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SMITHSONIAN INSTITUTION—BUREAU OF ETHNOLOGY.

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PICTOGRAPHS  
OF THE  
NORTH AMERICAN INDIANS.  
A PRELIMINARY PAPER.  
BY  
GARRICK MALLERY.

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# ON THE PICTOGRAPHS OF THE NORTH AMERICAN INDIANS.

BY GARRICK MALLERY.

## INTRODUCTORY.

A pictograph is a writing by picture. It conveys and records an idea or occurrence by graphic means without the use of words or letters. The execution of the pictures of which it is composed often exhibits the first crude efforts of graphic art, and their study in that relation is of value. When pictures are employed as writing the conception intended to be presented is generally analyzed, and only its most essential points are indicated, with the result that the characters when frequently repeated become conventional, and in their later forms cease to be recognizable as objective portraitures. This exhibition of conventionalizing also has its own import in the history of art.

Pictographs are considered in the present paper chiefly in reference to their significance as one form of thought-writing directly addressed to the sight, gesture-language being the other and probably earlier form. So far as they are true ideographs they are the permanent, direct, visible expression of ideas of which gesture-language gives the transient expression. When adopted for syllabaries or alphabets, which is known to be the historical course of evolution in that regard, they have ceased to be the direct and have become the indirect expression of the ideas framed in oral speech. The writing common in civilization records sounds directly, not primarily thoughts, the latter having first been translated into sounds. The trace of pictographs in the latter use shows the earlier and predominant conceptions.

The importance of the study of pictographs depends upon their examination as a phase in the evolution of human culture, or as containing valuable information to be ascertained by interpretation.

The invention of alphabetic writing being by general admission the great step marking the change from barbarism into civilization, the history of its earlier development must be valuable. It is inferred from internal evidence that picture-writing preceded and originated the graphic systems of Egypt, Nineveh, and China, but in North America its use is still modern and current. It can be studied there, without any

requirement of inference or hypothesis, in actual existence as applied to records and communications. Furthermore, its transition into signs of sound is apparent in the Aztec and the Maya characters, in which stage it was only arrested by foreign conquest. The earliest lessons of the birth and growth of culture in this most important branch of investigation can therefore be best learned from the Western Hemisphere. In this connection it may be noticed that picture-writing is found in sustained vigor on the same continent where sign-language has prevailed or continued in active operation to an extent unknown in other parts of the world. These modes of expression, *i. e.*, transient and permanent idea-writing, are so correlated in their origin and development that neither can be studied with advantage to the exclusion of the other.

The limits assigned to this paper allow only of its comprehending the Indians north of Mexico, except as the pictographs of other peoples are introduced for comparison. Among these no discovery has yet been made of any of the several devices, such as the rebuses, or the initials, adopted elsewhere, by which the element of sound apart from significance has been introduced.

The first stage of picture-writing as recognized among the Egyptians was the representation of a material object in such style or connection as determined it not to be a mere portraiture of that object, but figurative of some other object or person. This stage is abundantly exhibited among the Indians. Indeed, their personal and tribal names thus objectively represented constitute the largest part of their picture-writing so far thoroughly understood.

The second step gained by the Egyptians was when the picture became used as a symbol of some quality or characteristic. It can be readily seen how a hawk with bright eye and lofty flight might be selected as a symbol of divinity and royalty, and that the crocodile should denote darkness, while a slightly further step in metaphysical symbolism made the ostrich feather, from the equality of its filaments, typical of truth. It is evident from examples given in the present paper that the North American tribes at the time of the Columbian discovery had entered upon this second step of picture-writing, though with marked inequality between tribes and regions in advance therein. None of them appear to have reached such proficiency in the expression of connected ideas by picture as is shown in the sign-language existing among some of them, in which even conjunctions and prepositions are indicated. Still many truly ideographic pictures are known.

A consideration relative to the antiquity of mystic symbolism, and its position in the several culture-periods, arises in this connection. It appears to have been an outgrowth of human thought, perhaps in the nature of an excrescence, useful for a time, but abandoned after a certain stage of advancement.

A criticism has been made on the whole subject of pictography by Dr. Richard Andree, who, in his work, *Ethnographische Parallelen und Vergleiche*, Stuttgart, 1878, has described and figured a large number of

examples of petroglyphs, a name given by him to rock-drawings and adopted by the present writer. His view appears to be that these figures are frequently the idle marks which, among civilized people, boys or ignorant persons cut with their pen-knives on the desks and walls of school-rooms, or scrawl on the walls of lanes and retired places. From this criticism, however, Dr. Andree carefully excludes the pictographs of the North American Indians, his conclusion being that those found in other parts of the world generally occupy a transition stage lower than that conceded for the Indians. It is possible that significance may yet be ascertained in many of the characters found in other regions, and perhaps this may be aided by the study of those in North America; but no doubt should exist that the latter have purpose and meaning. Any attempt at the relegation of such pictographs as are described in the present paper, and have been the subject of the study of the present writer, to any trivial origin can be met by a thorough knowledge of the labor and pains which were necessary in the production of some of the petroglyphs described.

All criticism in question with regard to the actual significance of North American pictographs is still better met by their practical use by historic Indians for important purposes, as important to them as the art of writing, of which the present paper presents a large number of conclusive examples. It is also known that when they now make pictographs it is generally done with intention and significance.

Even when this work is undertaken to supply the demand for painted robes as articles of trade it is a serious manufacture, though sometimes imitative in character and not intrinsically significant. All other instances known in which pictures are made without original design, as indicated under the several classifications of this paper, are when they are purely ornamental; but in such cases they are often elaborate and artistic, never the idle scrawls above mentioned. A main object of this paper is to call attention to the subject in other parts of the world, and to ascertain whether the practice of pictography does not still exist in some corresponding manner beyond what is now published.

A general deduction made after several years of study of pictographs of all kinds found among the North American Indians is that they exhibit very little trace of mysticism or of esotericism in any form. They are objective representations, and cannot be treated as ciphers or cryptographs in any attempt at their interpretation. A knowledge of the customs, costumes, including arrangement of hair, paint, and all tribal designations, and of their histories and traditions is essential to the understanding of their drawings, for which reason some of those particulars known to have influenced pictography are set forth in this paper, and others are suggested which possibly had a similar influence.

Comparatively few of their picture signs have become merely conventional. A still smaller proportion are either symbolical or emblematic, but some of these are noted. By far the larger part of them are merely

mnemonic records and are treated of in connection with material objects formerly and, perhaps, still used mnemonically.

It is believed that the interpretation of the ancient forms is to be obtained, if at all, not by the discovery of any hermeneutic key, but by an understanding of the modern forms, some of which fortunately can be interpreted by living men; and when this is not the case the more recent forms can be made intelligible at least in part by thorough knowledge of the historic tribes, including their sociology, philosophy, and arts, such as is now becoming acquired, and of their sign-language.

It is not believed that any considerable information of value in an historical point of view will be obtained directly from the interpretation of the pictographs in North America. The only pictures which can be of great antiquity are rock-carvings and those in shell or similar substances resisting the action of time, which have been or may be found in mounds. The greater part of those already known are simply peckings, etchings, or paintings delineating natural objects, very often animals, and illustrate the beginning of pictorial art. It is, however, probable that others were intended to commemorate events or to represent ideas entertained by their authors, but the events which to them were of moment are of little importance as history. They referred generally to some insignificant fight or some season of plenty or of famine, or to other circumstances the evident consequence of which has long ceased.

While, however, it is not supposed that old inscriptions exist directly recording substantively important events, it is hoped that some materials for history can be gathered from the characters in a manner similar to the triumph of comparative philology in resurrecting the life-history and culture of the ancient Aryans. The significance of the characters being granted, they exhibit what chiefly interested their authors, and those particulars may be of anthropologic consequence. The study has so far advanced that, independent of the significance of individual characters, several distinct types of execution are noted which may be expected to disclose data regarding priscan habitat and migration. In this connection it may be mentioned that recent discoveries render it probable that some of the pictographs were intended as guide-marks to point out trails, springs, and fords, and some others are supposed to indicate at least the locality of mounds and graves, and possibly to record specific statements concerning them. A comparison of typical forms may also usefully be made with the objects of art now exhumed in large numbers from the mounds.

Ample evidence exists that many of the pictographs, both ancient and modern, are connected with the mythology and religious practices of their makers. The interpretations obtained during the present year of some of those among the Moki, Zuñi, and Navajo, throw new and strong light on this subject. It is regretted that the most valuable and novel part of this information cannot be included in the present paper,



as it is in the possession of the Bureau of Ethnology in a shape not yet arranged for publication, or forms part of the forthcoming volume of the Transactions of the Anthropological Society of Washington, which may not be anticipated.

The following general remarks of Schoolcraft, Vol. I, p. 351, are of some value, though they apply with any accuracy only to the Ojibwa and are tinged with a fondness for the mysterious:

For their pictographic devices the North American Indians have two terms, namely, *Kekeewin*, or such things as are generally understood by the tribe; and *Keckenowin*, or teachings of the *medas* or priests, and *jossakeeds* or prophets. The knowledge of the latter is chiefly confined to persons who are versed in their system of magic medicine, or their religion, and may be deemed hieratic. The former consists of the common figurative signs, such as are employed at places of sepulture, or by hunting or traveling parties. It is also employed in the *muzzinábiks*, or rock-writings. Many of the figures are common to both, and are seen in the drawings generally; but it is to be understood that this results from the figure-alphabet being precisely the same in both, while the devices of the *nugamoons*, or medicine, *wabino*, hunting, and war songs, are known solely to the initiates who have learned them, and who always pay high to the native professors for this knowledge.

It must, however, be admitted, as above suggested, that many of the pictographs found are not of the historic or mythologic significance once supposed. For instance, the examination of the rock carvings in several parts of the country has shown that some of them were mere records of the visits of individuals to important springs or to fords on regularly established trails. In this respect there seems to have been, in the intention of the Indians, very much the same spirit as induces the civilized man to record his initials upon objects in the neighborhood of places of general resort. At Oakley Springs, Arizona Territory, totemic marks have been found, evidently made by the same individual at successive visits, showing that on the number of occasions indicated he had passed by those springs, probably camping there, and such record was the habit of the neighboring Indians at that time. The same repetition of totemic names has been found in great numbers in the pipestone quarries of Dakota, and also at some old fords in West Virginia. But these totemic marks are so designed and executed as to have intrinsic significance and value, wholly different in this respect from vulgar names in alphabetic form. It should also be remembered that mere *graffiti* are recognized as of value by the historian, the anthropologist, and the artist.

One very marked peculiarity of the drawings of the Indians is that within each particular system, such as may be called a tribal system, of pictography, every Indian draws in precisely the same manner. The figures of a man, of a horse, and of every other object delineated, are made by every one who attempts to make any such figure with all the identity of which their mechanical skill is capable, thus showing their conception and motive to be the same.

The intention of the present work is not to present at this time a view of the whole subject of pictography, though the writer has been

preparing materials with a reference to that more ambitious project. The paper is limited to the presentation of the most important known pictographs of the North American Indians, with such classification as has been found convenient to the writer, and, for that reason, may be so to collaborators. The scheme of the paper has been to give very simply one or more examples, with illustrations, in connection with each one of the headings or titles of the classifications designated. This plan has involved a considerable amount of cross reference, because, in many cases, a character, or a group of characters, could be considered with reference to a number of noticeable characteristics, and it was a question of choice under which one of the headings it should be presented, involving reference to it from the other divisions of the paper. An amount of space disproportionate to the mere subdivision of Time under the class of Mnemonics, is occupied by the Dakota Winter Counts, but it is not believed that any apology is necessary for their full presentation, as they not only exhibit the device mentioned in reference to their use as calendars, but furnish a repertory for all points connected with the graphic portrayal of ideas.

Attention is invited to the employment of the heraldic scheme of designating colors by lines, dots, etc., in those instances in the illustrations where color appeared to have significance, while it was not practicable to produce the coloration of the originals. In many cases, however, the figures are too minute to permit the successful use of that scheme, and the text must be referred to for explanation.

Thanks are due and rendered for valuable assistance to correspondents and especially to officers of the Bureau of Ethnology and the United States Geological Survey, whose names are generally mentioned in connection with their several contributions. Acknowledgment is also made now and throughout the paper to Dr. W. J. Hoffman who has officially assisted the present writer during several years by researches in the field, and by drawing nearly all the illustrations presented.

## DISTRIBUTION OF PETROGLYPHS IN NORTH AMERICA.

Etchings or paintings on rocks in North America are distributed generally.

They are found throughout the extent of the continent, on boulders formed by the sea waves or polished by ice of the glacial epoch; on the faces of rock ledges adjoining streams; on the high walls of cañons and cliffs; on the sides and roofs of caves; in short, wherever smooth surfaces of rock appear. Drawings have also been discovered on stones deposited in mounds and caves. Yet while these records are so frequent, there are localities to be distinguished in which they are especially abundant and noticeable. Also they differ markedly in character of execution and apparent subject-matter.

An obvious division can be made between characters etched or pecked and those painted without incision. This division in execution coincides to a certain extent with geographic areas. So far as ascertained, painted characters prevail perhaps exclusively throughout Southern California, west and southwest of the Sierra Nevada. Pictures, either painted or incised, are found in perhaps equal frequency in the area extending eastward from the Colorado River to Georgia, northward into West Virginia, and in general along the course of the Mississippi River. In some cases the glyphs are both incised and painted. The remaining parts of the United States show rock-etchings almost exclusive of paintings.

It is proposed with the accumulation of information to portray the localities of these records upon a chart accompanied by a full descriptive text. In such chart will be designated their relative frequency, size, height, position, color, age, and other particulars regarded as important. With such chart and list the classification and determination now merely indicated may become thorough.

In the present paper a few only of the more important localities will be mentioned; generally those which are referred to under several appropriate heads in various parts of the paper. Notices of some of these have been published; but many of them are publicly mentioned for the first time in this paper, knowledge respecting them having been obtained by the personal researches of the officers of the Bureau of Ethnology, or by their correspondents.

## NORTHEASTERN ROCK CARVINGS.

A large number of known and described pictographs on rocks occur in that portion of the United States and Canada at one time in the possession of the several tribes constituting the Algonkian linguistic stock.

This is particularly noticeable throughout the country of the great lakes, and the Northern, Middle, and New England States.

The voluminous discussion upon the Dighton Rock, Massachusetts, inscription, renders it impossible wholly to neglect it.

The following description, taken from Schoolcraft's History, Condition, and Prospect of the Indian Tribes of the United States, Vol. IV, p. 119, which is accompanied with a plate, is, however, sufficient. It is merely a type of Algonkin rock-carving, not so interesting as many others:

The ancient inscription on a boulder of greenstone rock lying in the margin of the Assonet, or Taunton River, in the area of ancient Vinland, was noticed by the New England colonists so early as 1680, when Dr. Danforth made a drawing of it. This outline, together with several subsequent copies of it, at different eras, reaching to 1830, all differing considerably in their details, but preserving a certain general resemblance, is presented in the *Antiquités Américaines* [*sic*] (Tab. XI, XII) and referred to the same era of Scandinavian discovery. The imperfections of the drawings (including that executed under the auspices of the Rhode Island Historical Society, in 1830, Tab. XII) and the recognition of some characters bearing more or less resemblance to antique Roman letters and figures, may be considered to have misled Mr. Magnussen in his interpretation of it. From whatever cause, nothing could, it would seem, have been wider from the purport and true interpretation of it. It is of purely Indian origin, and is executed in the peculiar symbolic character of the Kekeewin.

#### ROCK CARVINGS IN PENNSYLVANIA.

Many of the rocks along the river courses in Northern and Western Pennsylvania bear traces of carvings, though, on account of the character of the geological formations, some of these records are almost, if not entirely, obliterated.

Mr. P. W. Shafer published in a historical map of Pennsylvania, in 1875, several groups of pictographs. (They had before appeared in a rude and crowded form in the Transactions of the Anthropological Institute of New York, N. Y., 1871-'72, p. 66, Figs. 25, 26, where the localities are mentioned as "Big" and "Little" Indian Rocks, respectively.) One of these is situated on the Susquehanna River, below the dam at Safe Harbor, and clearly shows its Algonkin origin. The characters are nearly all either animals or various forms of the human body. Birds, bird-tracks, and serpents also occur. A part of this pictograph is presented below, Figure 149, page 226.

On the same chart a group of pictures is also given, copied from the originals on the Allegheny River, in Venango County, 5 miles south of Franklin. There are but six characters furnished in this instance, three of which are variations of the human form, while the others are undetermined.

Mr. J. Sutton Wall, of Monongahela City, describes in correspondence a rock bearing pictographs opposite the town of Millsborough, in Fayette



County, Pennsylvania. This rock is about 390 feet above the level of Monongahela River, and belongs to the Waynesburg stratum of sandstone. It is detached, and rests somewhat below its true horizon. It is about 6 feet in thickness, and has vertical sides; only two figures are carved on the sides, the inscriptions being on the top, and are now considerably worn. Mr. Wall mentions the outlines of animals and some other figures, formed by grooves or channels cut from an inch to a mere trace in depth. No indications of tool marks were discovered. It is presented below as Figure 147, page 224.

The resemblance between this record and the drawings on Dighton Rock is to be noted, as well as that between both of them and some in Ohio.

Mr. J. Sutton Wall also contributes a group of etchings on what is known as the "Geneva Picture Rock," in the Monongahela Valley, near Geneva. These are foot-prints and other characters similar to those mentioned from Hamilton Farm, West Virginia, which are shown in Figure 148, page 225.

Schoolcraft (Vol. IV, pp. 172, 173, Pl. 17, 18), describes also, presenting plates, a pictograph on the Allegheny River as follows:

One of the most often noticed of these inscriptions exists on the left bank of this river [the Allegheny], about six miles below Franklin (the ancient Venango), Pennsylvania. It is a prominent point of rocks, around which the river deflects, rendering this point a very conspicuous object. \* The rock, which has been lodged here in some geological convulsion, is a species of hard sandstone, about twenty-two feet in length by fourteen in breadth. It has an inclination to the horizon of about fifty degrees. During freshets it is nearly overflowed. The inscription is made upon the inclined face of the rock. The present inhabitants in the country call it the 'Indian God.' It is only in low stages of water that it can be examined. Captain Eastman has succeeded, by wading into the water, in making a perfect copy of this ancient record, rejecting from its borders the interpolations of modern names put there by boatmen, to whom it is known as a point of landing. The inscription itself appears distinctly to record, in symbols, the triumphs in hunting and war.

#### ROCK CARVINGS IN OHIO.

In the Final Report of the Ohio State Board of Centennial Managers, Columbus, 1877, many localities showing rock carvings are noted. The most important (besides those mentioned below) are as follows: Newark, Licking County, where human hands, many varieties of bird tracks, and a cross are noticed. Independence, Cuyahoga County, showing human hands and feet and serpents. Amherst, Lorain County, presenting similar objects. Wellsville, Columbiana County, where the characters are more elaborate and varied.

Mr. James W. Ward describes in the Journal of the Anthropological Institute of New York, Vol. 1, 1871-72, pp. 57-64, Figs. 14-22, some sculptured rocks. They are reported as occurring near Barnesville, Belmont County, and consist chiefly of the tracks of birds and animals. Serpentine forms also occur, together with concentric rings. The au-

thor also quotes Mr. William A. Adams as describing, in a letter to Professor Silliman in 1842, some figures on the surface of a sandstone rock, lying on the bank of the Muskingum River. These figures are mentioned as being engraved in the rock and consist of tracks of the turkey, and of man.

#### ROCK CARVINGS IN WEST VIRGINIA.

Mr. P. W. Norris, of the Bureau of Ethnology, reports that he found numerous localities along the Kanawha River, West Virginia, bearing pictographs. Rock etchings are numerous upon smooth rocks, covered during high water, at the prominent fords of the river, as well as in the niches or long shallow caves high in the rocky cliffs of this region. Although rude representations of men, animals, and some deemed symbolic characters were found, none were observed superior to, or essentially differing from, those of modern Indians.

Mr. John Haywood mentions (*The Natural and Aboriginal History of Tennessee*, Nashville, 1823, pp. 332, 333) rock etchings four miles below the Burning Spring, near the mouth of Campbell's Creek, Kanawha County, West Virginia. These consist of forms of various animals, as the deer, buffalo, fox, hare; of fish of various kinds; "infants scalped and scalps alone," and men of natural size. The rock is said to be in the Kanawha River, near its northern shore, accessible only at low water, and then only by boat.

On the rocky walls of Little Coal River, near the mouth of Big Horse Creek, are cliffs upon which are many carvings. One of these measures 8 feet in length and 5 feet in height, and consists of a dense mass of characters.

About 2 miles above Mount Pleasant, Mason County, West Virginia, on the north side of the Kanawha River, are numbers of characters, apparently totemic. These are at the foot of the hills flanking the river.

On the cliffs near the mouth of the Kanawha River, opposite Mount Carbon, Nicholas County, West Virginia, are numerous pictographs. These appear to be cut into the sandstone rock.

See also page 225, Figure 148.

#### ROCK CARVINGS IN THE SOUTHERN STATES.

Charles C. Jones, jr., in his *Antiquities of the Southern Indians*, etc., New York, 1873, pp. 62, 63, gives some general remarks upon the pictographs of the southern Indians, as follows:

In painting and rock writing the efforts of the Southern Indians were confined to the fanciful and profuse ornamentation of their own persons with various colors, in

which red, yellow, and black predominated, and to marks, signs, and figures depicted on skins and scratched on wood, the shoulder blade of a buffalo, or on stone. The smooth bark of a standing tree or the face of a rock was used to commemorate some feat of arms, to indicate the direction and strength of a military expedition, or the solemnization of a treaty of peace. High up the perpendicular sides of mountain gorges, and at points apparently inaccessible save to the fowls of the air, are seen representations of the sun and moon, accompanied by rude characters, the significance of which is frequently unknown to the present observer. The motive which incited to the execution of work so perilous was, doubtless, religious in its character, and directly connected with the worship of the sun and his pale consort of the night.

The same author, page 377, particularly describes and illustrates one in Georgia, as follows :

In Forsyth County, Georgia, is a carved or incised bowlder of fine-grained granite, about 9 feet long, 4 feet 6 inches high, and 3 feet broad at its widest point. The figures are cut in the bowlder from one-half to three-fourths of an inch deep. \* It is generally believed that they are the work of the Cherokees.

These figures are chiefly circles, both plain, nucleated, and concentric, sometimes two or more being joined by straight lines, forming what is now known as the "spectacle-shaped" figure.

Dr. M. F. Stephenson mentions, in *Geology and Mineralogy of Georgia*, Atlanta, 1871, p. 199, sculptures of human feet, various animals, bear tracks, etc., in Enchanted Mountain, Union County, Georgia. The whole number of etchings is reported as one hundred and forty-six.

#### ROCK CARVINGS IN IOWA.

Mr. P. W. Norris found numerous caves on the banks of the Mississippi River, in Northeastern Iowa, 4 miles south of New Albion, containing incised pictographs. Fifteen miles south of this locality paintings occur on the cliffs.

#### ROCK CARVINGS IN MINNESOTA.

Mr. P. W. Norris has discovered large numbers of pecked totemic characters on the horizontal face of the ledges of rock at Pipe Stone Quarry, Minnesota, of which he has presented copies. The custom prevailed, it is stated, for each Indian who gathered stone (Catlinite) for pipes to inscribe his totem upon the rock before venturing to quarry upon this ground. Some of the cliffs in the immediate vicinity were of too hard a nature to admit of pecking or scratching, and upon these the characters were placed in colors.

## ROCK CARVINGS IN WYOMING AND IN IDAHO.

A number of pictographs in Wyoming are described in the report on Northwestern Wyoming, including Yellowstone National Park, by Capt. William A. Jones, U. S. A., Washington, 1875, p. 268 *et seq.*, Figures 50 to 53 in that work. The last three in order of these figures are reproduced in Sign Language among North American Indians, in the First Annual Report, Bureau of Ethnology, pages 378 and 379, to show their connection with gesture signs. The most important one was discovered on Little Popo-Agie, Northwestern Wyoming, by members of Captain Jones's party in 1873. The etchings are upon a nearly vertical wall of the yellow sandstone in the rear of Murphy's ranch, and appear to be of some antiquity.

Further remarks, with specimens of the figures, are presented in this paper as Figure 150, on page 227.

Dr. William H. Corbusier, U. S. Army, in a letter to the writer, mentions the discovery of rock etchings on a sandstone rock near the headwaters of Sage Creek, in the vicinity of Fort Washakie, Wyoming. Dr. Corbusier remarks that neither the Shoshoni nor the Arapaho Indians know who made the etchings. The two chief figures appear to be those of the human form, with the hands and arms partly uplifted, the whole being surrounded above and on either side by an irregular line.

The method of grouping, together with various accompanying appendages, as irregular lines, spirals, etc., observed in Dr. Corbusier's drawing, show great similarity to the Algonkin type, and resemble some etchings found near the Wind River Mountains, which were the work of Blackfeet (Satsika) Indians, who, in comparatively recent times, occupied portions of the country in question, and probably also etched the designs near Fort Washakie.

A number of examples from Idaho appear *infra*, pages 228 and 229.

## ROCK CARVINGS IN NEVADA.

At the lower extremity of Pyramid Lake, Nevada, pictographs have been found by members of the United States Geological Survey, though no accurate reproductions are available. These characters are mentioned as incised upon the surface of basalt rocks.

On the western slope of Lone Butte, in the Carson Desert, Nevada, pictographs occur in considerable numbers. All of these appear to have been produced, on the faces of bowlders and rocks, by pecking and scratching with some hard mineral material like quartz. No copies have been obtained as yet.

Great numbers of incised characters of various kinds are found on the walls of rock flanking Walker River, near Walker Lake, Nevada.

Waving lines, rings, and what appear to be vegetable forms are of frequent occurrence. The human form and footprints are also depicted.

Among the copies of pictographs obtained in various portions of the Northwestern States and Territories, by Mr. G. K. Gilbert, is one referred to as being on a block of basalt at Reveillé, Nevada, and is mentioned as being Shinumo or Moki. This suggestion is evidently based upon the general resemblance to drawings found in Arizona, and known to have been made by the Moki Indians. The locality is within the territory of the Shoshonian linguistic division, and the etchings are in all probability the work of one or more of the numerous tribes comprised within that division.

#### ROCK CARVINGS IN OREGON AND IN WASHINGTON.

Numerous boulders and rock escarpments at and near the Dalles of the Columbia River, Oregon, are covered with incised or pecked pictographs. Human figures occur, though characters of other forms predominate.

Mr. Albert S. Gatschet reports the discovery of rock etchings near Gaston, Oregon, in 1878, which are said to be near the ancient settlement of the Tualati (or Atfalati) Indians, according to the statement of these people. These etchings are about 100 feet above the valley bottom, and occur on six rocks of soft sandstone, projecting from the grassy hillside of Patten's Valley, opposite Darling Smith's farm, and are surrounded with timber on two sides. The distance from Gaston is about 4 miles; from the old Tualati settlement probably not more than  $2\frac{1}{2}$  miles in an air-line.

This sandstone ledge extends for one-eighth of a mile horizontally along the hillside, upon the projecting portions of which the inscriptions are found. These rocks differ greatly in size, and slant forward so that the inscribed portions are exposed to the frequent rains of that region. The first rock, or that one nearest the mouth of the cañon, consists of horizontal zigzag lines, and a detached straight line, also horizontal. On another side of the same rock is a series of oblique parallel lines. Some of the most striking characters found upon other exposed portions of the rock appear to be human figures, *i. e.*, circles to which radiating lines are attached, and bearing indications of eyes and mouth, long vertical lines running downward as if to represent the body, and terminating in a bifurcation, as if intended for legs, toes, etc. To the right of one figure is an arm and three-fingered hand (similar to some of the Moki characters), bent downward from the elbow, the humerus extending at a right angle from the body. Horizontal rows of short vertical lines are placed below and between some of the figures, probably numerical marks of some kind.

Other characters occur of various forms, the most striking being an



arrow pointing upward, with two horizontal lines drawn across the shaft, vertical lines having short oblique lines attached thereto.

Mr. Gatschet, furthermore, remarks that the Tuálati attach a trivial story to the origin of these pictures, the substance of which is as follows: The Tillamuk warriors living on the Pacific coast were often at variance with the several Kalapuya tribes. One day, passing through Patten's Valley to invade the country of the Tuálati, they inquired of a passing woman how far they were from their camp. The woman, desirous not to betray her own countrymen, said that they were yet at a distance of one (or two?) days' travel. This made them reflect over the intended invasion, and holding a council they preferred to retire. In commemoration of this the inscription with its numeration marks, was incised by the Tuálati.

Capt. Charles Bendire, U. S. Army, states in a letter that Col. Henry C. Merriam, U. S. Army, discovered pictographs on a perpendicular cliff of granite at the lower end of Lake Chelan, lat. 48° N., near old Fort O'Kinakane, on the upper Columbia River. The etchings appear to have been made at widely different periods, and are evidently quite old. Those which appeared the earliest were from twenty-five to thirty feet above the present water level. Those appearing more recent are about ten feet above water level. The figures are in black and red colors, representing Indians with bows and arrows, elk, deer, bear, beaver, and fish. There are four or five rows of these figures, and quite a number in each row. The present native inhabitants know nothing whatever regarding the history of these paintings.

For another example of pictographs from Washington see Figure 109, p. 190.

#### ROCK CARVINGS IN UTAH.

A locality in the southern interior of Utah has been called Pictograph Rocks, on account of the numerous records of that character found there.

Mr. G. K. Gilbert, of the United States Geological Survey, in 1875 collected a number of copies of inscriptions in Temple Creek Cañon, Southeastern Utah, accompanied by the following notes: "The drawings were found only on the northeast wall of the cañon, where it cuts the Vermillion cliff sandstone. The chief part are etched, apparently by pounding with a sharp point. The outline of a figure is usually more deeply cut than the body. Other marks are produced by rubbing or scraping, and still other by laying on colors. Some, not all, of the colors are accompanied by a rubbed appearance, as though the material had been a dry chalk.

"I could discover no tools at the foot of the wall, only fragments of pottery, flints, and a metate.

"Several fallen blocks of sandstone have rubbed depressions that may have been ground out in the sharpening of tools. There have been many dates of inscriptions, and each new generation has unscrupulously run its lines over the pictures already made. Upon the best protected surfaces, as well as the most exposed, there are drawings dimmed beyond restoration and others distinct. The period during which the work accumulated was longer by far than the time which has passed since the last. Some fallen blocks cover etchings on the wall, and are themselves etched.

"Colors are preserved only where there is almost complete shelter from rain. In two places the holes worn in the rock by swaying branches impinge on etchings, but the trees themselves have disappeared. Some etchings are left high and dry by a diminishing talus (15-20 feet), but I saw none partly buried by an increasing talus (except in the case of the fallen block already mentioned).

"The painted circles are exceedingly accurate, and it seems incredible that they were made without the use of a radius."

In the collection contributed by Mr. Gilbert there are at least fifteen series or groups of figures, most of which consist of the human form (from the simplest to the most complex style of drawing), animals, either singly or in long files, as if driven, bird tracks, human feet and hands, etc. There are also circles, parallel lines, and waving or undulating lines, spots, and other unintelligible characters.

Mr. Gilbert also reports the discovery, in 1883, of a great number of pictographs, chiefly in color, though some are etched, in a cañon of the Book Cliff, containing Thompson's spring, about 4 miles north of Thompson's station, on the Denver and Colorado Railroad, Utah.

Collections of drawings of pictographs at Black Rock spring, on Beaver Creek, north of Milford, Utah, have been furnished by Mr. Gilbert. A number of fallen blocks of basalt, at a low escarpment, are filled with etchings upon the vertical faces. The characters are generally of an "unintelligible" nature, though the human figure is drawn in complex forms. Foot-prints, circles, etc., also abound.

Mr. I. C. Russell, of the United States Geological Survey, furnished rude drawings of pictographs at Black Rock spring, Utah (see Figure 153). Mr. Gilbert Thompson, of the United States Geological Survey, also discovered pictographs at Fool Creek Cañon, Utah (see Figure 154). Both of those figures are on page 230.

#### ROCK CARVINGS IN COLORADO.

Captain E. L. Berthoud furnished to the *Kansas City Review of Science and Industry*, VII, 1883, No. 8, pp. 489, 490, the following:

The place is 20 miles southeast of Rio Del Norte, at the entrance of the cañon of the Piedra Pintada (Painted Rock) Creek. The carvings are found on the right of the

cañon, or valley, and upon volcanic rocks. They bear the marks of age and are cut in, not painted, as is still done by the Utes everywhere. They are found for a quarter of a mile along the north wall of the cañon, on the ranches of W. M. Maguire and F. T. Hudson, and consist of all manner of pictures, symbols, and hieroglyphics done by artists whose memory even tradition does not now preserve. The fact that these are carvings, done upon such hard rock merits them with additional interest, as they are quite distinct from the carvings I saw in New Mexico and Arizona on soft sand-stone. Though some of them are evidently of much greater antiquity than others, yet all are ancient, the Utes admitting them to have been old when their fathers conquered the country.

#### ROCK CARVINGS IN NEW MEXICO.

On the north wall of Cañon de Chelly, one fourth of a mile east of the mouth of the cañon, are several groups of pictographs, consisting chiefly of various grotesque forms of the human figure, and also numbers of animals, circles, etc. A few of them are painted black, the greater portion consisting of rather shallow lines which are in some places considerably weathered.

Further up the cañon, in the vicinity of cliff-dwellings, are numerous small groups of pictographic characters, consisting of men and animals, waving or zigzag lines, and other odd and "unintelligible" figures.

Lieut. J. H. Simpson gives several illustrations of pictographs copied from rocks in the northwest part of New Mexico in his Report of an Expedition into the Navajo Country. (Sen. Ex. Doc. No. 64, 31st Cong., 1st sess., 1856, Pl. 23, 24, 25.)

Inscriptions have been mentioned as occurring at El Moro, consisting of etchings of human figures and other unintelligible characters. This locality is better known as Inscription Rock. Lieutenant Simpson's remarks upon it, with illustrations, are given in the work last cited, on page 120. He states that most of the characters are no higher than a man's head, and that some of them are undoubtedly of Indian origin.

At Arch Spring, near Zuñi, figures are cut upon a rock which Lieutenant Whipple thinks present some faint similarity to those at Rocky Dell Creek. (Rep. Pac. R. R. Exped., Vol. III, 1856, Pt. III, p. 39, Pl. 32.)

Near Ojo Pescado, in the vicinity of the ruins, are pictographs, reported in the last mentioned volume and page, Plate 31, which are very much weather-worn, and have "no trace of a modern hand about them."

#### ROCK-CARVINGS IN ARIZONA.

On a table land near the Gila Bend is a mound of granite boulders, blackened by augite, and covered with unknown characters, the work of human hands. On the ground near by were also traces of some of



the figures, showing some of the pictographs, at least, to have been the work of modern Indians. Others were of undoubted antiquity, and the signs and symbols intended, doubtless, to commemorate some great event. (See Ex. Doc. No. 41, 30th Cong., 1st sess. (Emory's Reconnaissance), 1848, p. 89; ill. opposite p. 89, and on p. 90.)

Characters upon rocks, of questionable antiquity, are reported in the last-mentioned volume, Plate, p. 63, to occur on the Gila River, at  $32^{\circ} 18' 13''$  N. lat., and  $109^{\circ} 07' 30''$  long. [According to the plate, the figures are found upon boulders and on the face of the cliff to the height of about 30 feet.]

The party under Lieutenant Whipple (see Rep. Pac. R. R. Exped., III, 1856, Pt. III, p. 42) also discovered pictographs at Yampais Spring, Williams River. "The spot is a secluded glen among the mountains. A high shelving rock forms a cave, within which is a pool of water and a crystal stream flowing from it. The lower surface of the rock is covered with pictographs. None of the devices seem to be of recent date."

Many of the country rocks lying on the Colorado plateau of Northern Arizona, east of Peach Springs, bear traces of considerable artistic workmanship. Some observed by Dr. W. J. Hoffman, in 1871, were rather elaborate and represented figures of the sun, human beings in various styles approaching the grotesque, and other characters not yet understood. All of those observed were made by pecking the surface of basalt with a harder variety of stone.

Mr. G. K. Gilbert discovered etchings at Oakley Spring, eastern Arizona, in 1878, relative to which he remarks that an Oraibi chief explained them to him and said that the "Mokis make excursions to a locality in the cañon of the Colorado Chiquito to get salt. On their return they stop at Oakley Spring and each Indian makes a picture on the rock. Each Indian draws his crest or totem, the symbol of his gens[?]. He draws it once, and once only, at each visit." Mr. Gilbert adds, further, that "there are probably some exceptions to this, but the etchings show its general truth. There are a great many repetitions of the same sign, and from two to ten will often appear in a row. In several instances I saw the end drawings of a row quite fresh while the others were not so. Much of the work seems to have been performed by pounding with a hard point, but a few pictures are scratched on. Many drawings are weather-worn beyond recognition, and others are so fresh that the dust left by the tool has not been washed away by rain. Oakley Spring is at the base of the Vermillion Cliff, and the etchings are on fallen blocks of sandstone, a homogeneous, massive, soft sandstone. Tubi, the Oraibi chief above referred to, says his totem is the rain cloud but it will be made no more as he is the last survivor of the gens."

A group of the Oakley Spring etchings of which Figure 1 is a copy, measures six feet in length and four feet in height. Interpreta-

tions of many of the separated characters of Figure 1 are presented on page 46 *et seq.*, also in Figures 156 *et seq.*, page 237.

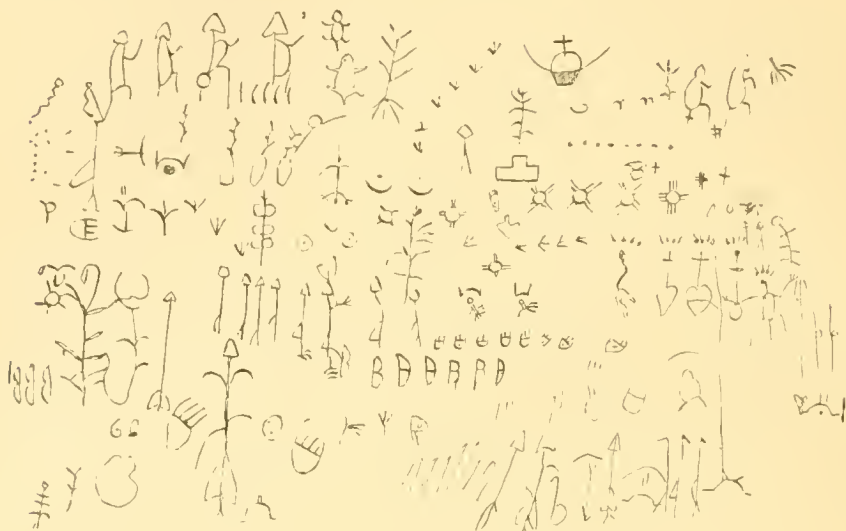


FIG. 1.—Petroglyphs at Oakley Springs, Arizona.

Mr. Gilbert obtained sketches of etchings in November, 1878, on Partridge Creek, northern Arizona, at the point where the Beale wagon road comes to it from the east. "The rock is cross-laminated Aubrey sandstone and the surfaces used are faces of the laminae. All the work is done by blows with a sharp point. (Obsidian is abundant in the vicinity.) Some inscriptions are so fresh as to indicate that the locality is still resorted to. No Indians live in the immediate vicinity, but the region is a hunting ground of the Wallapais and Avasupais (Cosninos)."

Notwithstanding the occasional visits of the above named tribes, the characters submitted more nearly resemble those of other localities known to have been made by the Moki Pueblos.

Rock etchings are of frequent occurrence along the entire extent of the valley of the Rio Verde, from a short distance below Camp Verde to the Gila River.

Mr. Thomas V. Kean reports etchings on the rocks in Cañon Segy, and in Kean's Cañon, northeastern Arizona. Some forms occurring at the latter locality are found also upon Moki pottery.

#### ROCK CARVINGS IN CALIFORNIA.

From information received from Mr. Alphonse Pinart, pictographic records exist in the hills east of San Bernardino, somewhat resembling

those at Tule River in the southern spurs of the Sierra Nevada, Kern County.

These pictographic records are found at various localities along the hill tops, but to what distance is not positively known.

In the range of mountains forming the northeastern boundary of Owen Valley are extensive groups of petroglyphs, apparently dissimilar to those found west of the Sierra Nevada. Dr. Oscar Loew also mentions a singular inscription on basaltic rocks in Black Lake Valley, about 4 miles southwest of the town of Benton, Mono County. This is scratched in the basalt surface with some sharp instrument and is evidently of great age. (Ann. Report upon the Geog. Surveys west of the 100th meridian. Being Appendix J J, Ann. Report of Chief of Engineers for 1876. Plate facing p. 326.)

