow often cut off the first joint of her little finger, or, as an alternative, she cut her hair.²

GOVERNMENT, WARFARE, AND SOCIAL HONORS

CHIEFS

According to the Hidatsa informants, a chief was a man who, first and foremost, had led a war party that had succeeded in killing some of the foe, in consequence of which he was privileged to wear the insignia of his rank, the scalp on his shoulder. To qualify for the duties of chieftainship³ such a man had to be ever ready to serve his people, to provide food and tobacco for those who came to his earthlodge, and to share any abundance of food that he possessed with the needy. In his rounds of the village he was expected to care for the personal needs (like wiping the nose) of any orphan child he encountered.

¹Goodbird is quoted in this connection as saying, "I remember when I was a boy, there was a tree just full of those buried babies."

²Cf. Lowie, 1917, p. 51. Mourning, according to Maximilian (1906, vol. 23, p. 362) continued for a year; the hair was cut, the body covered with clay, and the arms and legs gashed in parallel lines.

Henry and Thompson (1897, vol. 1, pp. 363-364) also note that a finger joint was severed for mourning.

There were several chiefs in the village. The chief who adhered most closely to the rules and regulations of his rank and transgressed none of them became the highest or first chief. The chiefs also had the power to conclude the peace following an intertribal war.

A chief was also held responsible for every occurrence, propitious or otherwise, during his tenure of office. Thus, if numerous buffalo were killed and food plentiful, it was credited to him; if, however, the enemy succeeded in killing some of his men in an encounter, he was discredited.

A chief must avoid quarrels and disputes.

Boller (1868, pp. 161-163) describes the death of the famous Four-bear's favorite wife and the consequent mourning.

The Mandan paint the face and hands white for mourning (Maximilian, 1906, vol. 23, p. 261).

³As a prerequisite for chieftainship among the Mandan, the aspirant had to lead a war party and also to kill an enemy when he was not a leader, but merely a member of such a party (Maximilian, 1906, vol. 23, p. 350). Cf. also Bowers (1965, pp. 63-64) for his summary of the Hidatsa concept of leadership or chieftainship.

Moreover, he must also act as intermediary in all altercations between tribesmen. Under circumstances such as these, it was his duty to fill his pipe and plead with the disputants, saying, "I want you to fill this pipe and cease your anger." He also offered a warbonnet in compensation. The disputants had no recourse from the decision; they had to accept the gift and compound their disagreement.

Visitors from other tribes were entertained by the chief. Although a chief was not necessarily himself a member of the Black Mouth society, he had authority to order the Black Mouths (cf. Lowie, 1917, p. 19) to notify the villagers to clean the village; at such a time the women tossed the refuse down the river bank. Some Hidatsa believed that the chiefs sometimes sat in council before ordering that the village be cleaned.

A chief was not chosen to serve for a stated period; once a man attained the chieftainship, he maintained this status for life. A chief who did not sufficiently heed public opinion and welcomed back a wife who had left him for a younger man, for example, was subsequently regarded as worthless. He ceased thereafter to receive the recognition customarily accorded to his rank. On the other hand, a chief who continued his customary mode of life, despite his wife's actions and his personal grief, was honored as more important, and as a greater chief than before his wife deserted him.

In a winter count kept by Butterfly and transcribed from a copy owned by Goodbird, we find a mere suggestion of dual chieftainship (Lowie, 1917, p. 18) in the repeated statements giving the names of the winter chiefs.

CRIME AND PUNISHMENT

Quarreling over a woman because of jealousy was punished by severe and adverse criticism, regardless of the status of the individual or the number of his honor marks. Such a campaign of disparagement was carried on especially by the clan relatives of the individuals concerned.

Whenever possible, the Hidatsa avoided feuds. According to the rules, a murderer was

killed by the brothers or other relatives of the individual who had been slain. However, the crime was often compounded by the members of one of the societies who always endeavored to prevent additional bloodshed. Customarily, they collected as many valuables—horses and other property—as possible and, with a filled pipe approached the relatives of the victim and said, "Take these gifts and obey the pipe. Be peaceable."

Transgression of the regulation against individual buffalo hunting, when discovered, was punished by the Black Mouths' society. Armed with arrows and knives, its members visited the offender's lodge, where they broke his gun, cut up all his meat, and threw it to the dogs, and finally, whipped him either with sticks or with their bows. They also shot his dogs. If he owned a tipi this too was slashed to shreds. En route to such a punishing episode the Black Mouths said, "How many wish to die? Let them die!"

The Black Mouths also punished any man who anticipated the actions of the rest of the group by being the first to shoot a buffalo.

WAR CUSTOMS

The display of sacred objects on a pole lashed to the righthand post of the earthlodge (as one leaves) at the front of the covered entrance passageway served as a signal that the man who lived in the lodge was about to lead a war party and was making a special appeal to the gods. Usually, the objects exhibited there included several bunches of hawk wing feathers, five tied in each bunch. The wing feathers were distributed to be worn in battle by those young members of the war party who had never suffered in any way and had never been vouchsafed a vision. Consequently, they possessed no protective sacred object to wear in the impending battle. Recompense for the privilege of carrying or wearing the sacred objects in the form of a warbonnet or other much

¹Lowie (1913, pp. 277-280) cites examples that demonstrate how Black Mouths functioned in punishing for crimes committed.

esteemed object was made following the return of the war party.

A war party was frequently organized with revenge as its objective. Under these circumstances no preliminary announcement of the plans was made to the respective families of the young men involved; this was done primarily because the undertaking was liable to be discouraged, and secondly, because any consequent withdrawal would be assumed to result from apprehension of the consequences.

A warrior usually provided himself with a supply of moccasins. He also carried with him his most elaborate clothing to wear in battle so that, in the event of death, he would be bedecked in his finest apparel. He also had a blanket or robe, customarily a buffalo skin but occasionally an old tipi skin. In cool weather the robe was drawn up over the shoulders; in warm weather, its upper part hung from the belt somewhat like a shirt.

Preceding its departure the members of the war party gathered in the leader's¹ lodge to smoke. Wolf-chief related in detail how a war party of which he had been a member sat in the leader's lodge, smoking in the dark, because they wanted the expedition to be a secret one and were hiding from the spirits inimical to each of them. Though the smoking on this occasion was not strictly ceremonial, the pipe was, nevertheless, offered first to the leader's sacred objects.

The lay members of a war party frequently carried small pipes in tobacco bags thrust into their belts. Only the leader carried the large ceremonial pipe in a tobacco bag which was thrust under his belt on his left side or slung from a thong passed over his right shoulder. Sometimes, part of the pipestem protruded from the mouth of the tobacco bag.

After all the members of the war party had smoked, the leader prayed. He laid his hawkskin medicine, which was tied to a stick about 2½ feet long, along his left arm and sang:

I wish these young men to walk from here in a

¹A Mandan war party had four leaders, each of whom carried a medicine pipe in a case (Maximilian, 1906, vol. 23, p. 350).

war party. And I wish that we have good fortune and all come back again.

The war party then set out, in single file, the leader at its head. Sometimes, a man reputed to have great power with the gods served as co-leader. On occasions when it was necessary to cross the Missouri, the sisters and wives of the warriors ferried them across, one or two in each boat.

Since the Hidatsa, like other Plains tribes, conceived of a war party either as symbolizing wolves or as their imitators, customarily warriors wore a headdress of sheeting in the form of a hood or turban to symbolize the wolves they were assumed to be imitating. Such a headdress served also as a kind of protective coloration for a scout because he was rendered less conspicuous against the skyline. Usually the scout wore the turban-like headdress in a position that left his ears uncovered on the assumption that no sound would escape him. Another warrior's headdress was in the form of a skin cap with two ears, said to be in imitation of a wolf's head. For winter wear such caps were made of pieces of buffalo skin; and in summer, of pieces of an old tipi skin. Scouts also sought additional protection by covering their faces and shoulders with white clay which gave them a generally gray tone, detracting considerably from their visibility.²

Warriors also painted not only themselves but their horses with red paint. Sometimes, as a means of forecasting speed, a row of horse-tracks was also painted on their cheeks and arms. A warrior's horse was faced westward. His nose and face were painted first, followed by his right side from the mane to the tail, then, finally, the left side along his back toward the head. To pass in front of a horse so painted was forbidden. The informants were unable to offer a reason for the restrictions. The painting was accompanied by a song said to have been received in a vision.

Each warrior carried with him his own food. The standard food taken on a war party consisted of a mass of parched, pounded corn that had been mixed with boiled dried squash and

²Similar painting was used in the Wolf ceremony (Pepper and Wilson, 1908, pp. 301, 321).

beans. These ingredients were all kneaded and molded together into a ball large enough to fill a buffalo heart skin when the ball was broken into fragments. Slabs of dried buffalo meat about a foot long and 8 inches wide were par-boiled. Then the meat was broken into small pieces and with bits of raw kidney fat pounded in a mortar. Meat so prepared was carried in a pair of extra new moccasins which were tucked in the warrior's belt. By carrying prepared food, the members of a war party who preferred not to risk exposure to the lurking enemy avoided hunting.

When a war party resting on its march sat around a fire, each member held his gun or bow on his knees and beat his weapon with a short stick as he sang. These rest periods also furnished an opportunity for any member of the party who was so inclined to rise and dance. Such a dancer wore an eagle feather cap and, as he danced, vowed that he wanted to be killed. The actual significance of the vow was that he expected, when necessary, to expose himself with reckless bravery, conquer his enemy, or die in the attempt. Vows such as these often elicited protests from the leader: if all the members of his party failed to return alive he was rendered ineligible to receive the honor mark that would otherwise be due him should all the members of the party return unscathed.

Every war party included one individual who was a "worker."¹ Usually, he was an active young man whose special duty it was to supply the party with water. Consequently, he was subsequently privileged to boast of his deeds during the time he functioned as the "worker."

Eight scouts were appointed. Their duty was to deploy by twos to the four cardinal directions about 300 yards from the camp. If alarmed, they alerted the guards and the warriors' camp. When the scouts returned, following a night of guard duty, the leader of the war party bade them sit in a row in front of him. He thrust the stick on which he carried his sacred bundle into the ground, untied his belt, removed his robe, spread it on the ground be-

fore him, and laid the sacred bundle on the robe. The leader prayed and sang to the sacred object in the bundle, a hawkskin bedecked with weasel skins. Then he appointed a new set of scouts.

To assure the confusion of an enemy and cause him to retreat, the leader of a war party placed his pipe in the horse tracks of an enemy and smoked it there.

According to all accounts, captives taken in the course of raids were well treated (cf. Matthews, 1877 p. 61); sometimes according to one informant, they were loaded with gifts and sent home; sometimes, as another Hidatsa expressed it, "We made them our sons and daughters," a statement that carries with it the implication of formal adoption.

WAR HONORS

Without the preliminary sanctioning vision no Hidatsa ever attempted to lead a war party.² Such a vision was usually achieved following a prolonged and persistent period of fasting. Because of the dangers involved and the responsibility for the members of the party, few men were eager to undertake such leadership. Consequently, only a favorable vision inspired a man to become the leader of a war party. A vision, for example, which was centered on a scalp-decorated shirt or a horse's tail became a major incentive to attempt such leadership. The person having experienced such a vision naturally believed that he would win the right to wear such a decorated shirt. It was assumed that the members of a war party whose leader had not experienced a vision would be killed. Such a leader was equated with a dog.

A man who wanted to set out with a war party summoned his clan father, feasted him, and presented him with a pair of moccasins or some other gift. He announced his intentions and asked for assistance. Agreeing, the clan

²Bowers (1965, pp. 219-281) provides considerably more details on warfare which admirably supplement the data here recorded.

See also Bruner, 1953, p. 25. Reporting on his observations on assimilation among the Indians living on the Fort Berthold Reservation, Bruner notes the continued stress on bravery among the men who retained the old tribal values.

¹Cf. Bowers, 1965, p. 137, who observes that young boys who joined war parties served as "camp tenders."

father, to display his power, customarily recounted his own fasting experiences and prayed to his own god as he sat with his clan son. Determined to lead a war party, such a man invited to his lodge all the young men he wanted to accompany him. The Hidatsa believed that an individual who had never fasted and expected to receive honor marks¹ without supernatural help would never kill an enemy. The leader described the subject of his vision to the young men he had assembled, saying, for example, that he expected to capture one Sioux or an enemy's horse. The conventional reply by the young men was, "Thank you, I want to strike him," or, if horses were promised, "I want to get one. I want to capture one. Thank you. Thank you."

Prior to the attack, the leader opened his sacred bundle on the ground, prayed to his gods, and sang his sacred song. The young men who surrounded him would say, "Leader, paint my face; help me." Always in accordance with his own vision, he painted their faces or tied feathers or other objects in their hair. He prayed for the fulfillment of the desires of the young warriors to strike an enemy or capture his horse. So strong was their belief in the efficacy of these and similar prayers that they had no doubt that an enemy would be struck down or a horse captured.

If horse raiding were the objective of the war party, the leader selected three brave young men to steal into the enemy camp and cut some horses loose. If successful, the thieves in all probability kept some of the horses for themselves and distributed some to their friends or to the leader. In the dance that followed the return of a successful war party, the man who stole the horses usually boasted of his deed: "I stole so many horses; I gave so many to my leader, and so many to my friends."

If the prophecies of the leader's vision were fulfilled, people would say of him, "He is a magic man. All that he saw in his vision has come true."

A man who had been a war party leader 10

¹The generic name for honor mark was *matse* (man) *aduxaka* (honor mark).

times, who returned each time with a scalp or a horse, became a great chief. Unsuccessful war parties or raids were simply excluded. So great was the power possessed by some men that it enabled them to direct a young man so skillfully that he would not fail to return with either a horse or an enemy. To add weight to his instructions, the leader also entrusted the young man with his own sacred object.

Upon the successful outcome of a war or raiding party initiated as described, both the actual leader and the young man who had been given the great sacred power were eligible to receive honor marks² as follows: If the party succeeded in killing one or more of the enemy and, in addition, captured horses, the leader was permitted to wear a scalp on his shirt; white or colored (red or yellow) horsehair was worn for the capture of horses.

Regardless of color, the horsehair was taken from the tail or mane and always cut short, about a foot long, to approximate the natural length of human hair. The wearer adorned himself with as many or as few of these as he chose but always collectively on one shoulder. The scalp decoration on a shirt signified, "I led a war party and we killed an enemy or enemies."

The leader of a second war party that had succeeded in killing an enemy earned the right to decorate the opposite shoulder of his shirt in the same fashion. The base of each scalp strand consisted of a decorative porcupine quillworked tab.