Dr. W. J. Hoffman, of the Bureau of Ethnology, reports the occurrence of a number of series of etchings scattered at intervals for over twenty miles in Owen's Valley, California. Some of these records were hastily examined by him in 1871, but it was not until the autumn of 1884 that a thorough examination of them was made, when measurements, drawings, etc., were obtained for study and comparison. The country is generally of a sandy, desert, character, devoid of vegetation and water. The occasional bowlders and croppings of rock consist of vesicular basalt, upon the smooth vertical faces of which occur innumerable characters different from any hitherto reported from California, but bearing marked similarity to some figures found in the country now occupied by the Moki and Zuñi, in New Mexico and Arizona, respectively.

The southernmost group of etchings is eighteen miles south of the town of Benton; the next group, two miles almost due north, at the Chalk Grade; the third, about three miles farther north, near the stage road; the fourth, half a mile north of the preceding; then a fifth, five and a half miles above the last named and twelve and a half miles south of Benton. The northernmost group is about ten or twelve miles northwest of the last-mentioned locality and southwest from Benton, at a place known as Watterson's Ranch. The principal figures consist of various simple, complex, and ornamental circles, some of the simple circles varying as nucleated, concentric, and spectacle-shaped, zigzag, and serpentine lines, etc. Animal forms are not abundant, those readily identified being those of the deer, antelope, and jack-rabbits. Representations of snakes and huge sculpturings of grizzly-bear tracks occur on one horizontal surface, twelve and a half miles south of Benton. In connection with the latter, several carvings of human foot-prints appear, leading in the same direction, *i. e.*, toward the south-southwest.

All of these figures are pecked into the vertical faces of the rocks, the depths varying from one-fourth of an inch to an inch and a quarter. A freshly broken surface of the rock presents various shades from a cream white to a Naples yellow color, though the sculptured lines are all blackened by exposure and oxidation of the iron contained therein. This fact has no importance toward the determination of the age of the work.

At the Chalk Grade is a large boulder measuring about six feet in height and four feet either way in thickness, upon one side of which is one half of what appears to have been an immense mortar. The sides of this cavity are vertical, and near the bottom turn abruptly and horizontally in toward the center, which is marked by a cone about three inches high and six inches across at its base. The interior diameter of the mortar is about twenty-four inches, and from the appearance of the surface, being considerably grooved laterally, it would appear as if a core had been used for grinding, similar in action to that of a mill-stone. No traces of such a core or corresponding form were visible. This instance is mentioned as it is the only indication that the authors of the etchings made any prolonged visit to this region, and perhaps only for grinding grass seed, though neither grass nor water is now found nearer than the remains at Watterson's Ranch and at Benton.

The records at Watterson's are pecked upon the surfaces of detached boulders near the top of a mesa, about one hundred feet above the nearest spring, distant two hundred yards. These are also placed at the southeast corner of the mesa, or that nearest to the northernmost of the main group across the Benton Range. At the base of the eastern and northeastern portion of this elevation of land, and but a stone's throw from the etchings, are the remains of former camps, such as stone circles, marking the former sites of brush lodges, and a large number of obsidian flakes, arrowheads, knives, and some jasper remains of like character. Upon the flat granite boulders are several mortar-holes, which perhaps were used for crushing the seed of the grass still growing abundantly in the immediate vicinity. Piñon nuts are also abundant in this locality.

Upon following the most convenient course across the Benton Range to reach Owen's Valley proper, etchings are also found, though in limited numbers, and seem to partake of the character of "indicators as to course of travel." By this trail the northernmost of the several groups of etchings above mentioned is the nearest and most easily reached.

The etchings upon the boulders at Watterson's are somewhat different from those found elsewhere. The number of specific designs is limited, many of them being reproduced from two to six or seven times, thus seeming to partake of the character of personal names.

One of the most frequent is that resembling a horseshoe within which is a vertical stroke. Sometimes the upper extremity of such stroke is attached to the upper inside curve of the broken ring, and frequently there are two or more parallel vertical strokes within one such curve. Bear-tracks and the outline of human feet also occur, besides several unique forms. A few of these forms are figured, though not accurately, in the Ann. Report upon the Geog. Surveys west of the 100th meridian last mentioned (1876), Plate facing p. 326.

Lieutenant Whipple reports (Rep. Pac. R.R. Exped. III, 1856, Pt. III,

p. 42, Pl. 36) the discovery of pictographs at Pai-Ute Creek, about 30 miles west of the Mojave villages. These are carved upon a rock, "are numerous, appear old, and are too confusedly obscure to be easily traceable."

These bear great general resemblance to etchings scattered over Northeast Arizona, Southern Utah, and Western New Mexico.

Remarkable pictographs have also been found at Tule River Agency. See Figure 155, page 235.

#### COLORED PICTOGRAPHS ON ROCKS.

Mr. Gilbert Thompson reports the occurrence of painted characters at Paint Lick Mountain, 3 miles north of Maiden Spring, Tazewell County, Virginia. These characters are painted in red, blue, and yellow. A brief description of this record is given in a work by Mr. Charles B. Coale, entitled "The Life and Adventures of Wilburn Waters," etc., Richmond, 1878, p. 136.

Mr. John Haywood (The Natural and Aboriginal History of Tennessee, Nashville, 1823, p. 149) mentions painted figures of the sun, moon, a man, birds, etc., on the bluffs on the south bank of the Holston, 5 miles above the mouth of the French Broad. These are painted in red colors on a limestone bluff. He states that they were attributed to the Cherokee Indians, who made this a resting place when journeying through the region. This author furthermore remarks: "Wherever on the rivers of Tennessee are perpendicular bluffs on the sides, and especially if caves be near, are often found mounds near them, enclosed in intrenchments, with the sun and moon painted on the rocks," etc.

Among the many colored etchings and paintings on rock discovered by the Pacific Railroad Expedition in 1853-'54 (Rep. Pac. R. R. Exped., III, 1856, Pt. III, pp. 36, 37, Pl. 28, 29, 30) may be mentioned those at Rocky Dell Creek, New Mexico, which were found between the edge of the Llano Estacado and the Canadian River. The stream flows through a gorge, upon one side of which a shelving sandstone rock forms a sort of cave. The roof is covered with paintings, some evidently ancient, and beneath are innumerable carvings of footprints, animals, and symmetrical lines.

Mr. James H. Blodgett, of the U. S. Geological Survey, calls attention to the paintings on the rocks of the bluffs of the Mississippi River, a short distance below the mouth of the Illinois River, in Illinois, which were observed by early French explorers, and have been the subject of discussion by much more recent observers.

Mr. P. W. Norris found numerous painted totemic characters upon the cliffs in the immediate vicinity of the pipestone quarry, Minnesota. These consisted, probably, of the totems or names of Indians who had



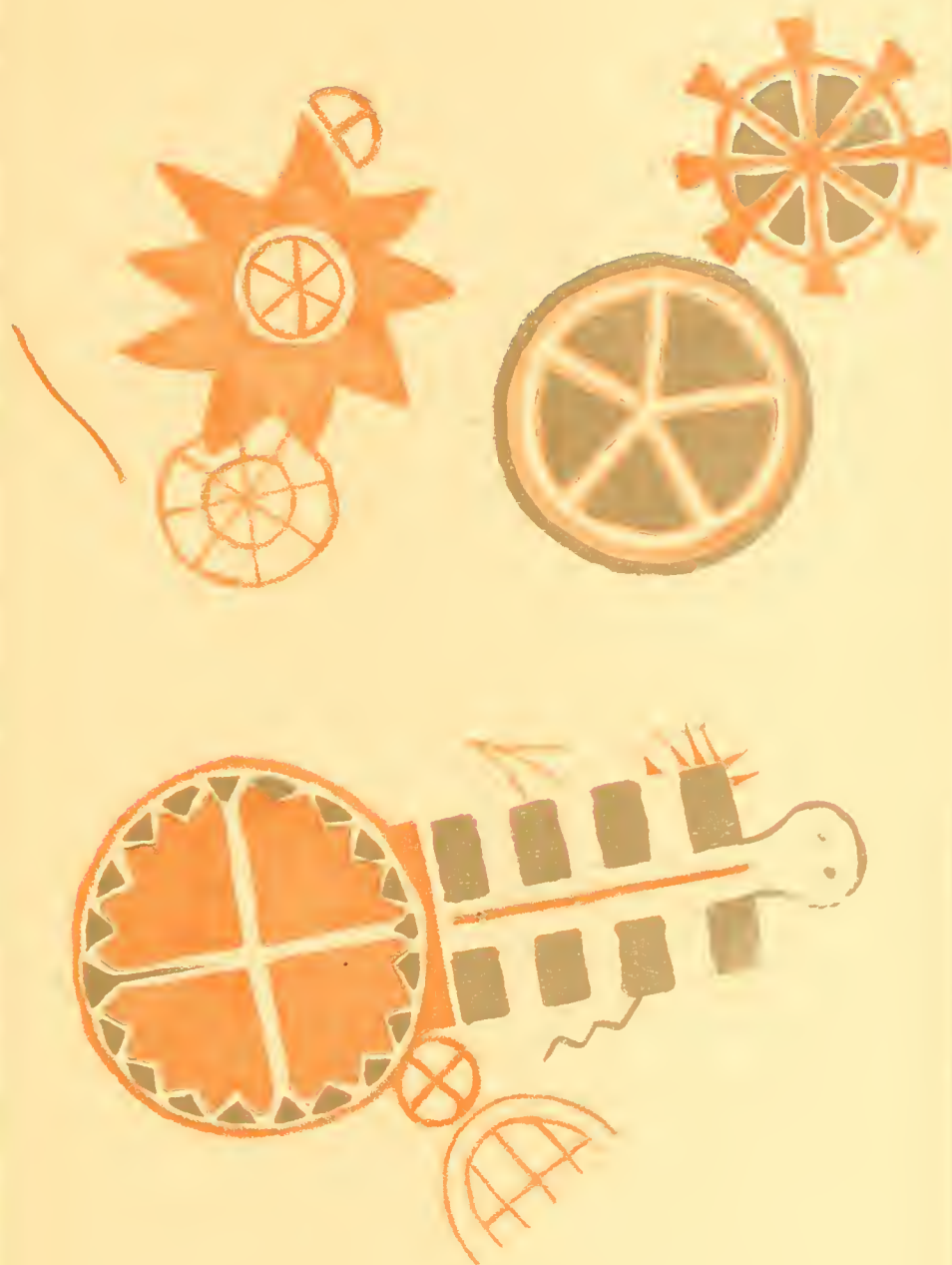
visited that locality for the purpose of obtaining catlinite for making pipes. These had been mentioned by early writers.

Mr. Norris also discovered painted characters upon the cliffs on the Mississippi River, 19 miles below New Albin, in northeastern Iowa.

Mr. Gilbert Thompson reports his observation of pictographs at San Antonio Springs, 30 miles east of Fort Wingate, New Mexico. The human form, in various styles, occurs, as well as numerous other characters strikingly similar to those frequent in the country, farther west, occupied by the Moki Indians. The peculiarity of these figures is that the outlines are incised or etched, the depressions thus formed being filled with pigments of either red, blue, or white. The interior portions of the figures are simply painted with one or more of the same colors.

Charles D. Wright, esq., of Durango, Colorado, writes that he has discovered "hieroglyphical writings" upon rocks and upon the wall of a cliff house near the Colorado and New Mexico boundary line. On the wall in one small building was found a series of characters in red and black paints, consisting of a "chief on his horse, armed with spear and lance, wearing a pointed hat and robe; behind this were about twenty characters representing people on horses, lassoing horses, etc.: in fact, the whole scene represented breaking camp and leaving in a hurry. The whole painting measured about 12 by 16 feet." Other rock-paintings are also mentioned as occurring near the San Juan River, consisting of four characters representing men as if in the act of taking an obligation, hands extended, etc. At the right are some characters in black paint, covering a space 3 by 4 feet.

The rock paintings presented in Plates I and II are reduced copies of a record found by Dr. W. J. Hoffman, of the Bureau of Ethnology, in September, 1884, 12 miles west-northwest of the city of Santa Barbara, California. They are one-sixteenth original size. The locality is almost at the summit of the Santa Ynez range of mountains; the gray sandstone rock on which they are painted is about 30 feet high and projects from a ridge so as to form a very marked promontory extending into a narrow mountain cañon. At the base of the western side of this boulder is a rounded cavity, measuring, on the inside, about 15 feet in width and 8 feet in height. The floor ascends rapidly toward the back of the cave, and the entrance is rather smaller in dimensions than the above measurements of the interior. About 40 yards west of this rock is a fine spring of water. One of the four old Indian trails leading northward across the mountains passes by this locality, and it is probable that this was one of the camping-places of the tribe which came south to trade, and that some of its members were the authors of the paintings. The three trails beside the one just mentioned cross the mountains at various points east of this, the most distant being about 15 miles. Other trails were known, but these four were most direct to the immediate vicinity of the Spanish settlement which sprang up shortly after the establishment of the Santa Barbara Mission in 1786. Pictographs (not now described)











appear upon rocks found at or near the origin of all of the above-mentioned trails at the base of the mountains, with the exception of the one under consideration. The appearance and position of these pictographs appear to be connected with the several trails.

The circles figured in *b* and *d* of Plate I, and *c*, *r*, and *w* of Plate II, together with other similar circular marks bearing cross-lines upon the interior, were at first unintelligible, as their forms among various tribes have very different signification. The character in Plate I, above and projecting from *d*, resembles the human form, with curious lateral bands of black and white, alternately. Two similar characters appear, also, in Plate II, *a*, *b*. In *a*, the lines from the head would seem to indicate a superior rank or condition of the person depicted.

Having occasion subsequently to visit the private ethnologic collection of Hon. A. F. Coronel, of Los Angeles, California, Dr. Hoffman discovered a clue to the general import of the above record, as well as the signification of some of the characters above mentioned. In a collection of colored illustrations of Mexican costumes some of them probably a century old, he found blankets bearing borders and colors, nearly identical with those shown in the circles in Plate I, *d*, and Plate II, *c*, *r*, *w*. It is more than probable that the circles represent bales of blankets which early became articles of trade at the Santa Barbara Mission. If this supposition is correct, the cross-lines would seem to represent the cords used in tying the blankets into bales, which same cross-lines appear as cords in *l*, Plate II. Mr. Coronel also possesses small figures of Mexicans, of various conditions of life, costumes, trades, and professions, one of which, a painted statuette, is a representation of a Mexican lying down flat upon an outspread serape, similar in color and form to the black and white bands shown in the upper figure of *d*, Plate I, and *a*, *b*, of Plate II, and instantly suggesting the explanation of those figures. Upon the latter the continuity of the black and white bands is broken, as the human figures are probably intended to be in front, or on top, of the drawings of the blankets.

The small statuette above mentioned is that of a Mexican trader, and if the circles in the pictographs are considered to represent bales of blankets, there is a figure in Plate I, *d*, still more interesting, from the union of one of these circles with that of a character representing the trader, *i. e.*, the man possessing the bales. Bales, or what appear to be bales, are represented to the top and right of the circle *d*, Plate I, and also upon the right hand figure in *l*, Plate II. To the right of the latter are three short lines, evidently showing the knot or ends of the cords used in tying a bale of blankets without colors, therefore of less importance, or of other goods. This bale is upon the back of what appears to be a horse, led in an upward direction by an Indian whose head-dress, and ends of the breech-cloth, are visible. Other human forms appear in the attitude of making gestures, one also in *j*, Plate II, probably carrying a bale of goods. Figure *u* represents a centipede, an insect found

occasionally south of the mountains, but reported as extremely rare in the immediate northern regions. (For *x*, see page 232.)

Mr. Coronel stated that when he first settled in Los Angeles, in 1843, the Indians living north of the San Fernando mountains manufactured blankets of the fur and hair of animals, showing transverse bands of black and white similar to those depicted, which were sold to the inhabitants of the valley of Los Angeles and to Indians who transported them to other tribes.

It is probable that the pictograph is intended to represent the salient features of a trading expedition from the north. The ceiling of the cavity found between the drawings represented in Plate I and Plate II has disappeared, owing to disintegration, thus leaving a blank about 4 feet long, and 5 feet from the top to the bottom of the original record between the parts represented in the two plates.

Dr. W. J. Hoffman also reports the following additional localities in Santa Barbara and Los Angeles counties. Fifteen miles west of Santa Barbara, on the northern summit of the Santa Ynez range, and near the San Marcos Pass, is a group of paintings in red and black. One figure resembles a portion of a checker-board in the arrangement of squares. Serpentine and zigzag lines occur, as also curved lines with serrations on the concave sides: figures of the sun, groups of short vertical lines, and *tree forms*, resembling representations of the dragon-fly, and the human form, as drawn by the Moki Indians, and very similar to Fig. *c*, Pl. II. These paintings are in a cavity near the base of an immense boulder, over twenty feet in height. A short distance from this is a flat granitic boulder, containing twenty-one mortar holes, which had evidently been used by visiting Indians during the acorn season. Trees of this genus are very abundant, and their fruit formed one of the sources of subsistence.

Three miles west-northwest of this locality, in the valley near the base of the mountain, are indistinct figures in faded red, painted upon a large rock. The characters appear similar, in general, to those above mentioned.

Forty-three miles west of Santa Barbara, in the Najowe Valley, is a promontory, at the base of which is a large shallow cavern, the opening being smaller than the interior, upon the roof and back of which are numerous figures of similar forms as those observed at San Marcos Pass. Several characters appear to have been drawn at a later date than others, such as horned cattle, etc. The black color used was a manganese compound, while the red pigments consist of ferruginous clays, abundant at numerous localities in the mountain cañons. Some of the human figures are drawn with the hands and arms in the attitude of making the gestures for *surprise* or *astonishment*, and *negation*.

One of the most extensive records, and probably also the most elaborately drawn, is situated in the Carisa Plain, near Señor Oreña's ranch, sixty or seventy miles due north of Santa Barbara. The most conspicious

ous figure is that of the sun, resembling a face, with ornamental appendages at the cardinal points, and bearing striking resemblance to some Moki marks and pictographic work. Serpentine lines and numerous anomalous forms also abound.

Four miles northeast of Santa Barbara, near the residence of Mr. Stevens, is an isolated sandstone boulder measuring about twenty feet high and thirty feet in diameter, upon the western side of which is a slight cavity bearing figures corresponding in general form to others in this county. The gesture for *negation* again appears in the attitude of the human figures.

Half a mile farther east, on Dr. Coe's farm, is another smaller boulder, in a cavity of which some portions of human figures are shown. Parts of the drawings have disappeared through disintegration of the rock, which is called "Pulpit Rock," on account of the shape of the cavity, its position at the side of the narrow valley, and the echo observed upon speaking a little above the ordinary tone of voice.

Painted rocks also occur in the Azusa Cañon, about thirty miles northeast of Los Angeles, of which illustrations are given in Plate LXXX, described on p. 156.

Dr. Hoffman also found other paintings in the valley of the South Fork of the Tule River, in addition to those discovered in 1882, and given in Figure 155, p. 235. The forms are those of large insects, and of the bear, beaver, centipede, bald eagle, etc.

Upon the eastern slope of an isolated peak between Porterville and Visalia, several miles east of the stage road, are pictographs in red and black. These are chiefly drawings of the deer, bear, and other animals and forms not yet determined.

Just previous to his departure from the Santa Barbara region, Dr. Hoffman was informed of the existence of eight or nine painted records in that neighborhood, which up to that time had been observed only by a few sheep-herders and hunters.

Other important localities showing colored etchings, and other painted figures, are at San Diego, California; at Oneida, Idaho; in Temple Creek Cañon, southeastern Utah, and in the Cañon de Chelly, northwestern New Mexico.



## FOREIGN PETROGLYPHS.

The distribution and the description of the petroglyphs of Mexico, as well as of other forms of pictographs found there, are omitted in the present paper. The subject is so vast, and such a large amount of information has already been given to the public concerning it, that it is not considered in this work, which is mainly devoted to the similar productions of the tribes popularly known as North American Indians, although the pre-Columbian inhabitants of Mexico should, in strictness, be included in that category. It is, however, always to be recognized that one of the most important points in the study of pictographs, is the comparison of those of Mexico with those found farther north.

Copies of many petroglyphs found in the eastern hemisphere have been collected, but the limitations of the present paper do not allow of their reproduction or discussion.

## PETROGLYPHS IN SOUTH AMERICA.

While the scope of this work does not contemplate either showing the distribution of the rock carvings in South America, or entering upon any detailed discussion of them, some account is here subjoined for the purpose of indicating the great extent of the ethnic material of this character that is yet to be obtained from that continent. Alexander von Humboldt, in *Aspects of Nature in different lands and different climates, etc.*, Vol. I, pp. 196-201, London, 1850, gives the following general remarks concerning pictographs from South America :

In the interior of South America, between the 2d and 4th degrees of North latitude, a forest-covered plain is enclosed by four rivers, the Orinoco, the Atabapo, the Rio Negro, and the Cassiquiare. In this district are found rocks of granite and of syenite, covered, like those of Caicara and Uruana, with colossal symbolical figures of crocodiles and tigers, and drawings of household utensils, and of the sun and moon. At the present time this remote corner of the earth is entirely without human inhabitants, throughout an extent of more than 8,000 square geographical miles. The tribes nearest to its boundaries are wandering naked savages, in the lowest stages of human existence, and far removed from any thoughts of carving hieroglyphics on rocks. One may trace in South America an entire zone, extending through more than eight degrees of longitude, of rocks so ornamented; viz. from the Rupuniri, Essequibo, and the mountains of Pacaraima, to the banks of the Orinoco and of the Yupura. These carvings may belong to very different epochs, for Sir Robert Schomburgk even found on the Rio Negro representations of a Spanish galiot, which must have been of a later date than the beginning of the 16th century; and this in a wilderness where

the natives were probably as rude then as at the present time. But it must not be forgotten that \* \* nations of very different descent, when in a similar uncivilized state, having the same disposition to simplify and generalize outlines, and being impelled by inherent mental dispositions to form rythmical repetitions and series, may be led to produce similar signs and symbols. \* \* \* Some miles from Encaramada, there rises, in the middle of the savannah, the rock Tepu-Mereme, or painted rock. It shews several figures of animals and symbolical outlines which resemble much those observed by us at some distance above Encaramada, near Caycara, in  $7^{\circ} 5'$  to  $7^{\circ} 40'$  lat., and  $66^{\circ} 28'$  to  $67^{\circ} 23'$  W. long. from Greenwich. Rocks thus marked are found between the Cassiquiare and the Atabapo (in  $2^{\circ} 5'$  to  $3^{\circ} 20'$  lat.), and what is particularly remarkable, 560 geographical miles farther to the East in the solitudes of the Parime. This last fact is placed beyond a doubt by the journal of Nicholas Hortsman, of which I have seen a copy in the handwriting of the celebrated D'Anville. That simple and modest traveller wrote down every day, on the spot, what had appeared to him most worthy of notice, and he deserves perhaps the more credence because, being full of dissatisfaction at having failed to discover the objects of his researches, the Lake of Dorado, with lumps of gold and a diamond mine, he looked with a certain degree of contempt on whatever fell in his way. He found, on the 16th of April, 1749, on the banks of the Rupunuri, at the spot where the river winding between the Macarana mountains forms several small cascades, and before arriving in the district immediately round Lake Amucu, "rocks covered with figures,"—or, as he says in Portuguese, "*de varias letras*." We were shown at the rock of Culimacari, on the banks of the Cassiquiare, signs which were called characters, arranged in lines—but they were only ill-shaped figures of heavenly bodies, boa-serpents, and the utensils employed in preparing manioc meal. I have never found among these painted rocks (*pedras pintadas*) any symmetrical arrangement or any regular even-spaced characters. I am therefore disposed to think that the word "*letras*" in Hortsman's journal must not be taken in the strictest sense.

Schomburgk was not so fortunate as to rediscover the rock seen by Hortsman, but he has seen and described others on the banks of the Essequibo, near the cascade of Warapunta. "This cascade," he says, "is celebrated not only for its height but also for the quantity of figures cut on the rock, which have great resemblance to those which I have seen in the island of St. John, one of the Virgin Islands, and which I consider to be, without doubt, the work of the Caribs, by whom that part of the Antilles was formerly inhabited. I made the utmost efforts to detach portions of the rock which contained the inscription, and which I desired to take with me, but the stone was too hard and fever had taken away my strength. Neither promises nor threats could prevail on the Indians to give a single blow with a hammer to these rocks—the venerable monuments of the superior mental cultivation of their predecessors. They regard them as the work of the Great Spirit, and the different tribes who we met with, though living at a great distance, were nevertheless acquainted with them. Terror was painted on the faces of my Indian companions, who appeared to expect every moment that the fire of heaven would fall on my head. I saw clearly that my endeavors would be fruitless, and I contented myself with bringing away a complete drawing of these memorials." \* \* \* Even the veneration everywhere testified by the Indians of the present day for these rude sculptures of their predecessors, shews that they have no idea of the execution of similar works. There is another circumstance which should be mentioned: between Encaramada and Caycara, on the banks of the Orinoco, a number of these hieroglyphical figures are sculptured on the face of precipices at a height which could now be reached only by means of extraordinarily high scaffolding. If one asks the natives how these figures have been cut, they answer, laughing, as if it were a fact of which none but a white man could be ignorant, that "in the days of the great waters their fathers went in canoes at that height." Thus a geological fancy is made to afford an answer to the problem presented by a civilization which has long passed away.

Mr. A. Pinart has for several years past been engaged in ethnologic researches, in which, as he explained to the present writer, orally, he has discovered a very large number of pictographs in the islands of the Caribbean Sea, in Venezuela, and Nicaragua, with remarkable correspondences between some of them, and strongly demarkating lines in regard to different types. His report will be of inestimable value in the complete discussion of this subject.

#### PETROGLYPHS IN BRITISH GUIANA.

In particular, a copious extract is given from the recent work *Among the Indians of Guiana*, by Everard F. im Thurn: London, 1883. His account is so suggestive for comparison with the similar discoveries made in North America that there is a temptation to extract from it even more liberally than has been done.

The following is taken from pages 391, *et seq.*, of that author:

The pictured rocks, which are certainly the most striking and mysterious of the antiquities of Guiana, are—and this has apparently never yet been pointed out—not all of one kind. In all cases various figures are rudely depicted on larger or smaller surfaces of rocks. Sometimes these figures are painted, though such cases are few and, as will be shown, of little moment; more generally they are graven on the rock, and these alone are of great importance. Rock sculptures may, again, be distinguished into two kinds, differing in the depth of incision, the apparent mode of execution, and, most important of all, the character of the figures represented.

Painted rocks in British Guiana are mentioned by Mr. C. Barrington Brown, well known as a traveler in the colony. He says, for instance, that in coming down past Amailah fall (in the same district and range as the Kaieteur), on the Cooriebrong River, he passed 'a large white sandstone rock ornamented with figures in red paint.' When in the Pacaraima mountains, on the Brazilian frontier, I heard of the existence of similar paintings in that neighborhood, but was unable to find them. Mr. Wallace, in his account of his 'Travels on the Amazons,' mentions the occurrence of similar drawings in more than one place near the Amazons; and from these and other accounts it seems probable that they occur in various parts of South America. If, as seems likely, these figures are painted with either of the red pigments which the Indians use so largely to paint their own bodies as well as their weapons and other implements, or, as is also possible, with some sort of red earth, they must be modern, the work of Indians of the present day: for these red pigments would not long withstand the effects of the weather, especially where, as in the case quoted from Mr. Brown, the drawings are on such an unenduring substance as sandstone. Some further account of these paintings is, however, much to be desired; for, though they are probably modern, it would be very interesting to know whether the designs resemble those depicted on the engraved rocks, or are of the kind with which the Indian at the present time ornaments both his own skin and his household utensils and paddles. It may be mentioned that in the Christy collection there is a stone celt from British Guiana on which are painted lines very closely resembling in character those which the Indian commonly paints on his own body.

The engraved rocks, on the contrary, must be of some antiquity: that is to say, they must certainly date from a time before the influence of Europeans was much felt in Guiana. As has already been said, the engravings are of two kinds and are probably the work of two different people; nor is there even any reason to suppose that the two kinds were produced at one and the same time.

These two kinds of engraving may, for the sake of convenience, be distinguished as 'deep,' [a typical example of which is in Figure 2] and 'shallow' [typical example Figure 3,] respectively, according as the figures are deeply cut into the rock or are merely scratched on the surface. The former \* \* vary from one-eighth to one-half of an inch, or even more, in depth: the latter are of quite inconsiderable depth. This difference probably corresponds with a difference in the means by which they were produced. The deep engravings seem cut into the rock with an edged tool, probably of stone; the shallow figures were apparently formed by long continued friction with stones and moist sand. The two kinds seem never to occur in the same place or even near to each other; in fact, a distinct line may almost be drawn between the districts in which the deep and shallow kinds occur, respectively; the deep \* \* form occurs at several spots on the Mazeruni, Essequibo, Ireng, Cotinga, Potaro, and Berbice Rivers. The shallow form has as yet only been reported from the Corentyn River and its tributaries, where, however, examples occur in considerable abundance. But the two kinds differ not only in the depth of incision, in the apparent mode of their production, and in the place of their occurrence, but also—and this is the chief difference between the two—in the figures represented.

They (the shallow engravings) seem always to occur on comparatively large and more or less smooth surfaces of rock, and rarely, if ever, as the deep figures, on detached blocks of rock, piled one on the other. The shallow figures, too, are generally much larger, always combinations of straight or curved lines in figures much more elaborate than those which occur in the deep engravings; and these shallow pictures always represent not animals, but greater or less variations of the figure which has been described. Lastly, though I am not certain that much significance can be attributed to this, all the examples that I have seen face more or less accurately eastward.

The deep engravings, on the other hand, consist not of a single figure but of a greater or less number of rude drawings. \* \* These depict the human form, monkeys, snakes, and other animals, and also very simple combinations of two or three straight or curved lines in a pattern, and occasionally more elaborate combinations. The individual figures are small, averaging from twelve to eighteen inches in height, but a considerable number are generally represented in a group.

Some of the best examples of this latter kind are at Warrapoota cataracts, about six days' journey up the Essequibo.

\* \* \* The commonest figures at Warrapoota are figures of men or perhaps sometimes monkeys. These are very simple, and generally consist of one straight line, representing the trunk, crossed by two straight lines at right angles to the body line: one, about two-thirds of the distance from the top, represents the two arms as far as the elbows, where upward lines represent the lower part of the arms; the other, which is at the lower end, represents the two legs as far as the knees, from which point, downward lines represent the lower part of the legs. A round dot, or a small circle, at the top of the trunk-line, forms the head; and there are a few radiating lines where the fingers, a few more where the toes, should be. Occasionally the trunk-line is produced downwards as if to represent a long tail. Perhaps the tailless figures represent men, the tailed monkeys. In a few cases the trunk, instead of being indicated by one straight line, is formed by two curved lines, representing the rounded outlines of the body; and the body, thus formed, is bisected by a row of dots, almost invariably nine in number, which seem to represent vertebrae.

Most of the other figures at Warrapoota are very simple combinations of two, three, or four straight lines similar to the so-called 'Greek meander pattern,' which is of such widespread occurrence. Combinations of curved lines and simple spiral lines also frequently occur. Many of these combinations closely resemble the figures which the Indians of the present day paint on their faces and naked bodies. The resemblance is, however, not so great but that it may be merely due to the fact that the



figures are just such simple combinations of lines which would occur independently to the rock-engravers and to the body-painters as to all other unttaught designers.



FIG. 2.—Deep carvings in Guiana.

The same author (pp. 368, 369) gives the following account of the superstitious reverence entertained for the petroglyphs by the living Indians of Guiana:

Every time a sculptured rock or striking mountain or stone is seen, Indians avert the ill-will of the spirits of such places by rubbing red peppers (*Capsicum*) each in his or her own eyes. For instance, on reaching the Timchri rock on the Corentyn River. I at once began to sketch the figures sculptured thereon. Looking up the next moment I saw the Indians—men, women and children—who accompanied me all grouped round the rock-picture, busily engaged in this painful operation of pepper-rubbing. The extreme pain of this operation when performed thoroughly by the Indians I can faintly realize from my own feelings when I have occasionally rubbed my eyes with fingers which had recently handled red-peppers; and from the fact that, though



the older practitioners inflict this self-torture with the utmost stoicism, I have again and again seen that otherwise rare sight of Indians, children, and even young men, sobbing under the infliction. Yet the ceremony was never omitted. Sometimes when by a rare chance no member of the party had had the forethought to provide peppers, lime-juice was used as a substitute; and once, when neither peppers nor

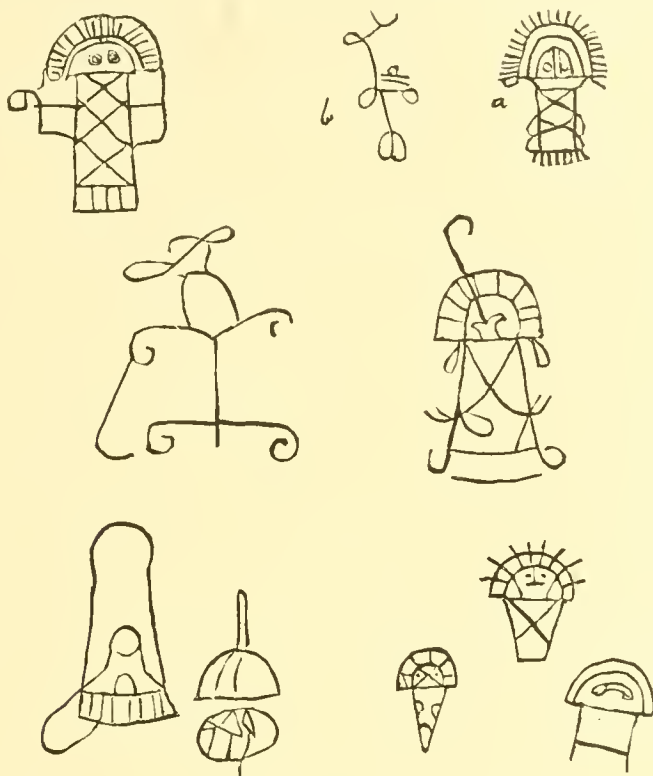


FIG. 3.—Shallow carvings in Guiana.

limes were at hand, a piece of blue indigo-dyed cloth was carefully soaked, and the dye was then rubbed into the eyes. These, I believe, are the only ceremonies observed by the Indians. One idea underlies them all, and that is the attempt to avoid attracting the attention of malignant spirits.

The following extract from a paper on the Indian picture writing in British Guiana, by Mr. Charles B. Brown, in the *Journal of the Anthropological Institute of Great Britain and Ireland*, 1873, Vol. II, 254-257, gives views and details somewhat different from the foregoing:

These writings or markings are visible at a greater or less distance in proportion to the depth of the furrows. In some instances they are distinctly visible upon the rocks on the banks of the river at a distance of one hundred yards; in others they are so faint that they can only be seen in certain lights by reflected rays from their polished surfaces. They occur upon greenstone, granite, quartz-porphry, gneiss, and jasperous sandstone, both in a vertical and horizontal position, at various elevations above the water. Sometimes they can only be seen during the dry season, when the rivers are low, as in several instances on the Berbice and Cassikytyn rivers. In one

instance, on the Corentyne river, the markings on the rock are so much above the level of the river when at its greatest height, that they could only have been made by erecting a staging against the face of the rock, unless the river was at the time much above its usual level. The widths of the furrows vary from half an inch to one inch, while the depth never exceeds one-fourth of an inch. Sometimes the markings are almost level with the surrounding surfaces, owing to the waste or degradation by atmospheric influences, which have acted with greater force upon the rough rock than on the polished face of the grooved markings. The furrows present the same weather-stained aspect as the rocks upon which they are cut, and both the rocks and the furrows are in some instances coated with a thin layer of the oxides of iron and manganese.

The Indians of Guiana know nothing about the picture writing by tradition. They scout the idea of their having been made by the hand of man, and ascribe them to the handiwork of the Makunaima, their great spirit. Nevertheless, they do not regard them with any superstitious feelings, looking upon them merely as curiosities, which is the more extraordinary as there are numbers of large rocks without any markings on some rivers, which they will not even look at in passing, lest some calamity should overtake them. Their Peaimen or sorcerers always squeeze tobacco juice in their eyes on approaching these, but pay no regard to the sculptured rocks. In the Pacaraima mountains, between the villages of Mora and Itabay, the path passes through a circle of square stones placed on one end, one of which has a carving upon it: some of these blocks have been thrown down and broken by the Indians, clearly proving their utter disregard for them. If then there were any traditions regarding these writings handed down from father to son, I conclude that the Indians of the present day—the most superstitious of beings—would undoubtedly treat them with awe and respect. Again, if their forefathers were as indolent as they now are, they never would have gone to the trouble of making these pictures merely for the purpose of passing away their time, which they could have more easily accomplished by lying in their hammocks from morning to night in a semi-dreamy sort of state, as their descendants do at present. As these figures were evidently cut with great care and at much labor by a former race of men, I conclude that they were made for some great purpose, probably a religious one, as some of the figures give indications of Phallic worship.

#### PETROGLYPHS IN BRAZIL.

The following is an abstract from a paper by J. Whitfield on Rock Inscriptions in Brazil, in the *Journal of the Anthropological Institute of Great Britain and Ireland*, 1874, Vol. III, p. 114:

The rock inscriptions were visited in August, 1865, during an exploring expedition for gold mines in the province of Ceará. Several similar inscriptions are said to exist in the interior of the province of Ceará, as well as in the provinces of Pernambuco and Piauhý, especially in the *Sertaões*, that is, in the thinly-wooded parts of the interior, but no mention is ever made of their having been seen near the coast.

In the margin and bed only of the river are the rocks inscribed. On the margin they extend in some instances to fifteen or twenty yards. Except in the rainy season the stream is dry. The rock is a silicious schist of excessively hard and flinty texture. The marks have the appearance of having been made with a blunt heavy tool, such as might be made with an almost worn-out mason's hammer.

The situation is about midway between Serra Grande or Ibiapaba and Serra Merioca, about seventy miles from the coast and forty west of the town Sobral. There are not any indications of works of art or other antiquarian remains, nor anything peculiar to the locality. The country is gently undulating, and of the usual character that obtains for hundreds of miles extending along the base of the Serra Ibiapaba.

The native population attribute all the 'Letreiros' (inscriptions), as they do every-

thing else of which they have no information, to the Dutch as records of hidden wealth. The Dutch, however, only occupied the country for a few years in the early part of the seventeenth century. Along the coast numerous forts, the works of the Dutch, still remain; but there are no authentic records of their ever having established themselves in the interior of the country, and less probability still of their amusing themselves with inscribing puzzling hieroglyphics, which must have been a work of time, on the rocks of the far interior, for the admiration of wandering Indians.

#### PICTOGRAPHS IN PERU.

Dr. J. J. Von Tschudi mentions in his *Travels in Peru* during the years 1838-1842, [Wiley and Putnam's Library, Vols. XCIII-XCIV, New York, 1847,] Pt. II, p. 345-346, that the ancient Peruvians also used a certain kind of "hieroglyphics" which they engraved in stone, and preserved in their temples. Notices of these "hieroglyphics" are given by some of the early writers. There appears to be a great similarity between these Peruvian pictographs and those found in Mexico and Brazil.

The temptation to quote from Charles Wiener's magnificent work *Pérou et Bolivie*, Paris, 1880, and also from *La Antigüedad del Hombre en el Plata*, by Florentino Ameghino, Paris (and Buenos Aires), 1880, must be resisted.

## OBJECTS REPRESENTED IN PICTOGRAPHS.

The objects depicted in pictographs of all kinds are too numerous and varied for any immediate attempt at classification. Those upon the petroglyphs may, however, be usefully grouped. Instructive particulars regarding them may be discovered, for instance the delineation of the fauna in reference to its present or former habitat in the region where the representation of it is found, is of special interest.

As an example of the number and kind of animals pictured, as well as of their mode of representation, the following Figures, 4 to 21, are presented, taken from the Moki inscriptions at Oakley Springs, Arizona, by Mr. G. K. Gilbert. These were selected by him from a large number of etchings, for the purpose of obtaining the explanation, and they were explained to him by Tnbi, an Oraibi chief living at Oraibi, one of the Moki villages.

Jones, in his *Southern Indians*, p. 377-379, gives a résumé of objects depicted as follows:

Upon the Enchanted Mountain in Union County, cut in plutonic rock, are the tracks of men, women, children, deer, bears, bisons, turkeys and terrapins, and the outlines of a snake, of two deer, and of a human hand. These sculptures—so far as they have been ascertained and counted—number one hundred and thirty-six. The most extravagant among them is that known as the footprint of the "Great Warrior." It measures eighteen inches in length, and has six toes. The other human tracks and those of the animals are delineated with commendable fidelity. \* \* \*

Most of them present the appearance of the natural tread of the animal in plastic clay. \* \* \* These *intaglios* closely resemble those described by Mr. Ward [*Jour. Anthropol. Inst. of N. Y.*, No. 1, 57 *et seq.*], as existing upon the upheaved strata of coarse carboniferous grit in Belmont County, Ohio, near the town of Barnesville.

The appearance of objects showing the influence of European civilization and christianization should always be carefully noted. An instance where an object of that character is found among a multitude of others not liable to such suspicion is in the heart surmounted by a cross, in the upper line of Figure 1, page 30 *ante*. This suggests missionary teaching.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 7.

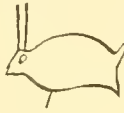


Fig. 8.



Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.



Fig. 13.



Fig. 14.



Fig. 15.

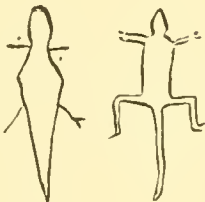


Fig. 16.



Fig. 17.



Fig. 18.



Fig. 19.



Fig. 20.

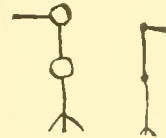


Fig. 21.

The following is the explanation of the figures:

Fig. 4. A beaver.

5. A bear.

6. A mountain sheep (*Ovis montana*).

7. Three wolf heads.

8. Three Jackass rabbits.

9. Cottontail rabbit.

10. Bear tracks.

11. An eagle.

12. Eagle tails.

Fig. 13. A turkey tail.

14. Horned toads (*Phrynosoma* sp.?).

15. Lizards.

16. A butterfly.

17. Snakes.

18. A rattlesnake.

19. Deer track.

20. Three Bird tracks.

21. Bitterns (wading birds).



## INSTRUMENTS USED IN PICTOGRAPHY.

These are often of anthropologic interest. A few examples are given as follows, though other descriptions appear elsewhere in this paper.

### INSTRUMENTS FOR CARVING.

This includes etching, pecking, and scratching.

The Hidatsa, when carving upon stone or rocks, as well as upon pieces of wood, use a sharply pointed piece of hard stone, usually a fragment of quartz.

The bow drill was an instrument largely used by the Innuit of Alaska in carving bone and ivory. The present method of cutting figures and other characters, to record events and personal exploits, consists in the use of a small blade, thick, though sharply pointed, resembling a graver.

### INSTRUMENTS FOR DRAWING.

When in haste, or when the necessary materials are not at hand, the Hidatsa sometimes prepare notices by drawing upon a piece of wood or the shoulder blade of a buffalo with a piece of charcoal obtained from the fire, or with a piece of red chalk, with which nearly every warrior is at all times supplied.

### INSTRUMENTS FOR PAINTING.

Painting upon robes or skins is accomplished by means of thin strips of wood, or sometimes of bone. Tufts of antelope hair are also used, by tying them to sticks to make a brush. This is evidently a modern innovation. Pieces of wood, one end of each chewed so as to produce a loose fibrous brush, are also used at times, as has been observed among the Teton Dakota.

The Hidatsa, Arikara, and other Northwest Indians usually employ a piece of buffalo rib, or a piece of hard wood, having somewhat of an elliptical or lozenge-shaped form. This is dipped in thin glue and a tracing is made, which is subsequently treated in a similar manner with a solution of glue, water, and color.

## INSTRUMENTS FOR TATTOOING.

The Hidatsa say that formerly, when tattooing was practiced, sharp pieces of bone were used for pricking the skin.

The tribes of Oregon, Washington, and northern California used sharp pieces of bone, thorns, and the dorsal spines of fish, though at present needles are employed, as they are more effective and less painful, and are readily procured by purchase.

Needles are used by the Klamath Indians, according to Mr. Gatschet.

Rev. M. Eells reports (Bull. U. S. Geol. and Geog. Survey II, p. 75) that for tattooing the Twana Indians use a needle and thread, blackening the thread with charcoal and drawing it under the skin as deeply as they can bear it.

Stephen Powers says (Contrib. to N. A. Ethnol. III., p. 130) that tattooing among the Yuki is done with pitch-pine soot, and a sharp-pointed bone. After the designs have been traced on the skin the soot is rubbed in dry.

Paul Marcoy mentions in his *Travels in South America*, N. Y., 1875, Vol. II, 353, that the Passés, Yuris, Barrés and Chmmanas, of Brazil, use a needle for tattooing.

The following quotation is from *Te Ika a Maui*, or New Zealand and its Inhabitants, by Rev. Richard Taylor, London, 1870, pp. 320, 321:

The substance generally used as coloring matter is the resin of the *kauri* or *rimu*, which, when burnt, is pounded and converted into a fine powder.

The *uhi* or instrument used was a small chisel, made of the bone of an albatross, very narrow and sharp, which was driven by means of a little mallet, *he mahoe*, quite through the skin, and sometimes completely through the cheek as well, in which case when the person undergoing the operation took his pipe, the smoke found its way out through the cuttings; the pain was excruciating, especially in the more tender parts, and caused dreadful swellings, only a small piece could be done at a time; the operator held in his hand a piece of *muka*, flax, dipped in the pigment, which he drew over the incision immediately it was made; the blood which flowed freely from the wound was constantly wiped away with a bit of flax; the pattern was first drawn either with charcoal or scratched in with a sharp-pointed instrument. To tattoo a person fully was therefore a work of time, and to attempt to do too much at once endangered life. I remember a poor *porangi*, or insane person, who, during the war, was tattooed most unmercifully by some young scoundrels; the poor man's wounds were so dreadfully inflamed, as to occasion his death: whilst any one was being operated upon, all persons in the pa were tapu, until the termination of the work, lest any evil should befall him: to have fine tattooed faces, was the great ambition of young men, both to render themselves attractive to the ladies, and conspicuous in war: for even if killed by the enemy, whilst the heads of the untattooed were treated with indignity and kicked on one side, those which were conspicuous by their beautiful *moko*, were carefully cut off, stuck on the *turnturu*, a pole with a cross on it, and then preserved: all which was highly gratifying to the survivors, and the spirits of their late possessors.

The person operated upon was stretched all his length on the ground, and to encourage him manfully to endure the pain, songs were continually sung to him.

## COLORS AND METHODS OF APPLICATION.

## IN THE UNITED STATES.

Since the establishment of traders' stores most colors of civilized manufacture are obtained by the Indians for painting and decoration. Frequently, however, the primitive colors are prepared and used when Indians are absent from localities where those may be obtained. The ferruginous clays of various shade of brown, red, and yellow, occur so widely distributed in nature that these are the most common and leading tints. Black is generally prepared by grinding fragments of charcoal into a very fine powder. Among some tribes, as has been found in some of the "ancient" pottery from the Arizona ruins, clay had evidently been mixed with charcoal to give better body. The black color of some of the Innuit tribes is blood and charcoal intimately mixed, which is afterwards applied to the incisions made in ivory, bone, and wood.

Among the Dakota, colors for dyeing porcupine quills are obtained chiefly from plants, or have been until very recently. The vegetable colors, being soluble, penetrate the substance of the quills more evenly and beautifully than the mineral colors of eastern manufacture.

The black color of some of the Pueblo pottery is obtained by a special burning with pulverized manure, into which the vessel is placed as it is cooling after the first baking. The coloring matter—soot produced by smoke—is absorbed into the pores of the vessel, and will not wear off as readily as when colors are applied to the surface with sticks or primitive brushes.

In decorating skins or robes the Arikara Indians boil the tail of the beaver, thus obtaining a viscons fluid which is in reality thin glue. The figures are first drawn in outline with a piece of beef-rib, or some other flat bone, the edge only being used after having been dipped into the liquor. The various pigments to be employed in the drawing are then mixed with some of the same liquid, in separate vessels, when the various colors are applied to the objects by means of a sharpened piece of wood or bone. The colored mixture adheres firmly to the original tracing in glue, and does not readily rub off.

When similar colors are to be applied to wood, the surface is frequently picked or slightly incised to receive the color more securely. For temporary purposes, as for mnemonic marks upon a shoulder blade of a buffalo or upon a piece of wood to direct comrades upon the course to be pursued to attain a certain object, a piece of red chalk, or a lump of red ochre of natural production is resorted to. This is often carried by the Indian for personal decoration.

A small pouch, discovered on the Yellowstone River in 1873, which had been dropped by some fleeing hostile Sioux, contained several fragments of black micaceous iron. The latter had almost the appearance and consistence of graphite, so soft and black was the result upon

rubbing it. It had evidently been used for decorating the face as war-paint.

Mr. Dall, in treating of the remains found in the mammalian layers in the Amaknak cave, Unalashka, remarks (Contributions to N. A. Ethnology, I, p. 79) that "in the remains of a woman's work-basket, found in the uppermost layer in the cave, were bits of this resin [from the bark of pine or spruce driftwood], evidently carefully treasured, with a little birch-bark case (the bark also derived from drift logs) containing pieces of soft hæmatite, graphite, and blue carbonate of copper, with which the ancient seamstress ornamented her handiwork."

The same author reports, *op. cit.* p. 86, "The coloration of wooden articles with native pigments is of ancient origin, but all the more elaborate instances that have come to my knowledge bore marks of comparatively recent origin. The pigments used were blue carbonates of iron and copper; the green fungus, or *peziza*, found in decayed birch and alder wood; hæmatite and red chalk; white infusorial or chalky earth; black charcoal, graphite, and micaceous ore of iron. A species of red was sometimes derived from pine bark or the cambium of the ground willow."

Stephen Powers states in Contributions to N. A. Ethnology, III, 244, that the Shastika women "smear their faces all over daily with choke-cherry juice, which gives them a bloody, corsair aspect."

Mr. A. S. Gatschet reports that the Klamaths of southwestern Oregon employ a black color, *lgú*, made of burnt plum seeds and bulrushes, which is applied to the cheeks in the form of small round spots. This is used during dances. Red paint, for the face and body, is prepared from a resin exuding from the spruce tree, *pánum*. A yellow mineral paint is also employed, consisting probably of ocher or ferruginous clay. Mr. Gatschet says the Klamath *spál*, yellow mineral paint, is of light yellow color, but turns red when burned, after which it is applied in making small round dots upon the face. The white infusorial earth (?), termed chalk by Mr. Gatschet, is applied in the form of stripes or streaks over the body. The Klamaths use charcoal, *lgúm*, in tattooing.

The various colors required by a tribe were formerly obtained from plants as by the Dakota, while some of the earthy compounds consisted of red and yellow ocher—oxides of iron—and black micaceous ore of iron and graphite. Some of the California Indians in the vicinity of Tulare River also used a white color, obtained at that locality, and consisted of infusorial earth—diatomaceous. The tribes at and near the geysers, north of San Francisco Bay, obtained their vermilion from croppings of sulphuret of mercury—cinnabar. The same is said to have been the case at the present site of the New Almaden mines, where tribes of the Mutsun formerly lived. Black colors were also prepared by mixing finely powdered charcoal and clay, this being practiced by some of the Pueblos for painting upon pottery. Some of the black color obtained

from pictographs in Santa Barbara County, California, proved to be a hydrous oxide of manganese.

For black color in tattooing the Yuki, of California, use soot. The juice of certain plants is also used by the Karok, of California, to color the face.

The Yokuts, of Tule River Agency, California, employ the roots of the cedar (red) and willow (white) split and rendered uniform in caliber. During work the materials are kept moistened, so as to permit of easy manipulation and to prevent fracture of the vegetal fibers.

Rev. J. Owen Dorsey, of the Bureau of Ethnology, reports regarding the Osages that one mode of obtaining black color for the face consists in burning a quantity of small willows. When these are charred they are broken in small pieces and placed in pans, with a little water in each. The hands are then dipped into the pan and rubbed together, and finally rubbed over the parts to be colored.

Formerly tattooing was more frequently practiced among the Hidatsa than at present, the marks being caused by pricking the skin with a sharp splinter of bone and the application of a paste consisting of finely-powdered charcoal and water.

The Hualpais, living on the western border of the Colorado Plateau, Arizona Territory, were found by Dr. Hoffman, in 1871, to decorate their persons by a disgusting process. Various individuals were observed who appeared as if their persons had been tattooed in vertical bands from the forehead to the waist, but upon closer examination it was found that dark and light bands of the natural skin are produced in the following manner: When a deer or an antelope has been killed, the blood is rubbed over the face and breast, after which the spread and curved fingers—to resemble claws—are scratched downward from the forehead over the face and over the breast, thus removing some of the blood; that remaining soon dries, and gives the appearance of black stripes. The exposed portion of the skin retains the natural dark-tanned color, while that under the coating of coagulated blood naturally becomes paler by being protected against the light and air. These individuals do not wash off such marks of success in the chase, and after a while the blood begins to drop off by desquamation, leaving lighter spots and lines, which for a short period of a week or two appear like tattoo marks.

The Mojave pigments are ocher, clay, and probably charcoal, mingled with oil. See *Pac. R. R. Exped.*, Vol. III, Pt. III, p. 33.

The colors, at present used by the Indians and obtained from the traders, consist generally of the following compounds, viz.: vermilion, red lead, chromate of lead (yellow), Prussian blue, chrome green, ivory black and lamp black, Chinese white, and oxide of zinc. All of these are in the form of powder or in crude masses, and are subsequently prepared for use as required.



## IN BRITISH GUIANA.

Everard F. im Thurn, *op. cit.*, p. 316, gives the following details:

The dyes used by the Indians to paint their own bodies, and occasionally to draw patterns on their implements, are red faroah, purple caraweera, blue-black lana, white felspathic clay, and, though very rarely, a yellow vegetable dye of unknown origin.

Faroah is the deep red pulp around the seed of a shrub (*Bixa orellana*), which grows wild on the banks of some of the rivers, and is cultivated by the Indians in their clearings. Mixed with a large quantity of oil, it is then either dried and so kept in lumps which can be made soft again by the addition of more oil, or is stored in a liquid condition in tubes made of hollow bamboo-stems. When it is to be used, either a mass of it is taken in the palm of the hand and rubbed over the skin or other surface to be painted, or a pattern of fine lines is drawn with it by means of a stick used as a pencil. The True Caribs also use faroah largely to stain their hammocks.

Caraweera is a somewhat similar dye, of a more purplish red, and by no means so commonly used. It is prepared from the leaves of a yellow flowered bignonia (*B. chicha*), together with some other unimportant ingredients. The dried leaves are boiled for a few minutes over a fire, and then some fresh-cut pieces of the bark of a certain tree and a bundle of twigs and fresh leaves of another tree are added to the mixture. The whole is then boiled for about twenty minutes, care being taken to keep the bark and leaves under water. The pot is then taken from the fire, and the contents, being poured into bowls, are allowed to subside. The clear water left at the top is poured away, and the sediment, of a beautiful purple colour, is put into a cloth, on which it is allowed to dry; after this it is scraped off and packed in tiny baskets woven of the leaves of the cokerite palm. The pigment is used for body-painting, with oil, just as is faroah.

Lana is the juice of the fruit of a small tree (*Genipa americana*), with which, without further preparation, blue-black lines are drawn in patterns, or large surfaces are stained on the skin. The dye thus applied is for about a week indelible.

One or more of the three body paints already mentioned is used by most Indians and in large quantities. But the white, and still more the yellow, pigments are used only rarely, in lines or dots, and very sparingly, by some of the Savannah Indians. The white substance is simply a very semi-liquid felspathic clay, which occurs in pockets in one or two places on the savannah; this is collected and dried in lumps, which are then pierced, threaded, and so put aside for future use. The nature of the yellow dye I was never able to trace; all that the Indians could or would say was that they received it in small quantities from a tribe living beyond the Wapianas, who extracted it from a tree which only grows in that neighborhood.

Paul Marcoy, in *Travels in South America: N. Y., 1875, Vol. II*, p. 353, says the Passés, Yuris, Barrés, and Chumanas, of Brazil, employ a decoction of indigo or genipa in tattooing.

## SIGNIFICANCE OF COLORS.

Significance has been attached to the several colors among all peoples and in all periods of culture. That it is still recognized in the highest civilizations is shown by the associations of death and mourning connected with black, of innocence and peace with white, danger with red, and epidemic disease, officially, with yellow. Without dwelling upon

the modern popular fancies on this subject, some illustrations from antiquity may be useful for comparison.

The Babylonians represented the sun and its sphere of motion by gold, the moon by silver, Saturn by black, Jupiter by orange, Mars by red, Venus by pale yellow, and Mercury by deep blue. Red was anciently and generally connected with divinity and power both priestly and royal. The tabernacle of the Israelites was covered with skins dyed red and the gods and images of Egypt and Chaldea were noticeably of that color, which to this day is the one distinguishing the Roman Pontiff and the cardinals.

In ancient art each color had a mystic sense or symbolism, and its proper use was an important consideration and carefully studied. With regard to early Christian art, the following extract is given from Mrs. Clement's *Handbook of Legendary and Mythologic Art*, Boston, 1883. The associations with the several colors therein mentioned differ widely from those in modern folk-lore—for instance, those with green and yellow, from the same colors stigmatized in the song produced by Mr. Black in his *Three Feathers*, exhibiting the belief in Cornwall that "green's forsaken and yellow's forsworn."

White is worn by the Saviour after his resurrection, by the Virgin in representations of the Assumption; by women as the emblem of chastity; by rich men to indicate humility, and by the judge as the symbol of integrity. It is represented sometimes by silver or the diamond, and its sentiment is purity, virginity, innocence, faith, joy, and light.

Red, the color of the ruby, speaks of royalty, fire, divine love, the holy spirit, creative power, and heat. In an opposite sense it symbolized blood, war, and hatred. Red and black combined were the colors of Satan, purgatory, and evil spirits. Red and white roses are emblems of love and innocence, or love and wisdom, as in the garland of St. Cecilia.

Blue, that of the sapphire, signified heaven, heavenly love and truth, constancy and fidelity. Christ and the Virgin Mary wear the blue mantle, St. John a blue tunic. Green, the emerald, the color of spring, expressed hope and victory.

Yellow or gold was the emblem of the sun, the goodness of God, marriage and fruitfulness. St. Joseph and St. Peter wear yellow. Yellow has also a bad signification when it has a dirty, dingy hue, such as the usual dress of Judas, and then signifies jealousy, inconsistency, and deceit.

Violet or amethyst signified passion and suffering, or love and truth. Penitents, as the Magdalene, wear it. The Madonna wears it after the crucifixion, and Christ after the resurrection.

Gray is the color of penance, mourning, humility, or accused innocence.

Black with white signified humility, mourning, and purity of life. Alone, it spoke of darkness, wickedness, and death, and belonged to Satan. In pictures of the Temptation Jesus sometimes wears black.

It is probable that, at one time, the several colors, at least in the same Indian tribe, had each special significance. This general significance was, however, modified by specific positions of the colors.

Colors are generally applied at this day according to fancy and without regard to special signification. The warriors make a distinction when on the warpath, and when mourning a deceased relative or en-

gaged in dances and religious ceremonies the members of most of the tribes still exhibit precise care in the selection and arrangement of color.

The Dakota at Grand River Agency, now abandoned, generally painted the face red from the eyes down to the chin when going to war. The whole face was blacked with charcoal or ashes when mourning. The women frequently resorted to this method of expressing grief.

The Absaroka, or Crow Indians, generally paint the forehead red when on the war-path. This distinction of the Crows is also noted by the Dakota in recording pictographic narratives of encounters with the Crows. See page 62. and Figures 124 *et. seq.*

Haywood, Nat. and Aborig. Hist. of Tennessee, 1823, p. 228, says of the Cherokees:

"When going to war their hair is combed and annointed with bear's grease and the red-root [*Sanguinaria canadensis*?], and they adorn it with feathers of various beautiful colours, besides copper and iron rings, and sometimes wampum or peak in the ears. And they paint their faces all over as red as vermilion, making a circle of black about one eye and another circle of white about the other."

When a Modoc warrior paints his face black before going into battle it means victory or death, and he will not survive a defeat. See Bancroft's Native Races, I, p. 333.

The Los Angeles County Indian girls paint the cheeks sparingly with red ocher when in love. (Bancroft, I, 403.) This prevails, to some extent also, among the northern bands of the Sioux, and among the Arikara at Fort Berthold, Dakota.

Rev. J. Owen Dorsey reports that when the Osage men go to steal horses from the enemy they paint their faces with charcoal.

The same authority gives the following description of the Osage paint for war parties:

Before charging the foe the Osages warriors paint themselves anew. This is called the death paint. If any of the men die with this paint on them the survivors do not put on any other paint.

All the gentes on the Tsiṣa side use the "fire paint" or iṣamaṇ, which is red. It is applied by them with the left hand all over the face. And they use prayers about the fire: "As the fire has no mercy, so should we have none." Then they put mud on the cheek below the left eye, as wide as two or more fingers. On the Hañṣa side this mud is put on the cheek, below the right eye. It is the young buffalo bull decoration (Tse-ṣú-ṣiñ'ṣa kíñṇ itáadi aú). With reference to it, a man says, "My little grandfather (the young buffalo bull) is ever dangerous, as he makes attempts. Very close do I stand, ready to go to the attack" (Witsiṣu ṣiñ'ṣa wáckṇ nñ'pewáḫé ehnuḁḁi aú. Eeṇqtsita waṣaṇ'ḫa ḁḫé atqaṇ'hi aú!) The horse is painted with some of the mud on the left cheek, shoulder, and thigh.

For the corresponding Hanka decorations, substitute *the right* for *the left* wherever the latter word occurs above.

Some who act like a black bear paint with charcoal alone.

Some paint in the wind style, some in the lightning style, and others in the panther or puma style.

See also pages 85 and 162.

When a Thlinkit arms himself for war he paints his face and powders his hair a brilliant red. He then ornaments his head with white eagle-feathers, a token of stern vindictive determination. See Bancroft, *Native Races*, etc., I, page 105.

Blue signifies peace among the Indians of the Pueblo of Tesuque. See Schoolcraft, III, 306.

In several addresses before the Anthropological Society of Washington, D. C., and papers yet unpublished, in the possession of the Bureau of Ethnology, by Mr. James Stevenson, Dr. Washington Matthews, U. S. Army, and Mr. Thomas V. Keam, the tribes below are mentioned as using in their ceremonial dances the respective colors designated to represent the four cardinal points of the compass, viz.:

	N.	S.	E.	W.
Stevenson—Zuñi . . . . .	Yellow.	Red.	White.	Black.
Matthews—Navajo . . . . .	Black.	Blue.	White.	Yellow.
Keam—Moki . . . . .	White.	Red.	Yellow.	Blue.

Capt. John G. Bourke, U. S. Army, in the Snake Dance of the Moquis of Arizona, etc., New York, 1884, p. 120, says that the Moki employ the following colors: yellow in prayers for pumpkins, green for corn, and red for peaches. Black and white bands are typical of rain, while red and blue bands are typical of lightning.

The Central Californians (north of San Francisco Bay) formerly wore the down of *Aselepias* (?) (white) as an emblem of royalty. See Bancroft, *Native Races*, I, 387, 388, quoting Drake's *World Encomp.* pp. 124-126.

The natives of Guatemala wore red feathers in their hats, the nobles only wearing green ones. *Ibid*, p. 691.

See with reference to the Haidas, Mr. J. G. Swan's account, page 66, *infra*.

The following extract relative to the color red among the New Zealanders is from Taylor's *Te Ika a Mani*, etc., pp. 209-210.

Closely connected with religion, was the feeling they entertained for the Kura, or Red Paint, which was the sacred color; their idols, *Pataka*, sacred stages for the dead, and for offerings or sacrifices, *Urupa* graves, chief's houses, and war canoes, were all thus painted.

The way of rendering anything tapu was by making it red. When a person died, his house was thus colored: when the tapu was laid on anything, the chief erected a post and painted it with the kura; wherever a corpse rested, some memorial was set up, oftentimes the nearest stone, rock, or tree served as a monument; but whatever object was selected, it was sure to be made red. If the corpse were conveyed by water, wherever they landed a similar token was left; and when it reached its destination, the canoe was dragged on shore, thus distinguished, and abandoned. When

the habunga took place, the scraped bones of the chief, thus ornamented, and wrapped in a red-stained mat, were deposited in a box or bowl, smeared with the sacred color, and placed in a tomb. Near his final resting-place a lofty and elaborately carved monument was erected to his memory: this was called *he tiki*, which was also thus colored.

In former times the chief annointed his entire person with red ochre; when fully dressed on state occasions, both he and his wives had red paint and oil poured upon the crown of the head and forehead, which gave them a gory appearance, as though their skulls had been cleft asunder.

A large number of examples occur in the present paper where the use and significance of color is mentioned. Among these see pages 64, 165-6-7, and 183.



## MATERIALS UPON WHICH PICTOGRAPHS ARE MADE.

These may be divided into:

- 1st. Natural objects other than the human person.
- 2d. The human person.
- 3d. Artificial objects.

### NATURAL OBJECTS.

Under the first head, the most important division is that of rocks and stones, many examples of which have already been presented. In addition to those respecting stone, Mr. Gilbert furnishes some data relating to the sacred stone kept by the Indians of the village of Oraibi, on the Moki mesas. This stone was seen by Messrs. John W. Young and Andrew S. Gibbon, and the notes were made by Mr. Gilbert from those furnished to him by Mr. Young. Few white men have had access to this sacred record, and but few Indians have enjoyed the privilege.

Mr. Gilbert remarks that "the stone was evidently squared by the eye and not by any instrument. The engraving seems to have been done with some rude instrument, but executed with some degree of skill, like an ancient art faded into dim remembrance of the artist or writer of the characters. The stone is a red clouded marble, entirely different from anything found in the region, so I learn by the Indians. The stone is badly worn, and some of the characters are difficult to determine."

According to the notes accompanying the rude drawings of this stone, it is an oblong rectangle, measuring  $11\frac{3}{4}$  inches long,  $7\frac{1}{4}$  inches wide, and  $1\frac{1}{2}$  inches thick. On one side there is an interior space, also an oblong rectangle measuring about three-fourths of the size of the whole tablet, between which and the outer margin are six nude human figures resembling one another, one at either end and two on each of the two sides. The interior space may have contained characters, though no traces are now visible.

On the other side are drawings of the sun, clouds with rain descending therefrom, lightning, stars, arrows, foot-prints of the bear, and several other undeterminable characters.

No history of the origin and import of this tablet has been obtained. Other materials may be mentioned as follows:

## BONE.

For instances of the use of bone, refer to several Alaska ivory carvings in this paper, *e. g.*, Figure 111, page 192; Comanche buffalo shoulder blade, Figure 137, page 216; Hidatsa shoulder blade, page 151; New Zealand human bone, Figure 34, page 74.

## THE LIVING TREE.

An example is to be found in Schoolcraft, IV, p. 253, Pl. 33, Fig. A, where it is stated that Mr. Richard H. Kern furnished a copy of an Indian drawing, which was "found on the trunk of a cottonwood tree in the valley of King's River, California, and evidently represents the manner of catching different wild animals with the lasso."

The use of the lasso, and the characters being upon the bark of a living tree, show sufficient reason to believe that this record was of modern workmanship.

## WOOD.

The Indians of the Northwest Coast generally employ wood upon which to depict objects of various kinds. These appear to partake of a mythical nature, sometimes becoming absurdly grotesque. Totem posts (Plate LXXXIII, page 199), boats, boat paddles, the boards constituting the front wall of a house, and masks are among the objects used upon which to display artistic skill.

Ottawa drawings are also found upon pipe-stems made of wood, usually ash. Figure 120, page 204, is an example of this.

Among the Arikara boat paddles are used upon which marks of personal distinction are reproduced, as shown in Figure 80, page 182.

Wooden dancing ornaments, such as fanciful representations of the human figure, idols, etc., are generally ornamented with a variety of colors, having them sometimes arranged to represent designs closely related to, if not actually signifying, marks of gentile distinction.

In Alaska, mortuary records are drawn upon slabs of wood. See Figures 113 and 114, page 198. Mnemonic devices, notices of departure, distress, etc., are also drawn upon thin narrow slips of wood, averaging an inch in width, and of sufficient length. See Figures 58 and 59, page 154. A circular piece of wood or board is sometimes drawn upon, showing the human face, and placed upon a pole, and facing in a certain direction, to show the course taken by the survivors of a settlement which has been attacked by an enemy. See Figure 50, page 152.

## BARK.

The Ojibwa have, until very recently, been in the habit of tracing characters of various kinds upon the inner surface of birch bark. These records are usually mnemonic, though many pertain to personal exploits. An illustration is given in Figure 139, page 218. The lines appear to have been traced with a sharply-pointed instrument, probably bone, and in some examples the drawings are made by simple puncturing. Sometimes color is applied to the objects delineated, and

apparently with reference to specific signification. The strips of bark, varying from an inch to several feet in length, roll up upon drying, and are straightened out for examination by heating near the fire.

#### SKINS.

This includes sealps. A large number of records upon the hides of animals are mentioned in the present paper. Plate IV with its description in the Dakota Winter Counts is one instance.

#### FEATHERS.

The Sacramento tribes of California are very expert in weaving blankets of feathers, many of them having really beautiful figures worked upon them. This is reported by Edward M. Kern in *Schoolcraft*, V, 649, 650.

The feather work in Mexico, Central America and the Hawaiian Islands is well known, often having designs properly to be considered among pictographs, though in general not, at least in modern times, passing beyond ornamentation.

#### GOURDS.

After gourds have dried the contents are removed and handles are attached; they serve as rattles in dances, and in religious and shamanistic rites. The representations of natural or mythical objects for which the owner may have special reverence are often depicted upon their surfaces. This custom prevails among the Pueblos generally, and, also, among many other tribes, notably those constituting the Siouan linguistic stock.

#### HORSE HAIR.

The Hidatsa, Arikara, Dakota, and several other tribes of the Northwest plains, use horse hair dyed red as appendages to feathers worn as personal marks of distinction. Its arrangement is significant.

#### SHELLS, INCLUDING WAMPUM.

The illustrated and exhaustive paper of Mr. W. H. Holmes, in the Second Annual report of the Bureau of Ethnology, removes all necessity for present extended mention under this head.

#### EARTH AND SAND.

Papers by Dr. Washington Matthews, U. S. A., Dr. W. H. Corbuser, U. S. A., and Mr. James Stevenson were read in the Anthropological Society of Washington during the season of 1884-5, giving account of important and entirely novel paintings by the Navajo, Yuman, and Zuni Indians. These paintings were made upon the ground by means of sand, ashes, and powdered vegetable matter of various colors. These were highly elaborate, made immediately preceding certain ceremonies, at the close of which they were obliterated.

Dr. W. J. Hoffman states that when the expedition under command of Capt. G. M. Wheeler, U. S. A., passed through Southern Nevada in

1871, the encampment for one night was at Pai-Uta Charlie's rancharia, where it was visited by many of the Pai-Uta Indians of that vicinity. On leaving camp the following morning representations of many mounted men, the odometer cart and pack animals were found depicted upon the hard, flat surface of the sand. The Indians had drawn the outlines in life size with sticks of wood, and the work was very artistically done. A mounted expedition was a new thing in that part of the country and amused them not a little.

The well-known animal mounds, sometimes called effigy mounds, of Wisconsin come in this category.

### THE HUMAN PERSON

Pictographs upon the human person may be divided into, 1st, paint on the face; 2d, paint on the body; and, 3d, tattooing, which is also divided into tattoo marks upon the head and tattoo marks upon the body.

#### PAINT.

Dr. Hoffman, who visited the Hualpai Indians of northern Arizona in 1871, gives an account (see *ante*, p. 52) of their habit of besmearing their bodies and faces with the blood of game killed.

A colored plate, facing page 33 of the report of the Pacific Railroad Expedition, 1856, pt. III, shows the designs adopted by the Mojave Indians for painting the body. These designs consist of transverse lines extending around the body, arms, and legs, or horizontal lines, or different parts may partake of different designs. Clay is now generally used, as was observed by Dr. Hoffman, who visited Camp Mojave in 1871.

For other notices of paint on head and body and the significance of color see *ante*, page 53 *et seq.*

Everard F. im Thurn, in his work before cited, page 196, describes the painting of the Indians of Guiana as follows:

The paint is applied either in large masses or in patterns. For example, a man, when he wants to dress well, perhaps entirely coats both his feet up to the ankles with a crust of red; his whole trunk he sometimes stains uniformly with blue-black, more rarely with red, or covers it with an intricate pattern of lines of either colour; he puts a streak of red along the bridge of his nose; where his eyebrows were till he pulled them out he puts two red lines; at the top of the arch of his forehead he puts a big lump of red paint, and probably he scatters other spots and lines somewhere on his face. The women, especially among the Aekawoi, who use more body-paint than other ornament, are more fond of blue-black than of red; and one very favorite ornament with them is a broad band of this, which edges the mouth, and passes from the corners of that to the ears. Some women especially affect certain little figures, like Chinese characters, which look as if some meaning were attached to them, but which the Indians are either unable or unwilling to explain.

The Serranos, near Los Angeles, California, formerly cut lines upon the trees and posts, marking boundaries of land, these lines corresponding to those adopted by the owner as facial decorations. See page 182.

During his connection with the Yellowstone expedition of 1873, under the command of General Stanley, Dr. Hoffman found elaborate narratives of hostile encounters between the Absaroka and Dakota Indians incised upon the bark of cotton-wood trees, in the valley of the Mussel-shell River. The Absaroka were shown by having the bark in the forehead removed, thus corresponding to their war custom of painting that portion of the face red, while the Dakota were denoted by having only the part of the face from the eyes down to the chin removed, referring to their custom of painting that part of the face. The number of individuals was shown by the outline of one individual of either tribe, with added short lines. The total number of arms was shown by drawing one gun and the requisite number of spots. The number of horses was indicated in a similar manner.

See also with reference to paint on the human person, pages 165 and 167.

The present writer, when reading the magnificent work of Conte Giovanni Gozzadini, *Di Ulteriori Scoperte Nell' Antica Necropoli a Marzabotto nel Bolognese*, Bologna, 1870, noticed in Plate XII, Figure 1, the representation of a human head in bronze of great antiquity, and that it shows incised lines over the superior malar region, below and outward from the outer canthi of the eye. To any one recently familiar with tattooing and the lines of face painting this gives a decided suggestion, and is offered as such.

The head is reproduced in Figure 22.



FIG. 22.—Bronze head from the Necropolis of Marzabotto, Italy.

A less distinct suggestion arose from the representation of a "Fragment of a lustrous black bowl, with an incised decoration filled with



white chalk," pictured in Troja, etc., by Dr. Henry Schliemann, New York, 1884, p. 31, No. 1, and here presented, Figure 23. In the absence of knowledge as to the connection of the two sets of parallel lines on each side of the face, with the remainder of the bowl, it is not possible to form any decision as to whether there was any intention to portray face painting or tattooing, or whether the lines merely partook of the general pattern of the bowl. The lines, however, instantly caught the present writer's eye as connected with the subject now under consideration.



FIG. 23.—Fragment of bowl from Troja.

#### TATTOOING.

Tattooing, a permanent marking of the skin as distinguished from the temporary painting, and accomplished by the introduction of coloring matter under the cutaneous epidermis, was formerly practiced extensively among the Indians of North America. Some authorities for this statement are here quoted, as also some descriptions of the custom where still practiced.

Capt. John Smith, in "The True Travels, Adventures, etc.," Richmond, 1819, Vol. I, page 130, is made to say of the Virginia Indians:

"They adorne themselves most with copper beads and paintings. Their women, some haue their legs, hands, breasts and face cunningly imbrodered with diuers workes, as beasts, serpents, artificially wrought into their flesh with blacke spots."

The Inuit, according to Cook, practiced tattooing perpendicular lines upon the chin of women, and sometimes similar lines extending backward from near the outer portions of the eyes.

Mr. Gatschet reports that very few Klamath men now tattoo their faces, but such as are still observed have but a single line of black running from the middle of the lower lip to the chin. The women have three lines, one from each corner of the mouth and one down over the center of the chin.

The Modoc women tattoo three blue lines, extending perpendicularly

from the center and corners of the lower lip to the chin. See Bancroft, *Native Races*, I, p. 332.

Stephen Powers says (*Contrib. N. A. Ethnol.*, III, p. 20) that the Karol, California, squaws tattoo in blue three narrow fern leaves perpendicularly on the chin, one falling from each corner of the month and one in the middle. For this purpose, they are said to employ soot gathered from a stone, mingled with the juice of a certain plant.

The same author reports, page 76: "Nearly every (Hupâ, California) man has ten lines tattooed across the inside of the left arm, about half way between the wrist and the elbow; and in measuring shell-money, he takes the string in his right hand, draws one end over his left thumb-nail, and if the other end reaches to the uppermost of the tattoo lines, the five shells are worth \$25 in gold or \$5 a shell. Of course it is only one in ten thousand that is long enough to reach this high value."

The same author, on page 96, says: The squaws (Pat'awât, Cal.) tattoo in blue three narrow pinnate leaves perpendicularly on their chins, and also lines of small dots on the backs of their hands.

He reports, page 148, of the Kas'tel Pomo: The women of this and other tribes of the Coast Range frequently tattoo a rude representation of a tree or other object, covering nearly the whole abdomen and breast.

Of the Wintuns of California the same author says (page 233) that the squaws all tattoo three narrow lines, one falling from each corner of the mouth, and one between.

See also page 167 *infra*.

Rev. M. Eells says (*Bull. U. S. Geol. and Geog. Survey*, III, p. 75) of the Twana Indians: A little of this tattooing is done, but much less than formerly, and chiefly now among the children.

Blue marks tattooed upon a Mojave woman's chin denotes that she is married. See *Pacific R. R. Exped.*, III, 1856, p. 33.

The only remarkable instance of tattooing now among the Hidatsa is that of Lean-Wolf, the present second chief of the tribe. The ornamentation consists of horizontal stripes, from one-third to one-half an inch broad, running from the middle of the breast around the right side of the body to the spinal column. The right arm and the right leg are encircled by similar bands, between which there are spaces of equal width. Lean-Wolf professed not to be able to give the origin and history of this ornamentation, although he represents himself with it upon pictographs relating to personal events of warfare and the chase.

Bancroft (*Native Races*, Vol. I, p. 48) says of the Eskimo, that the females tattoo lines on their chins; the plebeian female of certain bands has one vertical line in the center and one parallel to it on either side. The higher classes mark two vertical lines from each corner of the mouth. On page 72 he says that young Kadiak wives tattoo the breast and adorn the face with black lines. The Kuskokwim women sew into their chin two parallel blue lines. This color is applied by

drawing a thread under the skin or pricking it with a needle. On page 117 he says that the Chippewyans have tattooed cheeks and foreheads. Both sexes have blue or black bars or from one to four straight lines to distinguish the tribe to which they belong; they tattoo by entering an awl or needle under the skin and on drawing it out, immediately rubbing powdered charcoal into the wounds. On page 127 he states that on the Yukon River among the Kutchins, the men draw a black stripe down the forehead and the nose, frequently crossing the forehead and cheeks with red lines and streaking the chin alternately with red and black, and the women tattoo the chin with a black pigment.

It will be observed that these statements by Bancroft, about tattooing among the Hyperboreans, seem to be confined to the face, except as is mentioned among the Kadiak, where the women tattoo the breast, and that these tattoo marks seem to be simple straight lines, either vertical or horizontal.

In this place is properly inserted the following report of original research among the Haidas on this subject, by Mr. James G. Swan, of Port Townsend, Washington, for which the thanks of this Bureau are tendered to him.

4 ETH—5

TATTOO MARKS OF THE HAIDA INDIANS OF QUEEN  
CHARLOTTE ISLANDS, B. C., AND THE PRINCE OF  
WALES ARCHIPELAGO, ALASKA.

By JAMES G. SWAN.

H. H. Bancroft, in his "Native Races, Pacific States," Vol. 1, p. 155, includes in the Haida family the nations occupying the coast and islands from the southern extremity of Prince of Wales Archipelago to the Bentinck Arms in about 52° N.

Their territory is bounded on the north and east by the Thlinket and Carrier nations of the Hyperboreans, and on the south by the Nootka family of the Columbians.

Its chief nations, or, more correctly speaking, bands, whose boundaries, however, can rarely be fixed with precision, are the Massets, Skiddegates, Cumshawas, Laskeets, and the Skringwai, of Queen Charlotte Islands; the Kaigani, Howkan, Klemakoan, and Kazan, of Prince of Wales Archipelago; the Chimsyans, about Fort Simpson and on Chatham Sound; the Nass and the Skenas, on the rivers of the same name; the Sebasses, on Pitt Archipelago and the shores of Gardiner Channel, and the Millbank Sound Indians, including the Hailtzas, Bella Bella, Bella Coola, etc.

Among all the tribes or bands belonging to the Haida family, the practice of tattooing the person in some manner is common; but the most marked are the Haidas proper, or those living on Queen Charlotte Islands, and the Kaiganis, of Prince of Wales Archipelago, Alaska. Of the Haida tribe, H. H. Bancroft says (Works 1882, Vol. 1, p. 159), "Besides the regular lip piece, ornaments various in shape and material, of shell, bone, wood, or metal, are worn, stuck in the lips, nose, and ears, apparently according to the caprice or taste of the wearer, the skin being sometimes, though more rarely, tattooed to correspond." The authors quoted by Bancroft for this information are Mayne's British Columbia, p. 282; Barrett-Lennard's Travels, pp. 45, 46; Poole's Queen Charlotte Islands, pp. 75-311; Dunn's Oregon, pp. 279, 285, and Reed, who says, "The men habitually go naked, but when they go off on a journey they wear a blanket."