An eagle feather,³ preferably a tail feather, (although a wing feather was acceptable if the first were not available), on the arm of a war party leader signified that the war party had either found a dead eagle or else had killed

²Mandan war honor marks, as noted by Maximilian (1906, vol. 23, pp. 260, 261, 349). The general pattern, however, is the same: significant stripes were painted on the arm for killing and counting coup on an enemy; feathers were painted on the arm for killing and counting coup on an enemy; feathers were worn; two wolf tails were worn at the heels for killing a second enemy. See also Will and Spinden, 1906, pp. 122-123.

³According to Maximilian (1906, vol. 23, p. 350), a Mandan "warrior has a right to wear as many eagles' feathers as he has performed exploits."

one. Eagle wing feathers were called elbow feathers.

This specific honor mark was, however, infrequently achieved primarily because eagles were difficult to kill. However, the Hidatsa code provided that if a man did find a second eagle he attached a feather to his other arm; if a third, a feather to one leg; and if a fourth, to his opposite leg. In the unusual circumstance that a fifth eagle were killed or found the feather decorations were added to those the finder already possessed.

Three strands of white horsehair dyed red near the eagle feather signify that the wearer had led a war party that had captured one or more horses. Again, a weasel tail, white with a black tip, served to prove that the leader had led a war party that had succeeded in killing a white buffalo. If, however, a white buffalo was found dead, the insignia was not worn.

In the past a square neck ornament was worn; in more modern times it was often triangular. The necklace was called *apa odakapije* (from *apa*, the throat, or better, the anterior part of the throat of human beings, and *odakapije*, something that flaps or flies). In place of the fringe on the sides of the leggings, a long flap was produced by running a seam some distance in from the edge of the sewed skin. This bore the same Hidatsa name as the flap above. In the past a scalp was customarily attached to this legging flap to signify that the wearer of the leggings had led a fifth war party that had succeeded in slaying enemies. When a colored horsehair was attached to the legging flap, it indicated that he had led five war parties that had succeeded in capturing horses. A sixth successful capture of horses was marked by tying white or colored horsehair on the leader's robe. Wolf-chief suggested that if a man had led a war party 10 times and had succeeded in killing eagles or had come upon dead eagles he might also be privileged to hang some feathers on his robe. However, he himself had never heard of any man who had ever performed so unusual a feat.

After a man had counted first coup on an enemy, he was entitled to fasten a fine middle eagle tail feather in his scalp lock at the back of his head. One Hidatsa, Rabbit-head, wore

five such fine middle tail feathers like a fan because he had succeeded in striking first coup five times. For the first two "first coups" a warrior wore two fine middle tail feathers upright at the back of his head, but for the third or fourth strike he was privileged to wear any eagle tail feathers. If a warrior had won so many coups that it was impossible to arrange the tail feathers in a fan at the back of his head, he braided a strip of skin, or later, strips of any available cloth—white, red, black, or any other color—tied it to the crown of his head, and puncturing it with an awl, thrust the feathers through it horizontally with the quill ends toward the left. If eagle tail feathers, which in the past were expensive and quite difficult to procure, were not available, eagle wing feathers were substituted. Consequently, several wing feathers representing the warrior's less significant strikes might be thrust in the hair braid while two or three middle tail feathers that represented first strikes were tied at the crown of the head.

Feathers worn in the hair to represent the honor marks of the wearer were especially prepared for this purpose. Each quill was shaved off at its base and a small sharp stick or peg inserted in the hollow. All the hair at the back of the head was gathered into a tight braid which was firmly tied close to the head with a piece of cloth into which the feathers were thrust. Eagle feathers were worn with the top of the feather facing backward; the under side of the feather faced forward. Everyone in the village was familiar not only with their significance but with the records of every brave man, so the insignia were readily interpretable. A scalp worn on the moccasins was the mark of honor for a sixth scalp-taking war party.

If the village were attacked by an enemy and scalps were taken, the successful warrior offered such a scalp or part of it to his personal sacred object, or he might present it to someone in the village—his mother-in-law, his father, or his clan father. A remark by Wolf-chief in another context places a slightly different significance not only on the practice that required a son-in-law to present a captured scalp to his mother-in-law, but also on the conversational taboos imposed on them. Ac-

cordingly, the presentation of the captured scalp abrogated the taboo, and social intercourse between son-in-law and mother-in-law was thenceforth deemed eminently proper.

A similar procedure among the Mandan also canceled the speaking restriction between the individuals so related (Maximilian, 1906, vol. 23, p. 283). Either the clan father or the real father carried the scalp through the village, and held it up on a pole as he sang and called out, "*A-ha-he*, Wolf-chief, *ha-he*," or, the name of the warrior to be honored. (*A-ha-he* and *ha-he* are vocables).

After the mother-in-law received the scalp she stood in front of her lodge, singing. She did not parade through the village.

However, neither the scalp¹ so taken nor its black horsehair substitute were ever worn, because the battle had not taken place under a leader nor under the auspices of a regularly organized war party.

The highest degree of a leader's honor mark was obtainable under the following circumstances: when a war party captured an enemy camp, specifically all the tipis and their contents (the actual number had no significance) and when it killed at least one of the enemy. Following such an episode the leader was entitled to wear a shirt dyed black with a dye the Hidatsa designated as Indian ink or earth ink. The black dye was described as consisting of earth dug from the hills and mixed with water. The leader's shirt was also decorated with a scalp. Wolf-chief offered no information on the method of blackening the shirt but did suggest that the black earth mixed with water was rubbed over the shirt with the hands. The black shirt was worn as a mark of honor.

If the body of a slain foe was borne off by his friends, the importance of the honor mark was not affected. If one of the enemy were wounded and all the tipis and this property of the hostile camp were captured, this too merited no mark.

If a war party encountered another group

that was camping without tipis, attacked it, and put it to flight, the honor count was the same as that received for a victory in battle and not like that for the capture of a camp.

When a member of a war party in the enemy country struck an enemy with a knife and, simultaneously, counted coup, he was privileged to carry a functional knife (not a wooden replica) in a dance and was also permitted to paint his hands and a part of his forearm red. The rule applied whether the enemy was merely wounded or actually slain. The Hidatsa customarily counted coup with a bow, a stick, or a similar object. The warrior who counted coup with a knife subsequently carried a knife and painted his hands red. However, if the honor were acquired during a fight in the vicinity of his own village, the warrior was permitted to carry the knife but not to paint his hands. Because Bite-nose had used an enemy's knife when he won this honor mark, he painted his hands red and his forearms almost to the elbows.

Wolf-chief never heard of a Hidatsa woman shooting or striking an enemy and, as a consequence, winning a warrior's honor marks.

When a scout who was working for a war party succeeded in locating an enemy tipi or a camp, he rated a gull wing feather. Regardless of the number of scouts in a party, only the first four who sighted the enemy were eligible to receive the gull wing feather decoration.

If a spy who discovered an enemy camp also succeeded in stealing a horse, he acquired the right to paint a red band across his gull feather ornament. A good horse was a valued possession. The horse was usually picketed in front of the owner's tipi entrance in the camp. To steal into a camp and cut such a horse loose was believed to be a brave and hazardous deed, principally because the thief was often killed by the enemy in the attempt. However, the captor who stole any horse belonging to the enemy merited the red strips; he also had to have been one of the first four to discover the enemy tipis and the horse must have belonged to the enemies camped in the tipis.

However, if one of four scouts who had spied out tipis captured a horse, he was not

¹The Mandan painted scalps red and stretched them on hoops for preservation. (Maximilian, 1906, vol. 23, p. 351).

permitted to paint the full feathers entirely red as the grass ornaments were painted under similar conditions. One of the four or five long feathers of a gull wing were used as honor count ornaments. Each feather was about 6 or 7 inches long; it had a black top and gray band near the quill end; its middle areas and bottom were white.

A war party was preceded by scouts whose objective it was to locate the enemy. After an encounter with the enemy, the scouts ceased to function and the party started on the return journey. If a member of a war party was killed, the responsibility for his death rested both on its leader and the leader of the scouts he had appointed.

To illustrate this point, Wolf-chief related his own experiences. One time, when Bull-man led a war party, he appointed Wolf-chief leader of the scouts to replace Coyote-necklace when he was lamed. Had any member of the party been killed, the two leaders, Bull-man and Wolf-chief, would have been held responsible and both of them would have had to bear the consequent disgrace. Their clan cousins would in all likelihood have admonished them, "You are like dogs. You thought you were big, that you had great power and had many gods, but you have lost us a good man. You are no good!" When such an unfortunate leader returned, he fasted, mourned, and prayed until such time as he had a favorable vision, which would give him the opportunity to lead another war party. If then his men succeeded in killing an enemy or in stealing a horse, his original status would be restored and he was no longer required to fast. If, however, Wolf-chief, as leader of the scouts and his men, had made contact with the enemy with whom they fought, and the war party started on the return journey, all the scouts would at once surrender their responsibilities. Consequently, the responsibility for any loss or disaster during the journey would rest wholly upon Bull-man as leader of the party.

On the other hand, from this point onward, in the accepted procedure, the leader of the war party was the only person eligible to receive all the honors. If a dead eagle were found, its tail

feather was tied to the leader's shoulder. If a horse was captured a fragment of white, red, or yellow horsetail hair was fastened to the leader's shoulder. However, black, which signified that an enemy had been killed, was never worn as a symbol that a horse had been captured.

Apparently, as compensation for bearing the entire responsibility for any disaster that may have occurred on its homeward journey, the war party leader could comfort himself with the thought that he was the recipient of all the glory. The informants failed to make clear whether any honor marks won on the return trip differed in any way from those granted before an encounter with the enemy.

When a scout discovered a hostile individual or group and in the ensuing battle succeeded in counting coup on one of the foe slain, he earned the privilege of wearing a kit fox tail¹ on the heel of one of his moccasins when participating in a dance. A red band, about 4 inches wide, also marked the middle of the kit fox tail. It was attached to the moccasin by a deerskin thong an inch above the sole. This kit fox insignia was known as "foot fringe."

The scout who first discovered an enemy and in the subsequent melee won the first coup on the first individual to fall merited the right to have a small cluster of raven feathers tied to the end of the kit fox tail (on his moccasins); this was called "foot-fringe-tassel." Either wing or tail feathers, stripped, except for a tiny tuft at the end, were used.

The first four men who struck an enemy earned the right to wear a golden or war eagle tail feather in their hair. However, only the first of the four men who counted coup achieved the privilege of wearing one of the two middle tail feathers of an eagle, the most highly prized of the 12 feathers. If a man who had struck second or third coup presumed to wear a middle tail feather he would most certainly be questioned by the people in this way: "What! Why do you wear that? Is that your sacred object?"

¹Curtis (1909, vol. 4, p. 180) also notes that those "who had counted coup wore fox-tails at the heels of the moccasins."

Wolf-chief recalled that he had shot an enemy with a rifle. Everyone knew it. He was the fourth man to count coup. Afterward, whenever he danced and exhibited his rifle with a middle eagle tail feather tied halfway down its red painted barrel, his claim was disputed.

In the old days, only the brave men wore an eagle tail cap or warbonnet. If a warrior had, in the past, killed an enemy who wore such a cap, subsequently, whenever he danced, he would raise his gun and announce, "I killed one who wore a warbonnet!"

In very ancient times the Hidatsa did not wear warbonnets during a dance. During Wolf-chief's youth warbonnets were fairly generally worn as a part of the dance costume. In the more recent past, a man who had worn a warbonnet in battle, customarily displayed it when he danced; however, unless it had actually been worn in battle a warbonnet was never exhibited in this way. A warbonnet was not equivalent to an honor mark. Only men who were exceptionally brave wore one, chiefly because it attracted attention to the wearer, and, as a consequence, everyone in an enemy group would be eager to kill its wearer. Subsequently, they could boast, "I struck a good enemy; he wore an eagle tail cap!" Wolf-chief denied when questioned both that the individual who wore a warbonnet was also the leader of one of the men's societies and that the feathers on the headdress represented the collective honors of all its members.

A slender flat stick about one foot long, wrapped with porcupine quills, surmounted by three or four crow wing feathers, was worn to indicate that its wearer had struck a woman. The stems or quills of these crow feathers were stripped down and cut in such a way that the soft end tufts fluttered in the wind. The stick was the ancient coup stick. In Wolf-chief's time no distinction was made between striking a man or a woman; an eagle feather was worn as a symbol for both. The first warrior who struck either a woman or a male enemy possessed the right to wear a middle tail feather. There was no differentiation made in establishing the privilege.

A man armed with his bow and arrows, who

maintained his position in a tribal battle during which the advantage changed from one side to the other, but succeeded finally in halting the enemy attack and managed to escape unharmed, was rewarded for such a deed of valor. A man so honored was called *Maidax-atia*; the word has survived as a proper name. It was believed to mean "Brave-man." In preparation for participation in a dance he first covered his entire body with white clay. He was clothed only in his breechclout; he wore no moccasins. His hair was gathered in a knot on the top of his head in back of his forehead. Presumably, this arrangement of his hair was used because some members of a war party dressed their hair in this fashion so that it would be possible to tie a sacred medicine to such a knot of hair. Before the white clay dried, a friend, with his fingers slightly spread, scraped it away from the dancer's arms and body in long vertical stripes which were then crossed with other horizontal stripes similarly applied. Wolf-chief was unable to provide any explanation of the significance of these stripes. A buffalo tail was attached to the back of the belt so that it was held perpendicularly in imitation of an angry bull. Obviously, this description refers to the costume worn in the bull dance (Lowie, 1913, pp. 292 [Hidatsa], 315 [Mandan]). Wolf-chief added that his father, Small-ankle, had once achieved this honor mark because he had withstood the enemy and shot the leader. This episode was said to have occurred before the great smallpox epidemic. Later, after the Hidatsa had been weakened by numerous deaths, the village was again attacked and its defenders driven back by the enemy. Again, Small-ankle triumphed against the attackers. He shot one of their brave men. Consequently he attained this honor twice.

In the past, more than a century ago, it was customary to use another honor mark. If a participant in an important battle proved, by plunging into the midst of the enemy and emerging unharmed, that he possessed power so sacred that bullets and arrows failed to enter his body, he merited the right to receive all honors except those specifically for a leader of a war party. He was not permitted, for exam-

ple, to wear scalps, a prerogative of such a leader. Such a man was called "he-strikes-first."