How this latter writer, presuming he speaks from personal experience, could have seen naked Haida men without noticing tattoo marks, I cannot understand. On page 182 of the same volume of Bancroft, footnote, is the following: "The habit of tattooing the legs and arms is common to all the women of Vancouver's Island; the men do not adopt it." Grant, in Lond. Geog. Soc. Jour., Vol. XXVII, p. 307. "No

such practice as tattooing exists among these natives.' Sproat's Scenes, p. 27."

What Grant says applies not to the women of Vancouver's Island, but to those of Queen Charlotte Islands. Sproat seems to have given more of his attention to some fancied terminal in their language, upon which he builds his theory of the "Aht" nation, than to the observance of their personal peculiarities. I am of the opinion, judging from my own observation of over twenty years among the coast tribes, that but few females can be found among the Indians, not only on Vancouver's Island, but all along the coast to the Columbia River, and perhaps even to California, that are *not* marked with some device tattooed on their hands, arms, or ankles, either dots or straight lines; but of all the tribes mentioned, the Haidas stand pre-eminent for tattooing, and seem to be excelled only by the natives of the Fiji Islands or the King's Mills Group in the South Seas. The tattoo marks of the Haidas are heraldic designs or the family totem, or crests of the wearers, and are similar to the carvings depicted on the pillars and monuments around the homes of the chiefs, which casual observers have thought were idols.

In a memoir written by me on the Haida Indians, for the Smithsonian Institution, and published as No. 267 of Contributions to Knowledge, I have given illustrations of various tattoo designs and heraldic carvings in wood and stone, but did not attempt to delineate the position or appearance of those designs upon their bodies or limbs, although all the tattoo marks represented in that memoir were copied by me directly from the persons of the Haidas, as stated in the illustrations.

The publication of this memoir, with its illustrations, which I showed to the Haidas and Kaiganis in 1875, during my cruise to Alaska in the United States revenue steamer Wolcott, gave them confidence in me that I had not made the drawings from idle curiosity, and in February, 1879, I was fortunate enough to meet a party of Haida men and women in Port Townsend, Washington, who permitted me to copy their tattoo marks again.

These designs are invariably placed on the men between the shoulders, just below the back of the neck on the breast, on the front part of both thighs, and on the legs below the knee. On the women they are marked on the breast, on both shoulders, on both fore-arms, from the elbow, down over the back of the hands, to the knuckles, and on both legs below the knee to the ankle.

When the Haidas visit Victoria or the towns on Puget Sound they are dressed in the garb of white people and present a respectable appearance, in marked contrast with the Indians from the west coast of Vancouver's Island, or the vicinity of Cape Flattery, who dress in a more primitive manner, and attract notice by their more picturesque costumes than do the Haidas, about whom there is nothing outwardly of unusual appearance, except the tattoo marks on the hands of the women, which show their nationality at a glance of the most careless observer.



As I before remarked, almost all of the Indian women of the north-west coast have tattoo marks on their hands and arms, and some on the face; but as a general thing these marks are mere dots or straight lines, having no particular significance. With the Haidas, however, every

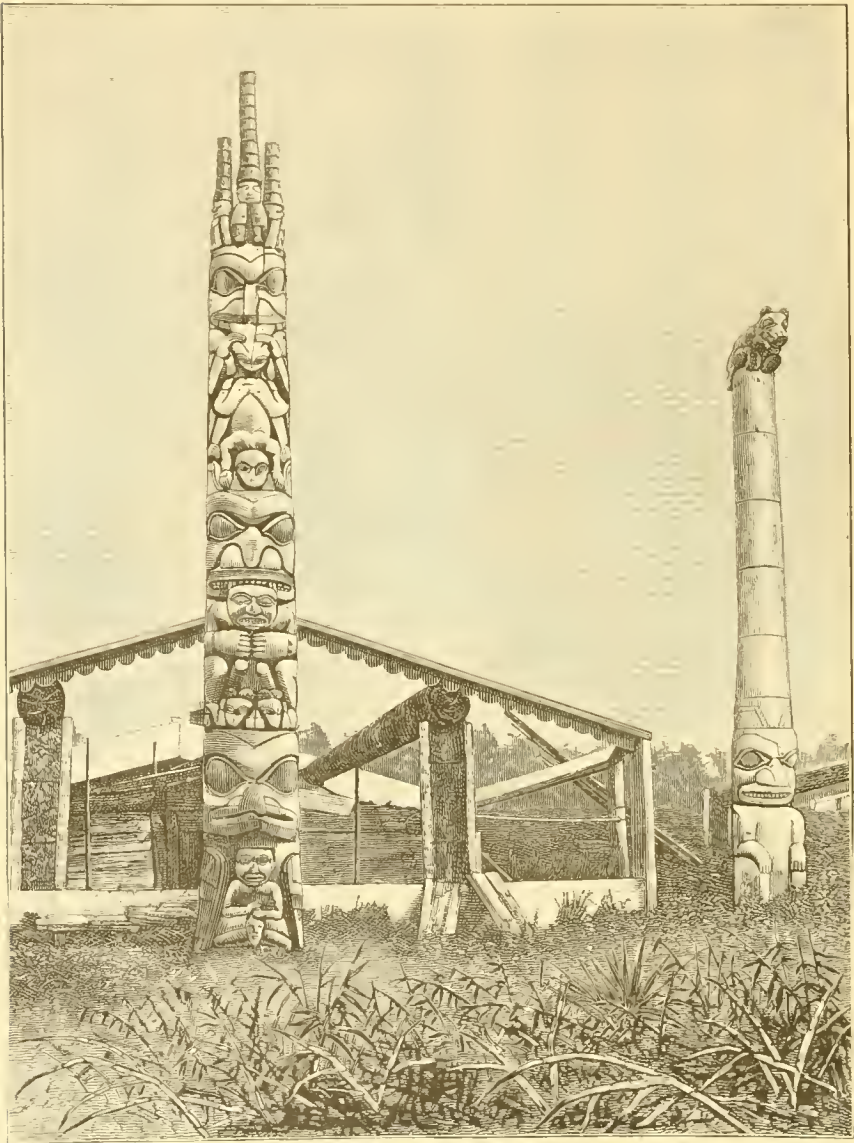


FIG. 24.—Haida Totem Post.

mark has its meaning; those on the hands and arms of the women indicate the family name, whether they belong to the bear, beaver, wolf, or eagle totems, or any of the family of fishes. As one of them quaintly

remarked to me, "If you were tattooed with the design of a swan, the Indians would know your family name."

Although it is very easy to distinguish the Haida women from those of other tribes by seeing the tattoo marks on the backs of their hands, yet very few white persons have cared to know the meaning of these



FIG. 25.—Haida man, tattooed.

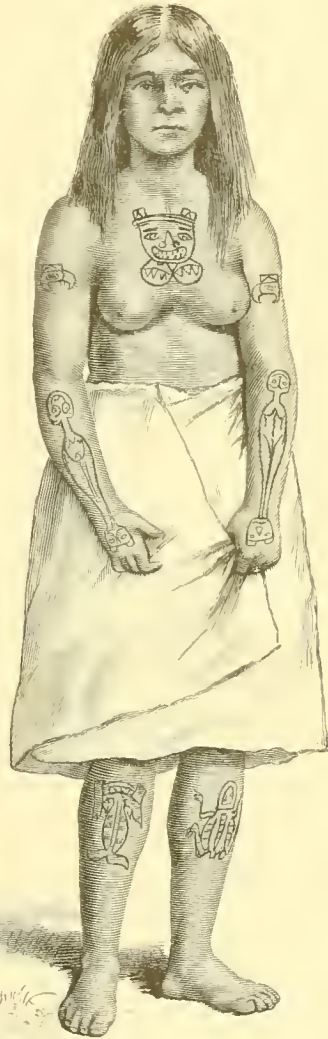


FIG. 26.—Haida woman, tattooed.

designs, or are aware of the extent of the tattoo marks on the persons of both sexes.

In order to illustrate this tattooing as correctly as possible, I inclose herewith a view (Figure 24) taken at Massett, Queen Charlotte Island, of

the carved columns in front of the chief's residence; and also sketches of the tattoo marks on two women and their husbands taken by me at Port Townsend.

It should be borne in mind that during their festivals and masquerade performances the men are entirely naked and the women have only a short skirt reaching from the waist to the knee; the rest of their



FIG. 27.—Haida woman, tattooed.

FIG. 28.—Haida man, tattooed.

persons are exposed, and it is at such times that the tattoo marks show with the best effect, and the rank and family connection known by the variety of designs.

Like all the other coast tribes, the Haidas are careful not to permit the intrusion of white persons or strangers to their Tomanawos cere-

monies, and as a consequence but few white people, and certainly none of those who have ever written about those Indians, have been present at their opening ceremonies when the tattoo marks are shown.



FIG. 29 Skulpin.



FIG. 30.—Frog.



FIG. 31.—Cod.

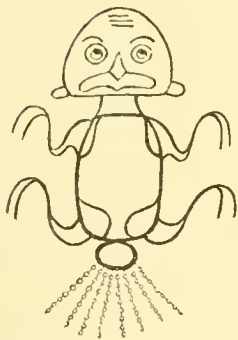


FIG 32.—Squid or octopus.

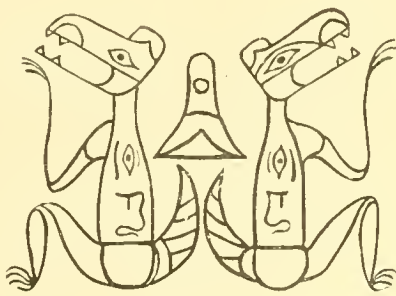


FIG. 33.—Wolf.

My information was derived from the Haidas themselves, who explained to me while I was making the drawings, and illustrated some of the positions assumed in their dances by both sexes.



Fig. 25 represents a man. On his breast is the cod (kahatta) split from the head to the tail and laid open; on each thigh is the octopus (noo), and below each knee is the frog (flkamkoston).

Figure 26 represents a woman. On her breast is the head with fore-paws of the beaver (tsching); on each shoulder is the head of the eagle or thunder-bird (skamskwin); on each arm, extending to and covering the back of the hand, is the halibut (hargo); on the right leg is the sculpin (kull); on the left leg is the frog (flkamkoston).

Figure 27 is a woman with the bear's head (hoorts) on her breast. On each shoulder is the eagle's head, and on her arms and legs are figures of the bear.

Figure 28 shows the back of a man with the wolf (wasko) split in halves and tattooed between his shoulders, which is shown enlarged in Figure 33. Wasko is a mythological being of the wolf species similar to the chu-chu-lumexl of the Makah Indians, an antediluvian demon supposed to live in the mountains.

The skulpin on the right leg of the woman in Figure 26 is shown enlarged in Figure 29; the frog in the left leg in Figure 30.

The codfish on the man in Figure 25 is shown enlarged in Figure 31, the octopus or squid in Figure 32.

As the Haidas, both men and women, are very light colored, some of the latter, full blooded Indians too, having their skins as fair as Europeans, the tattoo marks show very distinct. These sketches are not intended as portraits of persons, but simply to illustrate the positions of the various tattoo marks. To enter into a detailed description would require more space and study than is convenient at this time. Enough is given, it is hoped, to convey to you an idea of this interesting subject, which will require much study to properly elaborate or understand.

This tattooing is not all done at one time nor is it every one who can tattoo. Certain ones, almost always men, have a natural gift which enables them to excel in this kind of work. One of the young chiefs, named Geneskelos, was the best designer I knew, and ranked among his tribe as a tattooer. He belonged to Laskeek village on the east side of Moresby's Island, one of the Queen Charlotte group. I employed him to decorate the great canoe which I sent to the Centennial Exposition at Philadelphia in 1876, for the National Museum. I was with him a great deal of the time both at Victoria and Port Townsend. He had a little sketch book in which he had traced designs for tattooing, which he gave to me. He subsequently died in Victoria of small-pox, soon after he had finished decorating the canoe.

He told me the plan he adopted was first to draw the design carefully on the person with some dark pigment, then prick it in with needles and then rub over the wound with some more coloring matter till it acquired the proper hue. He had a variety of instruments composed



of needles tied neatly to sticks. His favorite one was a flat strip of ivory or bone, to which he had firmly tied five or six needles, with their points projecting beyond the end just far enough to raise the skin without inflicting a dangerous wound, but these needle points stuck out quite sufficiently to make the operation very painful, and although he applied some substance to deaden the sensation of the skin, yet the effect was on some to make them quite sick for a few days; consequently the whole process of tattooing was not done at one time. As this tattooing is a mark of honor, it is generally done at or just prior to a Tomanawos performance and at the time of raising the heraldic columns in front of the chief's houses. The tattooing is done in open lodge and is witnessed by the company assembled. Sometimes it takes several years before all the tattooing is done, but when completed and the person well ornamented, then they are happy and can take their seats among the elders.

It is an interesting question, and one worthy of careful and patient investigation, Why is it that the Haida Nation alone of all the coast tribes tattoo their persons to such an extent, and how they acquire the art of carving columns which bear such striking similarity to carving in wood and stone by the ancient inhabitants of Central America, as shown by drawings in Bancroft's fourth volume of Native Races and in Habel's investigation in Central and South America?

Some of these idols in design, particularly on pages 40 to 58, and notably on pages 49-50 (Bancroft, *op. cit.*), are very like some small carvings I have in Port Townsend which I received from Alaska, showing a similarity of idea which could not be the result of an accident.

The tattoo marks, the carvings, and heraldic designs of the Haida are an exceedingly interesting study, and I hope what I have thus hastily and imperfectly written may be the means of awakening an interest to have those questions scientifically discussed, for they seem to me to point to a key which may unlock the mystery which for so many ages has kept us from the knowledge of the origin of the Pacific tribes.

#### TATTOOING IN THE PACIFIC ISLANDS.

The following quotations and illustrations of tattooing in the islands of the Pacific Ocean are presented for comparison, and in hopes that the discussion of the subject may afford further information upon the significance of tattoo marks. It is by no means probable that they were originally altogether or chiefly for ornamentation.

The accompanying illustration, Figure 34, is taken from a bone obtained from a mound in New Zealand, by Mr. J. C. Russell, of the United States Geological Survey, several years ago. Mr. Russell says that the Maori formerly tattooed the bones of enemies, though the custom now seems to have been abandoned. The work consists of sharp, shal-

low lines, as if made with a sharp-pointed steel instrument, into which some blackish pigment has been rubbed, filling up some of the markings, while in others scarcely a trace remains.



FIG. 34.—Tattoo designs on bone, New Zealand.

In connection with the use of the tattoo marks as reproduced on artificial objects see also, Figure 37, page 76, and Figure 116, page 200.

The following is extracted from *Te Ika a Mani*, or New Zealand and its inhabitants, by Rev. Richard Taylor, London, 1870, p. 320, etc.

Before they went to fight, the youth were accustomed to mark their countenance with charcoal in different lines, and their traditions state that this was the beginning of the tattoo, for their wars became so continuons, that to save the trouble of thus constantly painting the face, they made the lines permanent by the *moko*; it is however a question whether it did not arise from a different cause; formerly the grand mass of men who went to fight were the black slaves, and when they fought side by side with their lighter colored masters, the latter on those occasions used charcoal to make it appear they were all one.

Whilst the males had every part of the face tattooed, and the thighs as well, the females had chiefly the chin and the lips, although occasionally they also had their thighs and breasts, with a few smaller marks on different parts of the body as well. There were regular rules for tattooing, and the artist always went systematically to work, beginning at one spot and gradually proceeding to another, each particular part having its distinguishing name. Thus,

1. *Te kawe*, which are four lines on each side of the chin.
2. *Te pukawae*, six lines on the chin.
3. *Nga rere hupe*, the lines below the nostrils, six in number.
4. *Nga kohiri*, a curved line on the cheek-bone.
5. *Nga koroaha*, lines between the cheek-bone and ear.
6. *Nga wakarakai*, lines below the former.
7. *Nga pongiangia*, the lines on each side of the lower extremity of the nose.
8. *Nga pae tarewa*, the lines on the cheek-bone.
9. *Nga rerepi*, and *Nga ngatarewa*, lines on the bridge of the nose.
10. *Nga tieana*, four lines on the forehead.
11. *Nga rewha*, three lines below the eyebrows.
12. *Nga titi*, lines on the center of the forehead.
13. *Ipu rangi*, lines above the former.
14. *Te tonokai*, the general names for the lines on the forehead.
15. *He ngutu pu rua*, both lips tattooed.
16. *Te rape*, the higher part of the thighs.
17. *Te paki paki*, the tattooing on the seat.
18. *Te paki turi*, the lower thigh.
19. *Nga tata*, the adjoining part.

The following are female tattoos:—

1. *Taki taki*, lines from the breast to the navel.
2. *Hope hope*, the lines on the thighs.
3. *Waka te he*, the lines on the chin.

Figure 35 is a copy of a tattooed head carved by Hongi, and also of the tattooing on a woman's chin, taken from the work last quoted.



FIG. 35.—New Zealand tattooed head and chin mark.

Figure 36 is a copy of a photograph obtained in New Zealand by Mr. Russell. It shows tattooing upon the chin.



FIG. 36.—New Zealand tattooed woman.

Two beautifully tattooed heads are in the collection of the Army Medical Museum at Washington, D. C., of which illustrations are pre-



sented in the accompanying Plate, III. No history of these heads can be obtained. The skin is almost perfect, and has become much brighter in tint than the original color. The tattooing is a blue black, and in certain lights becomes almost bright indigo. In many of the markings there appear slight grooves, which add greatly to the general ornamentation, breaking the monotony of usually plain surfaces. Whether any mechanical work was performed upon the heads after death is not positively known, though from the general appearance of the work it would be suggested that the sharp creases or grooves was done subsequent to the death of the individual. The tattooing shows sub-cutaneous coloring, which indicates that at least part of the ornamentation was done in life.

Figure 37 is an illustration from *Te Ika a Mani*, etc., *op. cit.*, facing page 378. It shows the "grave of an Australian native, with his name, rank, tribe, etc., cut in hieroglyphics on the trees," which "hieroglyphics" are supposed to be connected with his tattoo marks.

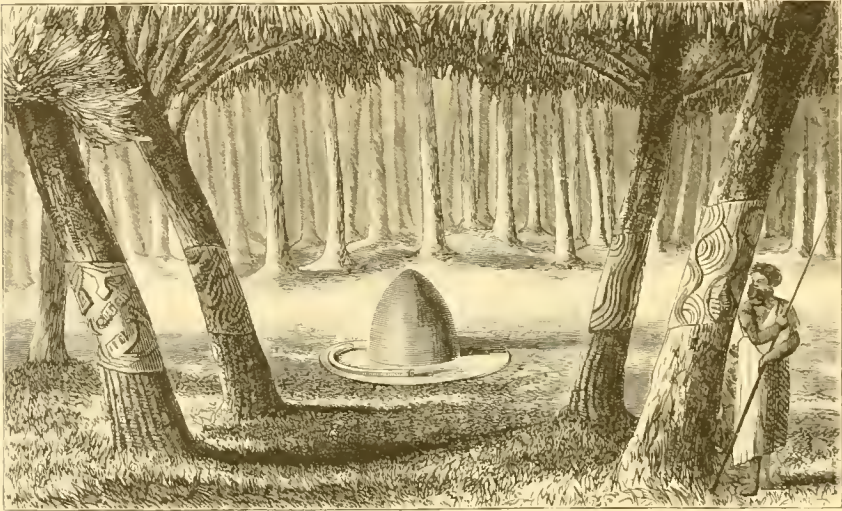


FIG. 37.—Australian grave and carved trees.

Mr. I. C. Russell, in his sketch of New Zealand, published in the *American Naturalist*, Volume XIII, p. 72, February, 1879, remarks, that the desire of the Maori for ornament is so great that they covered their features with tattooing, transferring indelibly to their faces complicated patterns of curved and spiral lines, similar to the designs with which they decorated their canoes and their houses.

In Mangaia, of the Hervey Group, the tattoo is said to be in imitation of the stripes on the two kinds of fish, *avini* and *paoro*, the color of which is blue. The legend of this is kept in the song of *Ina'*. See *Myths and songs from the South Pacific*, London, 1876, p. 94.



*Robert Bland O.S.A.*

NEW ZEALAND TATTOOED HEADS





Mr. Everard F. im Thurn, in his work previously cited, pages 195-296 among the Indians of Guiana, says :

Painting the body is the simplest mode of adornment. Tattooing or any other permanent interference with the surface of the skin by way of ornament is practiced only to a very limited extent by the Indians; is used, in fact, only to produce the small distinctive tribal mark which many of them bear at the corners of their mouths or on their arms. It is true that an adult Indian is hardly to be found on whose thighs and arms, or on other parts of whose body, are not a greater or less number of indelibly incised straight lines; but these are scars originally made for surgical, not ornamental purposes.

The following extracts are taken from Samoa, by George Turner, LL. D., London, 1884 :

Page 55. Taema and Tilafainga, or Tila the *sportive*, were the goddesses of the tattooers. They swam from Fiji to introduce the craft to Samoa, and on leaving Fiji were commissioned to sing all the way, "Tattoo the women, but not the men." They got muddled over it in the long journey, and arrived at Samoa singing, "Tattoo the *men* and not the women." And hence the universal exercise of the blackening art on the men rather than the women.

Page 88. "Herodotus found among the Thracians that the barbarians could be exceedingly foppish after their fashion. The man who was not tattooed among them was not respected." It was the same in Samoa. Until a young man was tattooed, he was considered in his minority. He could not think of marriage, and he was constantly exposed to taunts and ridicule, as being poor and of low birth, and as having no right to speak in the society of men. But as soon as he was tattooed he passed into his majority, and considered himself entitled to the respect and privileges of mature years. When a youth, therefore, reached the age of sixteen, he and his friends were all anxiety that he should be tattooed. He was then on the outlook for the tattooing of some young chief with whom he might unite. On these occasions, six or a dozen young men would be tattooed at one time; and for these there might be four or five tattooers employed.

Tattooing is still kept up to some extent, and is a regular profession, just as house-building, and well paid. The custom is traced to Taemā and Tilafainga; and they were worshipped by the tattooers as the presiding deities of their craft.

The instrument used in the operation is an oblong piece of human bone (*os ilium*), about an inch and a half broad and two inches long. A time of war and slaughter was a harvest for the tattooers to get a supply of instruments. The one end is cut like a small-toothed comb, and the other is fastened to a piece of cane, and looks like a little serrated adze. They dip it into a mixture of candle-nut ashes and water, and, tapping it with a little mallet, it sinks into the skin, and in this way they puncture the whole surface over which the tattooing extends. The greater part of the body, from the waist down to the knee is covered with it, variegated here and there with neat regular stripes of the untattooed skin, which when they are well oiled, make them appear in the distance as if they had on black silk knee-breeches. Behrens, in describing these natives in his narrative of Roggewein's voyage of 1772, says: "They were clothed from the waist downwards with fringes and a kind of silken stuff artificially wrought." A nearer inspection would have shown that the fringes were a bunch of red *li* leaves (*Dracena terminalis*) glistening with cocoa nut oil, and the "kind of silken stuff," the tattooing just described. As it extends over such a large surface the operation is a tedious and painful affair. After smarting and bleeding for awhile under the hands of the tattooers, the patience of the youth is exhausted. They then let him rest and heal for a time, and, before returning to him again, do a little piece on each of the party. In two or three months the whole is completed. The friends of the young men are all the while in attendance with food. They also bring quantities of fine mats and native cloth, as the hire of the tattooers; connected with them, too, are many waiting on for a share in the food and property.

Among the fellahs, as well as among the laboring people of the cities, the women tattoo their chin, their forehead, the middle of the breast, a portion of their hands and arms, as well as feet, with indelible marks of blue and green. In Upper Egypt most females puncture their lips to give them a dark bluish hue. See Featherman, *Social Hist. of the Races of Mankind*, V, 1881, p. 545.

Professor Brauns, of Halle, reports (*Science*, III, No. 50, p. 69) that among the Ainos of Yezo the women tattoo their chins to imitate the beards of the men.

The antiquity of tattooing in the eastern hemisphere is well established. With reference to the Hebrews, and the tribes surrounding them, the following Biblical texts may be in point :

"Ye shall not make any cuttings in your flesh for the dead, nor print any marks upon you." Lev., XIX, 28.

\* \* \* "Though thou rentest thy face with painting, in vain shalt thou make thyself fair." Jer., IV, 30.

#### ARTIFICIAL OBJECTS.

The objects of this character, on which pictographs are found, may be mentioned as follows :

- |             |                       |
|-------------|-----------------------|
| 1. Lances.  | 6. Habitations.       |
| 2. Arrows.  | 7. Utensils.          |
| 3. Shields. | 8. Pottery.           |
| 4. Canoes.  | 9. Sinews or thread.  |
| 5. Paddles. | 10. Artificial beads. |

It is believed that examples showing the use of each of these objects are presented in various parts of the present paper, but the following do not appear under other headings :

Many of the California tribes are expert workers in grass and roots in the manufacture of baskets, upon which designs are frequently worked, other than mere ornamentation, in geometric forms. The Yokuts, at Tule River Agency, in the southeastern part of the State, frequently incorporate various forms of the human body, in which the arms are suspended at the sides of the body with the hands directed outward to either side. Above the head is a heavy horizontal line. In the manufacture of these vessels grass is taken, carefully cleaned, and soaked, so as to become smooth and uniform in size.

Among the Thlinkit, boats as well as paddles are ornamented with painted figures, and the family coat of arms. See Bancroft's *Native Races*, etc., I, 106.

There is no need to give evidence concerning the designs upon pottery, after the numerous illustrations in the Second Annual Report of this Bureau, from Zuñi, etc.

## MNEMONIC.

This has been the most apparent, and probably the most ancient, purpose for which pictographs have been made. It commenced by the use of material objects which afterwards were reproduced graphically in paintings, etchings, and carvings.

In the present paper many examples appear of objects known to have been so used, the graphic representations of which, made with the same purpose, are explained by knowledge of the fact. Other instances are mentioned as connected with the evolution of pictographs, and possibly to interpret some of the latter which are not yet understood.

The quipu of the Peruvians is one of the most instructive devices for the general aid of memory, and as applicable to a variety of subjects, also having value for comparison with and reference to all other objects of this character. A good account of the quipu, quoted from *Travels in Peru*, during the years 1838-1842, \* \* by Dr. J. J. von Tschudi [Wiley and Putnam's Library, Vols. XCIII-XCIV], New York, 1847, Pt. II, pp. 344, 345, is as follows :

## THE QUIPU OF THE PERUVIANS.

The ancient Peruvians had no manuscript characters for single sounds; but they had a method by which they composed words and incorporated ideas. This method consisted in the dexterous intertwining of knots on strings, so as to render them auxiliaries to the memory. The instrument consisting of these strings and knots was called the QUIPU. It was composed of one thick head or top string, to which, at certain distances, thinner ones were fastened. The top string was much thicker than these pendent strings, and consisted of two doubly twisted threads, over which two single threads were wound. The branches, if I may apply the term to these pendent strings, were fastened to the top ones by a single loop; the knots were made in the pendent strings, and were either single or manifold. The length of the strings used in making the quipu were various. The transverse or top string often measures several yards, and sometimes only a foot long; the branches are seldom more than two feet long, and in general they are much shorter.

The strings were often of different colors; each having its own particular signification. The color for soldiers was red; for gold, yellow; for silver, white; for corn, green, &c. This writing by knots was especially employed for numerical and statistical tables; each single knot representing ten; each double knot stood for one hundred; each triple knot for one thousand, &c.; two single knots standing together made twenty; and two double knots, two hundred.

This method of calculation is still practiced by the shepherds of the Puna. They explained it to me, and I could, with very little trouble, construe their quipus. On the first branch or string they usually place the numbers of the bulls\* on the second,

that of the cows; the latter being classed into those which were milked, and those which were not milked; on the next string were numbered the calves, according to their ages and sizes. Then came the sheep, in several subdivisions. Next followed the number of foxes killed, the quantity of salt consumed, and, finally, the cattle that had been slaughtered. Other quipus showed the produce of the herds in milk, cheese, wool, &c. Each list was distinguished by a particular color, or by some peculiarity in the twisting of the string.

In this manner the ancient Peruvians kept the accounts of their army. On one string were numbered the soldiers armed with slings; on another, the spearmen; on a third, those who carried clubs, &c. In the same manner the military reports were prepared. In every town some expert men were appointed to tie the knots of the quipu, and to explain them. These men were called *quipucamayocuna* (literally, officers of the knots). Imperfect as was this method, yet in the flourishing period of the Inca government the appointed officers had acquired great dexterity in unriddling the meaning of the knots. It, however, seldom happened that they had to read a quipu without some verbal commentary. Something was always required to be added if the quipu came from a distant province, to explain whether it related to the numbering of the population, to tributes, or to war, &c. Through long-continued practice, the officers who had charge of the quipus became so perfect in their duties that they could with facility communicate the laws and ordinances, and all the most important events of the kingdom, by their knots.

All attempts made in modern times to decipher Peruvian quipus have proved unsatisfactory in their results. The principal obstacle to deciphering those found in graves consists in the want of the oral communication requisite for pointing out the subjects to which they refer. Such communication was necessary, even in former times, to the most learned *quipucamayocuna*. Most of the quipus here alluded to seems to be accounts of the population of particular towns or provinces, tax-lists, and information relating to the property of the deceased. Some Indians in the southern provinces of Peru are understood to possess a perfect knowledge of some of the ancient quipus, from information transmitted to them from their ancestors. But they keep that knowledge profoundly secret, particularly from the whites.

That the general idea or invention for mnemonic purposes appearing in the quipus, was used pictorially is indicated in the illustrations given by Dr. S. Habel in *The Sculptures of Santa Lucia Cosumalwhuapa in Guatemala, etc.*, Smithsonian Contributions to Knowledge, [No. 269], 1878, Vol. XXII, page 85. Upon these he remarks:

It has been frequently affirmed that the aborigines of America had nowhere arisen high enough in civilization to have characters for writing and numeral signs; but the sculptures of Santa Lucia exhibit signs which indicate a kind of cipher writing, higher in form than mere hieroglyphics. From the mouth of most of the human beings, living or dead, emanates a staff variously bent, to the sides of which nodes are attached. These nodes are of different sizes and shapes, and variously distributed on the sides of the staff, either singly or in twos and threes,—the last named either separated or in shape of a trefoil. This manner of writing not only indicates that the person is speaking, or praying, but also indicates the very words, the contents of the speech or prayer. It is quite certain that each staff, as bent and ornamented, stood for a well-known petition which the priest could read as easily as those acquainted with a cipher dispatch can know its purport. Further, one may be allowed to conjecture that the various curves of the staves served the purpose of strength and rhythm, just as the poet chooses his various meters for the same purpose.

In connection with the quipu, Dr. Hoffman reports a corresponding device among the Indians formerly inhabiting the mountain valleys north of Los Angeles, California, who frequently came to the settle-



ments to dispose of native blankets, skins, and robes. The man delegated by the tribe to carry away and sell these articles was provided with a number of strings, made of some flexible vegetable fiber, one string for each class of goods, which were attached to his belt. Every one contributing articles mentioned the prices to be asked therefor, and when the salesman disposed of a blanket the proper cord was taken, and a single knot was tied for each *real* received, or a double knot for each *peso*. Thus any particular string indicated the kind of goods disposed of, as well as the whole sum realized, which was finally distributed among the original contributors.

#### NOTCHED STICKS.

The use of these mnemonically was very frequent. A few instances only of this obvious expedient need be given.

The Dakotas formerly residing at Grand River Agency, the Hidatsa, and the Shoshoni from Idaho were observed to note the number of days during which they journeyed from one place to another, by cutting lines or notches upon a stick of wood.

The coup sticks carried by Dakota warriors are often found bearing a number of small notches, which refer to the number of individuals the owners may have hit after they had been shot or wounded.

The young men and boys of the several tribes at Fort Berthold, Dakota, frequently carry a stick, upon which they cut a notch for every bird killed during a single expedition.

Dr. Hoffman states that he found in the collection of the Hon. A. F. Coronel, of Los Angeles, California, a number of notched sticks, which had been invented and used by the Indians at the Mission of San Gabriel. The history of them is as follows: Immediately after the establishment of the mission the Franciscan father appointed major domos, who had under their charge corporals or overseers of the several classes of laborers, herders, etc. The chief herder was supplied with a stick of hard wood, measuring about one inch in thickness each way, and from twenty to twenty-four inches long. The corners were beveled at the handle. Upon each of these facets were marks to indicate the kinds of cattle herded, thus: one cut or notch, a bull; two cuts, a cow; one cross, a heifer; and a >-shaped character, an ox. Similar characters were also used for horses, respectively, for stallion, mare, colt, and gelding. Where only cattle were owned no difference was made in the upper end of the stick; but when both kinds of animals were owned near the same localities, or by the same settler, the stick referring to cattle was notched V-shaped at the head end, and reversed or pointed to denote horses. Sticks were also marked to denote the several kinds of stock, and to record those which had been branded. In all of these sticks numbers

were indicated by cutting notches into the corners, each tenth cut extending across the face of the stick. For instance, if the herder had thirteen oxen in charge, he selected that edge of the stick which bore upon the handle the >-shape, and cut nine short notches, one long one, and three short ones.

Labor sticks were also used by the Indians. On one side was a circle intersected with cross lines to denote *money*, and on the opposite side, which was reserved for time, either nothing or some character, according to the fancy of the owner. Short notches on the money side indicated *reals*, long cuts *pesos*. On the opposite side short cuts indicated days, and long cuts weeks.

For further reference to this subject, see *Reliquiæ Aquitanicæ*: etc., by Edouard Lartet and Henry Christy, \* \* London, 1875, p. 183 *et seq.*

#### ORDER OF SONGS.

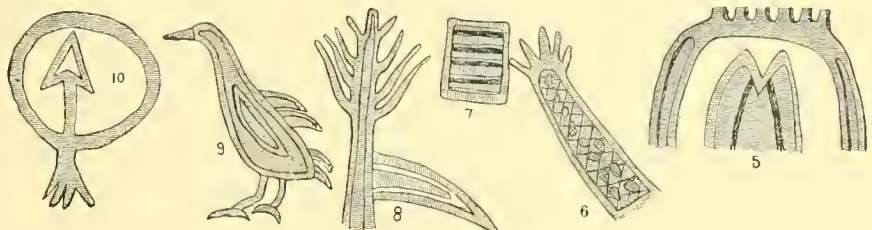
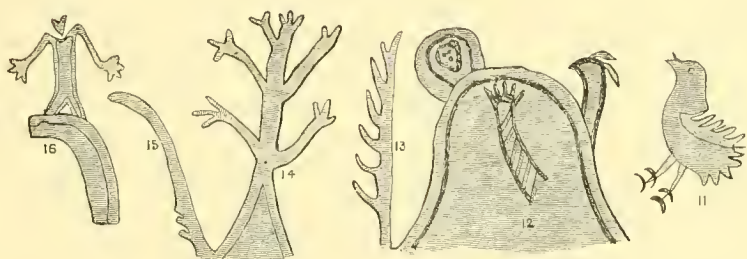
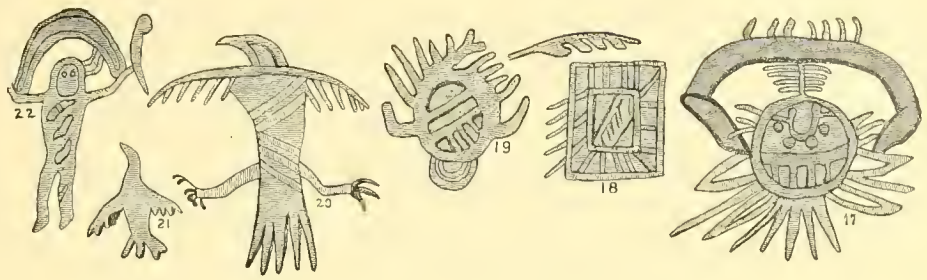
Many instances have been published in regard to the use of mnemonic characters to preserve the remembrance of songs. The words of these are invariable as well as the notes to which they are chanted. Both words and notes must have been previously memorized by the singers. Ideographic characters might give the general interpretation, but would not suggest the exact words.

Schoolcraft, I, 361, remarks: Sounds are no further preserved by these mnemonic signs, than is incident, more or less, to all pure figurative or representative pictures. The simple figure of a quadruped, a man, or a bird, recalls the *name* of a quadruped, a man or a bird. \* \* We may thus recall something of the living language from the oblivion of the past, by the pictorial method. Mnemonic symbols are thus at the threshold of the hieroglyphic.

One of the best examples of this mnemonic device is one of the Qjibwas, found in Schoolcraft, *op. cit.*, I, page 362 *et seq.*, and called by him Songs of the Meda. His illustration is reproduced as Plate IV, and his explanation, much condensed, is as follows:

No. 1. A medicine lodge filled with the presence of the Great Spirit, who, it is affirmed, came down with wings to instruct the Indians in these ceremonies. The meda, or priest, sings, "The Great Spirit's lodge—you have heard of it. I will enter it." While this is sung, and repeated, the priest shakes his shi-shi-gwun, and each member of the society holds up one hand in a beseeching manner. All stand, without dancing. The drum is not struck during this introductory chant.

No. 2. A candidate for admission crowned with feathers, and holding, suspended to his arm, an otter-skin pouch, with the wind represented as gushing out of one end. He sings, repeating after the priest, all dancing, with the accompaniment of the drum and rattle: \* \* "I have always loved that that I seek. I go into the new green leaf lodge."



OJIBWA MEDA SONG



No. 3 marks a pause, during which the victuals prepared for the feast are introduced.

No. 4. A man holding a dish in his hand, and decorated with magic feathers on his wrists, indicating his character as master of the feast. All sing, "I shall give you a share, my friend."

No. 5. A lodge apart from that in which the meda-men are assembled, having a vapor-bath within it. The elder men go into this lodge, and during the time of their taking the bath, or immediately preceding it, tell each other certain secrets relative to the arts they employ in the Medáwin. The six heavy marks at the top of the lodge indicate the steam escaping from the bath. There are three orders of men in this society, called 1. meda; 2. sangemau; and 3. ogeman. And it is in these secret exchanges of arts, or rather the communication of unknown secrets from the higher to the lower orders, that they are exalted from one to another degree. The priest sings, "I go into the bath—I blow my brother strong."

No. 6. The arm of the priest, or master of ceremonies, who conducts the candidate, represented in connection with the next figure.

No. 7. The goods, or presents given, as a fee of admission, by the novitiate. "I wish to wear this, my father, my friend."

No. 8. A meda-tree. The recurved projection from the trunk denotes the root that supplies the medicine. "What! my life, my single tree!—we dance around you."

No. 9. A stuffed crane-skin, employed as a medicine-bag. By shaking this in the dance, plovers and other small birds are made, by a sleight-of-hand trickery, to jump out of it. These, the novitiates are taught, spring from the bag by the strong power of the operator. This is one of the prime acts of the dance. "I wish them to appear—that that has grown—I wish them to appear."

No. 10. An arrow in the supposed circle of the sky. Represents a charmed arrow, which, by the power of the meda of the person owning it, is capable of penetrating the entire circle of the sky, and accomplishing the object for which it is shot out of the bow. "What are you saying, you mee dá man? This—this is the meda bone."

No. 11. The Ka Kaik, a species of small hawk, swift of wing, and capable of flying high into the sky. The skin of this bird is worn round the necks of warriors going into battle. "My kite's skin is fluttering."

No. 12. The sky, or celestial hemisphere, with the symbol of the Great Spirit looking over it. A Manito's arm is raised up from the earth in a supplicating posture. Birds of good omen are believed to be in the sky. "All round the circle of the sky I hear the Spirit's voice."

No. 13. The next figure denotes a pause in the ceremonies.

No. 14. A meda-tree. The idea represented is a tree animated by magic or spiritual power. "The Wabeno tree—it dances."



No. 15. A stick used to beat the Ta-wa-e-gun or drum. "How rings aloud the drum-stick's sound."

No. 16. Half of the celestial hemisphere—an Indian walking upon it. The idea symbolized is the sun pursuing his diurnal course till noon. "I walk upon half the sky."

No. 17. The Great Spirit filling all space with his beams, and enlightening the world by the halo of his head. He is here depicted as the god of thunder and lightning. "I sound all around the sky, that they can hear me."

No. 18. The Ta-wa-e-gun, or single-headed drum. "You shall hear the sound of my Ta wa-e-gun."

No. 19. The Ta-wa-e-gonse, or tambourine, ornamented with feathers, and a wing, indicative of its being prepared for a sacred use. "Do you understand my drum?"

No. 20. A raven. The skin and feathers of this bird are worn as head ornaments. "I sing the raven that has brave feathers."

No. 21. A crow, the wings and head of which are worn as a head-dress. "I am the crow—I am the crow—his skin is my body."

No. 22. A medicine lodge. A leader or master of the Meda society, standing with his drum stick raised, and holding in his hands the clouds and the celestial hemisphere. "I wish to go into your lodge—I go into your lodge."

In connection with this topic reference may be made to the *Lenâpé* and their Legends: with the complete text and symbols of *The Walam Olum*, by Daniel G. Brinton, A. M., M. D., Phila., 1885. 8 vo. pp. 262, with numerous illustrations.