If one man had already counted coup on an enemy and another claimed the same strike, and if the first claimant surrendered his claim, the second man was privileged to wear a skunk skin on his moccasin with the tail trailing at the heel.

If an enemy were scalped, thereafter, all those who participated in the scalping merited the privilege of painting the inner side of the right moccasin red. A man who wore one moccasin with its inner so painted who also had helped to take the scalp of a second slain enemy earned the right to paint his second moccasin in the same way.

When the village was attacked, or a war party fought a battle in enemy country, and more than one member of the attackers was killed, each of four men who counted coup on the first enemy slain achieved the right to paint himself by dipping his three fingers in red paint and drawing them spirally around one leg or an arm. Regardless of whether the leg or arm were so painted, the mark was called "leg-marked-spirally." If a man repeatedly merited the privilege of using this mark he would first paint his legs, one after the other, and follow by painting his arms.

In a battle that took place at the village or on a war party, if several of the enemy were killed, each of the four men who struck the last person slain earned the right to use the *ikaha* (last) *dahi* (to stand) mark. Dipping his two fingers in black¹ charcoal and water, he made four pairs of stripes halfway around the outside of the leg. The informant believed that the word should be defined as the "last enemy to be killed," despite the fact *dahi* signifies "stand," not "killed." He then suggested that perhaps its definition might be extended to include the last enemy to maintain his position against the Hidatsa warriors.

Two diagonal marks on a bullboat paddle in

the Museum collection were said to symbolize "last enemy struck in battle." When two more of their opponents were killed, the warrior who struck the last individual slain was granted this honor mark. The stripes were applied by dipping the finger in red ocher which had been mixed with grease. The decoration on the paddle was preserved by avoiding friction against the water. This was achieved by holding its undecorated side against the bullboat when paddling and exposing only the painted stripes.

A warrior who had achieved first strike on four enemies was rewarded with the right to paint either his left legging or his bare left leg red, a very high ranking honor mark called "left-painted-red."

Wolf-chief recalled that when he was 20 years old he heard a man named Red-kettle call out in the village, "Young men, go out, fast in the hills; try to find your god. When you paint your faces and try to find some means of cleaning your hands, you can rub the paint off on your left leg." The informant explained that Red-kettle referred to the young men who customarily painted their faces. He urged them to fast and pray to assure that the gods appear to them in a vision and grant them the power to win first strike four times and, in this way, achieve the right to paint the left leg red. Following such a vision experience, whenever a young man painted his face he was also privileged to rub his left leg with the superfluous paint remaining on his hand.

The method of painting these stripes never varied. The mark was called "enemy strike." A warrior who had struck 10 enemies might paint 10 red stripes on his arms and legs, ignoring the degree of first strike and last strike. Under these circumstances, the first stripe was placed above the wrist; the second, midway on the forearm; and the third, farther up on the arm. Three additional stripes were painted on the second arm; the seventh stripe was painted on the leg, and the tenth on the opposite leg.

A warrior who rescued a fellow tribesman after he had been shot down by the enemy and either wounded or slain and whose body enemies had rushed up ready to mutilate, was entitled to mark his left thigh. It was permissi-

¹Again we find a parallel among the Mandan who signaled the performance of an exploit by resorting to black facial painting (Maximilian, 1906, vol. 23, p. 263).



FIG. 17. Example of Hidatsa face painting. AMNH negative number 286394.

ble to display this mark (*maadukuxti*)¹ on the face, the leg, or the breast in any color clay desired—black, white, or red. It was permissible to draw all the marks thus far described in black, white, or red clay.

“Hand-pressed-on-breast,” served as the reward of a warrior who ran forward afoot and with a knife or some other hand weapon, seized and slew a desperate enemy who was surrounded by Hidatsa.

The insignia that commemorated the deed meriting the honor mark was placed on the warrior by a friend when he was preparing for a dance. He wet his hands with white clay; he pressed his right palm against the warrior’s left breast and the left palm over the warrior’s right breast. Wolf-chief recalled only one Hidatsa, Brave-man, who achieved this honor count.

¹An adequate translation of the term was unobtainable. *Kuxti* means *help*. Wolf-chief suggested that it might, perhaps, signify he who sacrifices himself for another, or a closely related idea.

If a Hidatsa warrior leaped his pony over a fallen enemy or rode the foe down, he was entitled to the honor mark called *mada-xu-ka* (from *ma* a prefix and *da-xu-a-ka*, “ride-down”). The distinguished mark was painted in white clay by a man who had won it. He painted a man’s rude figure on the breast of the horse, the head on its throat, the two arms extended on the animal’s shoulders, and the legs on its legs. An alternate symbol cut out from any available material was in the form of a rude image of a horse with a horsetail or a portion of one hanging from it in the form of a streamer. A rude male figure was also made by dipping both hands in clay and pressing them on the shoulders of the horse. Only the two hands were painted carefully; the rest of the figure received less attention to detail. Good-bird remembered that he had seen Flying-eagle with such an image; on that occasion, the figure of a horse was made of a flat piece of wood, that of the man, of tin.

A man who had captured an enemy horse

and returned safely to camp with it painted four horse tracks on his leg and thigh. A repetition of the feat merited the painting of four such tracks on his opposite leg; if the same man returned with a third horse, he painted four tracks on one arm; if he captured a fourth horse, four tracks were painted on the opposite arm.

If a Hidatsa engaged in hand-to-hand combat was wounded by an enemy knife, he was entitled to wear a wooden knife¹ painted red as a head ornament. The informant had known only one man who wore this ornament. Similarly, the recipient of a wound inflicted by an enemy lance merited a red-painted lance to be worn as a head ornament.

Ever after when he danced, a man who had cut loose a picketed horse outside an enemy tipi was privileged to wear an unpainted rawhide rope on either shoulder.

A Hidatsa who had been wounded wore a little red-painted stick in his hair sharpened at one end. The stick was somewhat longer than a pencil. A little ball in the middle of the stick represented the wadding of a gun which, in the old days, consisted of wood shavings. A ball of shavings was added to the stick to represent each wound. From the context of Wolf-chief's description, apparently at this point he was referring to gunshot wounds.

A wound inflicted by an arrow made it possible for the injured warrior to wear an eagle tail feather. It was colored red, trimmed short for its entire length on either side, and split down from the top, half its length, to represent the feathering of an arrow.

If a warrior was wounded, a mark suggesting a wound, a red circle with three or four lines emanating from it, representing blood, was placed either on his bare leg or on his leggings. This honor count was translated as "wounded." A similar mark was painted on the wound area if the warrior was wounded in the chest through the lung and recovered. He also

painted his chin and neck to represent the blood spurting from his mouth. This symbolic painting is called "wounded badly" or "wounded in an (almost) vital place." However, the wound mark on the leg might actually represent any body wound.

In a fight near the village if only one of the enemy was killed, or if a war party succeeded in killing a single opponent, the warrior who counted coup on the slain foe was entitled to an honor mark consisting of a cross surrounded by four spots. The mark was painted on the body, for example, on the right arm. If the same warrior counted coup on another individual enemy slain under similar conditions, he placed the spotted cross on one leg, a fourth on the opposite leg, and a fifth on his breast. Under these circumstances such a man was privileged to boast, "I am full of honor marks."

An honor mark attained by counting coup on a member of an enemy tribe who was killed subsequent to a visit to the Hidatsa was also recognized. However, such a mark was considered to be of a low degree; it was rated as a poor honor mark.

A war party leader who personally struck first coup on an enemy received a middle tail feather of an eagle. He was also privileged to wear a scalp on his shirt. If a white buffalo was killed while a war party was en route, its leader was entitled to wear a weasel tail on his arm. Also, when a war party captured horses, its leader merited the right to wear either white or brightly colored horsehair on his shirt. A leader who possessed these four honor marks was also privileged to tie a scalp or a part of one to his pipestem about two-thirds of the distance to the bowl. The pipestem was scorched black for its entire length.

After a war leader had acquired all these honor counts, he was recognized as a chief. He was then called "very great chief." He was spoken of as, "One who helped himself," meaning that he had won all four honors marks by his own efforts. In Wolf-chief's time no Hidatsa had attained this pinnacle of success. However, when they lived on the Knife River, there were said to have been men who had achieved this rank. Recognized as a chief, such a man was obligated to feed orphans, aged

¹Bodmer portrays the famous Mandan, Mato-Tope, wearing a wooden knife in his hair, to signify that he had killed a Cheyenne chief; he also wore six painted wooden sticks emblematic of six musket wounds he had received (Maximilian, 1906, vol. 23, p. 261).

people, or anyone else, and in addition, to keep open house. When such a man returned from the hunt, any poor people had the right to come to his dwelling and eat his food.

A Hidatsa who had once owned or won a white buffalo robe was subsequently privileged to wear a strip of white-haired skin, for example, a piece of white horsehide bound across his forehead. A white buffalo robe was never mutilated for this purpose, principally because such robes were not only rare but also highly valued. Although Wolf-chief had seen a white buffalo skin he had never seen a live white buffalo. If a man had offered a white buffalo skin either to his sacred objects or to the sun, he wore the same honor mark. During his lifetime, Wolf-chief had known only two old men who wore this insignia.

A man who struck, second, third, or fourth coup on the single individual killed in any battle was privileged to wear an unpainted kit fox tail on the heel of his moccasin.¹

A war party leader who had killed an enemy attained the right in the subsequent dance to tie an eagle tail feather and a scalp (or a portion of one), or failing that, an imitation scalp fashioned from a piece of horsetail hair and skin to his gun. An ordinary member of a war party who killed an enemy earned the right to the eagle tail feather but not the scalp.

If an enemy attacked the village and stole horses, a pursuit party was organized at the initiative of one who possessed the "power" to be a leader. He dispatched a crier through the village to assemble the retaliating group. The status of such a pursuit party was equivalent to that of a war party. Its participants were eligible to attain the same honors for deeds of valor as were the members of a war party. Apparently, however, there was some difference in ranking. Although the members of a pursuit party wore eagle feathers and painted themselves with the same insignia as members of a bona fide war party, those who had already achieved their honors as members of

such a group, on occasions when the symbols of these honors were displayed, were wont to announce, "But I won these marks in the enemy's country."

Wolf-chief remembered such a pursuit party that was led by Hairy-coat one spring when the Hidatsa were still living in their winter camp opposite Independence. Hairy-coat, accompanied by virtually all the young men in the village, pursued some Sioux who had stolen some horses. One Sioux who had stolen seven horses was killed. The Sioux fled with the stolen herd in the direction of Lac-que-mont, where they separated into four groups. The Hidatsa divided into three groups and pursued the Sioux but did not succeed in overtaking them. One man, with seven horses, fled across Lac-que-mont, where he abandoned the stolen horses. He dismounted, fled afoot, and took refuge in a heavy growth of bushes. Hairy-coat, accompanied by about 13 men armed with guns and bows and arrows, followed and stopped him. He carried only a bow and arrow.

The pursuit party pressed on; the Sioux heard them as they advanced. He was surrounded; he shot at the Hidatsa, but his arrow failed to find a mark. The pursuers thought the Sioux was "excited." They rushed in to count coup in such numbers that it was impossible to be sure who struck the first coup. Long afterward, the Hidatsa learned that the Sioux had shot wild because he was snow-blind. About 40 miles from their village, the Hidatsa found the abandoned horses tied together in a long line. Each horse was tied by the jaw with a piece of a lariat to the knotted tail of the horse directly in front. Wolf-chief suggested that the Sioux probably used this method of leading the horses because he was snow-blind and his vision was defective. This method of tying the horses made it impossible for them to attain their greatest speed. Ordinarily, a raiding party would drive its stolen horses at top speed throughout the night and would allow them only a brief rest at feeding time in the morning, after which they would push on again rapidly.

If any members of the pursuit party had killed any of the Sioux, all a leader's honor counts would have fallen to Hairy-coat whether or not he was personally present.

A hand-to-hand encounter with an enemy,

¹Maximilian (1906, vol. 23, p. 265) writing of the Mandan remarks on an interesting parallel: "Those men who have performed exploits wear, round the ankles, wolf's tail, or pieces of otter skin, which are lined with red cloth, and trail on the ground."

whether it resulted in his death or not, earned the victorious Hidatsa the privilege of carrying a knife painted red in the subsequent dance.

The captor always gave a captive woman or child to a woman—his mother-in-law, his wife, or his sister. The captive woman then became a servant who fetched the wood and water. It was also permissible for the family members she served to send her out on a dark night for whatever purpose they might wish, though never to any great distance for fear that she would escape. If such a captive woman attempted to escape she would, in all probability, have been killed. However, Wolf-chief was unable to corroborate such a practice as having been followed during his own lifetime. A lazy captive woman was punished by beating her with a stick or burning her with a coal of fire held at one end of a stick. However, cooperative industrious captives were treated with kindness as if they were members of the family.

No adult captives¹ were taken in Wolf-chief's lifetime. Once, however, a girl baby was captured. The Hidatsa killed her because they did not want to be burdened with the difficulties of bringing her up. To possess a captive in ancient days served as a symbol of social superiority that was formulated in a boastful statement such as "You have had no captive! But I have!"

Boys as captives were treated very much like women in the same situation. They were forbidden to own any sharp instrument or weapon, except possibly a knife. A good many

captive boys, especially those over 10 years old, ran off or hid, and when visitors to the village departed they would take this opportunity to leave with them.

Wolf-chief knew only one male captive, Buffalo-tail, an Ihanktonwan. He was brave; he joined the Hidatsa war parties and acted like a member of the tribe.

Wolf-chief mentioned another method of attaining honor marks, the result of a specific exploit. A Hidatsa, Stirrup, following an attack on a Sioux camp, used his bow to strike many Sioux women who had been abandoned by their men, and for this reason won many honor marks.

WOMEN'S HONORS

Just as Hidatsa men became eligible for honor marks through prowess in battle, as a parallel, the women of the tribe received comparable rewards for industry and attainment in their own spheres of activities. An industrious woman who had tanned hundreds of hides became eligible to receive the most coveted of honor marks, the "woman's belt"² from her clan aunt. Such a bead-decorated belt, usually about 2 inches wide, was not purchasable, nor was it correct practice for any woman to make one for herself. Two additional special rewards for merit were cited: a bracelet, as a reward for decorating a tipi cover with quills, and a ring, for making a quill-embroidered robe.

GAMES AND AMUSEMENTS

As exhibitions of skill, as contests, and as the basis of gambling, games appear to have had a fairly important place in Hidatsa culture. Like many other subjects treated in this publi-

cation, this section falls far short of completeness. It does not include all the games known to the Hidatsa.³

¹The thoughtful and kindly treatment of captives here described is not corroborated by Maximilian (1906, vol. 23, p. 384), who observes that prisoners of war were not only treated harshly but also frequently mutilated. Among the Mandan, however, a war captive was generally handled with kindness and consideration, though the women frequently sought vengeance by killing war captives before they were brought to the village (Maximilian, 1906, vol. 23, p. 351).

²A corroborative statement by Curtis (1909, vol. 4, p. 142) is of interest. "A woman who had good gardens and a well-kept lodge was permitted to wear a belt, about six inches wide, made of deerskin on which feathers were thickly sewn."

³Many additional games are mentioned by early observers (Boller, 1868, pp. 160, 196, 197; Brackenridge, 1816, pp. 158-159; Maximilian, 1906, vol. 23, p. 299. Cf. also the Hidatsa games described by Culin, 1907, pp. 57, 186, 419, 511, 641, 729, 747).

WOMEN'S GAMES

A favorite gambling game was played on the ice by young women, whether married or unmarried, usually 18 or 19 years old. The stakes consisted of glass beads, brass wristlets, and other trade ornaments. Usually four young women played, two opponents on each side. Occasionally, the number of players was increased to six or eight, also equally divided. Each participant sat on the ice with her robe folded under her; sometimes the robe was laid over a foundation of small sticks. To fold the robe, its head was first dropped on the ice, fur side up; then the girl kneeled on the head simultaneously letting herself down with her feet turned to the right and the robe held over her left shoulder, and finally she seated herself. The object of the game was to slide a squarish-shaped bone to a goal, that consisted of a cylindrical piece of wood about 2½ inches long, and attempt to strike the goal. Each end of the goal piece was notched. Its notched surfaces were painted red. In the old days, the square bone thrower was made of the upright process of a buffalo vertebra. The bone thrower in the Museum collection has a corner broken off; on one side it has a shallow pit from which lines radiate to its four corners. The design was said to have a symbolic meaning that signified "one-enemy-killed" coup, that is, one of four men had counted coup on one enemy killed in battle. Sometimes either a yellowish stone, cut square, or a flat round pebble was substituted for the bone thrower.

The players paired off. One slid the bone; the opponent held the stakes. If the player made a hit, the loser slid the stake, usually a bead, to the winner. Young men functioned as interested spectators during the game. They attempted to induce the players to laugh. However, no man ever spoke directly to his own sweetheart; instead, he addressed his humorous remarks to the wife of a member of his clan.

The dice game was called "dish-raised-up," its name based on the lifting of the dishlike basket as the dice were thrown. Brackenridge (1816, p. 149) observed Arikara women playing this game during which they tossed five pebbles

in a small basket.¹ The beautiful baskets used in the past by Mandan women to toss dice were becoming rare early in the twentieth century. Consequently, in 1911 Dr. Wilson engaged Calf-woman to weave several for the Museum collection. These baskets were of two types; one was made of willow roots, the softer and more pliable material; the second was woven of willow shoots. The baskets were of two sizes, the smaller one for tossing dice, the larger basket for use in the ceremony of the adoption of the sacred child. In the spring, when the Missouri was free of ice, the long roots used to weave these baskets were easily obtainable along the river bank. The roots were identified by their sweetish taste. Children occasionally chewed them to extract their sweetness. The Hidatsa played a very similar game with plum stones; the counts, however, were different. The native names are all Mandan.

Owl-woman made a set of six bone dice for the Museum collection. One face of each was plain; the opposite face was decorated. Of these, each of two round dice (*canacot*, meaning "not unknown") had five parallel lines. According to the informant, the number of decorated lines may vary, but they must be the same on each die.

Each of two square dice (*kiduta*, meaning "unknown") was marked with five parallel lines. As for the round dice, the number of decorative bones may vary, but the two dice must be duplicates.

One round die (*patux*, or "cut-marks") was decorated with 10 radiating lines resembling the spokes of a wheel. The design is referred to as the "web" below.

Another round die (*ipa*, "head") had four marks on its face that roughly resemble a buffalo head. Owl-woman explained that because the last Hidatsa who had the right to mark the dice with the images of a buffalo head had died, it was permissible to sketch the motive very roughly. In the following descriptions the die is referred to as "head."

The better to understand the game, Owl-woman and three of her friends were persuaded

¹See also Culin, 1907, pp. 186-187, for descriptions of the Hidatsa and Mandan games.

to play through a game, permitting Dr. Wilson as observer, to ask questions and to record each throw. Unfortunately, he did not have an opportunity to corroborate the count because he witnessed only a single game, which was played as follows:

"Strictly a woman's game, it was customarily played by four women, sometimes by two players. The women sat on the ground in the position below:

Mrs. Two-chiefs	X	Other-kind-of-snake
Owl-woman		Beaver-woman

"Mrs. Two-chiefs and Owl-woman were partners, as were the other two players. Fifty counters, peeled sticks about 6 inches long, were piled between two of the women (X).

"In the following scoring the name of the player to throw first will be in the first column. The second column records the position of the dice as they fell. The third shows the count made by the throw. The dice were tossed in the baskets and fell back into the baskets.

"Other-kind-of-snake shuffled the dice between her palms as she prayed, 'Let me beat the other.' She cast the dice back into the basket and made the first throw:

Other-kind-of-snake		
2 Squares, 4 Blank		10 sticks

"Because of scoring, the player should have had another throw, but this was overlooked.

Beaver-woman

Square, Web, 2 Rounds, 2 Blank	Out
--------------------------------	-----

"At this point in the game it was explained that in the foregoing throw, Head and Web face down made a draw, called 'head with' an explanation which remains rather obscure.

(Another throw)

2 Squares, 2 Rounds, 2 Blank	Out
------------------------------	-----

Mrs. Two-chiefs

Web, Round, 4 Blank	Out
---------------------	-----

Other-kind-of-snake (prays)

Head, 2 Squares, Round, 2 Blank	Out
---------------------------------	-----

Beaver-woman

Square, Round, 4 Blank	Out
------------------------	-----

Owl-woman

Web, Head, 4 Blank	10 sticks
--------------------	-----------

(Another throw)

2 Rounds, Square, Head, 2 Blank	Out
---------------------------------	-----

Mrs. Two-chiefs

Head, Web, 4 Blank	10 sticks
--------------------	-----------

(Another throw)

2 Square, Head, Web, 2 Blank	Out
------------------------------	-----

"Owl-woman thought that the throw called *cadacote* may mean 'something white.'

"Owl-woman explained that the two dice called 'rounds' have no count, but are called 'helpers.' One round face up and the other blank are called *Cawi*. This throw does not score but does gain an additional throw.

Other-kind-of-snake

Square, Head, 4 Blank	Out
-----------------------	-----

Beaver-woman

Web, Head, Round, 3 Blank	Out
---------------------------	-----

"One of the dice fell out of the basket at this throw. It was replaced as it had fallen on the ground and counted with the rest of the dice.

Owl-woman

Head, Web, Square, 3 Blank	Out
----------------------------	-----

Mrs. Two-chiefs

Web, Round, 4 Blank	Out
---------------------	-----

Other-kind-of-snake

Round, 5 Blank (another throw)	
--------------------------------	--

"This throw makes *cawi*, one round was up and the other blank.

Another throw

Head, Web, 2 Rounds, 2 Squares	10 sticks
Called <i>awepsi</i> or 'all-black'	

Another throw

Head, Round, 4 Blank	Out
----------------------	-----

"The players here remarked, 'If just head up, all others blank, the throw counts 10 sticks.'

Beaver-woman

Square, Round, Head, 3 Blank	Out
------------------------------	-----

Owl-woman

2 Square, 4 Blank	10 sticks
-------------------	-----------

Another throw

Head, Round, 4 Blank	Out
----------------------	-----

Mrs. Two-chiefs

Head, Web, 2 Squares, Round, Blank	
------------------------------------	--

Cawi, winning another throw

Another throw

Dice make *cawi* again

Another throw

2 Rounds, Square, 3 Blank	Out
---------------------------	-----

Other-kind-of-snake

Head, Round, 2 Squares, 2 Blank	Out
---------------------------------	-----

"This throw, *canacote*, was again translated as 'white' or 'only white,' but somewhat doubtfully.

Beaver-woman

Head, Web, 4 Blank	10 sticks
--------------------	-----------

Another Throw

Round, Web, Square, 3 Blank	Out
-----------------------------	-----

Owl-woman

2 Squares, Web, 3 Blank	Out
-------------------------	-----

"At this point in the demonstration an interruption occurred. The game ended, and whether it was finished or not was uncertain. The following rules also applied:

"If one or both rounds were face up, the player

was entitled to another throw, provided all the other dice were blank.

Web, Square, 4 Blank are called *hackidoxkik*, and count 16 sticks.

Web, 5 Blank, count 20 sticks.

6 Blank, count 10 sticks.

Web, Head, 2 Rounds, Square, Blank (that is, all face but one square) count 5 sticks.

"Sometimes, by agreement, the game was ended, regardless of the number of counting sticks either side would have accumulated. For example, if Head turned up, with all others blank, that position assured that the game was won; or, if the two squares were blank and all the others were face up, that was the winning position; or if Head and 2 Squares were face up, the game was won; or, if all six dice were blank, that position won the game.

"In claiming sticks won by a throw, the players were observed to draw from the common pile at X until that source was exhausted; thereafter, they drew from the opposing players' side."

ARROW SHOOTING CONTESTS

Contests to determine skill in shooting arrows were popular.¹ Such contests were frequently held in the space between two earthlodges. Wagers were placed on the results. The boys or young men participants customarily staked quivers, robes, leggings, or other possessions of greater value on the outcome. When boys took part in such a contest they shot bird arrows or pointed wooden arrows like those used to kill rabbits.

Wolf-chief commented one time that when the Hidatsa shot at a mark in olden times, the customary range was about 60 yards. Additional inquiry as to methods and rules of such a shooting contest produced a suggestion from Wolf-chief that he and Wilson shoot a contest so that Wilson would have an opportunity to learn the game. Wilson had his own lemon wood bow, 46 pounds pull and 6 feet 4 inches

long, and a dozen arrows of the customary 28-inch length. Wolf-chief used one of his own bows. A place behind his cabin was chosen for a range.

Two peeled sticks, i.e., two arrowshafts, were thrust into the sod about 60 yards apart to serve as targets. Each player took an equal number of arrows—three. The old Hidatsa custom required that each contestant shoot from one to four arrows. The contestants shot, in turn, one arrow at a time until the full end was shot. In the standard English fashion each contestant shoots the whole end of three arrows and then makes way for the next contestant to shoot.

The final count was registered: Wolf-chief and Wilson each shot three arrows and walked to the spot where they lay. The arrow lying nearest the peeled stick counted one point for its owner. The rest of the arrows were not counted. The distance for the winning arrow was not measured from the stake to the arrow-head but to that part of the arrow that lay closest to it. The distance was measured from the place where the arrow lay, irrespective of whether or not it had struck the ground and glanced.

Shooting and scoring proceeded in this fashion: After the first end had been shot Wolf-chief and Wilson walked to the stake and found that one of Wilson's arrows lay nearest to it. This position counted one point for Wilson. Then they shot an end (three arrows) at the second stake from which they had just shot. This time, one of Wolf-chief's arrows lay nearest the mark, cancelling Wilson's point, and so, left the score blank for both contestants. In the event of such an outcome of a contest, the game was begun again; playing continued until one player won two points. The customary objective was to win two points; occasionally, however, the winning count was one point.

Although more rarely, in addition to the count by measurement, another count was made. If the point of an arrow struck the stake, this position was reckoned as one point that superseded every other count, even if the striking arrow had glanced away to a distance with other arrows now lying nearer. However, this striking arrow must not have glanced up from

¹"The Big Bellies amuse themselves by shooting at a mark, either with guns or bows and arrows" (Henry and Thompson, 1897, vol. 1, p. 363). The Mandan test of expertise in archery differed, according to Catlin's account (1842, vol. 1, p. 141). Cf. also Bowers (1965, p. 219), who writes that Hidatsa children's games often centered around the war customs of their parents in the form of imaginary war expeditions.

the ground before it hit the pin, nor must it have first struck any other arrow. In either of these eventualities, this strike counted like that for other arrows.

The match shot by Wolf-chief and Wilson, with three arrows for an end and two points for the winning score, lasted over an hour. They were about equally skillful. The practice of repeatedly cancelling a point with one made by the opposing archer not only served to wipe the score clean but added a surprising excitement to the play.

After the game was ended, when leaving the shooting ground, Wolf-chief volunteered that in the past when an archer selected the best arrow to shoot he would hold four arrows by their feathered ends in his right hand and would toss them with an underhand pitching motion, heads forward. The arrow that fell the greatest distance was believed to be the best. It would be picked up by its owner who said, "I will use this arrow first; I am sure it will reach a buffalo's heart."

CHILDREN'S GAMES

Although some informants said that boys and girls did not play together because "boys who played with girls grew up to be women," the rule was far from rigid, as will be observed in the examples of joint play cited below.

For a few weeks in early spring, in March and early April, Hidatsa boys were fond of playing the hoop and pole game. The hoop game (cf. Maximilian, 1906, vol. 23, pp. 298, 299) was played either in the village or beyond its limits on level ground where the melting snow left the ground bare. It was called *makaxadike* (based on the name of the hoop, *makaxake*). Two or three boys played on a side; each used three or four laced hoops about 30 yards apart. When very young boys played they stood about 50 yards apart. The players on one side rolled the hoops forward. The hoops were caught by the opposing side on the points of the lancelike sticks which were thrust or darted at the hoops. Any hoop caught in this way was hurtled back, sailing through the air. The objective was to try to strike an opponent. The final hoop thrown was quite small; its lacing

differed from that of the others. According to Wolf-chief, the play continued until all the hoops were caught, at which point the opposing side gave chase to the hoop throwers (throwing the hoops at them?). If the hoops were not caught, both the hoop thrown and an additional hoop had to be forfeited to the throwers.

It was an observed rule that when the ice in the Missouri River broke up the boys went to the high bank overlooking the river and cast their hoops into its current.¹ According to Hidatsa tradition the hoops were transformed into dead buffalo after they had passed beyond sight around the first point of land downstream.

In the old days, in the spring, many dead buffalo floated down with the river current. Their flesh was highly valued. Both dead elk and buffalo that floated in the river were hauled in and eaten (Maximilian, 1906, vol. 24, p. 78). Brave young men went out on the river ice and dragged the carcasses to land with ropes. When the river ice broke the old people of the village were wont to exhort the boys, "Now is the time; throw your hoops into the river; make some dead buffalo!"