#### TRADITIONS.

As an example of a chart used to assist in the exact repetition of traditions, Figure 38 is presented with the following explanation by Rev. J. Owen Dorsey:

"The chart accompanies a tradition chanted by members of a secret society of the Osage tribe. It was drawn by an Osage, Hada öüqse, Red Corn, who was adopted in childhood by a white man named Matthews; hence he is also known as Wm. P. Matthews, or "Bill Nix." He is one of the tribal lawyers. He obtained his version of the tradition from a member of his gens, Sadekiçč. Another version of the same tradition was obtained by him from Pahi-skă, White Hair, the chief of the Bald Eagle sub-gens of the Tsiou gens. Yahiçe waçayinçe, Saucy Chief, gave me other parts of the tradition, which Hada öüqse had forgotten.

He also chanted a few lines of the tradition of the Waçæe gens. Wayiits'axaöi, of the Black Bear gens, told me a little of his tradition; and I obtained part of the Waçæe tradition from Huçakçin, Good Voice, of the Mi<sup>n</sup>k'i<sup>n</sup> gens.

The tree at the top represents the tree of life. By this flows a river. The tree and the river are described later in the degrees. When a woman is initiated she is required by the head of her gens to take four sips of water (symbolizing the river), then he rubs cedar on the palms of his hands, with which he rubs her from head to foot. If she belongs to a gens on the left side of the tribal circle, her chief begins on the left side of her head, making three passes, and pronouncing the sacred name of Deity three times. Then he repeats the process from her forehead down; then on the right side of her head; then at the back of her head; four times three times, or twelve passes in all.

Beneath the river are the following objects: The Watse ɣuɣa, male slaying animal (?), or morning star, which is a red star. 2. Six stars called the "Elm rod" by the white people in the Indian Territory. 3. The evening star. 4. The little star. Beneath these are the moon, seven stars, and sun. Under the seven stars are the peace pipe and war hatchet, the latter is close to the sun, and the former and the moon are on the same side of the chart. Four parallel lines extending across the chart, represent four heavens or upper worlds through which the ancestors of the Tsiu people passed before they came to this earth. The lowest heaven rests on an oak tree: the ends of the others appear to be supported by pillars or ladders. The tradition, according to Saḍekiḍě, begins below the lowest heaven, on the left side of the chart, under the peace pipe. Each space on the pillar corresponds with a line of the chant; and each stanza (at the opening of the tradition) contains four lines. The first stanza precedes the arrival of the first heaven, pointing to a time when the children of the "former end" of the race were without human bodies as well as human souls. The bird hovering over the arch denotes an advance in the condition of the people; then they had human souls in the bodies of birds. Then followed the progress from the fourth to the first heaven, followed by the descent to earth. The ascent to four heavens and the descent to three, makes up the number seven.

The tree on which the Tsiu was called pü-sü-hü, jack oak, or a sort of a red oak. When they alighted, it was on a beautiful day when the earth was covered with luxuriant vegetation. From that time the paths of the Osages separated; some marched on the right, being the war gentes, while those on the left were peace gentes, including the Tsiu, whose chart this is.

Then the Tsiu met the black bear, called Káxe-wáhü-sa<sup>u</sup> in the tradition. Káxe-wáhü-sa<sup>u</sup>, Crow-bone-white in the distance. He offered to become their messenger, so they sent him to the different stars for aid. According to the chart he went to them in the following order: Morning star, sun, moon, seven stars, evening star, little star; but, according to the chant related, they were as follows: Watse ɣuɣa (morning star); Watse mi<sup>n</sup>ɣa (female animal that slays another star); Ha<sup>n</sup>-paɣa<sup>n</sup>-Wakaɣa (Wakanda or Deity during the day, the sun); Wa-

kanjaba<sup>n</sup> ɸiŋkee (Deity of the night, moon): Mikak'e peɸŋ<sup>n</sup>da, Seven Stars: Ta adɸi<sup>n</sup>, Three Deer; Mikak'e taŋɣa, Big Star; Mikak'e ɔiŋɣa, Little Star. Then the Black bear went to the Waɔiŋɣa-ɔiŋse, a female red bird sitting on her nest. This grandmother granted his request. She gave them human bodies, making them out of her own body.

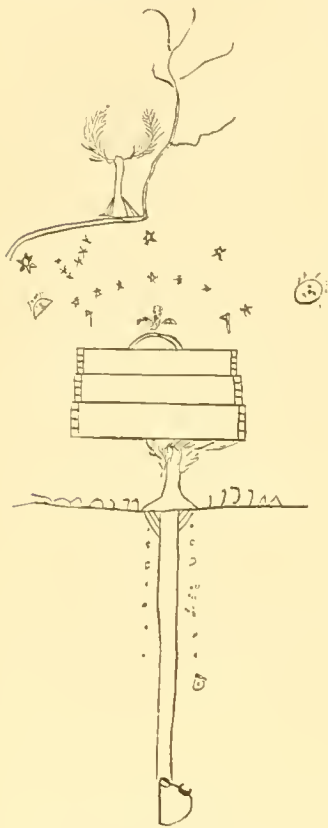


FIG. 38.—Osage chart.

The earth lodge at the end of the chart denotes the village of the Haŋɣa-utaɸa<sup>n</sup>ɣsi, who were a very warlike people. Buffalo skulls were on the tops of the lodges, and the bones of the animals on which they subsisted, whitened on the ground. The very air was rendered offensive by the decaying bodies and offal. The Haŋɣa-utaɸa<sup>n</sup>ɣsi made a treaty of peace with the Waɔace and Tsiɔu gentes, and from the union of the three resulted the present nation of the Osages.

The Bald Eagle account of the tradition begins very abruptly. The stars were approached thus: Ha<sup>n</sup>ɸaɣa<sup>n</sup>-Wakanɣa (sun), Watse ɣuɣa (morning star), Waɸaha (Great Dipper), Tapa (Pleiades) Mikak'e-ha<sup>n</sup>-ɸaɣa<sup>n</sup> (Day Star). This version gives what is wanting in the other, the meeting of other gentes, Haŋkā ɔiŋɣa, Waɔaɔe, Haŋɣa-utaɸa<sup>n</sup>ɣsi, etc., and the decisions of the chief of the Haŋɣa-utaɸa<sup>n</sup>ɣsi.

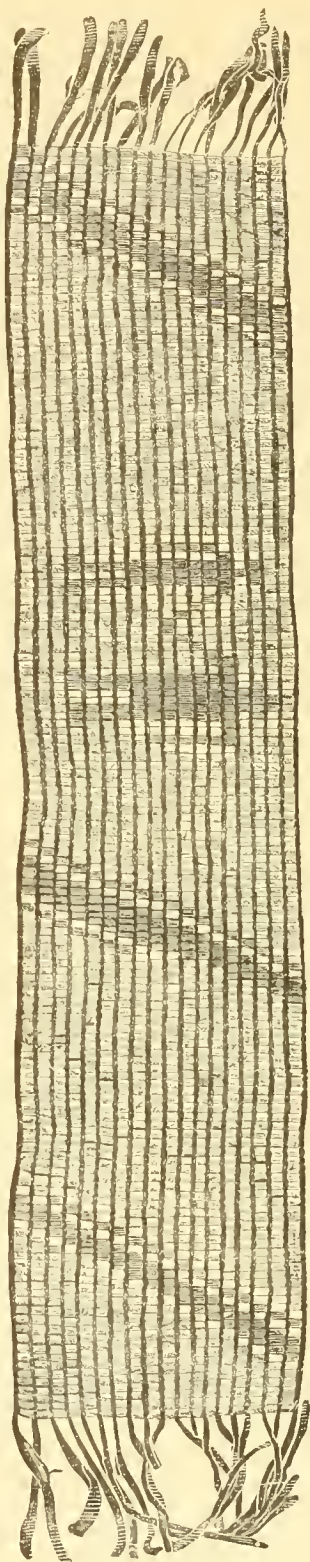
The people on the war side had similar adventures, but the accurate account has not yet been obtained.

The whole of the chart was used mnemonically. Parts of it, such as the four heavens and ladders, were tattooed on the throat and chest of the old men belonging to the order."

#### TREATIES.

The most familiar example of the recording of treaties is the employment of wampum belts for that purpose. An authority on the subject says: "The wampum belts given to Sir William Johnson, of immortal Indian memory, were in several rows, black on each side, and white in the middle; the white being placed in the center was to express peace, and that the path between them was fair and open. In the center of the





PEI: I WAMFUM BELT



belt was a figure of a diamond made of white wampum, which the Indians call the council fire." See *Voyages and Travels of an Indian interpreter and trader, etc.*, by J. Long, London, 1791, p. 47.

More minute statements regarding wampum is made superfluous after its full discussion by Mr. W. H. Holmes in his work, "Art in Shell of the ancient Americans," in the Second Annual Report of the Bureau of Ethnology, pages 253 *et seq.* One of his illustrations specially in point for the present purpose is here reproduced in Plate V. His remarks upon it are as follows:

The remarkable belt shown has an extremely interesting, although a somewhat incomplete, history attached to it. It is believed to be the original belt delivered by the Leni-Lenape sachems to William Penn at the celebrated treaty under the elm tree at Shackamaxon in 1682. Although there is no documentary evidence to show that this identical belt was delivered on that occasion, it is conceded on all hands that it came into the possession of the great founder of Pennsylvania at some one of his treaties with the tribes that occupied the province ceded to him. Up to the year 1857 this belt remained in the keeping of the Penn family. In March, 1857, it was presented to the Pennsylvania Historical Society by Granville John Penn, a great-grandson of William Penn. Mr. Penn, in his speech on this occasion, states that there can be no doubt that this is the identical belt used at the treaty, and presents his views in the following language:

"In the first place, its dimensions are greater than of those used on more ordinary occasions, of which we have one still in our possession—this belt being composed of eighteen strings of wampum, which is a proof that it was the record of some very important negotiation. In the next place, in the center of the belt, which is of white wampum, are delineated in dark-colored beads, in a rude but graphic style, two figures—that of an Indian grasping with the hand of friendship the hand of a man evidently intended to be represented in the European costume, wearing a hat; which can only be interpreted as having reference to the treaty of peace and friendship which was then concluded between William Penn and the Indians, and recorded by them in their own simple but descriptive mode of expressing their meaning, by the employment of hieroglyphics. Then the fact of its having been preserved in the family of the founder from that period to the present time, having descended through three generations, gives an authenticity to the document which leaves no doubt of its genuineness; and as the chain and medal which were presented by the parliament to his father the admiral, for his naval services, have descended among the family archives unaccompanied by any written document, but is recorded on the journals of the House of Commons, equal authenticity may be claimed for the wampum belt confirmatory of the treaty made by his son with the Indians; which event is recorded on the page of history, though, like the older relic, it has been unaccompanied in its descent by any document in writing."

#### WAR.

Material objects were often employed in challenge to and declaration of war, some of which may assist in the interpretation of pictographs. A few instances are mentioned:

Arrows, to which long hairs are attached, were stuck up along the

trail or road, by the Florida Indians, to signify a declaration of war. See Captain Landonnière in Hakluyt, III, 415.

Challenging by heralds obtained. Thus the Shumeias challenged the Ponios [in central California] by placing three little sticks, notched in the middle and at both ends, on a mound which marked the boundary between the two tribes. If the Ponios accept, they tie a string round the middle notch. Heralds then meet and arrange time and place, and the battle comes off as appointed. See Bancroft, Native Races, I, p. 379.

A few notices of the foreign use of material objects in connection with this branch of the subject may be given.

It appears in the Bible: Ezek., XXXVII, 16-20, and Numbers, XVII, 2.

Lieutenant-Colonel Woodthorp says (Jour. Anth. Inst. Gr. Brit., Vol. XLI, 1882, p. 211): "On the road to Niao we saw on the ground a curious mud figure of a man in slight relief presenting a gong in the direction of Senna; this was supposed to show that the Fiao men were willing to come to terms with Senna, then at war with Niao. Another mode of evincing a desire to turn away the wrath of an approaching enemy, and induce him to open negotiations, is to tie up in his path a couple of goats, sometimes also a gong, with the universal symbol of peace, a palm leaf planted in the ground hard by."

The Maori had neither the quipus nor wampum, but only a board shaped like a saw, which was called *he rakau wakapa-paranga*, or genealogical board; it was in fact a tally, having a notch for each name, and a blank space to denote where the male line failed and was succeeded by that of the female; youths were taught their genealogies by repeating the names of each to which the notches referred. See Te Ika a Mani.—Rev. Richard Taylor, London, 1870, p. 379.

#### TIME.

Dr. William H. Corbusier, assistant surgeon, U. S. Army, gives the following information:

The Dakotas make use of the circle as the symbol of a cycle of time; a small one for a year and a large one for a longer period of time, as a life-time, one old man. Also a round of lodges, or a cycle of 70 years, as

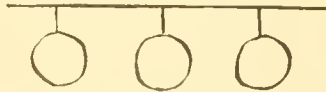


FIG. 39.—Device denoting succession of time. Dakota.

in Battiste Good's Winter Count. The continuance of time is sometimes indicated by a line extending in a direction from right to left across the page, when on paper, and the annual circles are suspended from the line at regular intervals by short lines, as in Figure 39, and the ideo-









BUFFALO ROBE.







WINTER COUNT ON BUFFALO ROBE.



graph for the year is placed beneath each one. At other times the line is not continuous, but is interrupted at regular intervals by the yearly circle, as in Figure 40.



FIG. 40.—Device denoting succession of time. Dakota.

The large amount of space taken up by the Dakota Winter Counts, now following, renders it impracticable to devote more to the graphic devices regarding time. While these Winter Counts are properly under the present head, their value is not limited to it, as they suggest, if they do not explain, points relating to many other divisions of the present paper.

#### THE DAKOTA WINTER COUNTS.

The existence among the Dakota Indians of continuous designations of years, in the form of charts corresponding in part with the orderly arrangement of divisions of time termed calendars, was first made public by the present writer in a paper entitled "A Calendar of the Dakota Nation," which was issued in April, 1877, in Bulletin III, No. 1, of the United States Geological and Geographical Survey. Later consideration of the actual use of such charts by the Indians has induced the change of their title to that adopted by themselves, viz., Winter Counts, in the original, *waniyetu wówapi*.

The lithographed chart published with that paper, substantially the same as Plate VI, now presented, was ascertained to be the Winter Count used by or at least known to a large portion of the Dakota people, extending over the seventy-one years commencing with the winter of A. D. 1800-'01.

The copy from which the lithograph was taken is traced on a strip of cotton cloth, in size one yard square, which the characters almost entirely fill, and was made by Lieut. H. T. Reed, First United States Infantry, an accomplished officer of the present writer's former company and regiment, in two colors, black and red, used in the original, of which it is a *fac simile*.

The general design of the chart and the meaning of most of its characters were ascertained by Lieutenant Reed, at Fort Sully, Dakota, and afterwards at Fort Rice, Dakota, in November, 1876, by the present writer; while further investigation of records and authorities at Washington elicited additional details used in the publication mentioned and many more since its issue.

After exhibition of the copy to a number of military and civil officers connected with the Departments of War and of the Interior, it appeared that those who, from service on expeditions and surveys or from special study of American ethnology, were most familiar with



the Indian tribes west of the Mississippi, had never heard of this or any other similar attempt among them to establish a chronological system. Bragging biographies of chiefs and partisan histories of particular wars delineated in picture writing on hides or bark are very common. Nearly every traveler on the plains has obtained a painted robe, on which some aboriginal artist has stained rude signs purporting to represent tribal or personal occurrences, or often the family connections of the first owner. Some of these in the possession of the present writer have special significance and are mentioned under appropriate heads in the present work.

It is believed that, in the pictographs of all of these peoples discovered before the chart mentioned, the obvious intention was either historical or biographical, or more generally was to chronicle occurrences as such, and that there was not an apparent design to portray events selected without exclusive reference to their intrinsic interest or importance, but because they severally occurred within regular successive intervals of time, and to arrange them in an orderly form, specially convenient for use as a calendar and valuable for no other purpose.

The copy made by Lieutenant Reed was traced over a duplicate of the original, which latter was drawn on a buffalo robe by Lone-Dog, an aged Indian, belonging to the Yanktonai tribe of the Dakotas, who in the autumn of 1876 was near Fort Peck, Montana, and was reported to be still in his possession. His Dakota name is given him by correspondents who knew him, as in the ordinary English literature, Shunka-ishnala, the words respectively corresponding very nearly with the vocables in Riggs's lexicon for dog-lone. Others have, however, identified him as Chi-no-sa, translated as "a lone wanderer," and asserted that he was at the time mentioned with the hostile Dakotas under Sitting Bull. There appear to have been several Dakotas of the present generation known to the whites as Lone-Dog.

Plate VI is a representation of the chart as it would appear on the buffalo robe, but it is photographed from the copy on linen cloth, not directly from the robe.

The duplicate from which the copy was immediately taken was in the possession of Basil Clément, a half-breed interpreter, living at Little Bend, near Fort Sully, Dakota, who professed to have obtained information concerning the chart from personal inquiries of many Indians, and whose dictated translation of them, reduced to writing in his own words, forms the basis of that given in the present paper. The genuineness of the document was verified by separate examination, through another interpreter, of the most intelligent Indians accessible at Fort Rice, and at a considerable distance from Clément, who could have had no recent communication with those so examined. One of the latter, named Good-Wood, a Blackfoot Dakota and an enlisted scout attached to the garrison at Fort Rice, immediately recognized the copy now in possession of the writer as "the same thing Lone-Dog had," and also



stated that he had seen another copy at Standing Rock Agency in the hands of Blue-Thunder, a Blackfoot Dakota. He said it showed "something put down for every year about their nation." He knew how to use it as a calendar, beginning from the center and counting from right to left, and was familiar with the meaning of many of the later characters and the events they commemorated, in which he corroborated Clément's translation, but explained that he had forgotten the interpretation of some of the earlier signs, which were about those things done before his birth.

All the investigations that could be made elicited the following account, which, whether accurate or not, the Indians examined certainly believed: Probably with the counsel of the old men and authorities of his tribe, Lone-Dog ever since his youth has been in the habit of deciding upon some event or circumstance which should distinguish each year as it passed, and when such decision was made he marked what was considered to be its appropriate symbol or device upon a buffalo robe kept for the purpose. The robe was at convenient times exhibited to other Indians of the nation, who were thus taught the meaning and use of the signs as designating the several years, in order that at the death of the recorder the knowledge might not be lost. A similar motive as to the preservation of the record led to its duplication in 1870 or 1871, so that Clément obtained it in a form ending at that time. It was also reported by several Indians that other copies of the chart in its various past stages of formation had been known to exist among the several tribes, being probably kept for reference, Lone-Dog and his robe being so frequently inaccessible.

Although Lone-Dog was described as a very old Indian, it was not supposed that he was of sufficient age in the year 1800 to enter upon the duty as explained. Either there was a predecessor from whom he received the earlier records or obtained copies of them, or, his work being first undertaken when he had reached manhood, he gathered the traditions from his elders and worked back so far as he could do so accurately, the object either then or before being to establish some system of chronology for the use of the tribe, or more probably in the first instance for the use of his particular band.

Present knowledge of the Winter Count systems renders it improbable that Lone-Dog was their inventor or originator. They were evidently started, at the latest, before the present generation, and have been kept up by a number of independent recorders. The idea was one specially appropriate to the Indian genius, yet the peculiar mode of record was an invention, and is not probably a very old invention, as it has not, so far as known, spread beyond a definite district or been extensively adopted. If an invention of that character had been of great antiquity it would probably have spread by inter-tribal channels beyond the bands or tribes of the Dakotas, where alone the copies of such charts have been found and are understood. Yet the known ex-

istence of portable pictographs of this ascertained character renders it proper to examine rock etchings and other native records with reference to their possible interpretation as designating events chronologically.

A query is naturally suggested, whether intercourse with missionaries and other whites did not first give the Dakotas some idea of dates and awaken a sense of want in that direction. The fact that Lone-Dog's winter count, the only one known at the time of its first publication, begins at a date nearly coinciding with the first year of the present century by our computation, awakened a suspicion that it might be due to civilized intercourse, and was not a mere coincidence. If the influence of missionaries or traders started any plan of chronology, it is remarkable that they did not suggest one in some manner resembling the system so long and widely used, and the only one they knew, of counting in numbers from an era, such as the birth of Christ, the Hegira, the *Ab Urbe Condita*, the First Olympiad, and the like. But the chart shows nothing of this nature. The earliest character (the one in the center or beginning of the spiral) merely represents the killing of a small number of Dakotas by their enemies, an event of frequent occurrence, and neither so important nor interesting as many others of the seventy-one shown in the chart, more than one of which, indeed, might well have been selected as a notable fixed point before and after which simple arithmetical notation could have been used to mark the years. Instead of any plan that civilized advisers would naturally have introduced, the one actually adopted—to individualize each year by a specific recorded symbol, or totem, according to the decision of a competent person, or by common consent acted upon by a person charged with or undertaking the duty whereby confusion was prevented—should not suffer denial of its originality merely because it was ingenious, and showed more of scientific method than has often been attributed to the northern tribes of America. The ideographic record, being preserved and understood by many, could be used and referred to with sufficient ease and accuracy for ordinary purposes. Definite signs for the first appearance of the small-pox and for the first capture of wild horses may be dates as satisfactory to the Dakotas as the corresponding expressions A. D. 1802 and 1813 to the Christian world, and far more certain than much of the chronological tables of Regiomontanus and Archbishop Usher in terms of A. M. and B. C. The careful arrangement of distinctly separate characters in an outward spiral starting from a central point is a clever expedient to dispense with the use of numbers for noting the years, yet allowing every date to be determined by counting backward or forward from any other that might be known; and it seems unlikely that any such device, so different from that common among the white visitors, should have been prompted by them. The whole conception seems one strongly characteristic of the Indians, who in other instances have shown such expert-

ness in ideography. The discovery of the other charts presented or referred to in this paper, which differ in their times of commencement and ending from that of Lone-Dog and from each other, removed any inference arising from the above-mentioned coincidence in beginning with the present century.

Copies of the paper publishing and explaining Lone-Dog's record were widely circulated by the present writer among Army officers, Indian agents, missionaries, and other persons favorably situated, in hopes of obtaining other examples and further information. The result was a gratifying verification of all the important statements and suggestions in the publication, with the correction of some errors of detail and the supply of much additional material. The following copies of the chart, substantially the same as that of Lone-Dog, are now, or have been, in the possession of the present writer:

1. A chart made and kept by Bo-i-de, The-Flame (otherwise translated The-Blaze), who, in 1877, lived at Peoria Bottom, 18 miles south of Fort Sully, Dakota. He was a Dakota and had generally dwelt with the Saus Arcs, though it was reported that he was by birth one of the Two Kettles. The interpretation was obtained (it is understood originally at the instance of Lieutenant Maus, First United States Infantry) directly from The-Flame by Alex. Laravey, official interpreter at Fort Sully, in the month of April, 1877.

The fac-simile copy in the writer's possession, also made by Lieutenant Reed, is on a cotton cloth about a yard square and in black and red—thus far similar to his copy of Lone-Dog's chart, but the arrangement is wholly different. The character for the first year mentioned appears in the lower left-hand corner, and the record proceeds toward the right to the extremity of the cloth, then crossing toward the left and again toward the right at the edge of the cloth—and so throughout in the style called boustrophedon; and ending in the upper left-hand corner. The general effect is that of seven straight lines of figures, but those lines are distinctly connected at their extremities with others above and below, so that the continuous figure is serpentine. It thus answers the same purpose of orderly arrangement, allowing constant additions, like the more circular spiral of Lone-Dog. This record is for the years 1786-'7 to 1876-'7, thus commencing earlier and ending later than that of Lone-Dog.

2. The-Swan's chart was kindly furnished to the writer by Dr. Charles Rau, of the Smithsonian Institution. It was sent to him in 1872 by Dr. John R. Patrick, of Belleville, Saint Clair County, Illinois, who received it from Dr. Washington West, of Belleville, Illinois, who became an acting assistant surgeon, U. S. Army, November 2, 1868, and was assigned to duty at Cheyenne Agency, Dakota, established by General Harney, as one of a number of agencies to become useful as rendezvous for Dakotas to keep them from disturbing the line of the Union Pacific Railroad. He remained there from November, 1868, to May, 1870.

The agency was specially for the Two Kettles, Sans Arcs, and Minneconjous. A Minneconjou chief, The-Swan, elsewhere called The-Little-Swan, kept this record on the dressed skin of an antelope or deer, claiming that it had been preserved in his family for seventy years. The title of the written interpretation of this chart was called the History of the Minneconjou Dakotas, its true use not being then understood. In return for favors, Dr. West obtained permission to have some copies made on common domestic cotton cloth and employed an Indian expert of the Two Kettle band to do the work in fac-simile. From one of these he had a photograph taken on a small plate, and then enlarged in printing to about two-thirds of the original size and traced and touched up in India ink and red paint to match the original, which was executed in some black pigment and ruddle.

The characters are arranged in a spiral similar to those in Lone-Dog's chart, but more oblong in form. The course of the spiral is from left to right, not from right to left. The interpretation of this chart was made at Cheyenne Agency in 1868 for Dr. Washington West by Jean Premeau, interpreter at that agency.

A useful note is given in connection with the interpretation, that in it all the names are names given by the Minneconjons, and not the names the parties bear themselves, *e. g.*, in the interpretation for the year 1829-'30, (see Plate XVIII, and page 114,) Bad Arrow Indian is a translation of the Dakota name for a band of Blackfeet. The owner and explainer of this copy of the chart was a Minneconjou, and therefore his rendering of names might differ from that of another person equally familiar with the chart.

3. Another chart examined was kindly loaned to the writer by Brevet Maj. Joseph Bush, captain Twenty-second United States Infantry. It was procured by him in 1870 at the Cheyenne Agency, from James C. Robb, formerly Indian trader, and afterwards post trader. This copy is one yard by three-fourths of a yard, spiral, beginning in the center from right to left. The figures are substantially the same size as those in Lone-Dog's chart, with which it coincides in time, except that it ends at 1869-'70. The interpretation differs from that accompanying the latter in a few particulars.

4. The chart of Mato Sapa, Black-Bear. He was a Minneconjou warrior, residing in 1868 and 1869 on the Cheyenne Agency Reservation, on the Missouri River, near Fort Snlly, Dakota, near the mouth of the Cheyenne River. In order to please Lieut. O. D. Ladley, Twenty-second United States Infantry, who was in charge of the reservation, he drew or copied on a piece of cotton cloth what he called, through the interpreter, the History of the Minneconjons, and also gave through the same interpreter the key or translation to the figures. Lieutenant Ladley loaned them to an ex-army friend in Washington, who brought them to the notice of the present writer.



This copy is on a smaller scale than that of Lone-Dog, being a flat and elongated spiral, 2 feet 6 inches by 1 foot 6 inches. The spiral reads from right to left. This chart, which begins as does that of Lone-Dog, ends with the years 1868-'69.

The present writer has had conversation and correspondence concerning other copies and other translated interpretations of what may be called for convenience and with some right, on account of priority in publication, the Lone-Dog system of winter counts. But it also was discovered that there were other systems in which the same pictographic method was adopted by the Dakotas. An account of the most important of these, viz.: the charts of Baptiste or Battiste Good, American-Horse, Cloud-Shield, and White-cow-killer has been communicated by Dr. William H. Corbusier, assistant surgeon, United States Army, and is presented *infra*, page 127, under the title of The Corbusier Winter Counts.

The study of all the charts, with their several interpretations, renders plain some points remaining in doubt while the Lone-Dog chart was the only example known. In the first place, it became clear that there was no fixed or uniform mode of exhibiting the order of continuity of the year-characters. They were arranged spirally or lineally, or in serpentine curves, by boustrophedon or direct, starting backward from the last year shown, or proceeding uniformly forward from the first year selected or remembered. Any mode that would accomplish the object of continuity with the means of regular addition seemed to be equally acceptable. So a theory advanced that there was some symbolism in the right to left circling of Lone-Dog's chart was aborted, especially when an obvious reproduction of that very chart was made by an Indian with the spiral reversed. It was also obvious that when copies were made, some of them probably from memory, there was no attempt at Chinese accuracy. It was enough to give the graphic or ideographic character, and frequently the character is better defined on one of the charts than on the others for the corresponding year. One interpretation or rather one translation of the interpretation would often throw light on the others. It also appeared that while different events were selected by the recorders of the different systems, there was sometimes a selection of the same event for the same year and sometimes for the next, such as would be natural in the progress of a famine or epidemic, or as an event gradually became known over a vast territory. To exhibit these points more clearly, the characters on the charts of The-Flame, Lone-Dog, and The-Swan have been placed together on Plates VII-XXXIII, and their interpretations, separately obtained and translated, have also been collated, commencing on page 100. Where any information was supplied by the charts of Mato Sapa or of Major Bush and their interpretation, or by other authorities, it is given in connection with the appropriate year. Reference is also made to some coincidences or explanatory manner noticed in the Corbusier system.



With regard to the Lone-Dog system, with which the present writer is more familiar, and upon which he has examined a large number of Indians during the last eight years, an attempt was made to ascertain whether the occurrences selected and represented were those peculiar to the clan or tribe of the recorder or were either of general concern or of notoriety throughout the Dakota tribes. This would tend to determine whether the undertaking was of a merely individual nature, limited by personal knowledge or special interests, or whether the scope was general. All inquiries led to the latter supposition. The persons examined were of different tribes, and far apart from each other, yet all knew what the document was, *i. e.*, that "some one thing was put down for each year;" that it was the work of Lone-Dog, and that he was the only one who "could do it," or perhaps was authority for it. The internal evidence is to the same effect. All the symbols indicate what was done, experienced, or observed by the nation at large or by its tribes without distinction—not by that of which Lone-Dog is a member, no special feat of the Yanktonais, indeed, being mentioned—and the chiefs whose deaths or deeds are noted appear to have belonged indifferently to the several tribes, whose villages were generally at great distance each from the other and from that of the recorder. It is, however, true that the Minneconjous were more familiar than other of the Dakotas with the interpretation of the characters on Lone-Dog's chart, and that a considerable proportion of the events selected relate to that division of the confederacy.

In considering the extent to which Lone-Dog's chart is understood and used among his people, it may be mentioned that the writer has never shown it to an intelligent Dakota of full years who has not known what it was for, and many of them knew a large part of the years portrayed. When there was less knowledge, there was the amount that may be likened to that of an uneducated person or child who is examined about a map of the United States, which had been shown to him before, with some explanation only partially apprehended or remembered. He would tell that it was a map of the United States; would probably be able to point out with some accuracy the State or city where he lived; perhaps the capital of the country; probably the names of the States of peculiar position or shape, such as Maine, Delaware, or Florida. So the Indian examined would often point out in Lone-Dog's chart the year in which he was born or that in which his father died, or in which there was some occurrence that had strongly impressed him, but which had no relation whatever to the character for the year in question. It had been pointed out to him before, and he had remembered it, though not the remainder of the chart.

With the interpretations of the several charts given below some explanations are furnished, but it may be useful to set forth in advance a few facts relating to the nomenclature and divisions of the tribes frequently mentioned. In the literature on the subject the great linguistic

stock or family embracing not only the Sioux or Dakotas proper, but the Missouris, Omahas, Ponkas, Osages, Kansas, Otos, Assiniboines, Gros Ventres or Minnitariis, Crows, Iowas, Mandans, and some others, has been frequently styled the Dakota Family. Major Powell, the Director of the Bureau of Ethnology, from considerations of priority, has lately adopted the name Sionan for the family, and for the grand division of it popularly called Sioux has used the term Dakota, which the people claim for themselves. In this general respect it is possible to conform in this paper to Major Powell's classification, but, specially in the details of the Winter Counts, the form of the titles of the tribes is that which is generally used, but with little consistency, in literature, and is not given with the accurate philologic literature of special scholars, or with reference to the synonymy determined by Major Powell, but not yet published. The reason for this temporary abandonment of scientific accuracy is that another course would require the correction or annotation of the whole material contributed from many sources, and would be cumbersome as well as confusing prior to the publication, by the Bureau of Ethnology, of the synonymy mentioned.

The word "Dakota" is translated in Riggs's Dictionary of that language as "leagued, or allied." Dr. J. Hammond Trumbull, the distinguished ethnographer and glossologist, gives the meaning to be more precisely "associated as comrades," the root being found in other dialects of the same group of languages for instance, in the Minnitaris, where *dúki* is the name for the clan or band, and *dakóe* means friend or comrade. In the Sioux (Dakota) dialect, *cota* or *coda* means friend, and Dakota may, literally translated, signify "our friends."

The title Sionx, which is indignantly repudiated by the nation, is either the last syllable or the two last syllables, according to pronunciation, of "Nadowesionx," which is the French plural of the Algonkin name for the Dakotas, "Nadowessi," "enemy," though the English word is not so strong as the Indian, "hated foe" being nearer. The Chippeways called an Iroquois "Nadowi," which is also their name for rattlesnake (or, as others translate, adder); in the plural, Nadowek. A Sioux they called Nadowessi, which is the same word with a contemptuous or diminutive termination; plural, Nadowessiwak or Nadowessyak. The French gave the name their own form of the plural, and the voyageurs and trappers cut it down to "Sioux."

The more important of existing tribes and organized bands into which the nation is now divided are given below, being the dislocated remains of the "Seven Great Council Fires," not only famed in tradition, but known to early white pioneers:

Yankton and Yanktonai or Ihañkto<sup>wa</sup>, both derived from a root meaning "at the end," alluding to the former locality of their villages.

Sihhasapa, or Blackfeet.

Oheño<sup>pa</sup>, or Two Kettles.

Itazipteco, Without Bow. The French translation, Sans Arc, is, however, more commonly used.

Minneconjou, translated Those who plant by the water, the physical features of their old home.

Sitca<sup>ngu</sup>, Burnt Hip or Brulé.

Santee, subdivided into Wahpeton, Men among Leaves, *i. e.*, forests, and Sisseton, Men of Prairie Marsh. Two other bands, now practically extinct, formerly belonged to the Santee, or, as it is more correctly spelled, Isanti tribe, from the root *Issan*, knife. Their former territory furnished the material for stone knives, from the manufacture of which they were called the "knife people."

Ogallalla, Ogallala, or Oglala. The meaning and derivation of this name, as well as the one next mentioned (Unepapa), have been the subjects of much controversy.

Unepapa, Unkpapa, or Hunkpapa, the most warlike and probably the most powerful of all the bands, though not the largest.

Hale, Gallatin, and Riggs designate a "Teton tribe" as located west of the Missouri, and as much the largest division of the Dakotas, the latter authority subdividing into the Sichangu, Itazipecho, Sihasapa, Minneconjou, Oheno<sup>pa</sup>, Ogallalla, and Hunkpapa, seven of the tribes specified above, which he calls bands. The fact probably is that "Teton" (from the word *ti<sup>n</sup>tan*, meaning, "at or on land without trees, or prairie") was the name of a tribe, but it is now only an expression for all those tribes whose ranges are on the prairie, and that it has become a territorial and accidental, not a tribular distinction. One of the Dakotas at Fort Rice spoke to the writer of the "hostiles" as "Titons," with obviously the same idea of locality, "away on the prairie;" it being well known that they were a conglomeration from several tribes.

It is proper here to remark that throughout the charts the totem of the clan of the person indicated is not generally given, though it is often used in other kinds of records, but instead, a pictorial representation of his name, which their selection of proper names rendered practicable. The clans are divisions relating to consanguinity, and neither coincide with the political tribal organizations nor are limited by them. The number of the clans, or distinctive totemic groups, of the Dakota is less than that of their organized bands, if not of their tribes, and considerably less than that of the totems appearing on the charts. Although it has been contended that the clan-totem alone was used by Indians, there are many other specimens of picture-writings among the Dakota where the name-totem appears, notably the set of fifty-five drawings in the library of the Army Medical Museum narrating the deeds of Sitting-Bull. A pictured message lately sent by a Dakota at Fort Rice to another at a distant agency, and making the same use of name-signs, came to the writer's notice. Captain Carver, who spent a considerable time with these Indians (called by him Nadowessies) in 1766-77, explains that "besides the name of the animal by which every nation or tribe [clan]

is denominated, there are others that are personal, which the children receive from their mother. \* \* \* The chiefs are distinguished by a name that has either some reference to their abilities or to the hieroglyphic of their families, and these are acquired after they have arrived at the age of manhood. Such as have signalized themselves either in their war or hunting parties, or are possessed of some eminent qualification, receive a name that serves to perpetuate the fame of their actions or to make their abilities conspicuous." The common use of these name-signs appears in their being affixed to old treaties, and also to some petitions in the office of Indian Affairs. Their similarity in character, use, and actual design, either with or without clan designation, affords an instructive comparison with the origin of heraldry and of modern surnames. Further remarks about the name system of Indians appear on page 169.

With reference to the Winter Counts, it is well known that the Dakotas count their years by winters (which is quite natural, that season in their high levels and latitudes practically lasting more than six months), and say a man is so many snows old, or that so many snow seasons have passed since an occurrence. They have no division of time into weeks, and their months are absolutely lunar, only twelve, however, being designated, which receive their names upon the recurrence of some prominent physical phenomenon. For example, the period partly embraced by February is intended to be the "raccoon moon"; March, the "sore-eye moon"; and April, that "in which the geese lay eggs." As the appearance of raccoons after hibernation, the causes inducing inflamed eyes, and oviposition by geese vary with the meteorological character of each year, and as the twelve lunations reckoned do not bring back the point in the season when counting commenced, there is often dispute in the Dakota tipis toward the end of winter as to the correct current date. In careful examination of the several Counts it does not appear to be clear whether the event portrayed occurred in the winter months or was selected in the months immediately before or in those immediately after the winter. No regularity or accuracy is noticed in these particulars.

The next following pages give the translated interpretation of the above mentioned charts of The-Flame, designated as No. I; of Lone-Dog, designated as No. II; and of The-Swan as No. III; and are explanations of Plates VII to XXXIII. As The-Flame's count began before the other two and ended later than those, Plates VII, VIII, and XXXIII are confined to that count, the others showing the three in connection. The red color frequently mentioned appears in the corresponding figures in Plate VI of Lone-Dog's chart as reproduced, but black takes its place in the series of plates now under consideration. Mention of the charts of Mato Sapa and of Major Bush is made where there seems to be any additional information or suggestion in them. When those charts are not mentioned they agree with that of Lone-Dog.



Reference is also made to the counts in the Corbusier system when correspondence is to be noted.

1786-'87.—No. I represents an Uncpapa chief who wore an "iron" shield over his head. It is stated that he was a great warrior, killed by the Rees. This word is abbreviated from the word Arikaree, a corrupt form of Arikara. This year in the Anno Domini style is ascertained by counting back from several well-known historical events corresponding with those on the charts.

Battiste Good's count for the same year says: "Iron-hand-band-went-on-war-path winter," and adds, "They formerly carried burdens on their backs hung from a band passed across their forehead. This man had a band of iron which is shown on his head."

1787-'88.—No. I. A clown, well known to the Indians; a mischief-maker. A Minneconjon. The interpreter could not learn how he was connected with this year. His accoutrements are fantastic. The character is explained by Battiste Good's winter count for the same year as follows:

"Left-the-heyoka-man-behind winter." A certain man was heyoka, that is, in a peculiar frame of mind, and went about the village bedecked with feathers singing to himself, and, while so, joined a war party. On sighting the enemy the party fled, and called to him to turn back also, but as he was heyoka, he construed everything that was said to him as meaning the very opposite, and, therefore, instead of turning back he went forward and was killed. The interpreter remarked if they had only had sense enough to tell him to go on, he would then have run away, but the idiots talked to him just as if he had been an ordinary mortal, and, of course, were responsible for his death.

The figure by Battiste Good strongly resembles that in this chart, giving indications of fantastic dress with the bow. The independent explanations of this figure and of some on the next page referring to dates so remote have been of interest to the present writer.

1788-'89.—No. I. Very severe winter and much suffering among the Indians. Crows were frozen to death, which is a rare occurrence. Hence the figure of the crow.

Battiste Good says: "Many-crows-died winter."

Cloud Shield says: The winter was so cold that many crows froze to death.

White-Cow-Killer calls the preceding year, 1787-'88, "Many-black-crows-died winter."

For the year 1789-'90, American-Horse says: "The cold was so intense that crows froze in the air and dropped dead near the lodges."

This is an instance of where three sets of accounts refer to the same severe cold, apparently to three successive years; it may really not have been three successive years, but that all charts referred to the same season, the fractions of years not being regarded, as above explained.



1786-'87.

1787-'88.

I



1788-'89.

1789-'90.

1790-'91.

I



1791-'92.