At the sound of the first thunder in May or June, when it was possible to peel the bark from willow shoots, it was time to play the *umakiheke* game.² Then the boys cut light willow or box elder sticks about 3 feet long and the diameter of a lead pencil. The sticks were often rubbed with red ocher, coloring them red, or stained green with grass. Sometimes, green bark was wrapped spirally around the larger end of the stick which was then held in the fire. When the strip of bark was removed, it left a white spiral stripe that contrasted with the blackened wood. When dry, these play sticks were light and springy.

The game consisted of darting the sticks against the ground from which they usually rebounded to a surprising distance. With long

¹Compare with this statement Kurz's description of this game and the stakes for which it was played (Jarrell and Hewitt, 1937, pp. 147-148); also Brackenridge (1816, p. 158) for the Arikara; also Bradbury (1817, p. 126).

²Apparently, this is a variant of the rather widely distributed game called snow snake. Cf. Lowie, 1922, p. 243, for the Crow, and Fletcher and La Flesche, 1911, p. 364, for the Omaha.

practice, a boy knew exactly the kind of earth and the contour of ground that served best to cause his stick to rebound farthest. Even in a small area boys became expert in choosing the exact spot most likely to fulfill these aims.

The number of throws to a game was settled beforehand by the players. To dart his stick against the hard ground, the player hooked one finger over its smaller end. Two boys played against each other; each wagered his stick. The player whose stick rebounded the farthest was the winner. One or two smaller boys frequently retrieved the sticks for the players.

After the game the winner collected the sticks he had won into a loose bundle. He shook them so that the shorter sticks fell to the ground. The small boys who had assisted in the game divided these shorter sticks among themselves. The winner of the game retained the longer and more valuable sticks. During the game, the players watched to see which sticks rebounded farthest. When the game was over they were careful to preserve them. It was said that this stick game was first played at the Five Villages by old men who darted their sticks against a flat stone. Reportedly the stone was removed by the State Historical Society of North Dakota and is now in Bismarck.

Boys from nine to 16 years old played arrow games throughout the summer months, but they never played the long two stick gambling game.

At the climax of a successful bird hunt boys frequently played a game called "one-who-strikes-the-heart." The game consisted of an attempt to pierce the heart of a bird by thrusting a feather into its carcass (presumably after it had been roasted in the ashes). Two boys were the opponents; the boy who succeeded in thrusting his feather into the heart won the bird and ate it. When both players were successful, they either divided the bird between them, or else one would yield his share to the other.

In winter, boys from five to 15 years (the bird-shooting age), were fond of darting elk horn slides. A few feathers thrust into one end of a piece of horn, very much like the plumes on an arrow, served to keep each slide from swerving its course and also to go straight. It was possible to project such a slide over the river ice for a hundred yards. Sometimes, two feathers were stuck in the end of a section of

reed in somewhat the same way that non-Indian boys stick feathers in one end of a corn cob to be tossed up in the air.

Another form of slide (*mapatsieke*, *ma*, snow, and *patsieke*, stick-in) consisted of a green ash stick about 5 feet long, approximately the thickness of a lead pencil. The stick was cut, trimmed, and its bark peeled off at regular intervals. The slide was thrown like a lance.

A variety of tests of skill were popular among Hidatsa boys. The aim of one such contest was to determine which member of a group could hop farthest on one leg. In a variant of this test the contestant carried another boy on his back as he hopped.

Another game (*tseduwa*) also served as a test of skill. As each player, in turn, took a long breath he attempted to repeat the word *tseduwa* as frequently as possible while spectators and other contestants held the count. Each time the word was chanted a small counting stick was dropped to the ground.

The young men gambled every evening playing principally the moccasin game.

A game resembling "follow-the-leader"¹ was a sunset favorite of boys and girls eight or 10 years old. They played together or separately. A group of children, either boys or girls or both together, formed a line. Each player grasped the edge of the shirt or dress of the child preceding him. Singing, they marched through the village, following their leader under corn stages, around posts, in and out of earthlodge entrances, and wherever he led. Sometimes, they paused to dance and sing in front of an earthlodge. As they pranced through the village, they mocked and jeered any young man who lingered in an earthlodge doorway with a girl. The children, in retaliation, were chased off and scattered.

Boys played a similar game called "follow-the-bad-road." In a single file, they followed a leader, who led them rapidly from place to place by difficult paths. If a member of the group stumbled or fell, or wandered out of line, he was shifted to the end. The boys did not clutch the clothes of their companions as they did in the game described above.

Tossing a playmate in a robe was a favorite

¹Cf. Fletcher and La Flesche, 1911, p. 364 for the Omaha.

pastime of girls from 13 to 15 years old. Usually, 15 or 20 girls played the game. A freshly dried and dehaired skin was used. Sticks twisted in the stake holes in the borders of a tautened hide provided excellent handles which made it possible to hold it over a pile of long thick weeds. The girls took turns. One girl lay face down on the robe, while the rest of the players tossed her in the air. She was expected to land on her feet, whereupon she was instantly tossed again. The player who was tossed had to bend her knees slightly to prevent being tossed to too great a height. The object of the game was to learn the number of times a participant could be tossed without falling. A player was often tossed more than 10 times before she lost her balance. As she descended, she turned in one direction. If she fell, the heaped-up weeds broke the fall. The game was won by the player who was tossed the greatest number of times.

In winter, coasting downhill on a buffalo hide or on a buffalo rib glider¹ was a popular sport for young people, both boys and girls, and young men and women. The coaster sat on a dried buffalo hide, which was laid on the snow, fur side down. However, a rib glider provided a much more efficient means of coasting. The simplest type of glider was made by removing the flesh from the ribs on one side. A split stick with the ribs thrust into the split was bound at each end of the glider. Such a glider was made for boys four or five years old. For older boys the gliders were bound with sinew. The bare ribs of the glider had no additional covering. The coaster, who wore a calfskin robe fur side in, sat on the glider and tucked the head of the robe between his clothing. The rider guided the glider with his heels which were pressed down on either side. To start the glider or to accelerate its pace and provide momentum, the rider's heels were dug into the snow.

When coasting over the snowdrifts formed over the bluffs, robes were preferred as coast-

ers; the boys sat on the head of their robes, which rested on the snow, fur side down.

Although boys ordinarily coasted in groups of 10 or 15, no contests were held that involved either gliders or robes as coasters. Coasting was also a favorite pastime of older boys and girls of 14 to 16. As each girl started off on her glider she was usually immediately pursued by her boy sweetheart, who would leap to his glider and try to overtake her. Customarily, the boy coasted downhill with his legs spread widely. When both contestants arrived at the bottom of a hill together, the girl would usually be sitting between the boy's outspread legs.

A form of coaster was used, especially by girls, to slide down a grass-covered hill. Either a dehaired skin or a robe was cut into the desired shape. When a robe was used as a coaster it was made hair side out.

Wolf-chief was four years old when he owned his first chokecherry wood bow with which he shot grass arrows made of two kinds of red grass; one type grew in the meadow-like level stretches of prairie, the other on the hill-sides.

Six-year-old boys often played a game which was a kind of sham battle² between two opposing but leaderless groups. These games, though usually begun in fun, often ended in a real quarrel. Moreover, the grass arrows were capable of inflicting painful wounds.

Wolf-chief recollected one such battle in which 10 boys from five to seven or eight years old participated. The boys prepared their own arrows, about 30 each. Wolf-chief carried his arrows in a cloth quiver slung from his shoulders over his breast. Divided into two opposing groups, the boys shot at each other from a position about 8 yards apart. The older people of the village never interfered when small boys fought in this manner.

In another type of sham battle boys used clay or mud missiles³ propelled by willow withes 5 or 6 feet long. Apparently, there was no fixed seasonal time for playing this game.

¹According to Maximilian a board as well as a buffalo backbone with the ribs attached was used as a glider (Maximilian, 1906, vol. 24, p. 72).

The Crow also used a similar toboggan (Lowie, 1922, pp. 247-248).

²Cf. Catlin's description of an organized sham battle between Mandan boys that he witnessed (Catlin, 1842, vol. 1, p. 131).

³Cf. Lowie, 1922, p. 252, for an account of a mud battle among the Crow.

The players separated into two opposing sides; each boy provided himself with lumps of mud and three or four flexible red willow sticks. Wolf-chief, a member of the Stone Hammer society, (Lowie, 1913, pp. 239-251) recalled that one-half of its members often ranged themselves against the other half as opponents in such a mud battle.

The peeled willow sticks varied from 2 to 5 or 6 feet in length and approximated a lead pencil in thickness. However, thicker sticks were used to throw heavier balls. The ball, about the size of hens' eggs, consisted of a combination of mud and the type of clay used for making pottery. Each contestant had a lump of mud or clay about 7 inches in diameter.

Usually, the contest took place about half a mile from the village on a stretch of prairie land covered with a short thick grass, which the Hidatsa called antelope hair. The opposing groups were even in number and strength; the boys chose sides at will. Eleven or 13 to a side was a common number. They formed two lines about 30 yards apart, the contestants standing at intervals of four paces from each other. The lines drawn up; each boy laid his lump of clay at his feet. He loaded his sticks, squeezing a ball of clay onto the end of each. The tighter and more firmly the clay was squeezed on in loading the sticks, the more force the lump of clay would have when thrown. When mud was used on the sticks it was important that it be of the correct consistency and that it not be too soft.

After all the preliminary arrangements were completed, the contest began. The mud-ball-headed sticks were held in the left hand; the balls were thrown with the right hand, occasionally to a distance of a hundred yards. As each ball of clay was thrown, the stick, without the clay, was slipped back into the left hand. Usually, the two contestants, standing opposite, aimed at each other; if a boy from one side ran forward, all the members of the opposing side concentrated their balls on him. As the balls flew through the air they produced a whistling sound caused by the air that blew through the holes made in the clay or mud as it was mounted on the ends of the throwing sticks. In

the autumn when this game¹ served as an evening pastime, corncobs were often burned in a fire built on a sand bank on the river until the cobs became glowing coals. Often, on such occasions, the mud balls were thrust quickly into the fire; when withdrawn, some of the burning coals clung to the softened clay and when thrown caused sparks to fly. Following the battle, the boys returned to their homes, or, those contestants who belonged to the Stone Hammers went to their society's lodge, where they feasted on boiled corn.

To cry out in pain when struck by a ball was believed to be a sign of weakness. A boy who gave vent to his feelings immediately became the target for teasing by his companions. Again, if a boy was wounded and abandoned his line, the game was broken up, as his departure necessarily left one side weaker.

When moved to individual combat, Hidatsa boys were wont to pull each other's hair; they never fought with fists or by kicking. We have an interesting contrast in the attitudes toward this type of boys' activities as reported by Wolf-chief, who stated that, usually, a mother would say, "You foolish boy, it was your own fault. You yourself were fighting. Why do you weep?" A father, on the other hand, taught, "If you get into a fight, you must not weep. Fight back. Be a man and do not cry."

Sometimes boys pelted each other with stones, but the men of the village always objected to this kind of activity. Throwing stones seems to have been a crime that demanded some kind of compensation to the injured person, provided, however, that the two individuals involved were not related, in which case no payment was demanded. We have no information either on the amount or kind of compensation the Hidatsa considered adequate to expiate this particular crime.

Boys built play lodges to imitate the temporary lodges constructed when camping in winter. Forked branches were gathered and set in a circle with their tops meeting. A wool blanket bound to the pole above the door was secured

¹The Crow also played this game (Lowie, 1922, p. 252).

with young willow shoots. When put to such use every part of a shoot was bitten and chewed to break the fibers, rendering it almost as pliable as twine. The play lodge had no cover.

Another boys' game, the fire test, a trial of courage, was played usually in the play lodge. Dry stalks of black sage were burned to a coal, which was smothered with earth and ashes, resulting in a stick of charcoal which was broken into pieces, each about an inch long. By wetting one end of a charcoal stick in his mouth a boy was able to set it upright on his wrist or on the knuckles of his fingers. A live coal was then touched to the dry top of the charcoal stick; it caught fire and burned steadily down to the flesh until it was entirely consumed. Such repeated burnings served as the ultimate test of courage in this game.

Boys made popguns from young box elder shoots or young ash. They used a red hot wire to burn out the pith. The rods were made of juneberry shoots. The missiles consisted of the inner bark of an elm¹ which had been chewed. Buffalo-bird-woman claimed that the Hidatsa did have popguns in old days; at any rate, they were in use when she was a little girl.

Childlike attempts at imitation of all the activities of their elders even took the form, among the Hidatsa, of practicing self-torture² like that practiced by an individual who sought a vision.

Wolf-chief related one incident that occurred during his boyhood when a few boys witnessed the self-torture of a man named Mamuac (meaning berry; not unlike a roseberry) who was suspended over the side of a bluff called Hawk's Nest, opposite Independence. Mamuac had driven two short posts into the ground at the top of the bluff. He suspended a lariat from these posts and fastened its opposite end to his

breast by means of two skewers and thongs. Held by these supports he swung himself over the cliff. Occasionally, he walked back and forth with his feet against its side; sometimes his whole weight was suspended from the skewers. He was prevented from falling, if the skewers tore loose from his flesh, by a wide-thong belt to which a second lariat, also fastened to the two posts above, was attached.

The boys who observed Mamuac's self-torture were inspired to pierce their arms with thorns to prove which one of their group was able to withstand the ensuing pain for the longest period. Two boys pinched the skin of the arm of a companion and a third boy pierced the skin with a thorn. These trials were unsuccessful because none of the boys was brave enough to withstand the torture.

Another way to ape their elders was to play at housekeeping.³ Groups of five or six each (boys and girls), joined in pretending that they were husband and wife. They built play lodges with limbs from the tree trunks felled by the villagers for their earthlodges. They covered them with bark and branches and built fires inside. Usually, each playing couple made a bed for themselves of the calfskin half robes each wore. They spread one robe on the ground and used the second for a covering. Wolf-chief, so far as it was possible to sense his position, seemed positive that this imitative game did not serve as an occasion for sexual intercourse between the youthful couples.

The boys played their part as hunters by collecting meat from their several parents' households; if the meat was uncooked, the girls proceeded to cook it.

Sometimes, when children played at moving camp, they used a discarded kinnikinnick stick to represent a horse. A small piece of hide cut so that it would curl upward at both ends, to imitate horns, served as a saddle. A little figure representing a rider was set on the saddle, or

¹It is entirely conceivable that popguns may have initially been given to Indian children by white traders. Matthews (1877, p. 19) believed that these popguns and their construction were known to the Hidatsa before their contact with whites.

²Maximilian witnessed the torture of a child by suspension following a four days' fast. This episode, however, was not in imitation of his elders but was supervised by

the father as part of the boy's training. (1906, vol. 23, p. 378).

³Cf. the account of imitative play of Omaha children by Fletcher and La Flesche, 1911, pp. 363-364.

bits of skin were hung on either side of it to imitate parfleche.

Small girls of eight or 10 amused themselves with dolls. In summer, the dolls were often fashioned of mud; in winter, they were more likely to be made of deerskin. The mud dolls were usually modeled to represent a man, a woman, or a child. They were customarily three-legged to permit them to stand. The girls also played with rush dolls, which were usually made by the child's mother or grandmother. These eight- or 10-year-old girls liked to imitate the household activities of their elders. They played at housekeeping in tipis made from pieces of old and discarded tipi covers or from borrowed robes. Each participant in the game contributed her share of food; boiled buffalo tongue was the favorite. They made little beds of tanned gopher skin for their dolls.

RACES

To learn to run well was an essential part of a young man's training. Its main objective was to increase his efficiency as a scout when he joined a war party. Early morning was the preferred time for practice races.¹ Before beginning to run for practice or in an actual race, the young man was enjoined to refrain from drinking too much. In the customary procedure, the racer in training went down to the Missouri, bathed, drank some of the river water, ran a short distance, and then induced vomiting. In additional preparation for a race, the body (but not the face) was completely covered with white clay² that had been mixed with the incense sage. The mixture was believed to penetrate the pores and in this way add to the comfort of the perspiring racer. After a trial run, the young man returned home. He gathered some of the brown sage that grew in the bottom lands around the water holes. He burned some of it on the coals, covered his head with a robe, inhaled the ascending smoke three or four times, left the earthlodge, and

vomited again. It was not an invariable custom to induce vomiting following every bath; it was nevertheless done rather frequently.

Young men were warned against smoking as a detriment to successful foot racing because it would cause the runner to become short-breathed. To keep in condition for racing, the young men resorted to bloodletting each spring. At intervals of approximately a month, incisions were made in a single vein on the inside of the arms just below the elbow, and on the inside of the legs a little above the ankle. The lancet consisted of a stick, about a foot long, and the diameter of a lead pencil, and a fragment of partly split tin from a baking powder box, bent around the end of the stick, and bound with sinew. The point of the tin blade was filed very sharp.

The individual about to be bled prepared himself by taking a cold bath and drinking a quantity of water. At this point he did not induce vomiting. He knelt and rested his arm on the ground. His fist was tightly closed. A handkerchief or other piece of cloth was banded tightly about the upper arm before the incision was made. An assistant laid the tin point of the lancet directly over the blood vessel. He struck the incising instrument smartly with a small stick or even with a finger snapped against it. At first the blood from the resulting wound ran black; as soon as it appeared red, the handkerchief binding was removed and the arm was bent back at the elbow to stop the flow. After 15 or 20 minutes the arm was straightened without any danger of continued hemorrhage. Both arms were treated in the same way. After the arms had healed, usually at the end of a month, the aspiring racer's legs were treated. The bloodletting invariably took place in a quiet coulee where the wind was now blowing. Bleeding ailing individuals in this way was said to be an effective cure. However, the kind of ailment for which this was done was not specified.

Members of the age societies competed in races. The fasting place where young men went to seek visions, a circle of buffalo skulls 6 yards in diameter (Wounded-face gave the diameter as 12 yards), was about a mile and a half from Like-a-fishhook village and 200 yards beyond the burial grounds. The skulls rested on

¹For Mandan racing customs see Maximilian, 1906, vol. 23, p. 299.

²A young Mandan explained that the white clay spots painted over his entire body served as an assurance that he would run fast (Maximilian, 1906, vol. 24, p. 17).

the bare ground, and the horns touched one another, with faces all turned inward. An open space in the circle on the side nearest the village permitted entrance. Offerings of eagle wings and the soft tail feathers of golden eagles were tied on some of the buffalo skulls. A faster entered the skull circle to make his offerings which consisted either of strips of his own skin or his own flesh. He laid these offerings in the nostrils of one of the buffalo skulls. Sometimes, an offering of a knife or a robe was placed on a skull, or the faster might move the skull and lay it on the ground inside the circle. Occasionally, an offering was made to the faster's personal sacred object, which he brought with him. Invariably, however, the faster entered the skull circle to make his offering. Young men who fasted here prayed for help to obtain war honor marks and to be protected from harm.

The Hidatsa race course was a road that led from the village on either side of the burial ground and surrounded this fasting place.

Wolf-chief described a race by the Kit Fox

society which he joined when he was 20 years old. One day a little before sunset, one of his fellow members suggested a footrace. To run with greater ease, the society members went outside the village, doffed all their clothing, leggings, shirt, and moccasins, retaining only the clout. They stood in line. One called, "Ready, go!" and the race was on. They ran the first mile fairly well together. However, when they turned the circle of skulls, four of the Kit Fox members had forged ahead. Then Wolf-chief himself drew ahead steadily and finished an easy winner. Two-bulls was a little behind him; then the others followed, scattered down the course. The stragglers came in at a walk, the winners mocking the laggards.

Following the race, the participants returned to the village two or three at a time, painted and bedecked with hair switches and wearing their most ornate clothing, that they might the more readily attract the attention of the young women. Then, in groups of two or three, they ascended to the earthlodge to sing the society songs.



FIG. 18. Pony race, 1908. AMNH negative number 286372.

SUPERNATURALISM

ANIMAL BELIEFS

Although they knew no one who had ever actually seen a thunderbird, the Hidatsa believed in its existence. The thunderbird was described as having a forked tail like a swallow; its wings were so huge that, outspread, they stretched between the bluffs on both banks of the Missouri, or about 2 miles. The thunderbird, they believed, kept its eyes shut; lightning flashed when its eyes were opened. Its voice was thunder.

A brave man's earthlodge was once struck by lightning. He was so distraught, he wanted to fight the thunderbird. He seized his gun, went outside his earthlodge, and shot upward into the sky.

Because many frogs and toads were found after a rain, the Hidatsa believed that they fell with the rain, a belief said to be common among frontier settlers. Lizards also were believed to fall with the rain. They were neither used as bait nor as food. In the spring, after the snow had melted, many frogs were found in the springs and ponds.

Snapping turtles were believed to have caught not only men but also buffalo and horses by the leg and to have dragged them under water. Turtles were described as accomplishing this feat in a curious way: the leg of the prey was seized between the tail and one of the turtle's hind legs, creating a firm hold on the victim.

Once, when hunting, Goodbird's father came to a lake of clear water. He had wounded a buffalo. The animal plunged into the water to escape, but it sank. A large snapping turtle caught the hair on the buffalo head between his hind leg and tail and dragged the animal to the bottom of the lake. Curiously enough, snapping turtles were said never to have devoured the animals they caught. Once an Arikara watered a horse in the Missouri. The horse soon began to sink and tried to turn about in order to

escape; however, a turtle caught the horse by its hind leg and dragged it under.

Many tales were told of buffalo spirits, or live buffalo, as Goodbird called them, that were encountered in the Missouri. Once, when his father was about 25 years old, he swam up the Missouri about a hundred yards. Then he let himself float down with the swift current while he treaded water. His feet struck something hairy that might possibly have been the bottom of a bullboat. He was frightened; he swam a short distance away; again he treaded water. His feet struck something hairy a second time. He swam away. He treaded water a third time and struck the same object. He believed that he had touched a live buffalo under the water.

Small-horn, hunting deer in the woods along the Missouri, saw a young buffalo bull rise to its surface, stand for a moment, and sink out of sight.

Once, one quiet night, Son-of-a-star, Goodbird's father, was with a war party descending the Missouri in a bullboat. As they floated downstream, they plainly heard the tramp of many buffalo on the stones in the riverbed, and after a moment, they heard the bleating of calves.

Snakes, especially bull snakes, were believed to be sacred. They attacked the nests of the sacred swallows by thrusting their heads into the holes in the river bank that led to the swallows' nests and gulped down not only the birds but their young and the eggs as well. Usually the snakes emerged from the swallows' nest head first.

The Hidatsa killed neither snakes nor swallows. Swallows, they were taught, were thunderbirds.

INDWELLING SPIRITS

According to Hidatsa belief, in very ancient times to the southward there existed a deep,

clear body of water so constantly fed by a spring that it never dried up. The Hidatsa also believed that when before birth one had been a bird, an animal, or a plant, a sacred indwelling spirit was lodged in the body near the backbone.

When a person wanted to learn about this indwelling spirit, he went out to camp near this never-drying pond. Only a few individuals, usually only members of war parties had this experience principally because the pond was open to attack, situated as it was near enemy country. The man who sought the vision bathed; in the early morning he stood naked on the shore of the pond. He looked down into the water. In his reflected image he was able to see right through his flesh and bones to the indwelling sacred object. Some individuals found this sacred object to be white or yellow maize, squash, beans, cattail rushes, or sunflowers; others learned that the sacred object was a bird or an animal. One very bad-tempered man learned that his indwelling object was thorns; another had the thorns of a rosebush.

Sometimes, a person possessing such an indwelling object was well paid to disgorge it publicly. He would be asked, "Have you an indwelling object? Then vomit it up, so that we can see it." Sometimes too, when a young man went into the hills to seek a vision, to fast and to pray, his god appeared before him and gave him his sacred mystery object, saying, "There, swallow that!" Subsequently, if the recipient correctly performed the ceremonies and sang the songs learned in his vision, he was able to disgorge his sacred object for all to see. After such an exhibition the sacred object was always swallowed again.

Such a sacred or spirit object was salable. When it was sold, the seller would cry, "Now, let that spirit object enter your body!" And it did so.

Bear's-tail had a daughter four or five years old. Her grandmother gave her corn as an indwelling object, saying, "Sometimes, you will see it!" Afterward, occasionally in the morning, a little stalk of corn was observed as it grew up in the child's mouth with its roots within her body. The little girl attained woman-

hood. During the Goose Society ceremonies when a specific song was sung, the corn was brought up in her mouth, whether or not she desired it, in the form of a developed ear, sometimes yellow and sometimes white. As the ear of corn came up into her mouth the young woman collapsed and ceased to breathe. When this occurred she was held in a sitting position, brushed with branches of wild sage, and the corn returned to her body.

A dying man summoned his brothers and sisters and gave each of them a sacred object or ceremony. He gave Small-ankle yellow paint. Occasionally, after that incident Small-ankle felt ill, and yellow paint came up in his mouth and flowed out down his chin. He, in turn, gave the yellow paint to his son, Charging-enemy. At his death, yellow paint came up in his mouth.

When a person was dying, his indwelling sacred object left him. Consequently, when sometimes the sacred object was disgorged it was assumed to be an omen of death.

Irreverent and mocking youths once came to the door of the Goose society lodge. During the dance one woman blew a white claylike cloud from her mouth to demonstrate the mystery powers of the society. The young men, observing this evidence of power, ceased their mockery and were no longer skeptics. Following this incident, one young man came forward and gave her a porcupine quill robe.

During the Earth ceremony, a young woman named All-moving sat and was covered with a robe, hair side out. A singer accompanied herself with two rattles; the other society members danced; the men, wearing buffalo robes with the tails hanging down, also danced. After an interval, the embroidered covering robe was removed from the young woman. She blew red paint from her mouth until there was red paint all about the lodge.

In the *Macuka-madaxi* society (from *Macuka*, "dog," and a Crow word meaning, "foolish," or better, "reckless") the members passed a pipe around when they wanted one of their group to display his image or his sacred indwelling object. As the pipe was passed, each member was asked, "Do you want to

show the magic spirit that is in you?" Each member replied, "There is none in me." Finally, the pipe was passed to a woman who said, "You old men are only *men*, nothing more! I will show you the magic spirit that is in me!" She made the announcement just before daybreak. The people who wanted to witness the rite had waited all night.

Buffalo-bird-woman and her husband one time wanted to have a ceremony. They collected many hides. An old man, White-duck, who came said, "Here I have four adopted children, Wolf-chief, Red-drum, Charging-enemy, and Buffalo-bird-woman. I give my magic or indwelling spirit object to Buffalo-bird-woman." However, because Small-ankle, her father, did not like to see a woman who possessed a magic spirit, she did not accept it. What White-duck proposed to give her was the power to tap herself several times on the abdomen and so produce ripe juneberries which would drop out of her mouth at any time of the year.

In a fit of jealousy, the husband of Hairycat's mother kicked her on the upper part of her back. She fell. After an interval she began to make a peculiar sound as if she were about to die. Her mother sent her sister to learn what ailed her. The sister found a magic child's pipe with an eagle feather sticking out of her mouth. They had to work hard to return it to her body. This sacred child's pipe is a ceremonial object. It is not for use.

GODS

The Hidatsa were taught that everything in this world, especially everything that moved, constituted their gods. They believed that all gods were powerful. They did not rank them, nor was any one of their gods supreme over all others.

GHOSTS

Boys bent on bird hunting never loitered in the depths of the woods or lingered outside the village until dark. They were always apprehensive about an ever-lurking enemy, but primarily, they feared the night. They believed

that ghosts haunted the dense woods, especially in the evening. The Hidatsa also believed the ghosts were the spirits of wandering dead men who were liable to strike and injure them. Sometimes, when a man went out to fast and to seek a vision, a ghost would appear to him and tell him whatever he wanted to know. Although Wolf-chief apparently endorsed these beliefs, he stated that he had never encountered such a ghost. However, he had been told they resembled shadows and traveled at very great speed.

Small-ankle, Wolf-chief's father, knew of one medicineman, Bad-buffalo, who was believed to have talked with ghosts. In the spring, a war party had gone into the heavily timbered enemy territory. The war party failed to return immediately; consequently, the relatives of its members were alarmed. Convinced that the young men in the party were dead, their parents, their sisters and brothers all cut joints off their fingers, cut their hair, gashed their legs, and mourned for the missing kin. But to learn with assurance whether they had all been killed, their relatives collected many valuable gifts, which they presented to a medicineman who possessed sacred ghost power, and asked him to tell them what had happened. He promised to do something for them. He invited them to visit his earthlodge at night so that they would hear the ghosts speak. The villagers who were unafraid went to his earthlodge as they were bidden. The lodge was filled with men. Bad-buffalo tied a small rattle to a long pole. He bound the pole to one of the four central posts of the lodge in such a way that the rattle was thrust upward through the smoke hole. The rattle, shaken by the wind, was interpreted as ghostly conversation. Bad-buffalo admonished his guests to listen intently.