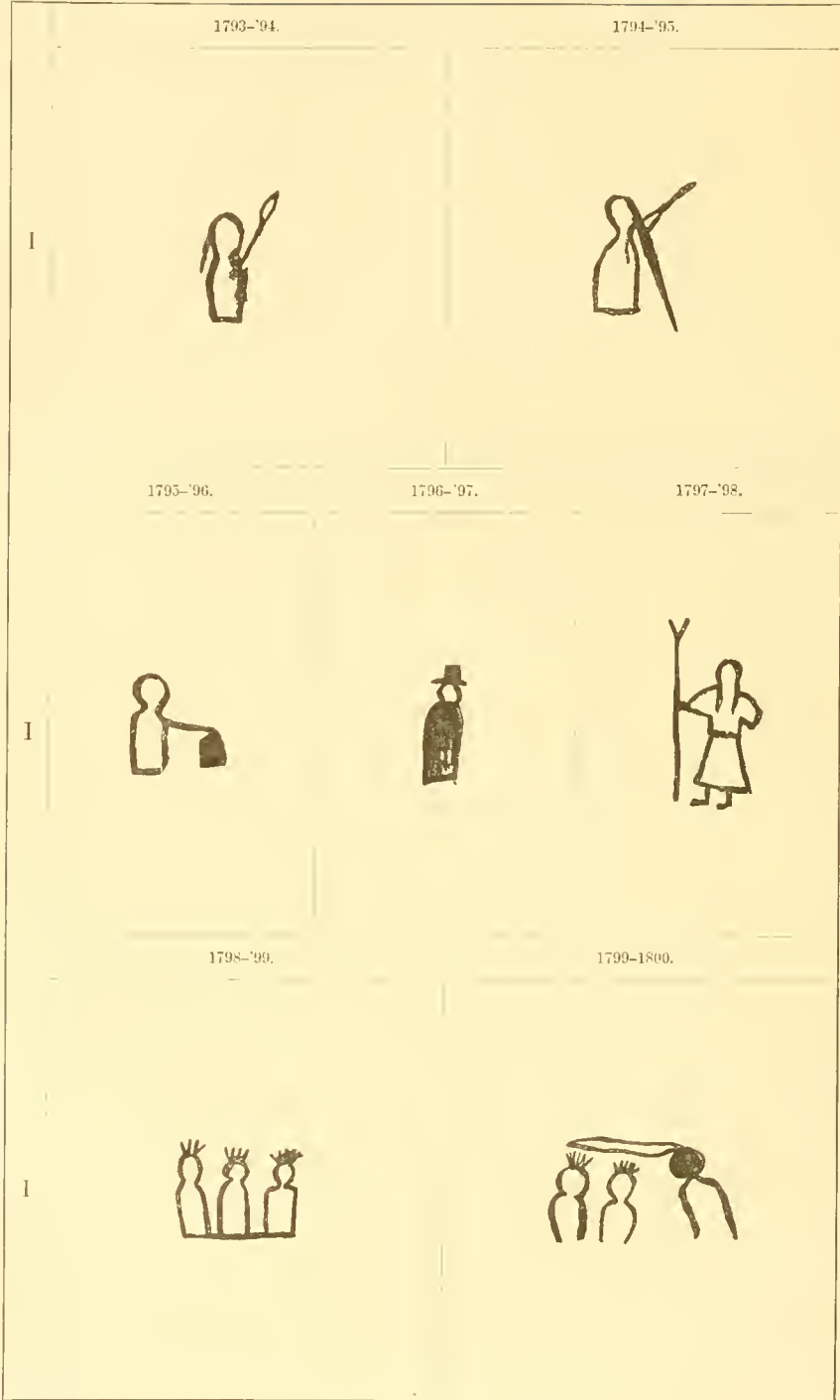
1792-'93.

I









THE DAKOTA INTER-COURTESY.

1789-'90.—No. I. Two Mandans killed by Minneconjous. The peculiar arrangement of the hair distinguishes the tribe.

The Mandans were in the last century one of the most numerous and civilized tribes of the Siouan stock. Lewis and Clarke, in 1804, say that the Mandans settled forty years before, *i. e.*, 1764, in nine villages, 80 miles below their then site (north of Knife River), seven villages on the west, and two on the east side of the Missouri. Two villages, being destroyed by the small-pox and the Dakotas, united and moved up opposite to the Arikaras, who probably occupied the same site as exhibited in the counts for the year 1823-'24.

Battiste Good says: "Killed-two-Gros-Ventres-on-the-ice winter."

1790-'91.—No. I. The first United States flag in the country brought by United States troops. So said the interpreter. No special occasion or expedition is noted.

Battiste Good says: "Carried-flag-about-with-them winter," and explains; they went to all the surrounding tribes with the flag, but for what purpose is unknown.

White-Cow-Killer says: "All-the-Indians-see-the-flag winter."

1791-'92.—No. I. A Mandan and a Dakota met in the middle of the Missouri; each swimming half way across, they shook hands, and made peace.

Mulligan, post interpreter at Fort Buford, says that this was at Fort Berthold, and is an historic fact; also that the same Mandan, long afterwards, killed the same Dakota.

Cloud-Shield says: The Sioux and Omahas made peace.

1792-'93.—No. I. Dakotas and Rees meet in camp together, and are at peace.

The two styles of dwellings, viz., the tipi of the Dakotas, and the earth lodge of the Arikaras, are apparently depicted.

Battiste Good says: "Camp-near-the-Gros-Ventres winter," and adds: "They were engaged in a constant warfare during this time." The Gros Ventres' dirt-lodge, with the entry in front, is depicted in Battiste Good's figure, and on its roof is the head of a Gros Ventre.

See Cloud-Shield's explanations of his figure for this year, page 133.

1793-'94.—No. I. Thin-Face, a noted Dakota chief, was killed by Rees.

Battiste Good says: "Killed-a-long-haired-man-at-Raw-Hide-Butte winter," adding that the Dakotas attacked a village of fifty-eight lodges, of a tribe [called by a correspondent the Cheyennes], and killed every soul in it. After the fight they found the body of a man whose hair was done up with deer-hide in large rolls, and on cutting them open, found it was all real hair, very thick, and as long as a lodge-pole. (Mem.: Catlin tells of a Crow called Long-Hair, whose hair, by actual measurement, was 10 feet 7 inches long.) The fight was at Raw-Hide Butte, now so-called by the whites, which they named Buffalo-Hide Butte because they found so many buffalo hides in the lodges.

According to Cloud-Shield, Long-Hair was killed in 1786-'87; and,



according to American-Horse, Long-Hair (a Cheyenne) was killed in 1796-'97.

White-Cow-Killer says: "Little-Face-kill winter."

Battiste Good says in his count for the succeeding year, 1794-'95, "Killed-little-face-Pawnee winter." The Pawnee's face was long, flat, and narrow like a man's hand, but he had the body of a large man.

1794-'95—No. 1. A Mandan chief killed a noted Dakota chief with remarkably long hair, and took his scalp.

White-Cow-Killer says: "Long-Hair-killed winter."

1795-'96—No. 1. While surrounded by the enemy (Mandans) a Black-foot Dakota Indian goes at the risk of his life for water for the party.

The interpreter states that this was near the present Cheyenne Agency, Dakota Territory. In the original character there is a bloody wound at the shoulder showing that the heroic Indian was wounded. He is shown bearing a water vessel.

Battiste Good gives a figure for this year recognizably the same as that in The-Flame's chart, but with a different explanation. He calls it "The Rees-stood-the-frozen-man-up-with-the-buffalo stomach-in-his-hand winter," and adds: "The body of a Dakota who had been killed in an encounter with the Rees, and had been left behind, froze. The Rees dragged it into their village, propped it up with a stick, and hung a buffalo stomach filled with ice in one hand to make sport of it. The buffalo stomach was in common use at that time as a water-jug."

White-Cow Killer calls it "Water-stomach-killed winter."

1796-'97—No. 1. A Mandan chief, "The-Man-with-the-Hat," becomes noted as a warrior. The character is precisely the same as that often given for white man. Some error in the interpretation is suggested in the absence of knowledge whether there actually was a Mandan chief so named, in which case the pictograph would be consistent.

Battiste Good says: "Wears-the-war-bonnet-died winter," adding: He did not die this winter, but received a wound in the abdomen from which the arrow head could not be extracted, but he died of the belly-ache years after.










White-Cow-Killer says: "War-Bonnet-killed winter."

The translated expression, "killed," has been noticed to refer often to a fatal wound, though the death did not take place immediately.

1797-'98.—No. 1. A Ree woman is killed by a Dakota while gathering "pomme-blanche," a root used for food. Pomme-blanche, or Navet de prairie, is a white root somewhat similar in appearance to a white turnip, botanically *Psoralea esculenta* (Nuttal), sometimes *P. argophylla*. It is a favorite food of the Indians, eaten boiled down to a sort of mush or hominy. A forked stick is used in gathering these roots.

It will be noticed that this simple statement about the death of the Arikara woman is changed by other recorders or interpreters into one of a mythical character.



	1800-'01.	1801-'02.	1802-'03.
I			
II			
III			

THE SIOUX WINTER COUNTS

Battiste Good says: "Took-the-god-woman-captive winter," adding: a Dakota war party captured a woman of a tribe unknown, who, in order to gain their respect, cried out, "I am a 'Waukan-Tanka' woman," meaning that she feared or belonged to God, the Great Spirit, whereupon they let her go unharmed.

A note is added: This is the origin of their name for God [Waka<sup>n</sup>-Taŋka], the Great Holy, or Supernatural One, they having never heard of a Supreme Being, but had offered their prayers to the sun, earth, and many other objects, believing they were endowed with spirits.

White-Cow-Killer says: "Caught-a-medicine-god-woman winter."

1798-'99.—No. I. Blackfeet Dakotas kill three Rees.

1799-1800.—No. I. Unepapas kill two Rees. The figure over the heads of the two Rees is a bow, showing the mode of death. The hair of the Arickaras in this and the preceding character is represented in the same manner.

1800-'01.—No. I. Thirty-one Dakotas killed by Crows.

No. II. Thirty Dakotas were killed by Crow Indians.

The device consists of thirty parallel black lines in three columns, the outer lines being united. In this chart, such black lines always signify the death of Dakotas killed by their enemies.

The Absaroka or Crow tribe, although classed by ethnographers as belonging to the Siouan family, has nearly always been at war with the Dakotas proper since the whites have had any knowledge of either. The official tables of 1875 give the number of Crows then living as 4,200. They are tall, well-made, bold, and noted for the extraordinary length of their hair.

No. III. Thirty Dakotas killed by the Gros Ventres Indians between Forts Berthold and Union, Dakota.

Mato Sapa's record has nine inside strokes in three rows, the interpretation being that thirty Dakotas were killed by Gros Ventres between Forts Berthold and Union, Dakota.

Major Bush says the same, adding that it was near the present site of Fort Buford.

1801-'02.—No. I. Many died of small-pox.

No. II. The small pox broke out in the nation. The device is the head and body of a man covered with red blotches.

No. III. All the Dakotas had the small-pox very bad; fatal.

Battiste Good's record says: "Small-pox-nsed-them-up-again winter."

White-Cow-Killer says: "All-sick winter."

Major Bush adds "very badly" to "small-pox broke out."

1802-'03.—No. I. First shod horses seen by Indians.

No. II. A Dakota stole horses with shoes on, *i. e.*, stole them either directly from the whites or from some other Indians who had before obtained them from whites, as the Indians never shoe their horses. The device is a horseshoe.

No. III. Blackfeet Dakotas stole some American horses having shoes on. Horseshoes seen for the first time.

Mato Sapa says: Blackfeet Dakota stole American horses with shoes on, then first seen by them.

Major Bush agrees with Mato Sapa.

White-Cow-Killer calls it "Brought-in-horseshoes winter."

Battiste Good says: "Brought-home-Pawnee-horses-with-iron shoes-on winter."

1803-'04.—No. I. A Blackfeet steals many curly horses from the Assinaboines.

No. II. They stole some "curly horses" from the Crows. Some of these horses are still seen on the plains, the hair growing in closely-curling tufts, resembling in texture the negro's woolly pile. The device is a horse with black marks for the tufts. The Crows are known to have been early in the possession of horses.

No. III. Uncapapa Dakotas stole five woolly horses from the Ree Indians.

White-Cow-Killer calls it "Plenty-woolly-horses winter."

Mato Sapa says: Uncapapa stole from the Rees five horses having curly hair.

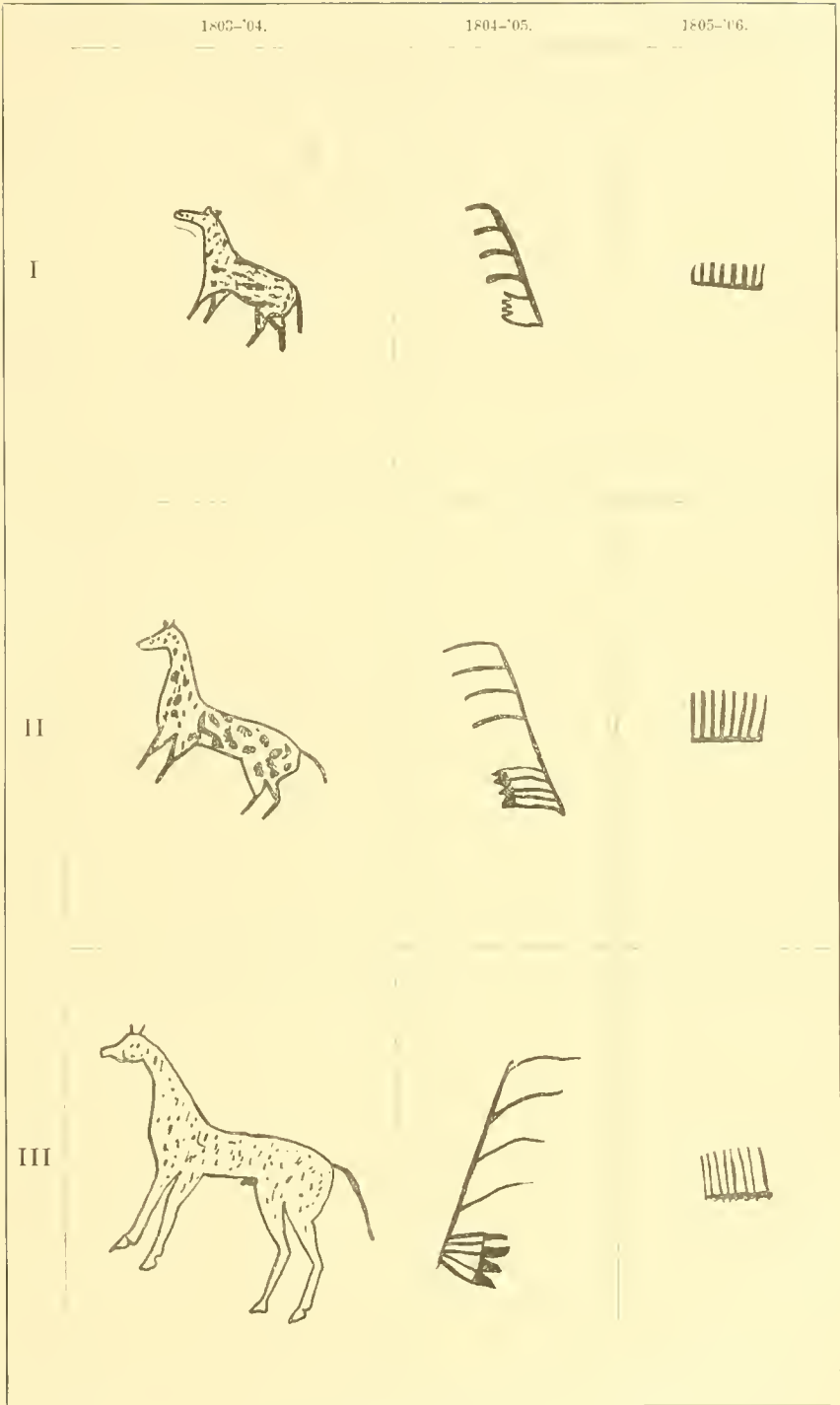
Major Bush same as last, using "woolly" instead of "curly."

Battiste Good says: "Brought-home-Pawnee-horses-with-their-hair-rough-and-curly winter."

1804-'05.—No. I. Calumet dance. Tall-Mandan born.

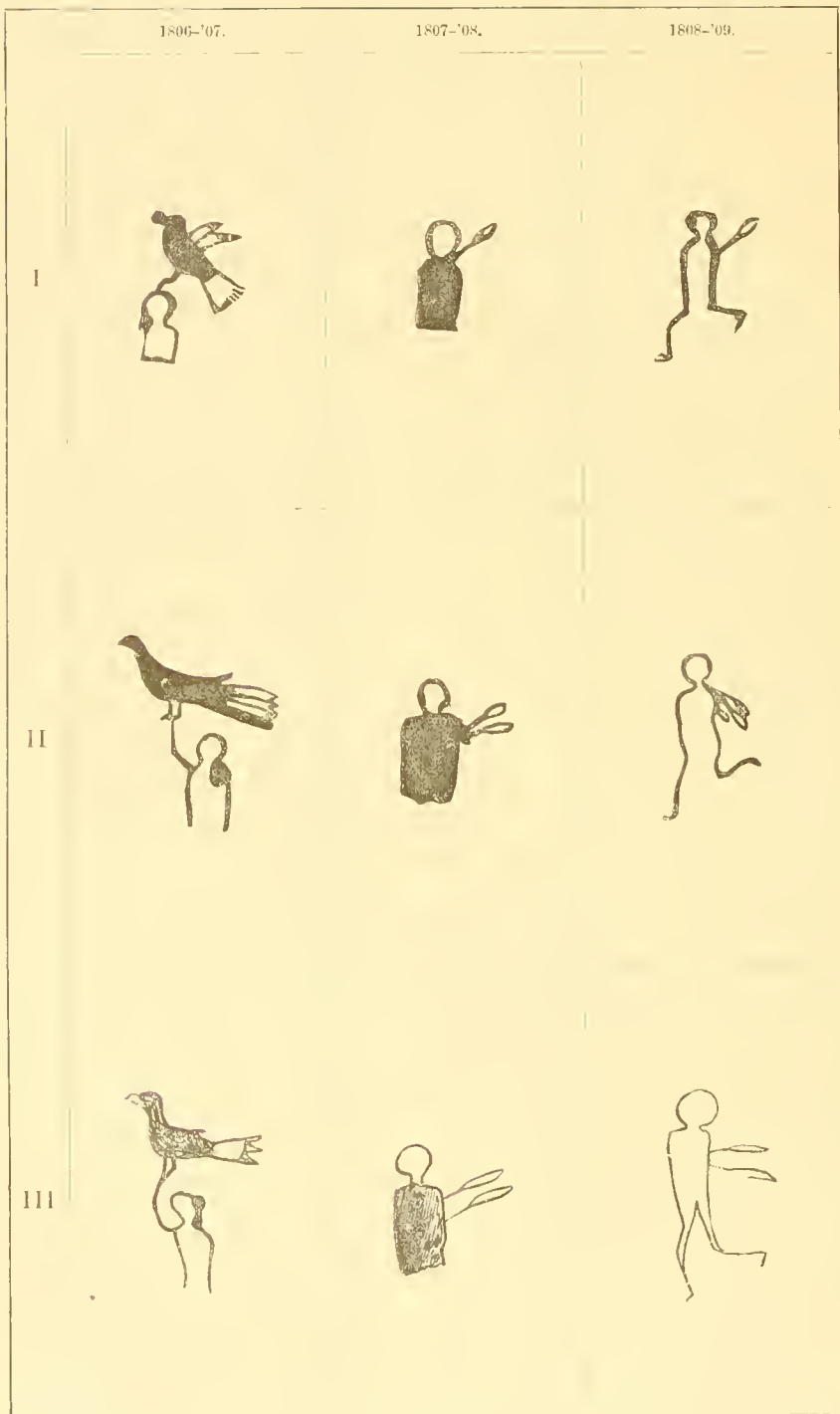
No. II. The Dakotas had a calumet dance and then went to war. The device is a long pipe-stem, ornamented with feathers and streamers. The feathers are white, with black tips, evidently the tail feathers of the adult golden eagle (*Aquila chrysaetos*), highly prized by all Indians. The streamers anciently were colored strips of skin or flexible bark; now gayly colored strips of cloth are used. The word calumet is a corruption of the French *chalumeau*, and the pipe among all the Mississippi tribes was a symbol of peace. Captain Carver, in his *Three Years' Travels Through the Interior Parts of North America*, Philadelphia, 1796, which travels began in 1766, after puzzling over the etymology of the word calumet (that honest "captain of Provincial troops" obviously not understanding French), reports it as "about 4 feet long, bowl of red marble, stem of a light wood curiously painted with hieroglyphics in various colors and adorned with feathers. Every nation has a different method of decorating these pipes and can tell at once to what band it belongs. It is used as an introduction to all treaties, also as a flag of truce is among Europeans." The event commemorated in the figure was probably a council of some of the various tribes of the nation for settlement of all internal difficulties, so as to act unitedly against the common enemy. J. C. Beltrami, who visited the Dakotas not long after this date, describes them in his *Pilgrimage*, London, 1828, as divided into independent tribes, managing their separate affairs











THE TANOITA WINTER C. UNITS.

each by its own council, and sometimes coming into conflict with each other, but uniting in a general council on occasions affecting the whole nation.

No. III. Danced calumet dance before going to war.

Battiste Good says: "Sung-over-each-other-while-on-the-war-path winter." He adds: "The war party while out made a large pipe and sang each other's praises." A memorandum is also added that the pipe here seems to indicate peace made with some other tribe assisting in the war. But see pages 118 and 139.

1805-'06.—No. I. Eight Dakotas killed by Crows.

No. II. The Crows killed eight Dakotas. Again the short parallel black lines, this time eight in number, united by a long stroke. The interpreter, Fielder, says that this character with black strokes is only used for grave marks.

No. III. Eight Minneconjon Dakotas killed by Crow Indians at the mouth of Powder River.

Battiste Good says: "They-came-and-killed-eight winter." The enemy killed eight Dakotas.

White-Cow-Killer calls it "Eight-Dakotas-killed winter."

Mato Sapa says: Eight Minneconjons killed by Crows at mouth of Powder River.

Major Bush same as last.

1806-'07.—No. I. Many eagles caught. This is done by digging a hole and baiting the eagles to the hole in which the Indian is concealed, who then catches the eagle.

No. II. A Dakota killed an Arikara as he was about to shoot an eagle. The sign gives the head and shoulders of a man with a red spot of blood on his neck, an arm being extended, with a line drawn to a golden eagle. The Arikaras, a branch of the Pawnee (Pani) family, were at the date given a powerful body, divided into ten large bands. They migrated in recent times from southeast to northwest along the Missouri River.

No. III. A Ree Indian hunting eagles from a hole in the ground killed by the Two Kettle Dakotas.

Battiste Good says: "Killed-them-while-hunting-eagles winter." Some Dakota eagle-hunters were killed by enemies.

White-Cow-Killer calls it "Killed-while-hunting-eagles winter."

Mato Sapa says: A Ree hunting eagles from a hole in the ground was killed by Two Kettles.

Major Bush says the same without the words "hole in the ground."

There is no doubt that the drawing represents an Indian in the act of catching an eagle by the legs, as the Arikaras were accustomed to catch eagles in their earth-traps. They rarely or never shot war eagles. The enemies probably shot the Arikara in his trap just as he put his hand up to grasp the bird.

1807-'08.—No. I. Red-Shirt killed by Rees.



No. II. Red-Coat, a chief, was killed. The figure shows the red coat pierced by two arrows, with blood dropping from the wounds.

No. III. Uncapapa Dakota, named Red-Shirt, killed by Ree Indians. Battiste Good says: "Came and-killed-man-with-red-shirt-on winter." White-Cow-Killer calls it "Red-shirt-killed winter."

Mato Sapa says: Red-shirt, an Uncapapa Dakota, was killed by Rees. Major Bush same as last.

1808-'09.—No. I. Broken-Leg (Dakota) killed by Rees.

No. II. The Dakota who had killed the Ree shown in this record for 1806-'07 was himself killed by the Rees. He is represented running, and shot with two arrows; blood dripping. These two figures, taken in connection, afford a good illustration of the method pursued in the chart, which was not intended to be a continuous history, or even to record the most important event of each year, but to exhibit some one of special peculiarity. War then raging between the Dakotas and several tribes, probably many on both sides were killed in each of the years; but there was some incident about the one Ree who was shot as in fancied security he was bringing down an eagle, and whose death was avenged by his brethren the second year afterward. Hence the selection of those occurrences. It would, indeed, have been impossible to have graphically distinguished the many battles, treaties, horse-stealings, big hunts, etc., so most of them were omitted and other events of greater individuality and better adapted for portrayal were taken for the calendar, the criterion being not that they were of national moment, but that they were of general notoriety, or perhaps of special interest to the recorders.

No. III. A Blackfeet Dakota, named Broken-Leg, killed by Ree Indians.

Mato Sapa says: Broken-Leg, a Blackfeet Dakota, was killed by Rees. Major Bush same as last.

1809-'10.—No. I. Little-Beaver, a white trapper, is burnt to death by accident in his house on the White River. He was liked by Indians.

No. II. A chief, Little-Beaver, set fire to a trading store, and was killed. The character is simply his name-totem. The other interpretations say that he was a white man, but he probably had gained a new name among the Indians.










No. III. White French trader, called Little-Beaver, was blown up by powder on the Little Missouri River.

Battiste Good says: "Little-Beaver's-house-burned winter." Little-Beaver was an English trader, and his trading house was a log one.

White-Cow-Killer says: Little-Beaver's house was burned.

1810-'11.—No. I. Black-Rock, a Minneconjou chief, killed. See page 135.

No. II. Black-Stone made medicine. The "medicine men" have no connection with therapeutics, feel no pulses, and administer no drugs, or, if sometimes they direct the internal or external use of some secret preparation, it is as a part of superstitious ceremonies, and with main reli-

	1809-'10.	1810-'11.	1811-'12.
I			
II			
III			

THE DAKOTA WINTER COUNTS



ance upon those ceremonies they "put forth the charm of woven paces and of waving hands," utter wild cries, and muddle in blood and filth until they sometimes work themselves into an epileptic condition. Their incantations are not only to drive away disease, but for many other purposes, such as to obtain success in war, avert calamity, and very frequently to bring within reach the buffalo, on which the Dakotas depended for food. The rites are those known as Shamanism, noticeable in the ethnic periods of savagery and barbarism. In the ceremonial of "making medicine," a buffalo head, and especially that of an albino, held a prominent place among the plains tribes. Many references to this are to be found in the Prince of Wied's Travels in the interior of North America; London, 1843; also see *infra*, pages 118, 122 and 195.

The device in the chart is the man-figure, with the head of an albino buffalo held over his own.

No. III. A Minneconjou Dakota, named Little-Tail, first made "medicine" with white buffalo cow-skin.

Mato Sapa says: A Minneconjou, named Little-Tail, first made medicine with white buffalo cow-skin.

Major Bush same as last.

American-Horse gives for the preceding year, 1809-'10: Black-Rock was killed by the Crows.

1811-'12.—No. 1. Twenty-seven Mandans surrounded and killed by Dakotas.

No. II. The Dakotas fought a battle with the Gros Ventres, and killed a great many. Device, a circle inclosing three round objects with flat bases, resembling heads severed from trunks, which latter the copy shows too minute in this device for suggestion of what they probably represent; but they appear more distinct in the record for 1864-'65 as the heads of enemies slain in battle. In the sign-language of the plains, the Dakotas are always denoted by drawing a hand across the throat, signifying that they cut the throats of their enemies. The Dakotas count by the fingers, as is common to most peoples, but with a peculiarity of their own. When they have gone over the fingers and thumbs of both hands, one finger is temporarily turned down for *one ten*. At the end of the next ten another finger is turned, and so on to a hundred. *Opawinge* [*Opawi<sup>n</sup>xe*], one hundred, is derived from *pawinga* [*pawi<sup>n</sup>xa*], to go around in circles, to make gyrations, and contains the idea that the round of all the fingers has again been made for their respective tens. So the circle is never used for less than one hundred, but sometimes signifies an indefinite number greater than a hundred. The circle, in this instance, therefore, was at first believed to express the killing in battle of many enemies. But the other interpretations remove all symbolic character, leaving the circle simply as the rude drawing of a dirt lodge, being an instance in which the present writer, by no means devoted to symbolism, had supposed a legitimate symbol to be indicated, which supposition full information on the subject did not support.

There are two wholly distinct tribes called by the Canadians Gros Ventres. One, known also as Hidatsa and Minnetari, is classed in the Siouan family, and numbered, in 1804, according to Lewis and Clarke, 2,500 souls. The other "Big Bellies," properly called Atsina, are the northern division of the Arapahos, an Algonkin tribe, from which they separated in the early part of this century, and, wandering eastward, met the Dakotas, by whom they were driven off to the north. It is probable that this is the conflict recorded, though the Dakotas have also often been at feud with their linguistic cousins, the Minnetari.

No. III. Twenty of the Gros Ventres killed by Dakotas in a dirt lodge. They were chased into a deserted Ree dirt lodge and killed there.

Mato Sapa says: Twenty Gros Ventres were killed by the Dakotas in a dirt lodge. In this record there is a circle with only one head.

Major Bush's interpretation is the same as the last.

1812-'13.—No. I. Many wild horses caught.

No. II. The wild horses were first run and caught by the Dakotas. The device is a lasso. The date is of value, as showing when the herds of prairie horses, descended from those animals introduced by the Spaniards in Mexico, or those deposited by them on the shores of Texas and at other points, had multiplied so as to extend into the far northern regions. The Dakotas undoubtedly learned the use of the horse and perhaps also that of the lasso from southern tribes, with whom they were in contact; and it is noteworthy that notwithstanding the tenacity with which they generally adhere to ancient customs, in only two generations since they became familiar with the horse they have been so revolutionized in their habits as to be utterly helpless, both in war and the chase, when deprived of that animal.

No. III. Dakotas first used lariat (*sic*) for catching wild horses.

Battiste Good says for the preceding year, 1811-'12: "First-hunted-horses winter." He adds: "The Dakotas caught wild horses in the sand-hills with braided lariats."

American-Horse also, for 1811-'12, says: They caught many wild horses south of the Platte River.

White-Cow-Killer calls 1811-'12 "Catching-wild-horses winter."

Major Bush says: Dakotas first made use of lariat in catching wild horses.

1813-'14.—No. I. Many Indians died of cold (consumption).

No. II. The whooping-cough was very prevalent and fatal. The sign is ludicrously suggestive of a blast of air coughed out by the man-figure.

No. III. Dakotas had whooping-cough, very fatal.

The interruption in the cough is curiously designed. An attempt at the same thing is made in Chart 1, and a less marked attempt appears in No. II.

1814-'15.—No. I. Hunchback, a Brulé, killed by Utes.










No. II. A Dakota killed an Arapaho in his lodge. The device repre-









	1815-'16.	1816-'17.	1817-'18.
I			
II			
III			

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sents a tomahawk or battle-ax, the red being blood from the cleft skull.

The Arapahos long dwelt near the head-waters of the Arkansas and Platte Rivers, and in 1822 numbered by report 10,000.

No. III. A Wetapahata (a stranger Indian, whose nationality was not identified by the interpreter) Indian killed by a Brulé Dakota, while on a visit to the Dakota.

Mato Sapa says: a Wetopahata Indian was killed by a Brulé Sioux while on a visit to the Dakotas.

Major Bush says the same, but spells the word Watahpahata.

Riggs gives Wi-ta-pa-ha, the Kiowas, and Ma-qpi-ya-to, the Arapahos, in the Dakota Dictionary.

1815-'16.—No. I. Large dirt lodge made by Sans Arcs. The figure at the top of the lodge is a bow.

No. II. The Sans Arcs made the first attempt at a dirt lodge. This was at Peoria Bottom, Dakota Territory. Crow-Feather was their chief, which fact, in the absence of the other charts, seemed to explain the fairly-drawn feather of that bird protruding from the lodge top, but the figure must now be admitted to be a badly drawn bow, in allusion to the tribe Sans Arc, without, however, any sign of negation. As the interpreter explained the figure to be a crow feather, and as Crow-Feather actually was the chief, Lone-Dog's chart with its interpretation may be independently correct.

No. III. Sans Arc Dakotas built dirt lodges at Peoria Bottom. A dirt lodge is considered a permanent habitation. The mark on top of the lodge is evidently a strung bow, not a feather.

Battiste Good says: "The-Sans-Arcs-made-large-house winter."

White-Cow-Killer calls it: "Made-a-house winter."

Major Bush's copy also shows a clearly drawn figure of a bow, strung. 1816-'17.—No. I. Buffalo very plenty.

No. II. "Buffalo belly was plenty." The device rudely portrays a side or perhaps hide of buffalo.

No. III. Dakotas had unusual quantities of buffalo.

1817-'18.—No. I. Trading store built at Fort Pierre.

No. II. La Framboise, a Canadian, built a trading store with dry timber. The dryness is shown by the dead tree. La Framboise was an old trader among the Dakotas. He once established himself in the Minnesota Valley. His name is mentioned by various travelers.

No. III. Trading post built on the Missouri River 10 miles above Fort Thompson.

Battiste Good says: "Chozé-built-a-house-of-dead-logs winter."

Mato Sapa says: A trading house was built on the Missouri River 10 miles above Fort Thompson.

Major Bush says the same as last, but that it was built by Louis La Conte.

1818-'19.—No. I. Many Indians died of cholera [*sic*].



No. II. The measles broke out and many died. The device in the copy is the same as that for 1801-'02, relating to the small-pox, except a very slight difference in the red blotches; and though Lone Dog's artistic skill might not have been sufficient to distinctly vary the appearance of the two patients, both diseases being eruptive, still it is one of the few serious defects in the chart that the sign for the two years is so nearly identical that, separated from the continuous record, there would be confusion between them. Treating the document as a mere *aide-de-mémoire*, no inconvenience would arise, it probably being well known that the small-pox epidemic preceded that of the measles; but such care is generally taken to make some, however minute, distinction between the characters, that possibly the figures on Lone-Dog's robe show a more marked difference between the spots indicating the two eruptions than is reproduced in the copy. It is also to be noticed that the Indian diagnosis makes little distinction between small-pox and measles, so that no important pictographic variation could be expected. The head of this figure is clearly distinguished from that in 1801-'02.

No. III. All the Dakotas had measles, very fatal.

Battiste Good says: "Small-pox-used-them-up-again winter." They at this time lived on the Little White River, about 20 miles above the Rosebud Agency. The character in Battiste Good's chart is presented here in Figure 41, as a variant from those in the plates.

Cloud-Shield says: Many died of the small-pox.

White-Cow-Killer calls it "Little-small-pox winter."

In Mato Sapa's drawing the head of the figure is distinguished from that of 1801-'02.

1819-'20.—No. I. Another trading store built.

No. II. Another trading store was built; this time by Louis La Conte, at Fort Pierre, Dakota. His timber, as one of the Indians consulted specially mentioned, was rotten.

No. III. Trading post built on the Missouri River above Farm Island (near Fort Pierre).

Battiste Good says: "Chozé-built-a-house-of-rotten-wood winter."

White-Cow-Killer calls it: "Made-a-house-of-old-wood winter."

1820-'21.—No. I. Large dirt lodge made by Two-Arrow. The projection at the top extends downward from the left, giving the impression of red and black cloth streamers.

No. II. The trader, La Conte, gave Two-Arrow a war-dress for his bravery. So translated an interpreter, and the sign shows the two arrows as the warrior's totem; likewise the gable of a house, which brings in the trader; also a long strip of black tipped with red streaming from the roof, which possibly may be the piece of parti-colored material out of which the dress was fashioned. This strip is not intended for sparks and smoke, as at first sight suggested, as the red would in that case be nearest the roof, instead of farthest from it.

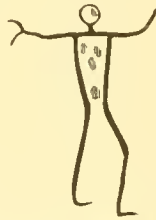











FIG. 41.—Measles or small-pox.

	1818-'19.	1819-'20.	1820-'21.
I			
II			
III			

THE DAKOTA WINTER COUNTS









No. III. A Minneconjou Dakota, named Two-Arrows, built himself a dirt medicine-lodge. This the interpreter calls, rather inaccurately, a headquarters for dispensing medicines, charms, and nostrums to the different bands of Dakotas. The black and red lines above the roof are not united and do not touch the roof.

White-Cow-Killer calls it: "Two-Arrows-made a-war-bonnet winter."

Battiste Good says: They made bands of strips of blankets in the winter.

Major Bnsh says: A Minneconjou, named Two-Arrow, made medicine in a dirt-lodge.

It will be observed that the interpreters vary in the details.

1821-'22.—No. I. Large ball of fire with hissing noise (aërolite).

No. II. The character represents the falling to earth of a very brilliant meteor, and though no such appearance is on record, there were in 1821 few educated observers near the Upper Mississippi and Missouri who would take the trouble to notify scientific societies of the phenomenon.

No. III. Dakota Indians saw an immense meteor passing from south-east to northwest which exploded with great noise (in Dakota Territory).

Red-Cloud said he was born in that year.

Battiste Good says: "Star-passed-by-with-loud-noise winter." His device is shown in Figure 42, showing the meteor, its pathway, and the clouds from which it came.

White-Cow-Killer calls it "One star-made-a-great-noise winter." See also Cloud-Shield's count, page 136.

1822-'23.—No. I. Trading store built at Little Missouri, near Fort Pierre.

No. II.—Another trading house was built, which was by a white man called Big-Leggings, and was at the mouth of the Little Missouri or Bad River. The drawing is distinguishable from that for 1819-'20.

No. III. Trading post built at the mouth of Little Missouri River.

1823-'24.—No. I. Whites and Dakotas fight Rees.

No. II. White soldiers made their first appearance in the region. So said the interpreter, Clément, but from the unanimous interpretation of others the event portrayed is the attack of the United States forces, accompanied by Dakotas, upon the Arikara villages, the historic account of which is as follows, abstracted from the annual report of J. C. Calhoun, Secretary of War, November 29, 1823:

General William H. Ashley, lieutenant-governor of the State of Missouri, a licensed trader, was treacherously attacked by the Arikara Indians at their village on the west bank of the Missouri River, about midway between the present Fort Sully and Fort Rice, on June 2, 1823. Twenty-three of the trading party were killed and wounded, and the remainder retreated in boats a considerable distance down the river,



FIG. 42—Meteor.

whence they sent appealing for succor to the commanding officer at Fort Atkinson, the present site of Council Bluffs. This officer was Col. H. Leavenworth, Sixth United States Infantry, who marched June 22, with 220 men of that regiment, 80 men of trading companies, and two 6-pound cannon, a 5½-inch brass howitzer, and some small swivels, nearly 700 miles through a country filled with hostile or unreliable Indians to the Ree villages, which, after much hardship and some losses, he reached on the 9th of August. The Dakotas were at war with the Arikara or Rees, and 700 to 800 of their warriors had joined the United States forces on the way; of these Dakotas 500 are mentioned as Yanktons, but the tribes of the remainder are not designated in the official reports. The Rees were in two villages, the lower one containing seventy-one dirt lodges and the upper seventy, both being inclosed with palisades and a ditch, and the greater part of the lodges having a ditch around the bottom on the inside. The enemy, having knowledge of the expedition, had fortified and made every preparation for resistance. Their force consisted of over 700 warriors, most of whom were armed with rifles procured from British traders. On the 9th of August the Dakotas commenced the attack, and were driven back until the regular troops advanced, but nothing decisive resulted until the artillery was employed on the 10th, when a large number of the Rees, including their chief, Grey-Eyes, were killed, and early in the afternoon they begged for peace. They were much terrified and humbled by the effect of the cannon, which, though small, answered the purpose. During the main engagement the Dakotas occupied themselves in gathering and carrying off all the corn to be found, and before the treaty was concluded, which, at the supplication of the Rees, Colonel Leavenworth agreed to, the Dakotas all left in great disgust at not being allowed to kill and scalp the surrendered warriors with their squaws and papposes, take possession of the villages, horses, etc., and in fact to exterminate their hereditary foes. However, the Rees, having become panic-stricken after the treaty and two days of peaceful intercourse with the soldiers, deserted their homes, and the troops, embarking on the 15th to descend the river, shortly saw the villages in flames, which was the work either of the Dakotas or of inimical traders.








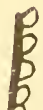

The device is believed to represent an Arikara palisaded village and attacking soldiers. Not only the remarkable character and triumphant result of this expedition, but the connection that the Dakotas themselves had with it, made it a natural subject for the year's totem.

All the winter counts refer to this expedition.

No. III. United States troops fought Ree Indians.

Battiste Good says: "General———first-appeared-and-the-Dakotas-aided-him-in-an-attack-on-the-Rees winter," also "Much corn winter." For his character see Figure 69, page 166. The gun and the arrow in contact with the ear of corn show that both whites and Indians fought the Rees.



	1824-'25.	1825-'26.	1826-'27.
I			
II			
III			

THE DAKOTA WINTER COUNTS.

White-Cow-Killer calls it "Old-corn-plenty winter."

Mato Sapa's chart gives the human figure with a military cap, beard, and goatee.

1824-'25.—No. I. All the horses of Little-Swan's father are killed by Indians through spite.

No. II. Swan, chief of the Two Kettle tribe, had all of his horses killed. Device, a horse pierced by a lance, blood flowing from the wound.

No. III. Swan, a Minneconjou Indian, had twenty horses killed by a jealous Indian.

Mato Sapa says: Swan, a Minneconjou chief, lost twenty horses killed by a jealous Indian.