He brought in four young men to whom he had taught his sacred songs. He asked them to sing as they listened to the sound of the rattle. Then he asked two or three of the young men present to tie his fingers and hands behind him, wrap a robe around him, and lace it tightly through its peg holes. The robe was spread out. Some of the young men followed his instructions. The fire was smothered by the young men. Bad-buffalo directed the young men to

sing and accompany the following song with a drum:

"I thought wind came
But it was his ghost."

After an interlude, Bad-buffalo ordered them to cease. As they listened in silence, the men in the earthlodge heard the rattle mounted on the pole shake three times. They heard a whisper from the roof; it was a ghost. They did not understand the ghost. However, Bad-buffalo understood perfectly. The spectators in the lodge heard him say, "Yes . . . yes" as if he were answering someone. Everyone was very quiet.

Among the people gathered in the earthlodge was a man named Slides. He did not want anyone to touch his body. He was so imbued with bears' mystery power that if anyone touched him, he would break into laughter and continue to laugh until he fell unconscious. The earthlodge was dark. Hanging-arm sat next to Slides. When the ghostly whispering ceased, Hanging-arm touched Slides who was quite an old man. He burst into laughter immediately. Hearing him, the rest of the company also began to laugh. Hanging-arm, an irreverent young man, and Slides both belonged to the Tsistska band and were therefore clan brothers.

Bad-buffalo now directed that the fire which had been allowed to die down be rebuilt. The men added grass and sticks to the fire; in its light they saw Bad-buffalo, who sat with his binding thongs loosened; he had bundled them with the robe in which he had been laced, and sat on it.

Bad-buffalo announced that all the members of the war party would return the following day except for one young man who had departed to the ghost country. "That young man," the ghost had said, "is one who lived in the center of the village. His father owns white-spotted horses. All the rest of the war party are well."

When Bad-buffalo was a young man he was ambitious to obtain supernatural power, or, as the Hidatsa say, he "wanted to find his god." He endeavored to have a ghost appear to him. He went to the village burial place; he dug up one of the graves and pushed the bones to one side, leaving enough space so that he could lie

down. He spread a bed of grass in the grave, laid down on it, and fasted for seven nights. In a dream, at the end of that time, the ghost of the dead man came to Bad-buffalo, talked with him, and taught him two mystery songs. Bad-buffalo sang one of these songs in his earthlodge. The second song was:

"I think I am alone,
The sacred powerful man."

The following summer, Bad-buffalo joined a war party. He predicted that he would be the leader and bring in a hundred tipis, meaning that his war party would find an enemy camp consisting of a hundred tipis. About 500 men accompanied Bad-buffalo. They knew that they were approaching the enemy. He told the members of the war party that he would demonstrate his mystery power and learn as much as was possible about the foe.

He had built a lodge that resembled a hunting lodge covered with pine branches. The members of the party were invited into this lodge. Bad-buffalo sang. He accompanied himself with a skin rattle. It was painted black with holes cut in its sides. The rattlers were human teeth removed from skeletons. As Bad-buffalo shook the rattle, the men observed fire inside of it. The rattle and the pine branches caught fire as he sang. The lodge burned. His mystery power was demonstrated and served to predict that a hundred tipis with their occupants would be captured or destroyed. The following day the war party encountered the enemy, captured all their horses, and their tipis, and took many captives.

Wolf-chief himself never saw a ghost; however, when he was about 20, he heard some ghosts whistle. When he was 15 years old his grandfather, Big-cloud, died. Before he died he told Wolf-chief that the Hidatsa believe that ghosts have the power to help people. He promised that after his death he would appear to Wolf-chief and talk to him when he fasted. Wolf-chief promised his dying grandfather that he would try to evoke his ghost.

When Wolf-chief was 20 years old, he recollected his grandfather's instructions. He visited the village burial grounds where he mourned and wept hoping that his grandfather's

spirit would vouchsafe him sacred power. For two or three hours on 30 successive nights he mourned at his grandfather's grave. The Hidatsa name for this ceremony translates as the "thirty-nights call." Although Wolf-chief completed this ordeal, his grandfather's ghost failed to appear. Consequently, he undertook another 30 nights trial. He mourned for 60 nights. His continual walking at the grave wore a trench around it.

He determined to try for 30 more nights. During the second night of his third attempt, he heard something in the grave hissing. It resembled the whistling sound made when the lips are pursed, spread rather than puckered. An answering whistle emerged at once from every other grave. The whistle from his grandfather's grave was the most distinct. That night Wolf-chief dreamed that all the graves were small earthlodges with men sitting on the roofs, with men and women on the floors, and with small corn-drying stages in front of each lodge. He also dreamed that he walked around the village as it currently appeared. At sunrise, he walked eastward. He saw an old man who smiled at him; he recognized his grandfather, Big-cloud. He was 68 years old when he died; now his hair and scant beard were white; he had aged a great deal. Wolf-chief awoke; he slept again and saw a tipi or a hunting lodge built of poles, bark, and earth burning in the east over the hills, and dreamed no more.

Later, he joined a war party; he discovered one tipi and struck a coup. Wolf-chief believed that his grandfather's promise had been fulfilled. When, in his dream, his grandfather smiled at him from the east and he saw a tipi burning, it marked the success he had experienced with the war party.

Wolf-chief's faith in these beliefs, according to his own statements, was undermined when he was converted to Christianity. He never again attempted to talk with ghosts or to seek a vision. However, he did claim that he continued to believe in both ghosts and visions because he had proved their authenticity. However, he avoided them and observed Christian instructions.

The Hidatsa maintained firm faith in the existence of a ghosts' town and related many

incidents that illuminated their beliefs. On one occasion when a man died, his family wailed, and they prepared his body; but then he revived. This was said to have been an isolated occurrence. From individuals who had revived, the Hidatsa learned that the ghosts' town is a large town. Another man who revived after he was believed to be dead returned from the ghosts' town with a round stone that had a circular hole.

Buffalo-bird-woman's grandfather, Itsidici-itakac, (Elk-yellow-old, or Old-yellow-elk, or Old-yellow-horse) performed the River ceremony. He had gathered many skins and other valuables and purchased membership in the ceremony. Its members presented him with an otterskin in return for his medicine; later, he prayed to the otterskin. When Old-yellow-horse died, his friends made him a pillow from that otterskin. They placed his body on the crest of a hill and piled logs around it. At that time people were dying so fast (no reason given) that there was no time to build burial scaffolds. That night, someone called from the burying place, "A-ha-he, a-ha-he, come for me! I want to get up." Many people hurried to the burying place; they removed the logs and uncovered Old-yellow-elk. He rose and returned to his lodge. Many Hidatsa came to hear his story. He related that he had seen many people in the ghost town, and that they had given him a spotted pony. He also told how an otter had brought him a great distance from the east, leading him underwater up the Missouri. As he led his pony, he tied the otter to one of the logs laid over his body because the otter had brought him up out of the water.

The next day, some people went to the burying place but failed to find a pony. Later, when Old-yellow-elk got a spotted pony from the Crow, he exclaimed, "You ought to see how many spotted ponies there are in my father's (evidently the otter) herd in the ghost land."

That same week, a woman died; she too revived. She drew a quantity of dried meat from her bosom. "Here," she said, "they gave me this dried meat in the ghost land. Eat it!" The people were afraid to comply; they tossed the meat to the dogs; they too rejected it.

The Hidatsa also believed that the tangled knots in fish lines left overnight in the river as well as the knots in their horses' manes were made by ghosts.

VISION EXPERIENCES

During the times when the Hidatsa villages were situated on the Knife River, a man named Bush wanted to find his god. He determined to fast (cf. Henry and Thompson, 1897, vol. 1, p. 364-365) and to suffer so that, in return, he would receive a message from the buffalo spirits. He fastened four buffalo skulls in a series. At one end he attached a thong fastened to a skewer¹ thrust under the flesh and skin of his back, so that he dragged the skulls after him as he walked.

As Bush pulled the skulls, weeping and appealing to the gods, he painfully made his way northward along the Missouri. He reached the Little Missouri, about 50 miles north of the Knife River. The four buffalo skulls were heavy, and the area along the banks of the Missouri was rough and broken by ravines and coulees. Bush suffered very much as he dragged the skulls over this rough terrain.

At low water, the Little Missouri is a shallow stream, but the river is subject to freshets that produce an overflow. The stream may have been in flood when Bush arrived on its banks. As he stood on the river bank weeping, he cried, "O, you gods, I am poor. I suffer much. I want to find my god. Other men have suffered; they found their gods. I have suffered but no god has answered me. I will plunge into the river. I believe I will die, but I shall plunge in. O, you gods, if you are going to answer me, answer me now, and save me!"

Painfully, he waded into the water, dragging the heavy skulls. The water became deeper and deeper so that he could wade no further but had to swim. He struck out. He did not seem to feel the weight of the buffalo skulls he was dragging. He heard a sound like, "Hw-u-u-u-!" He looked around. He saw the four buffalo skulls had been revived. The skulls were cov-

ered with flesh and heavy woolly hair; they had big blue eyes; they had large red tongues. Bush had found his gods.

When Goodbird was 12 years old he was taken to the Bad Lands on a buffalo hunt. The group consisted of about 30 men. There were no women. The hunters killed some buffalo, butchered them, and loaded the flesh on ponies. On returning to the hunting camp they found one of their party, Long-toe, who was fasting and seeking a vision, had painted his body with white clay. He had tied a buffalo head to a rope about 10 feet long and fastened it to a skewer thrust under the flesh of his back. A long piece of undressed skin stripped from a buffalo spine, with the tail attached, was dragged behind the severed buffalo head. The head, the strip of skin, and the tail had been cut in a single piece. Long-toe wailed, "O, you gods! You gods, I am poor. I want to meet something easy, something not difficult!" Tears rolled down his cheeks. He had induced some of the hunters in the party to fasten the buffalo head to his back about noon and had dragged it all that afternoon until he reached the camp 10 miles away.

As he came within sight of the camp in the evening, some of the hunting party went out to meet him, removed the buffalo head, which they abandoned, and brought Long-toe into camp.

Before young men joined a war party they sought a vision. At the burial place, a young man would appeal to the dead for help, crying, "You who have turned into ghosts and are now spirits, come to me and help me. I want to steal a horse. I want to strike an enemy."

MISCELLANEOUS NOTES

DANCING BOOTH

According to Goodbird, the Hidatsa dancing booth built annually to celebrate the Fourth of July is an invariable traditional form. The Mandan and Hidatsa united for the Fourth of July festivities. It is presumed that the form of the booth was the same for both tribes. Wilson examined a booth built by the Mandan at the mouth of the Little Missouri in the summer of 1907. It was similar to the booth described

¹There were in all probability two skewers. Goodbird did not always distinguish plural from singular.

here, which was set up at Elbowoods in July 1908, in Wilson's presence. The booth consisted of a circular frame of 16 posts, 8 or 9 feet high and 6 inches in diameter. The upper end of each post terminated in a fork with prongs about 1 foot long; stringers were laid in these forks. The circle of posts was 90 feet in diameter; the space between each post was a little over 15 feet. Small trees, cottonwoods predominating, cut green with all their foliage, were leaned against the stringers. The trees were about 16 to 18 feet high. Early in the morning, three or four old men dug the post holes. They used an iron crowbar and dragged the loosened earth out of the holes with their bare hands.

DIVISION OF LABOR

An incident which throws some light on the division of labor¹ and the responsibility for the accomplishment of a given task when a community project is involved may be worth recording. According to Goodbird, the people of Independence once wanted to build a flat boat. A council was called to choose the men who would procure the lumber. It was decided that Wolf-chief would bring in the lumber. He had a small trading store and would have considerable use for the flat boat. This decision, however, aroused violent protests, principally because it was contrary to Hidatsa practice to send an old man, like Wolf-chief, on an errand for the benefit of the entire community. The correct procedure was to select one young man or a number of young men for such a task.

TRAILING

Some individuals excelled in following the tracks of people or animals just as others were specialists in various arts. The expert trackers were said to have been able to trail an enemy throughout the night and, judging from the

softness or solidity of the tracks, were able to estimate when the tracks were made. Frequently it was also possible to determine from the number of the tracks the size of the group that was being trailed. As one man followed another, in single file, it was customary to step in the tracks of the man who preceded him on the trail. As each track was enlarged, it served as proof that a large number of individuals had followed the same trail.

The debris left in a camp also served to provide a reasonably adequate suggestion of the time that had elapsed since it was abandoned. Thus, any bones lying around a camp were examined to learn whether any adhering fragments of meat were red or black, to suggest the approximate time since the campers had moved on.

Tracking large game was relatively easier than following the trail of small animals, like rabbits. Trailing in late summer, when many leaves had fallen, was simpler in the woods than on the prairies. However, the Hidatsa drew largely on their knowledge of the habitat and the ranges of the animals known to them to determine which trails to follow.

Wolf-chief described a method of trail marking he had observed in his youth. Upon making camp in the evening a gun rod was customarily thrust into the ground so that it leaned in the direction to be followed. Consequently, if it became necessary to flee during the night or the sky was overcast, and it was impossible to determine the cardinal points, the gun rod served as a direction marker.

Quite young boys were taught how to trail animals by following their tracks. Goodbird believed that it was easier to follow a trail in the spring or fall than in the summer when the grass was dry and the ground dry and hard. One August Wilson, in an effort to test Goodbird's skill, suggested that he sit on the steps in front of the chapel at Elbowoods while he (Wilson) walked back and forth and circled around over the prairie behind it. Goodbird found no difficulty in following the trail which he picked up by lying on the ground and sighting along the top of the grass in the direction of the setting sun. He explained that in the

¹Cf. Maximilian, 1906, vol. 23, pp. 270-271 for the division of labor among the Mandan, where except for hunting, war, the building of houses, the manufacture of weapons, and part of the harvesting, the women bore the brunt of the burden.

morning the grass was newly covered with thousands of little spider webs and that these tiny webs were broken when walking on the prairie. Consequently, to trail anyone it was only necessary to sight along the top of the grass and follow the track of the broken webs.

TRADE

As related by Goodbird and other Hidatsa, people adhered strictly to the principle of reciprocal return for any object received. This rule was not necessarily applicable to a direct or simultaneous exchange but was so fixed that, for example, if a member of the Prairie Chicken band arranged with one of its women members to make a fine shirt for him, she might not be paid immediately on delivery, after many months of labor, she would be presented with a horse at some time in the future.