Major Bush says the same.

1825-'26.—No. I. River overflows the Indian camp; several drowned. The-Flame, the recorder of this count, born. In the original drawing the five objects above the line are obviously human heads.

No. II. There was a remarkable flood in the Missouri River, and a number of Indians were drowned. With some exercise of fancy, the symbol may suggest heads appearing above a line of water, or it may simply be the severed heads, several times used, to denote Indians other than Dakotas, with the uniting black line of death.

No. III. Thirty lodges of Dakota Indians drowned by a sudden rise of the Missouri River about Swan Lake Creek, which is in Horsehead Bottom, 15 miles below Fort Rice. The five heads are more clearly drawn than in No. II.

Battiste Good says: "Many-Yanktonais-drowned winter;" adding: The river bottom on a bend of the Missouri River where they were encamped was suddenly submerged, when the ice broke and many women and children were drowned. This device is presented in Figure 43.

All the winter counts refer to this flood.

1826-'27.—No. I. All of the Indians who ate of a buffalo killed on a hunt died of it, a peculiar substance issuing from the mouth.



FIG. 43.—River freshet..

No. II. "An Indian died of the dropsy." So Basil Clément was understood, but it is not clear why this circumstance should have been noted, unless the appearance of the disease was so unusual in 1826 as to excite remark. Baron de La Hontan, a good authority concerning the Northwestern Indians before they had been greatly affected by intercourse with whites, although showing a tendency to imitate another baron—Munchausen—as to his personal adventures, in his *Nouveaux Voyages dans l'Amérique Septentrionale* specially mentions dropsy as one of the diseases unknown to them. Carver also states that this malady was extremely rare. Whether or not the dropsy was very uncommon, the swelling in this special case might have been so enormous



as to render the patient an object of general curiosity and gossip, whose affliction thereby came within the plan of the count. The device merely shows a man-figure, not much fatter than several others, but distinguished by a line extending sidewise from the top of the head and inclining downward. The other records cast doubt upon the interpretation of dropsy.

No. III. Dakota war party killed a buffalo; having eaten of it they all died.

Battiste Good says: "Ate-a-whistle-and-died winter," and adds: "Six Dakotas, on the war-path, had nearly perished with hunger, when they found and ate the rotting carcass of an old buffalo, on which the wolves had been feeding. They were seized soon after with pains in the stomach, their abdomens swelled and gas poured from the mouth, and they died of a whistle, or from eating a whistle." The sound of gas escaping from the mouth is illustrated in his figure which see in Figure 146, page 221.

White-Cow-Killer calls it "Long-whistle-sick winter."

1827-'28.—No. I. A Minneconjou is stabbed by a Gros Ventre, and his arm shrivels up.

No. II. Dead-Arm was stabbed with a knife or dirk by a Mandan. The illustration is quite graphic, showing the long-handled dirk in the bloody wound and the withered arm. Though the Mandans are also of the great Siouan family, the Dakotas have pursued them with special hatred. In 1823, their number, much diminished by wars, still exceeded 2,500.

No. III. A Minneconjou Dakota wounded with a large knife by a Gros Ventre. The large knife was a sword, and the Indian who was wounded was named, afterwards, Lame-Shoulder. This is an instance of a change of name after a remarkable event in life.

1828-'29.—No. I. Chardran, a white man, builds a house at forks of Cheyenne River. This name should probably be spelled Chadron, with whom Catlin hunted in 1832, in the region mentioned.

No. II. A white man named Shardran, who lately (as reported in 1877) was still living in the same neighborhood, built a dirt lodge. The hatted head appears under the roof.

III. Trading post opened in a dirt lodge on the Missouri a little below the mouth of the Little Missouri River.

1829-'30.—No. I. A Dakota found dead in a canoe.

No. II. Bad-Spike killed another Indian with an arrow.










No. III. A Yanktonai Dakota killed by Bad-Arrow Indians.

The Bad-Arrow Indians is a translation of the Dakota name for a certain band of Blackfeet Indians.

Mato Sapa says: a Yanktonai was killed by the Bad-Arrow Indians. Major Bush says the same as Mato Sapa.

1830-'31.—No. I. Mandans kill twenty Crows at Bear Butte.

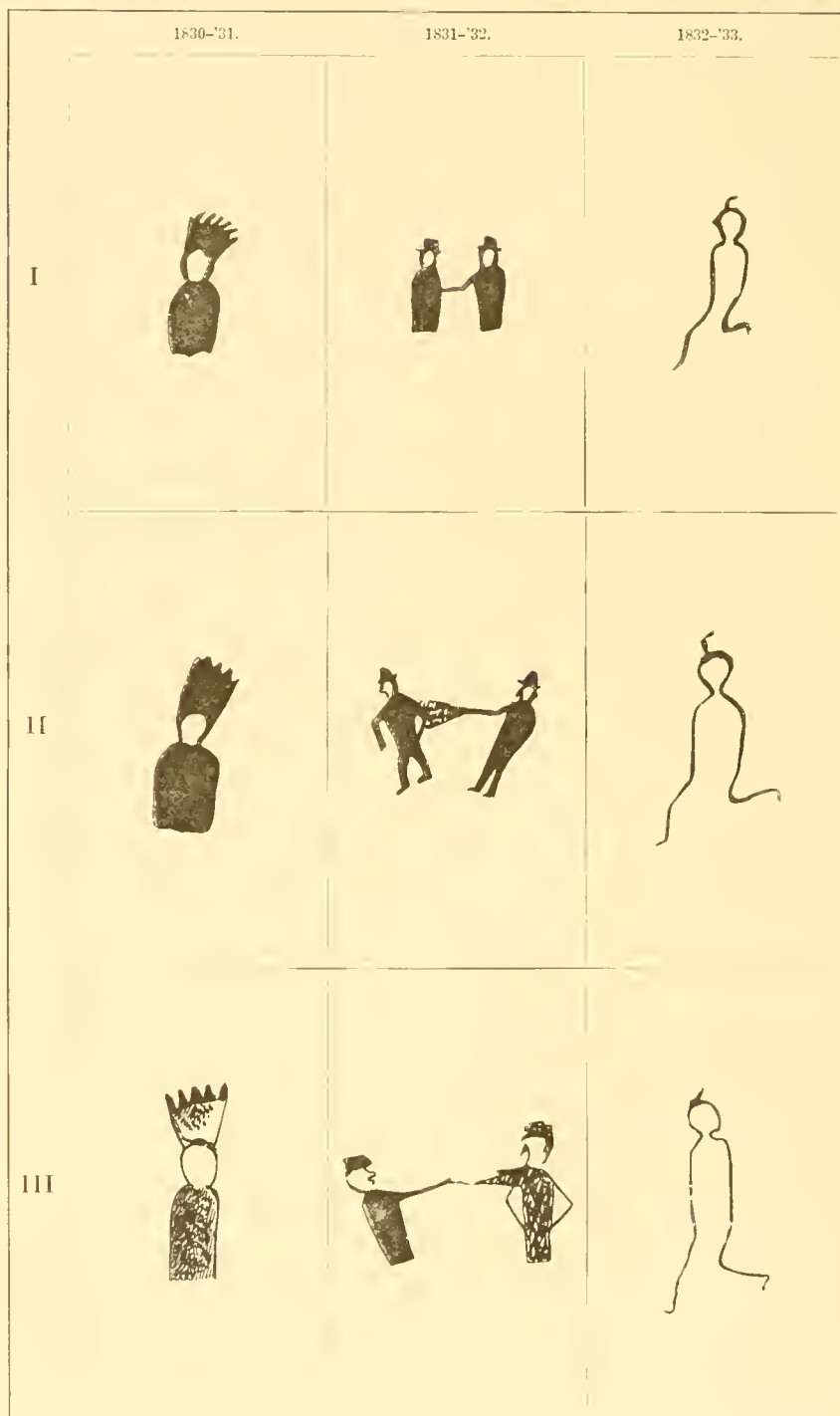
No. II. Bloody battle with the Crows, of whom it is said twenty-three

	1827-'28.	1828-'29.	1829-'30.
I			
II			
III			

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were killed. Nothing in the sign denotes number, it being only a man-figure with red or bloody body and red war bennet.

No. III. Twenty Crow and one Cheyenne Indians killed by Dakotas at Bear Butte.

Mato Sapa says: One Cheyenne and twenty Crows were killed by Dakotas at Bear Butte.

Major Bush says the same as Mato Sapa.

1831-'32.—No. I. Two white men killed by a white man at Medicine Creek, below Fort Sully.

No. II. Le Beau, a white man, killed another named Kermel. Another copy reads Kennel. Le Beau was still alive at Little Bend, 30 miles above Fort Sully, in 1877.

No. III. Trader named Le Beau killed one of his employés on Big Cheyenne River, below Cherry Creek.

1832-'33.—No. I. Lone-Horn's father broke his leg.

No. II. Lone-Horn had his leg "killed," as the interpretation gave it. The single horn is on the figure, and a leg is drawn up as if fractured or distorted, though not unlike the leg in the character for 1808-'09, where running is depicted.

No. III. A Minneconjou Dakota, Lone-Horn's father, had his leg broken while running buffalo.

Mato Sapa and Major Bush also say Lone-Horn's father.

Battiste Good says: "Stiff-leg-With-war-bonnet-on-died winter." He was killed in an engagement with the Pawnees on the Platte River.

White-Cow-Killer calls it "One-Horn's-leg-broken winter."

In Catlin's "North American Indians," New York, 1844, Vol. I, page 211, the author, writing from the mouth of Teton River, Upper Missouri, site of Fort Pierre, described Ha-won-je-tah, The One-Horn, head chief of all the bands of the Dakotas, which were about twenty. He was a bold, middle-aged man of medium stature, noble countenance, and figure almost equalling an Apollo. His portrait was painted by Catlin in 1832. He took the name of One-Horn, or One-Shell, from a simple small shell that was hanging on his neck, which descended to him from his father, and which he valued more than anything else which he possessed, and he kept that name in preference to many others more honorable which he had a right to have taken, from his many exploits.

On page 221, the same author states, that after being the accidental cause of the death of his only son, Lone-Horn became at times partially insane. One day he mounted his war-horse, vowing to kill the first living thing he should meet, and rode to the prairies. The horse came back in two hours afterwards, with two arrows in him covered with blood. His tracks were followed back, and the chief was found mangled and gored by a buffalo bull, the carcass of which was stretched beside him. He had driven away the horse with his arrows and killed the bull with his knife.

Another account in the catalogue of Catlin's cartoons gives the portrait of The One-Horn as number 354, with the statement that having killed his only son accidentally, he became deranged, wandered into the prairies, and got himself killed by an infuriated buffalo bull's horns. This was at the mouth of Little Missouri River, in 1834.

1833-'34.—No. I. Many stars fell (meteors). The character shows six black stars above the concavity of the moon.

No. II. "The stars fell," as the Indians all agreed. This was the great meteoric shower observed all over the United States on the night of November 12th of that year. In this chart the moon is black and the stars are red.

No. III. Dakotas witnessed magnificent meteoric showers; much terrified.

Battiste Good calls it "Storm-of-stars winter," and gives as the device a tipi, with stars falling around it. This is presented in Figure 44. The tipi is colored yellow in the original, and so represented in the figure according to the heraldic scheme.

White-Cow-Killer calls it "Plenty-stars winter."

All the winter counts refer to this meteoric display. See page 138.

1834-'35.—No. I. A Ree killed by a Dakota.

No. II. The chief, Medicine-Hide, was killed. The device shows the body as bloody, but not the war bonnet, by which it is distinguished from the character for 1830-'31.

No. III. An Unepapa Dakota Medicine-man killed by the Ree Indians.

Mato Sapa says: An Unepapa medicine-man was killed by Rees. There is no red on the figure.

1835-'36.—No. I. Lame-Deer killed by a Dakota. The Dakota had only one arrow. He pulled it out and shot Lame-Deer many times.

No. II. Lame-Deer shot a Crow Indian with an arrow; drew it out and shot him again with the same arrow. The hand is drawing the arrow from the first wound. This is another instance of the principle on which events were selected. Many fights occurred of greater moment, but with no incident precisely like this.

No. III. Minneconjou chief named Lame-Deer shot an Assiniboiné three times with the same arrow. He kept so close to his enemy that he never let the arrow slip away from the bow, but pulled it out and shot it in again.

Mato Sapa says a Minneconjou named Lame-Deer shot an Assiniboiné three times running with the same arrow.

Lame-Deer was a distinguished chief among the hostiles in 1876. His camp of five hundred and ten lodges was surprised and destroyed

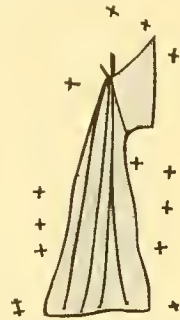
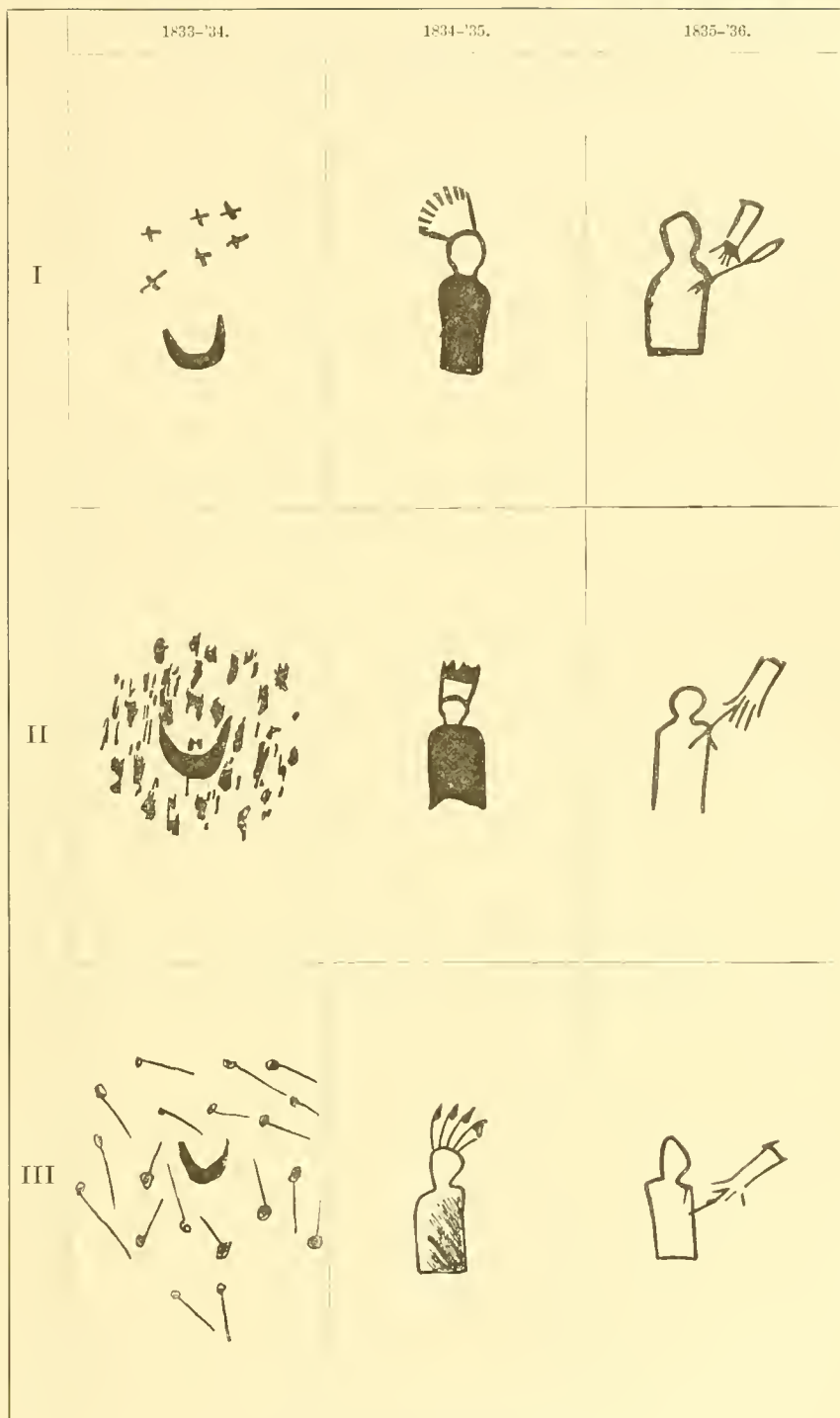


FIG. 44.—Meteoric shower.









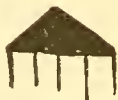


THE TAINTA WATER CUNTS.




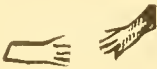











	1836-'37.	1837-'38.	1838-'39.
I			
II			
III			

THE DAKOTA WINTER COUNTS.



	1839-'40.	1840-'41.	1841-'42.
I			
II			
III			

THE DAKOTA WINTER COUNTS

by General Miles, and four hundred and fifty horses, mules, and ponies were captured.

1836-'37.—No. I. Father-of-the-Mandans died.

No. II. Band's-Father, chief of the Two Kettles, died. The device is nearly the same as that for 1816-'17, denoting plenty of buffalo belly; and the question might be raised, what the buffalo belly had to do with the demise of the lamented chieftain, unless he suffered from a fatal indigestion after eating too much of that delicacy.

Interpreter Fielder, however, throws light on the subject by saying that this character was used to designate the year when The-Breast, father of The-Band, a Minneconjou, died. The-Band himself died in 1875, on Powder River. His name was O-ye-a-pee. The character was therefore the buffalo breast, a name-totem.

No. III. Two Kettle, Dakota, named The-Breast, died.

Mato Sapa says: A Two Kettle, named The-Breast, died.

Major Bush same as Mato Sapa.

1837-'38.—No. I. Many elk and deer killed. The figure does not show the split hoof

No. II. Commemorates a remarkably successful hunt, in which it is said one hundred elk were killed. The drawing of the elk is good enough to distinguish it from the other quadrupeds in this chart.

No. III. The Dakotas killed one hundred elk at the Black Hills.

Mato Sapa says: The Dakotas killed one hundred elk at the Black Hills. His figure does not show the split hoof.

1838-'39.—No. I. Indians built a lodge on White Wood Creek, in the Black Hills, and wintered there.

No. II. A dirt lodge was built for Iron-Horn. The other dirt lodge (1815-'16) has a mark of ownership, which this has not. Perhaps it was not so easy to draw an iron horn as a crow feather, and the distinction was accomplished by omission. A chief of the Minneconjons is mentioned in General Harney's report in 1856, under the name of The-One-Iron-Horn.

No. III. A Minneconjou chief, named Iron-Horn, built dirt lodge (medicine lodge) on Moreau River (same as Owl River).

This Minneconjou chief, Iron-Horn, died a few years ago and was buried near Fort Sully. He was father-in-law of Dupuis, a French Canadian.

1839-'40.—No. I. Dakotas killed twenty lodges of Arapahos.

No. II. The Dakotas killed an entire village of Snake Indians. The character is the ordinary tipi pierced by arrows. The Snakes, or Shoshoni, were a numerous and wide-spread people, inhabiting South-eastern Oregon, Idaho, Western Montana, and portions of Utah and Nevada, extending into Arizona and California.

No. III. A Minneconjou Dakota, named The-Hard (with band), killed seven lodges of the Blue Cloud Indians.

The Blue Clouds are the Arapahos, so styled by the Dakotas, original *Maqpiyato*.

Mato Sapa says: A Minneconjou Dakota named The-Hard killed seven lodges of the Blue Cloud Indians.

Major Bush same as Mato Sapa.

1840-'41.—No. I. Red-Arm, a Cheyenne, and Lone-Horn, a Dakota, make peace.

No. II. The Dakotas made peace with the Cheyennes, a well-known tribe belonging to the Algonkin family. The symbol of peace is the common one of the approaching palms of two persons. The different coloration of the two arms distinguishes them from the approximation of the palms of one person.

No. III. Dakotas made peace with Cheyenne Indians.

1841-'42.—No. I. Feather-in-the-Ear steals horses from the Crows.

No. II. Feather-in-the-Ear stole thirty spotted ponies. The spots are shown red, distinguishing them from those of the curly horse in the character for 1803-'04.

No. III. A Minneconjou Dakota, named Feather-in-his-Ear, stole nineteen spotted horses from the Crow Indians.

Mato Sapa says: A Minneconjou named Feather-in-the-Ear stole nineteen spotted horses from the Crows.

Major Bush says the same, except that he gives the number as nine instead of nineteen.

A successful theft of horses, demanding skill, patience, and daring, is generally considered by the plains Indians to be of equal merit with the taking of scalps. Indeed, the successful horse-thief is more popular than a mere warrior on account of the riches gained by the tribe, wealth until lately being generally estimated in ponies as the unit of value.

1842-'43.—No. I. A Minneconjou chief tries to make war. The tip of the feather is black. No red in it.

No. II. One-Feather raised a large war party against the Crows. This chief is designated by his long solitary red eagle feather, and holds a pipe with black stem and red bowl, alluding to the usual ceremonies before starting on the war path. For further information on this subject see page 139. The Red-War-Eagle-Feather was at this time a chief of the Sans Ares.

No. III. Feather-in-the-Ear made a feast, to which he invited all the young Dakota braves, wanting them to go with him. A memorandum is added that he failed to persuade them. See Corbusier Winter Counts for same year, page 141.









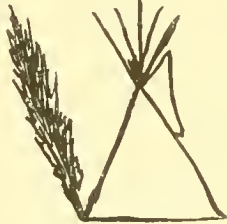
Mato Sapa says: The same man (referring to last year), Feather-in-the-Ear, made a feast inviting all Dakota young men to go to war.

Major Bush says same as Mato Sapa.

1843-'44.—No. I. Buffalo is scarce; an Indian makes medicine and brings them to the suffering.

No. II. The Sans Ares made medicine to bring the buffalo. The medicine tent is denoted by a buffalo's head drawn on it.












	1842-'43.	1843-'44.	1844-'45.
I			
II			
III			

THE DAKOTA WINTER COUNTS.





	1845-46.	1846-47.	1847-48.
I			
II			
III			

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No. III. No buffalo; Indians made medicine to the Great Spirit by painting a buffalo's head on lodge; plenty came.

Mato Sapa says: Dakotas were starving; made medicine to Great Spirit by painting buffalo head on their lodges; plenty came.

Major Bush substantially same as Mato Sapa.

1844-'45.—No. I. Mandans wintered in Black Hills.

No. II. The Minneconjons built a pine fort. Device: A pine tree connected with a tipi.

No. III. Unusually heavy snow; had to build corrals for ponies.

Major Bush says: Heavy snow, in which many of their ponies perished.

Probably the Indians went into the woods and erected their tipis there as protection from the snow, thus accounting for the figure of the tree.

1845-'46—No. I. Dakotas have much feasting at Ash Point, 20 miles above Fort Sully.

No. II. Plenty of buffalo meat, which is represented as hung upon poles and trees to dry.

No. III. Immense quantities of buffalo meat.

1846-'47.—No. I. Broken-Leg dies.

No. II. Broken-Leg died. Rev. Dr. Williamson says he knew him. He was a Brulé. There is enough difference between this device and those for 1808-'09 and 1832-'33 to distinguish each.

No. III. A Minneconjou Dakota named Broken-Leg died.

Battiste Good calls this: "The-Teal-broke-his-leg winter." The arm in his character, given in Figure 45, is lengthened so as nearly to touch the broken leg, which is shown distorted, instead of indicating the injury by the mere distortion of the leg itself as in the charts on Plate XXIV. The bird over the head and connected by a line with it, probably represents the teal as a name-totem. He was perhaps called Broken-Leg after the injury, or perhaps the other interpreters did not remember his name, only the circumstance.

Mato Sapa says: A Minneconjou named Broken-Leg died.

The Corbusier records for 1847-'48 refer to a number of accidents by which legs were broken. See page 142.

1847-'48—No. I. Mandans kill two Minneconjons.

No. II. Two-Man was killed. His totem is drawn—two small man-figures side by side.

No. III. Two Minneconjou Dakotas killed by the Assiniboine Indians.

Major Bush says: the wife of an Assiniboine chief named Big-Thunder had twins.

1848-'49.—No. I. Humpback, a Minneconjou, killed.



FIG. 45.—The-Teal-broke-his-leg.



No. II. Humpback was killed. An ornamented lance pierces the distorted back.

No. III. A Minneconjou Dakota named Broken-Back was killed by the Crow Indians at Black Hills.

Major Bush says: A Minneconjou, Broken-Back, was killed by Crows. 1849-'50.—No. I. Crows steal all the Dakotas' horses.

No. II. The Crows stole a large drove of horses (it is said eight hundred) from the Brulés. The circle may denote multitude, at least one hundred, but probably is a simple design for a camp or corral from which a number of horse-tracks are departing.

No. III. Crow Indians stole two hundred horses from the Minneconjou Dakotas near Black Hills.

Interpreter A. Lavery says: Brulés were at the headwaters of White River, about 75 miles from Fort Laramie, Wyoming. The Dakotas surprised the Crows in 1849, killed ten, and took one prisoner, because he was a man dressed in woman's clothes, and next winter the Crows stole six hundred horses from the Brulés. See page 142.

1850-'51.—No. I. Cow with old woman in her belly. Cloven hoof not shown.




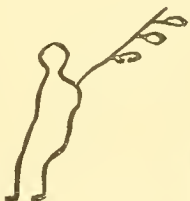


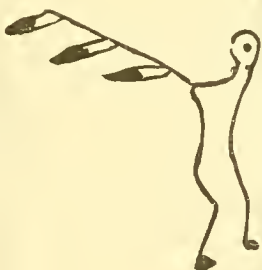


No. II. The character is a distinct drawing of a buffalo containing a human figure. Clément translated that "a buffalo cow was killed in that year, and an old woman found in her belly"; also that all the Indians believed this. Good-Wood, examined through another interpreter, could or would give no explanation, except that it was "about their religion." At first the writer suspected that the medicine men had manufactured some pretended portent out of a fetus taken from a real cow, but the Dakotas have long believed in the appearance from time to time of a monstrous animal that swallows human beings. This superstition was perhaps suggested by the bones of mastodons, often found in the territory of those Indians; and the buffalo being the largest living animal known to them, its name was given to the legendary monster, in which nomenclature they were not wholly wrong, as the horns of the fossil *Bison latifrons* are 10 feet in length. The medicine men, perhaps, announced, in 1850, that a squaw who had disappeared was swallowed by the mammoth, which was then on its periodical visit, and must be propitiated.

No. III. A Minneconjou Dakota, having killed a buffalo cow, found an old woman inside of her.

Memorandum from interpreter: A small party of Dakotas, two or three young men, returning unsuccessful from a buffalo hunt, told this story, and it is implicitly believed by the Dakotas.

Major Bush suggests that perhaps some old squaw left to die sought the carcass of a buffalo for shelter and then died. He has known that to occur.

1851-'52.—No. I. Peace made with the Crows.

	1848-49.	1849-50.	1850-51.
I			
II			
III			

THE DAKOTA WINTER COUNTS.




















	1854-'55.	1855-'56.	1856-'57.
I			
II			
III			

THE DAKOTA WINTER COUNTS.

No. II. Peace with the Crows. Two Indians, with differing arrangement of hair, showing two tribes, are exchanging pipes for a peace-smoke.

No. III. Dakotas made peace with the Crow Indians. It was, as usual, broken immediately.

The treaty of Fort Laramie was in 1851.

1852-'53.—No. I. A Crow chief, Flat-Head, comes into the tipi of a Dakota chief, where a council was assembled, and forces them to smoke the pipe of peace. This was a daring act, for he was in danger of immediate death if he failed.

No. II. The Nez Percés came to Lone-Horn's lodge at midnight. The device shows an Indian touching with a pipe a tipi, the top of which is black or opaque, signifying night. The Nez Percés are so styled by a blunder of the early travelers, as they never have been known to pierce their noses, although others of their family, the Sabaptin, do so. The tribe was large, dwelling chiefly in Idaho.

No. III. An enemy came into Lone-Horn's lodge during a medicine feast and was not killed. (The enemy numbered about fourteen and had lost their way in a snow-storm.) The pipe is not in the man's hand, and the head only is drawn with the pipe between it and the tipi.

Mato Sapa says: Several strange Indians came into the Dakota camp, were saved from being killed by running into Lone-Horn's lodge.

Major Bush says: An enemy came into Lone-Horn's lodge during a feast and was not killed.

Touch-the Clouds, a Minneconjon, son of Lone-Horn, on being shown Chart No. II by the present writer, designated this character as being particularly known to him from the fact of its being his father's lodge. He remembers all about it from talk in his family, and said it was the Nez Percés who came.

1853-'54.—No. I. Spanish blankets introduced by traders. The blanket is represented without the human figure.

No. II. Spanish blankets were first brought to the country. A fair drawing of one of those striped blankets, held out by a white trader.

No. III. Dakotas first saw the Spanish blankets.

See Corbusier records for 1851-'52, page 142.

1854-'55.—No. I. Brave-Bear killed by Blackfeet.

No. II. Brave-Bear was killed. It does not appear certain whether he had already invested in the new style of blanket or whether the extended arms are ornamented with pendent stripes. The latter is more probable.

No. III. A Minneconjon Dakota named Brave-Bear was killed by the Upper Blackfeet. [Satsika ?]

See Corbusier winter-counts for the same year, page 143.

1855-'56.—No. I. General Harney (Putin ska) makes a treaty.

No. II. General Harney made peace with a number of the tribes or

bands of the Dakotas. This was at Fort Pierre, Dakota. The figure shows an officer in uniform shaking hands with an Indian.

Executive document No. 94, Thirty-fourth Congress, first session, Senate, contains the "minutes of a council held at Fort Pierre, Nebraska, on the 1st day of March, 1856, by Brevet Brig.-Gen. William S. Harney, U. S. Army, commanding the Sioux expedition, with the delegations from nine of the bands of the Sioux, viz., the Two-Kettle band, Lower Yankton, Onepapas, Blackfeet Sioux, Minneconjous, Sans Arcs, Yancetonnais (two bands), Brulés of the Platte."

No. III. Dakotas made peace with General Harney (called by them Putinska, white beard or moustache) at Fort Pierre, Dakota.

1856-'57.—No. I. Four-Horns, a great warrior.

No. II. Four-Horn was made a calumet or medicine man. This was probably the result of an important political struggle, as there is much rivalry and electioneering for the office, which, with its triple character of doctor, priest, and magician, is one of far greater power than the chieftainship. A man with four horns holds out the same kind of ornamented pipe-stem shown in the character for 1804-'05, it being his badge of office. Four-Horn was one of the subchiefs of the Onepapas, and was introduced to General Harney at the council of 1856 by Bear-Rib, head chief of that tribe.

No. III. A Minneconjou Dakota, named Red-Fish's-Son, danced calumet dance.

Mato Sapa says the same as last.

Major Bush says, "A Minneconjou, Red-Fish's-Son, The-Ass, danced the Four-Horn calumet."

Interpreter Clément, in the spring of 1874, said that Four Horn and Sitting-Bull were the same person, the name Sitting-Bull being given him after he was made a calumet man. No other authority tells this.

1857-'58.—No. I. White-Robe kills a Crow woman. There is but one arrow and one blood spot in the character.

No. II. The Dakotas killed a Crow squaw. The stripes on the blanket are shown horizontally, Brave-Bear's, 1854-'55, and Swan's, 1866-'67, being vertical. She is pierced by four arrows, and the peace made with the Crows in 1851-'52 seems to have been short lived.








No. III. A party of Crow Indians, while on a visit to the Dakotas, had one of their number killed by a young Dakota. The figure has blood from the four arrows running down each side of the body.

Mato-Sapa says: A Crow was killed by a Dakota while on a visit to the latter.

Major Bush says substantially the same as Mato Sapa.

1858-'59.—No. I. Lone-Horn makes medicine. "At such times Indians sacrifice ponies, etc., and fast." In this character the buffalo-head is black.

No. II. Lone-Horn, whose solitary horn appears, made buffalo medicine, probably on account of the scarcity of that animal. Again the










	1857-'58.	1858-'59.	1859-'60.
I			
II			
III			

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	1860-'61.	1861-'62.	1862-'63.
I			
II			
III			

THE DAKOTA WINTER COUNTS.

head of an albino bison. One-Horn, doubtless the same individual, is recorded as the head chief of the Minneconjous at this date.

No. III. A Minneconjou chief, named Lone-Horn, made medicine with white buffalo-cow skin.

Lone-Horn, chief of Minneconjous, died in 1874, in his camp on the Big Cheyenne.

1859-'60.—No. I. Big-Crow killed.

No. II. Big-Crow, a Dakota chief, was killed by the Crows. The crow, transfixd by an arrow, is drawn so as to give quite the appearance of an heraldic crest.

No. III. A Minneconjou Dakota, named Big-Crow, was killed by the Crow Indians. He had received his name from killing a Crow Indian of unusual size.

Mato Sapa says: Big-Crow, a Minneconjou, was killed by Crows.

Major Bush says same as Mato Sapa.

1860-'61.—No. I. The-Elk-who-shows-himself-when-he-walks makes medicine.

No. II. Device, the head and neck of an elk, like that part of the animal in 1837-'38, with a line extending from its mouth, at the extremity of of which is the albino buffalo-head. "The elk made you understand his voice while he was walking." The interpreter persisted in this oracular rendering, probably not being able to fully catch the Indian explanation from want of thorough knowledge of the language. The ignorance of professed interpreters, who easily get beyond their philological depth, but are ashamed to acknowledge it, has occasioned many official blunders. This device and its interpretation were unintelligible to the writer until examination of General Harney's report above referred to showed the name of a prominent chief of the Minneconjous, set forth as "The-Elk-that-Hollows-Walking." It then became probable that the device simply meant that the aforesaid chief made buffalo medicine, which conjecture, published in 1877, the other records subsequently discovered verified.

No. III. A Minneconjou Dakota, named Red-Fish's-Son, made medicine with white buffalo-cow skin.

Mato Sapa's record agrees with No. III.

Major Bush says the same, adding, after the words "Red-Fish's-Son," "The-Ass."

Interpreter A. Lavary said, in 1867, that The-Elk-that-Hollows-Walking, then chief of the Minneconjous, was then at Spotted-Tail's camp. His father was Red-Fish. He was the elder brother of Lone-Horn. His name is given as A-hag-a-hoo-man-ie, translated The Elk's-Voice-Walking, compounded of He-ha-ka, elk, and Omani, walk—this according to Lavary's literation. The correct literation of the Dakota word meaning elk is *heqaka*; voice *ho*; and to walk, walking, *mani*. Their compound would be *Heqaka ho mani*, the translation being the same as above given.

1861-'62.—No. I. Buffalo very plenty.

No. II. Buffalo were so plenty that their tracks came close to the tipis. The cloven hoof-mark is cleverly distinguished from the tracks of horses in the character for 1849-'50.

No. III. Dakotas had unusual abundance of buffalo.

1862-'63.—No. I. Red-Plume kills an enemy.

No. II. Red-Feather, a Minneconjou, was killed. His feather is shown entirely red, while the "one-feather" in 1842-'43 has a black tip.

No. III. A Minneconjou Dakota killed an Assiniboine named Red-Feather.

Mato Sapa says: Minneconjous kill an Assiniboine named Red-Feather. Major Bush agrees with Mato Sapa.

It is to be noted that there is no allusion to the great Minnesota massacre, which commenced in August, 1862, and in which many of the Dakotas belonging to the tribes familiar with these charts, were engaged. Little-Crow was the leader. He escaped to the British possessions, but was killed in July, 1863. Perhaps the reason of the omission of any character to designate the massacre, was the terrible retribution that followed it, beginning with the rout by Colonel Sibley, on September 23, 1862. The Indian captives amounted in all to about eighteen hundred. A military commission sentenced three hundred and three to be hanged and eighteen to imprisonment for life. Thirty-eight were actually hanged, December 26, 1862, at Camp Lincoln.

1863-'64.—No. I. Crows kill eight Dakotas on the Yellowstone.

No. II. Eight Dakotas were killed. Again the short parallel black lines united by a long stroke. In this year Sitting Bull fought General Sully in the Black Hills.

Interpreter Lavary says General Sully killed seven or eight Crows at The-Place-They-Shot-The-Deer, Ta cha-con-té, about 90 miles southwest of Fort Rice, Dakota. Mulligan says that General Sully fought the Yanktonnais and the Santees at that place.

No. III. Eight Minneconjou Dakotas killed by Crow Indians.

See Corbusier Winter Counts for same year, page 144.

1864-'65.—No. I. Four Crows caught stealing horses from the Dakotas were tortured to death. Shoulders shown.

No. II. The Dakotas killed four Crows. Four of the same rounded objects, like several heads, shown in 1825-'26, but these are bloody, thus distinguishing them from the cases of drowning.

No. III. Four Crow Indians killed by the Minneconjou Dakotas. Necks shown.

1865-'66.—No. I. Many horses died.








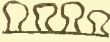

No. II. Many horses died for want of grass. The horse here drawn is sufficiently distinct from all others in the chart.

No. III. Dakotas lost many horses in the snow.

See Corbusier's Winter Counts, No. II for same year, page 144.

1866-'67.—No. I. Little Swan, a great warrior.

No. II. Swan, father of Swan, chief of the Minneconjous in 1877, died.










	1863-'64.	1864-'65.	1865-'66.
I			
II			
III			

THE DAKOTA WINTER COUNTS.







	1866-'67.	1867-'68.	1868-'69.
I			
II			
III			

THE DAKOTA WINTER COUNTS.

With the assistance of the name the object intended for his totem may be recognized as a swan swimming on the water.

No. III. Minneconjou Dakota chief, named Swan, died.

Mato Sapa's record has a better representation of a swan.

Interpreter Lavery says: Little-Swan died in this year on Cherry Creek, 75 miles northwest of Fort Sully.

Major Bush says this is historically correct.

1857-'68.—No. I. Much medicine made.

No. II. Many flags were given them by the Peace Commission. The flag refers to the visit of the Peace Commissioners, among whom were Generals Sherman, Terry, and other prominent military and civil officers. Their report appears in the Annual Report of the Commissioner of Indian Affairs for 1868. They met at Fort Leavenworth, August 13, 1867, and between August 30 and September 13 held councils with the various bands of the Dakota Indians at Forts Sully and Thompson, and also at the Yankton, Ponka, and Santee Reservations. These resulted in the great Dakota treaty of 1868.

No. III. Made peace with General Sherman and others at Fort Laramie.

Mato Sapa says: Made peace with General Sherman and others at Fort Laramie.

Major Bush agrees with Mato Sapa.

See Corbusier's Winter Counts, No. II, page 144.

1868-'69.—No. I. First issue of beef by Government to Indians.

No. II. Texas cattle were brought into the country. This was done by Mr. William A. Paxton, a well-known business man, resident in Dakota in 1877.

No. III. Dakotas had plenty of white men's cattle (the result of the peace).

Mato Sapa agrees with No. III.

1869-'70.—No. I. Eclipse of the moon.

No. II. An eclipse of the sun. This was the solar eclipse of August 7, 1869, which was central and total on a line drawn through the Dakota country. This device has been criticised because the Indians believe an eclipse to be occasioned by a dragon or aerial monster swallowing the sun, and it is contended that they would so represent it. An answer is that the design is objectively good, the sun being painted black, as concealed, while the stars come out red, *i. e.*, bright, and graphic illustration prevails throughout the charts where it is possible to employ it. In addition, it is learned that Prof. Cleveland Abbé, who was famed as an astronomer before he became so as a meteorologist, was at Sionx Falls, with a corps of assistants, to observe this very eclipse, and explained the subject to a large number of Indians there at that time, so that their attention was not only directed specially to that eclipse, but also to the white men as interested in it, and to its real appearance as apart from their old superstition.