Among the Mandan, to admire any object in possession of another person was tantamount to immediate ownership; it was unthinkable in their code to fail to present the object admired. However, there were compensations for this apparent generosity. It was equally unheard of to accept anything without making a reciprocal payment, euphemistically termed a gift.

Women from neighboring tribes bought quantities of beans and dried half-boiled green corn from the Hidatsa. A wooden bowl containing about 400 cubic inches of either beans or dried corn (calculated on the basis of measurements provided by Wolf-chief in pantomime) was exchangeable for a hide or a package of meat, as was a string of braided corn or one of dried squash,¹ 1 foot in diameter

¹To provide an example of the quantity, Wolf-chief measured out the contents of a wooden bowl as described; it weighed 3½ pounds. A string of braided corn should contain about 56 large ears. The string of squash "one foot in diameter and three feet long" doubtless describes a string of dried squash doubled into a bundle of that size. Obviously, the Hidatsa demanded rather high payment for their vegetable products, as they continued to do in the years Wilson visited them. Presumably, the visiting Indians also bought tobacco and vegetables. Wilson believed that, in all probability, they may have been content to pay a stiff price, after they had been feasted by their hosts.

and a little more than 3 feet long. Visiting Indians who did not raise any vegetables were very eager to trade their products for Hidatsa vegetables.

One year, Wolf-chief's mother exchanged a hundred hides for vegetables she had grown. She traded² the hides to a white man for a fine spotted horse swift enough to chase buffalo. Another year, she sold a variety of vegetables—corn, squash, and beans, but no sunflower seeds to a family of Unkpapa Sioux from whom she received a buckskin-colored, middle-sized horse in exchange.

SMOKING CUSTOMS

Wolf-chief clarified the conventions of Hidatsa smoking.³ A semicircle of Hidatsa smoked in a tipi. The pipe was lighted and passed to the left. Thus, A lighted the pipe, and passed it to D, who smoked and passed it to E. The pipe was passed in this way until it reached C, who passed it to the right to F. F gave it to G. It was handed on in this direction until it returned to A. During the return to its starting point, the pipe was not smoked. However, when it reached A, it was smoked again and started around the half circle to the left.

Let us assume that at the end of several rounds the pipe reached B and was smoked out to ashes. Under these circumstances, B passed the empty pipe to E, E to D, and D to A, who refilled and lighted it. However, if, let us say, E had originally lighted the pipe, he would smoke it and pass it on to B, who smoked the pipe and passed it to F, F to G, in sequence until it reached A. No one smoked the pipe as it moved to the right.

²Cf. Matthews, 1877, pp. 27-28, who cites the exchange of a good horse with the Teton Dakota for a dozen tipi poles. The Hidatsa, adept in eagle hunting, traded eagle tail feathers for horses; each feather was valued at one horse. He also seems to have been convinced that dentalium and abalone shells from the Pacific Coast were indirectly traded to the Hidatsa.

³Cf. Maximilian, 1906, vol. 23, p. 283 for various smoking taboos and customs. The Mandan method of preparation of tobacco for smoking is described in Will and Spinden, 1906, pp. 119-120.

Smokers also sat in a circle not quite closed. The pipe lit by A was passed to B, to C, and so on, until it reached S; each member of the circle smoked in turn. In this example, if he could conveniently reach across, S would hand the pipe across the small interval in the circle, and the pipe made the rounds again. However, if A was the father-in-law of S, with whom he was forbidden to deal, S might instead pass the pipe back up the line to R, to Q, and the others, until it reached A, always unsmoked. A now smoked and passed the pipe to the left, everyone smoking.

If C lighted the pipe, he passed it to his left and so around to S, each member of the group smoking. S handed the pipe to A; it would then be handed to the left around the circle until it was smoked out. Or, S could return the pipe to the right with no one smoking until it reached A, who smoked and passed the pipe, to the left again, each man smoking.

A complete circle of smokers also existed. The pipe was lit by A, who passed it to his left to B, and so around the circle until it was smoked out. If the pipe was smoked out during the circuit it was returned to the owner, passed either to the right or left, as was most convenient. Thus, if K smoked the pipe until it was emptied, he returned it to the right through D, C, B, to A. However, a specific ceremonial rule might demand another sequence to the procedure as in the eagle hunting lodge (Wilson, 1928, pp. 155, 164-165, 173-174, 175, 198.)

Some men who had received instruction in a vision observed special rules; for example, some men always held the pipe at a specific part—the stem or the bowl, for example.

Sometimes, a pipe was smoked to illustrate or reenact honors received in battle. Wolf-chief described such an incident when the Hidatsa fought the Sioux. He ran down the line between the two opposing parties while many of the Sioux shot at him. Later, when smoking, whenever the pipe was returned to him it was passed to the right and, not being smoked as it passed him, he would remark, "I will smoke the pipe now, for thus I rode past the Sioux." All the men assembled would laugh and cry out, "Good, that is right! Smoke it, for that is our custom."

MEDICINES

A curing, or rather, a medicineman's attempt at warding off illness¹ was described by Wolf-chief. One time, his mother thought he had been stricken with smallpox. His grandfather came. He opened his medicine bundle and burned some pulverized cedar leaves to fumigate it. First, he held some buffalo hair taken from the medicine bundle in the cedar smoke. Then he held the buffalo hair near the patient's face, in the meantime praying to the gods to cure him. Then the grandfather bit off a piece of a specific root medicine from a root that grew in the Rocky Mountains. He chewed it and sang the following buffalo spirit song:

Mita to ta madiidi, My face whither I walk
Mihidu cewa its, If I said
Etsa Madiidiits! All we walk

Or, freely, translated:

"Behold, I say that whithersoever I turn my face, thither shall we go, and none may turn aside." The text of the song implied that the singer had power to move in any direction toward which duty called or toward which strong desire dictated.

When a Hidatsa returned to the village, wearied from hunting, or had tired from sitting long in one position, he would ask to have his spine kneaded. His wife, or a friend, commonly massaged his spine using one foot or both hands. Sometimes a small boy would tread the man's spine with both feet as he lay prone. It was said that it was possible to hear the bones crack as they were kneaded. Both men and women practiced this kneading.²

An ancient medicine, an infusion of mint leaves, was usually given to a woman in child-

¹According to Maximilian (1906, vol. 23, p. 384) the Hidatsa had few medicines and had to recourse more frequently to the ministrations of the medicine-man than to specifics. Cf. also his statement as to the ailments observed by him and the attempted cures (Maximilian, 1906, vol. 23, pp. 358-360).

²Wilson witnessed Goodbird's little son tread his mother's spine. He moved slowly, bringing heel to toes as he stepped.

So strenuous was this kneading as observed by Maximilian (1906, vol. 23, p. 359) that it often resulted in swelling of the intestines and ulcers of the liver.

birth. It was said to cause any coagulated blood to flow more freely.

According to Buffalo-bird-woman, the Hidatsa in the past were not subject to toothache;¹ young people were never known to be bothered by it. She attributed the modern prevalence of toothaches among both young and old to the change in diet. The pains were caused, it was said, by small worms (called "teeth eater" or "tooth eater") which attacked the teeth. Sometimes decayed teeth were extracted with

the fingers; a deciduous tooth was occasionally drawn by tying a piece of sinew around it and pulling. Although the informant did mention somewhat vaguely a medicine applied to aching teeth, at the same time, she expressed her contempt for the assumed efficacy of any medicine for the teeth, native or otherwise. She also believed that if troublesome teeth received no attention, they would in the course of time drop out.

LITERATURE CITED

- Boller, Henry A.
1868. Among the Indians, eighty years in the far west: 1858-1866. Philadelphia, T. Elwood Zell.
- Bowers, Alfred W.
1965. Hidatsa social and ceremonial organization. *Bur. Amer. Ethnol.*, Bull. 194.
- Brackenridge, H.M.
1816. Journal of a voyage up the river Missouri; performed eighteen hundred eleven. [Second edition.] Baltimore, Coale and Maxwell.
- Bradbury, John
1817. Travels in the interior of America, in the years 1809, 1810, and 1811. Liverpool, Smith and Galway.
- Bruner, Edward M.
1953. Case reports on Indian assimilation among Fort Berthold Indians. *The Amer. Indian*, vol. 6, no. 4, pp. 21-29.
1956. Cultural transmission and cultural change. *Southwestern Jour. Anthropol.*, vol. 12, pp. 191-199.
- Catlin, George
1842. Letters and notes on the manners, customs, and conditions of the North American Indians. [Third edition.] London, Tilt and Bogue, vols. 1, 2.
- ¹This statement is corroborated, to some extent, for the Mandan by Matthews, who remarks that when living almost entirely on fresh meat, their gums and teeth were in good condition. With the change in diet this no longer held (Matthews, 1877, p. 25).
- Maximilian's observations also offer general confirmation. Among the Mandan, he noted no defective teeth, although those of the aged were worn down, a condition believed to stem from their dried meat diet (Maximilian, 1906, vol. 23, pp. 256-257).
- Culbertson, Thaddeus A.
1851. Journal of an expedition to the Mauvais Terres and the Upper Missouri in 1850. *Bur. Amer. Ethnol.*, Bull. 147.
- Culin, Stewart
1907. Games of the North American Indians. 24th Ann. Rept. *Bur. Amer. Ethnol.*, for 1902-03.
- Curtis, Edward S.
1909. The North American Indian. Hodge, Frederick W. (ed.). Cambridge, The University Press, vols. 4, 5.
- DeLand, Charles E.
1908. The aborigines of South Dakota. Part II. The Mandan Indians. In *State Historical Society (compiler), South Dakota historical collections*. Sioux Falls, South Dakota, Mark D. Scott, vol. 4, pp. 275-730.
- Densmore, Frances
1923. Mandan and Hidatsa music. *Bur. Amer. Ethnol.*, Bull. 80.
- Fletcher, Alice C., and Francis La Flesche
1911. The Omaha tribe. 27th Ann. Rept. *Bur. Amer. Ethnol.*, for 1905-06.
- Henry, Alexander, and David Thompson
1897. New light on the early history of the greater Northwest. In Coues, Elliot (ed.), *The manuscript journals of Alexander Thompson 1799-1814*. Minneapolis, Ross and Haines, Inc., vol. 1.
- Hiller, Wesley R.
1948a. Hidatsa soft tanning of hide as demonstrated by Uta Wias (Weasel Woman). *Minnesota Archaeol.*, vol. 14, no. 1, pp. 4-11.
1948b. The making of ma-pi or corn balls, as told by Uta Wias (Weasel Woman). *Minnesota Archaeol.*, vol. 14, no. 1, pp. 25-26.

James, Edwin (COMPILER)

1823. Account of an expedition from Pittsburgh to the Rocky Mountains, performed in the years 1819 and '20 . . . under the command of Maj. Stephen H. Long. Philadelphia, H.C. Carey I. Lea, vol. 1.

Jarrell, M. (TRANS.) and J.N.B. Hewitt (ED.)

1937. Journal of Rudolph Friederich Kurz. Bur. Amer. Ethnol., Bull. 115.

Lewis, Meriwether, and William Clark

1904. Original Journals of the Lewis and Clark Expedition, Thwaites, Reuben G. (ed.), vol. 1. New York, Dodd, Mead and Co.

Lowie, Robert H.

1912. Social life of the Crow Indians. *Anthrop. Papers Amer. Mus. Nat. Hist.*, vol. 9, pt. 2, pp. 179-253.
 1913. Societies of the Crow, Hidatsa and Mandan Indians. *Ibid.*, vol. 11, pt. 3 pp. 3-358.
 1917. Notes on the social organization and customs of the Mandan, Hidatsa, and Crow Indians. *Ibid.*, vol. 21, pt. 1, pp. 1-99.
 1919. The tobacco society of the Crow Indians. *Ibid.*, vol. 21, pt. 2, pp. 101-200.
 1922. The material culture of the Crow Indians. *Ibid.*, vol. 21, pt. 3, pp. 201-270.
 1935. The Crow Indians. New York, Holt, Rinehart and Winston.

Matthews, Washington

1877. Ethnography and philology of the Hidatsa Indians. Washington, U.S. Geol. Geogr. Surv., Misc. Publ., vol. 7.

Maximilian, Prince of Wied

1906. Travels in the interior of North America, 1832-1834, pts. 1, 2. In Thwaites, Reuben Gold (ed.), Early western travels 1748-1846. Cleveland, The Arthur H. Clark Co., vols. 22, 23, 24.

Pepper, George H., and Gilbert L. Wilson

1908. An Hidatsa shrine and the beliefs respecting it. *Amer. Anthropol. Assoc. Mem.*, vol. 2, pp. 275-328.

Stewart, Frank A.

1974. Mandan and Hidatsa villages in the eighteenth and nineteenth centuries. *Plains Anthrop.*, vol. 19, no. 66, pp. 287-302.

Will, George F., and George E. Hyde

1917. Corn among the Indians of the Upper Missouri. St. Louis, The William Harvey Miner Co., Inc.

Will, G.F., and H.J. Spinden

1906. The Mandans. A study of their culture, archaeology and language. *Papers Peabody Mus. Amer. Archaeol. Ethnol.*, Harvard Univ., vol. 3, no. 4, pp. 81-219.

Wilson, Gilbert L. (ED.)

1914. Goodbird the Indian. His story told by himself to Gilbert L. Wilson. New York, Fleming H. Revell Co.
 1917. Agriculture of the Hidatsa Indians: an Indian interpretation. Minneapolis, Univ. Minnesota Studies Soc. Sci., vol. 9.
 1924. The horse and the dog in Hidatsa culture. *Anthrop. Papers Amer. Mus. Nat. Hist.*, vol. 15, pt. 2, pp. 125-311.
 1928. Hidatsa eagle trapping. *Ibid.*, Nat. Hist., vol. 30, pt. 4, pp. 99-243.
 1934. The Hidatsa earthlodge. Weitzner, Bella (editor and arranger). *Ibid.*, vol. 33, pt. 5, pp. 341-420.
 1977. Mandan and Hidatsa pottery making. Wood, W. Raymond, and Donald J. Lehmer (editors and arrangers). *Plains Anthrop.*, vol. 22 (1976), pt. 1, pp. 97-106.

Wissler, Clark

1912. Social organization and ritualistic ceremonies of the Blackfoot Indians. *Anthrop. Papers Amer. Mus. Nat. Hist.*, vol. 7, pts. 1, 2.