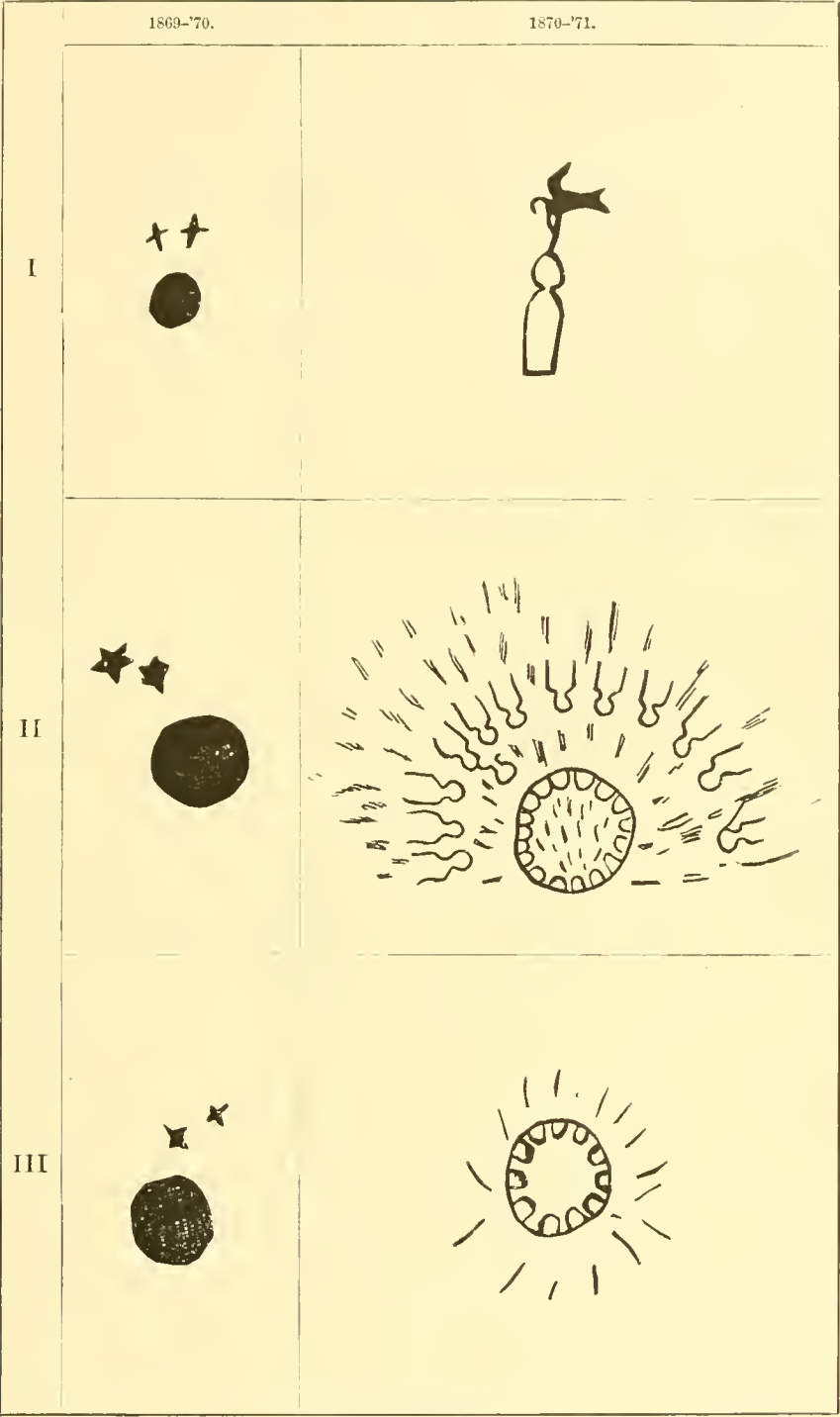
In addition to this fact, Dr. Washington Matthews, assistant surgeon United States Army, communicates the statement that the Indians had numberless other opportunities all over their country of receiving the same information. He was at Fort Rice during the eclipse and remembers that long before the eclipse occurred the officers, men, and citizens around the post told the Indians of the coming event and discussed it with them so much that they were on the tip-toe of expectancy when the day came. Two-Bears and his band were then encamped at Fort Rice, and he and several of his leading men watched the eclipse along with the whites and through their smoked glass, and then and there the phenomenon was thoroughly explained to them over and over again. There is no doubt that similar explanations were made at all the numerous posts and agencies along the river that day. The path of the eclipse coincided nearly with the course of the Missouri for over a thousand miles. The duration of totality at Fort Rice was nearly two minutes (1<sup>m</sup> 48<sup>s</sup>.)

No. III. Dakotas witnessed eclipse of the sun; frightened terribly.

It is remarkable that the Corbusier Winter Counts do not mention this eclipse.

1870-'71.—No. I. The-Flame's son killed by Rees. The recorder, The-Flame, evidently considered his family misfortune to be of more importance than the battle referred to by the other recorders.

No. II. The Uncpapas had a battle with the Crows, the former losing, it is said, 14 and killing 29 out of 30 of the latter; though nothing appears to show those numbers. The central object in the symbol is not a circle denoting multitude, but an irregularly rounded object, clearly intended for one of the wooden inclosures or forts frequently erected by the Indians, and especially the Crows. The Crow fort is shown as nearly surrounded, and bullets, not arrows or lances, are flying. This is the first instance in which any combat or killing is portrayed where guns explicitly appear to be used by Indians, though nothing in the chart is at variance with the fact that the Dakotas had for a number of years been familiar with fire arms. The most recent indications of any weapon were those of the arrows piercing the Crow squaw in 1857-'58 and Brave-Bear in 1854-'55, while the last one before them was the lance used in 1848-'49, and those arms might well have been employed in all the cases selected for the calendar, although rifles and muskets were common. There is also an obvious practical difficulty in picturing by a single character killing with a bullet, not arising as to arrows, lances, dirks, and hatchets, all of which can be and are in the chart shown projecting from the wounds made by them. Pictographs in the possession of the Bureau of Ethnology show battles in which bullets are denoted by continuous dotted lines, the spots at which they take effect being sometimes indicated. It is, however, to be noted that the bloody wound on the Ree's shoulder (1806-'07) is without any protruding weapon, as if made by a bullet.

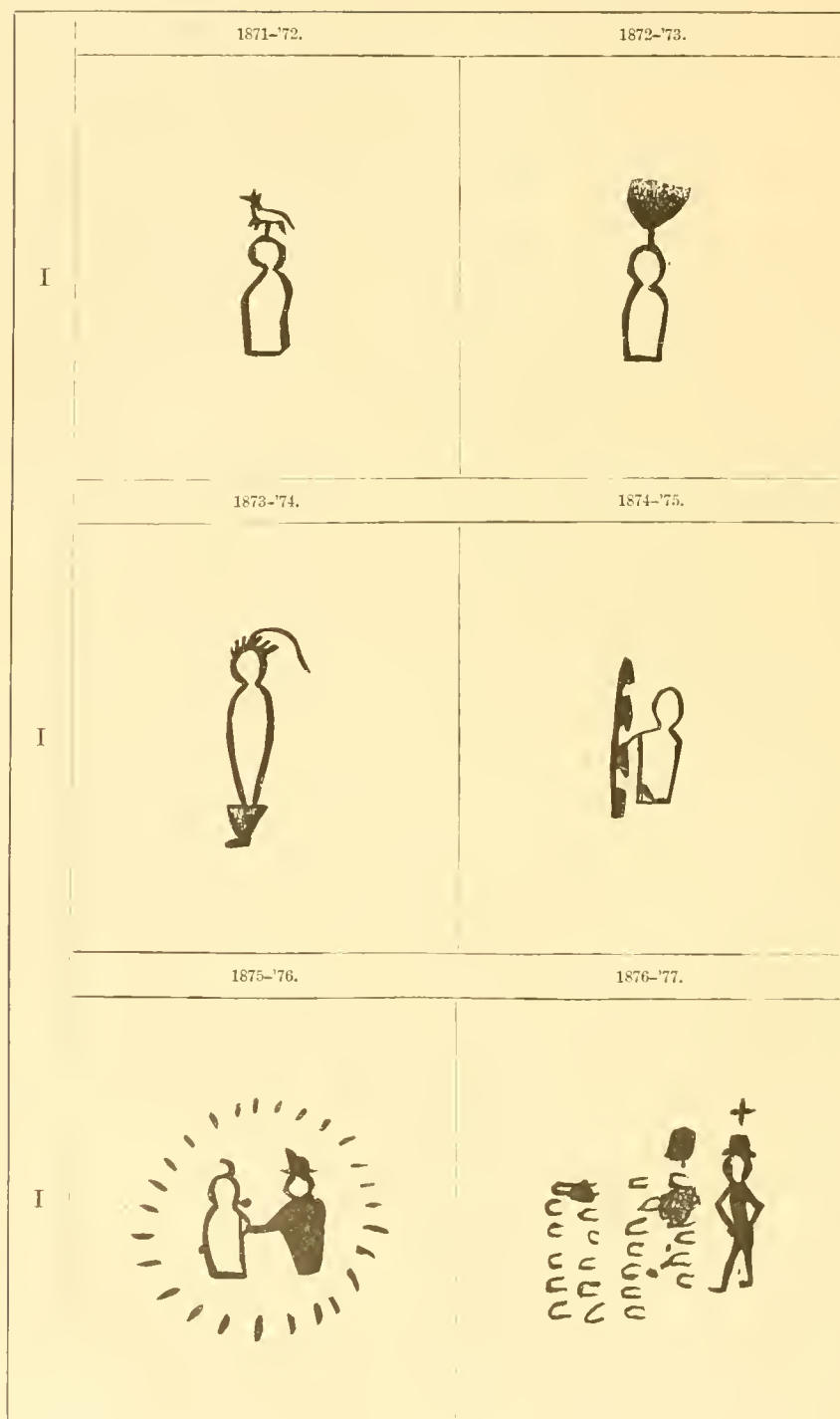


THE DAKOTA WINTER COUNTS.









HE TAKETA WINTER COUNTS

No. III. A Crow war party of 30 were surprised and surrounded in the Black Hills by the Dakotas and killed. Fourteen of the Dakotas were killed in the engagement.

1871-72.—No. I. The-Flame's second son killed by Rees.

1872-73.—No. I. Sans-Are-John killed by Rees.

1873-74.—No. I. Brulés kill a number of Pawnees.

Cloud-Shield says they killed many Pawnees on the Republican River.

1874-75.—No. I. A Dakota kills one Ree.

1875-76.—No. I. Council at Spotted Tail Agency.

1876-77.—No. I. Horses taken by United States Government.

White Cow-Killer calls it "General-Mackenzie-took-the-Red-Cloud-Indians'-horses away-from-them winter."

In the account of Lone-Dog's chart, published in 1877, as above mentioned, the present writer, on the subject of the recorder's selection of events, remarked as follows:

"The year 1876 has furnished good store of events for his choice, and it will be interesting to learn whether he has selected as the distinguishing event the victory over Custer, or, as of still greater interest, the general seizure of ponies, whereat the tribes, imitating Rachel, weep and will not be comforted, because they are not."

It now appears that two of the counts have selected the event of the seizure of the ponies, and none of them yet seen make any allusion to the defeat of Custer.

After examination of the three charts it will be conceded that, as above stated, the design is not narrative, the noting of events being subordinated to the marking of the years by them, and the pictographic serial arrangements of sometimes trivial, though generally notorious, incidents, being with special adaptation for use as a calendar. That in a few instances small personal events, such as the birth or death of the recorder or members of his family, are set forth, may be regarded as in the line of interpolations in or unauthorized additions to the charts. If they had exhibited a complete national or tribal history for the years embraced in them, their discovery would have been, in some respects, more valuable, but they are the more interesting to ethnologists because they show an attempt, before unsuspected among the tribes of American Indians, to form a system of chronology.

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#### THE CORBUSIER WINTER COUNTS.

While the present paper was in preparation, a valuable and elaborate communication was received from Dr. William H. Corbusier, assistant surgeon, United State Army, styled by him the Dakota Winter Counts, which title was adopted for the whole subject-matter, including the charts with their interpretations which had before been known to the present writer, and those from Dr. Corbusier, which furnish a different

system, are distinguished by his name. It is necessary to explain that all references in the text to colors, other than black, must be understood as applicable to the originals. Other colors could not be reproduced in the plates without an expense disproportionate to the importance of the colors for significance and comprehension.

A more important explanation is due on account of the necessity to omit from Dr. Corbusier's contribution the figures of Battiste Good's count and their interpretation. This count is in some respects the most important of all those yet made known. As set down by Battiste Good, it begins in a peculiar cyclic computation with the year A. D. 900, and in thirteen figures includes the time to A. D. 1700, all these figures being connected with legends and myths, some of which indicate European influence. From 1700-'01 to 1879-'80 a separate character for each year is given, with its interpretation, in a manner generally similar to those in the other charts. Unfortunately all of these figures are colored, either in whole or in large part, five colors being used besides black, and the drawing is so rude that without the colors it is in many cases unintelligible. The presentation at this time of so large a number of colored figures—in all one hundred and ninety-three—in addition to the other illustrations of the present paper, involved too great expense. It is hoped that this count can be so far revised, with the elimination of unessential coloration and with more precision in the outlines, as to allow of its publication. Several of its characters, with references also to its interpretation when compared with that of other counts, are given in various parts of the present paper. Where it was important to specify their coloration the heraldic scheme has been used.

The pages immediately following contain the contribution of Dr. Corbusier, diminished by the extraction of the parts comprising Battiste Good's count. Its necessary omission, as above explained, is much regretted, not only on account of its intrinsic value, but because without it the work of Dr. Corbusier does not appear to all the advantage merited by his zeal and industry.

The Dakotas reckon time by winters, and apply names to them instead of numbering them from an era. Each name refers to some notable occurrence of the winter or year to which it belongs, and has been agreed upon in council on the expiration of the winter. Separate bands have often fixed upon different events, and it thus happens that the names are not uniform throughout the nation. Ideographic records of these occurrences have been kept in several bands for many years, and they constitute the Dakota Winter-Counts (*waniyetu wówapi*) or Counts Back (*hékta yawapi*). They are used in computing time, and to aid the memory in recalling the names and events of the different years, their places in the count, and their order of succession. The enumeration of the winters is begun at the one last recorded and carried backward. Notches on sticks, war-shirts, pipes, arrows, and other de-

vices also serve a mnemonic purpose. The Counts were formerly executed in colors on the hides of animals, but the present recorders make use of paper, books, pens, pencils, and paints obtained from the whites. The alignment of the ideographs depends to some extent upon the material on which they are depicted. On robes it is spiral from right to left and from the center outward, each year being added to the coil as the snail adds to its whorl. The spiral line, frequently seen in etchings on rocks, has been explained to me as indicating a snail shell. On paper they are sometimes carried from right to left, sometimes from left to right, and again the two methods are combined as in Battiste Good's winter-count, which begins at the back of the book and is carried forward, *i. e.*, from right to left, but in which the alignment on each page is from left to right. The direction from right to left is that followed in many of their ceremonies, as when tobacco is smoked as incense to the sun and the pipe is passed around, and when the devotees in the dance to the sun enter and leave the consecrated lodge in which they fulfill their vows.

Among the Oglálas and the Brulés there are at least five of these counts kept by as many different men, each man seeming to be the recorder for his branch of the tribe. I obtained copies of three of them in 1879 and 1880, while stationed at Camp Sheridan, Nebraska, near the Pine Ridge Agency, Dakota. One winter count was made for me by Battiste Good, a Brulé Dakota, at the Rosebud Agency, Dakota, being a copy of the one of which he is the recorder. He explained the meaning of the pictographs to the Rev. William J. Cleveland, of the Rosebud Agency, to whom I am indebted for rendering his explanations into English. Several Indians and half-breeds had informed me that his count formerly embraced about the same number of years as the other two, but that Battiste Good gathered the names of many years from the old people and placed them in chronological order as far back as he was able to learn them.

Another winter count is a copy of the one in the possession of American-Horse, an Oglála Dakota, at the Pine Ridge Agency, who asserts that his grandfather began it, and that it is the production of his grandfather, his father, and himself. I received the explanations from American-Horse through an interpreter.

A third winter count is a copy of one kept by Cloud-Shield. He is also an Oglála Dakota at the Pine Ridge Agency, but of a different band from American-Horse. I also received his explanations through an interpreter. The last two counts embrace nearly the same number of years. I have added the dates to both of them, beginning at the last year, the date of which was known, and carrying them back. Two dates belong to each figure, as a Dakota year covers a portion of two of our calendar years.

I have seen copies of a fourth winter count which is kept by White-

Cow-Killer at the Pine Ridge Agency. I did not obtain a copy of it, but learned most of the names given to the winters.

On comparing the winter counts, it is found that they often correspond, but more frequently differ. In a few instances the differences are in the succession of the events, but in most instances they are due to an omission or to the selection of another event. When a year has the same name in all of them, the bands were probably encamped together or else the event fixed upon was of general interest; and, when the name is different, the bands were scattered or nothing of general interest occurred. Differences in the succession may be due to the loss of a record and the depiction of another from memory; or to errors in copying an old one.

The explanations of the counts are far from complete, as the recorders who furnished them could in many instances recall nothing except the name of the year, and in others were loth to speak of the events or else their explanations were vague and unsatisfactory, and, again, the interpreters were sometimes at fault. Many of the recent events are fresh in the memory of the people, as the warriors who strive to make their exploits a part of the tribal traditions proclaim them on all occasions of ceremony—count their *coups*, as it is called. Declarations of this kind partake of the nature of affirmations made in the presence of God. War-shirts on which scores of the enemies killed are kept, and which are carefully transmitted from one generation to another, help to refresh their memories in regard to some of the events. By testing many Indians I learned that but few could interpret the significance of the figures; some of them could point out the year of their birth and that of some members of their families; others could not do so, or pretended that they could not, but named the year and asked me to point it out and tell their age.

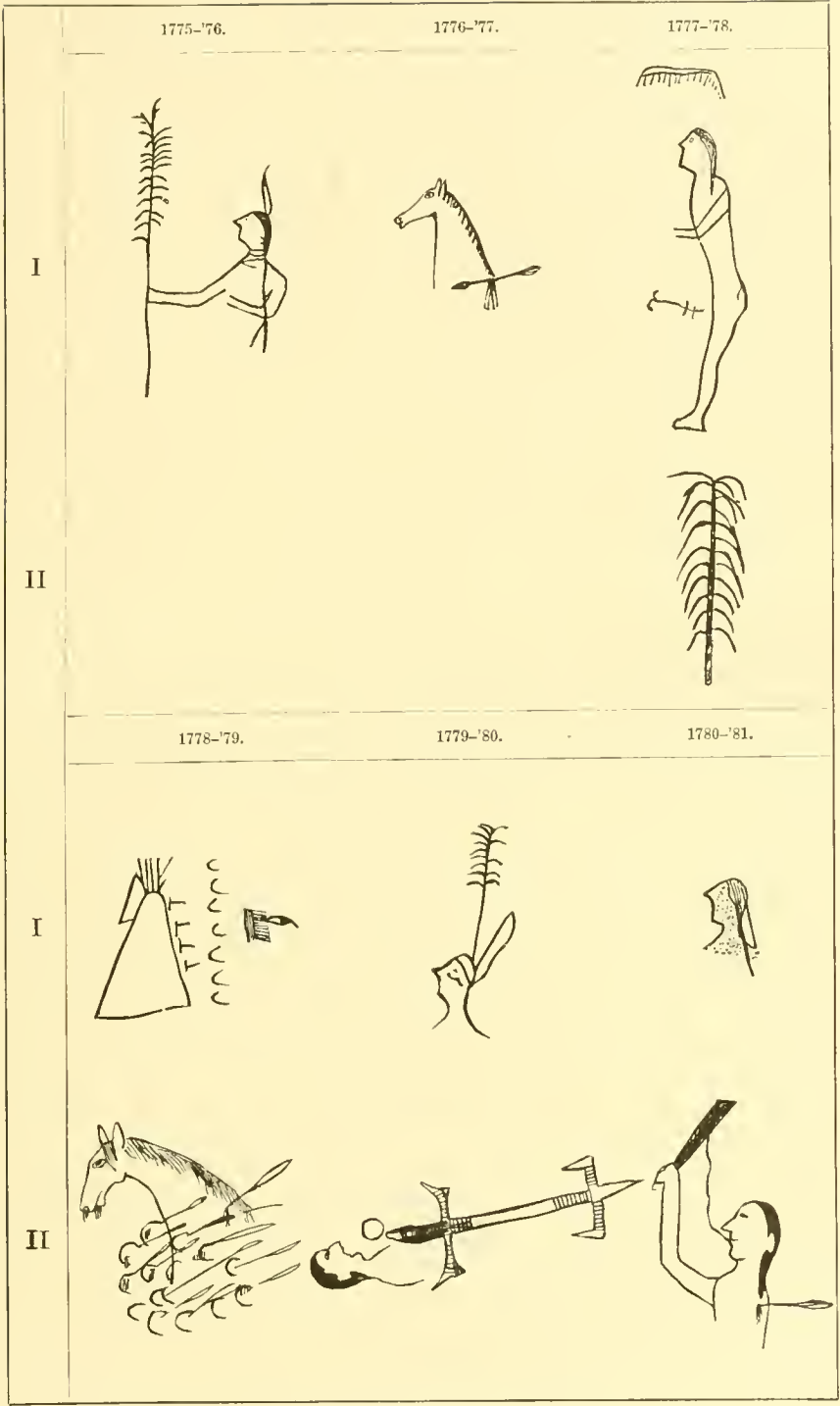
In the following explanation of the winter counts, [figured on Plates XXXIV–LI.] No. I refers to that of American-Horse and No. II to that of Cloud-Shield.

1775–'76.—No. I. Standing-Bull, the great-grandfather of the present Standing-Bull, discovered the Black Hills. He carried home with him a pine tree of a species he had never seen before. (In this count the Dakotas are usually distinguished by the braided scalp-lock and the feather they wear at the crown of the head, or by the manner in which they brush back and tie the hair. It will be noticed that the profile of most of the faces is given, whereas Battiste Good gives the full face. The Dakotas have of late years claimed the Black Hills, probably by right of discovery in 1775–'76; but the Crows were the former possessors.)

This is also the first winter of White-Cow-Killer's count and is called "Two-warriors-killed winter."

1776–'77.—No. I. Many of their horses were killed by some of their own people, who were jealous because they were fatter than their own.

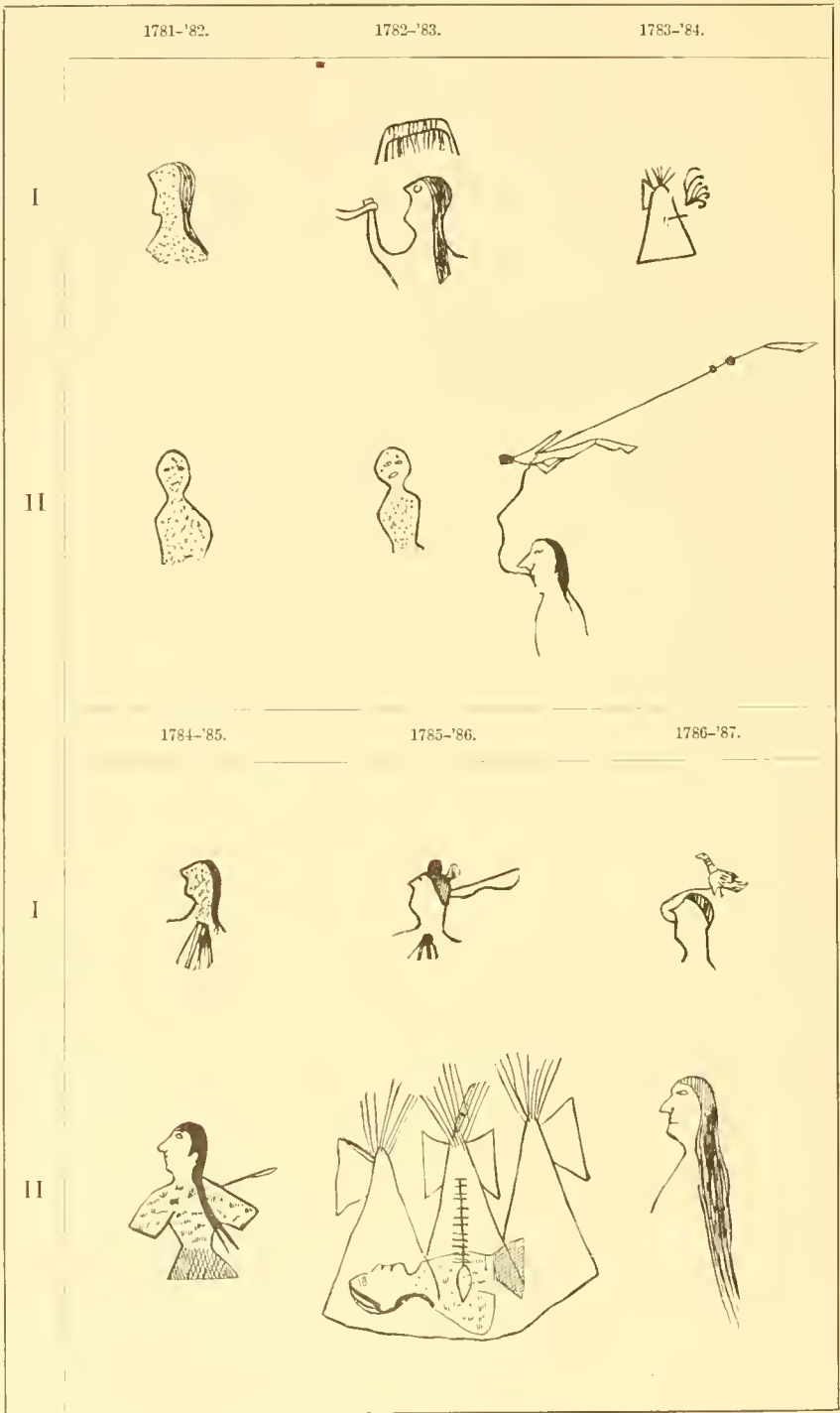




THE CORBUSIER WINTER COUNTS.







THE CORBUSIER WINTER COUNTS.

1777-'78.—No. I. It was an intensely cold winter, and the Man-who-has-no-skin-on-his-penis froze to death. The sign for snow or winter, *i. e.*, a clond with snow falling from it, is above his head. A haka-stiek, which, in playing that game, they cast after a ring, is represented in front of him.

Battiste Good's record is that a Dakota named Skinned-Penis was killed in a fight with the Pawnees, and his companions left his body where they supposed it would not be found, but the Pawnees found it, and as it was frozen stiff, they dragged it into their camp and played haka with it.

No. II. A war party brought in the lone pine tree from the enemy's country. They met no enemies while out. This event is also the first in No. I, in which it marks the winter of 1775-'76.

1778-'79.—No. I. The Ponkas came and attacked a village, notwithstanding peace had just been made with them. The people repulsed and followed them, killing sixty. Some elk-hair and a feather represent Ponka. Horse tracks are used for horses. Attack is indicated by signs which were said to represent bullet marks, and which convey the idea that the bullet struck. The sign seems to be derived from the gesture-sign for "it struck."

No. II. Many of their horses were killed, but by whom is not known. The same event is recorded in No. I, 1776-'77.

1779-'80.—No. I. Long-Pine was killed in a fight with the Crows. The absence of his scalp denotes that he was killed by an enemy. The wound was made with the bow and arrow.

No. II. Skinned-his-penis was used in the ring-and-pole game.

1780-'81.—No. I. Many died of small-pox.

No. II. "The policeman" was killed by the enemy.

1781-'82.—No. I. Many died of small-pox.

No. II. Many people died of small-pox. They all record two successive winters of small-pox, but No. I makes the first year of the epidemic one year later than that of Battiste Good, and No. II makes it two years later.

1782-'83.—No. I. A Dakota named Stabber froze to death. The sign for winter is the same as before.

No. II. Many people died of small-pox again.

1783-'84.—No. I. The Mandans and Rees made a charge on a Dakota village. The Dakotas drove them back, killed twenty five of them, and captured a boy. An eagle's tail, which is worn on the head, stands for Mandan and Ree.

No. II. The Stabber froze to death. The man's name is suggested by the spear in the body over his head, which is connected with his mouth by a line.

White-Cow-Killer calls it "Big-fire winter," possibly because big fires were required to keep them warm.

1784-'85.—No. I. A young man who was afflicted with the small-pox,

and was in his tipi, off by himself, sang his death-song and shot himself. Suicide is more common among Indians than is generally suspected, and even boys sometimes take their own lives. A Dakota boy at one of the agencies shot himself rather than face his companions after his mother had whipped him, and a Pai-Ute boy at Camp McDermitt, Nevada, tried to poison himself with the wild parsnip because he was not well and strong like the other boys. The Pai-Utes usually eat the wild parsnip when bent on suicide.

No. II. An Omaha woman who was living with the Oglálas attempted to run away from them, and they killed her. A war between the two tribes was the result.

1785-'86.—No. I. Bear's-Ears, a Brulé, was killed in an Oglála village by the Crows.

No. II. The Oglálas killed three lodges of Omahas.

1786-'87.—No. I. Broken-Leg-Duck, an Oglála, went to a Crow village to steal horses and was killed. A line connects the name with the mouth.

No. II. Long-Hair was killed. To what tribe he belonged is not known.

1787-'88.—No. I. They went out in search of the Crows in order to avenge the death of Broken-Leg-Duck. They did not find any Crows, but, chancing on a Mandan village, captured it and killed all the people in it.

No. II. A year of famine. They lived on roots, which are represented in front of the tipi.

1788-'89.—No. I. Last-Badger, an Oglála, was killed by the Rees.

No. II. The winter was so cold that many crows froze to death.

White-Cow-Killer calls 1787-'88 "Many-black-crows-died winter."

1789-'90.—No. I. The cold was so intense that crows froze in the air and dropped dead near the lodges.

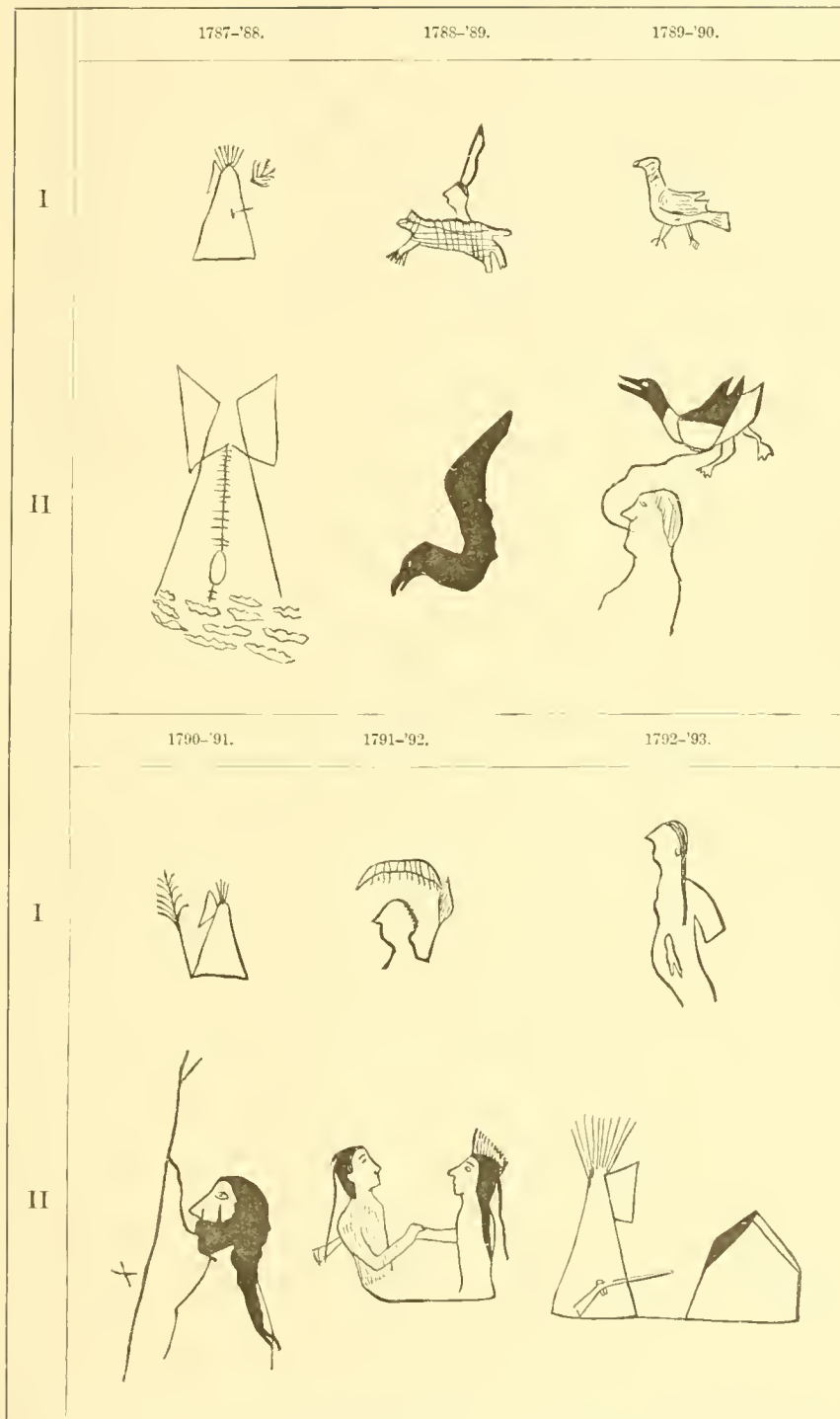
No. II. White-Goose was killed in an attack made by some enemies.

White-Cow-Killer calls it "Goose-Feather-killed winter."

1790-'91.—No. I. They could not hunt on account of the deep snow, and were compelled to subsist on anything they could get, as herbs (pézi) and roots.

No. II. Picket-Pin went against the Cheyennes. A picket-pin is represented in front of him and is connected with his mouth by the usual line. The black band across his face denotes that he was brave and had killed enemies. The cross is the symbol for Cheyenne. The mark used for Cheyenne stands for the scars on their arms, or stripes on their sleeves, which also gave rise to the gesture sign for this tribe, given in Sign Language among the North American Indians, etc., First Annual Report of the Bureau of Ethnology, p. 465, viz.: Draw the extended right index, or the inner edge of the open right hand, several times across the base of the extended left index or across the left forearm at different heights.

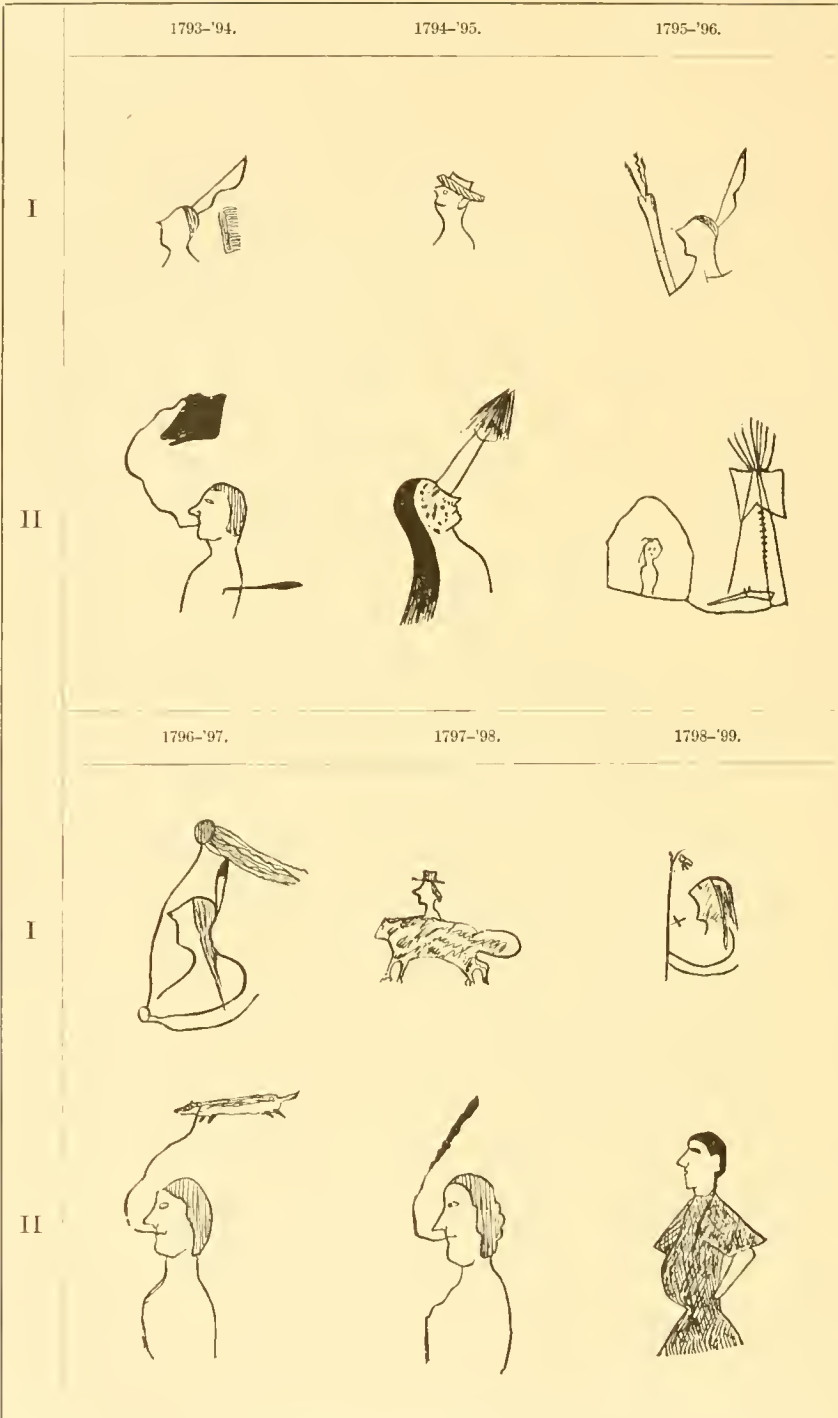




THE CORBUSIER WINTER COUNT.







THE CORBUSIER WINTER COUNTS

White-Cow-Killer calls it "All-the-Indians-see-the-flag winter."

1791-'92.—No. I. Glue, an Oglála, froze to death on his way to a Brulé village. A glue-stick is represented back of his head. Glue, made from the hoofs of buffalo, is used to fasten arrow-heads on, and is carried about on sticks.

No. II. The Dakotas and Omahas made peace.

1792-'93.—No. I. Many women died in child-birth.

No. II. The Dakotas camped on the Missouri River near the Gros Ventres and fought with them a long time. The Dakota tipi and the Gros Ventre lodge are shown in the figure.

White-Cow-Killer calls it "Rees-house-winter."

1793-'94.—No. I. A Ponka who was captured when a boy by the Oglálas was killed while outside the village by a war party of Ponkas.

No. II. Bear's-Ears was killed in a fight with the Rees.

White-Cow-Killer calls it "Little-Face-killed winter."

1794-'95.—No. I. The-Good-White-Man came with two other white men. He promised that if they would let him and his companions go undisturbed he would return and bring with him weapons with which they could kill game with but little labor. They gave them buffalo robes and dogs to pack them on and sent the party off. The sign for white man is a hat, either by itself or on a head, and the gesture-sign indicates one who wears a hat. Draw the open right hand horizontally from left to right across the forehead a little above the eyebrows, the back of the hand to be upward and the fingers pointing toward the left, or draw the index across the forehead in the same manner.

No. II. Bad-Face, a Dakota, was shot in the face.

White-Cow-Killer calls it "Long-Hair-killed winter."

1795-'96.—No. I. The-Man-Who-Owns-the-Flute was killed by the Cheyennes. His flute is represented in front of him with sounds coming from it. A bullet mark is on his neck.

No. II. The Dakotas camped near the Rees and fought with them.

White-Cow-Killer calls it "Water-Stomach-killed winter."

1796-'97.—No. I. They killed the long-haired man in a fight with the Cheyennes while on an expedition to avenge the death of The-Man-Who-Owns-the-Flute, who was killed by the Cheyennes the year before.

No. II. Badger, a Dakota, was killed by enemies, as shown by the absence of his scalp.

White-Cow-Killer calls it "War-Bonnet-killed winter."

1797-'98.—No. I. Little-Beaver and three other white men came to trade, having been sent by the Good-White-Man. Their goods were loaded on three sleds, each drawn by six dogs.

No. II. The-Wise-Man was killed by enemies.

White-Cow-Killer calls it "Caught-the-medicine-god-woman-winter."

1798-'99.—No. I. Owns-the-Pole, the leader of an Oglála war party, brought home many Cheyenne scalps. The cross stands for Cheyenne.

No. II. Many women died in child-birth.

White-Cow-Killer says, "Many-squaws-died winter."

1799-1800.—No. I. The Good-White-Man returned and gave guns to the Dakotas. The circle of marks represents the people sitting around him, the flint-lock musket the guns.

No. II. A woman who had been given to a white man by the Dakotas was killed because she ran away from him. [See No. I, 1804-'05.]

White-Cow-Killer says, "The-Good-White-Man-came winter."

1800-'01.—No. I. Nine white men came to trade with them. The covered head with short hair stands for a white man and also intimates that the eight dots over it are for white men. According to this count the first whites came in 1794-'95.

No. II. The Good-White-Man came. He was the first white man to trade and live with the Dakotas.

White-Cow-Killer calls it "Don't-Eat-Heart-makes-a-god-house winter."

1801-'02.—No. I. The Oglálas, Brulé, Minneconjous, Sans Arcs, and Cheyennes united in an expedition against the Crows. They surprised and captured a village of thirty lodges, killed all the men, and took the women and children prisoners. The three tipis stand for thirty; the red spots are for blood.

No. II. A trader brought them their first guns.

White-Cow-Killer says, "All-sick-winter."

1802-'03.—No. I. The Ponkas attacked two lodges of Oglálas, killed some of the people, and made the rest prisoners. The Oglálas went to the Ponka village a short time afterward and took their people from the Ponkas. In the figure an Oglála has a prisoner by the arm leading him away. The arrow indicates that they were ready to fight.

No. II. The Omahas made an assault on a Dakota village. Arrows and bullets are flying back and forth.

White-Cow-Killer calls it "Brought-in-horse-shoes winter."

1803-'04.—No. I. They made peace with the Gros Ventres.

No. II. Little-Beaver, a white trader, came.

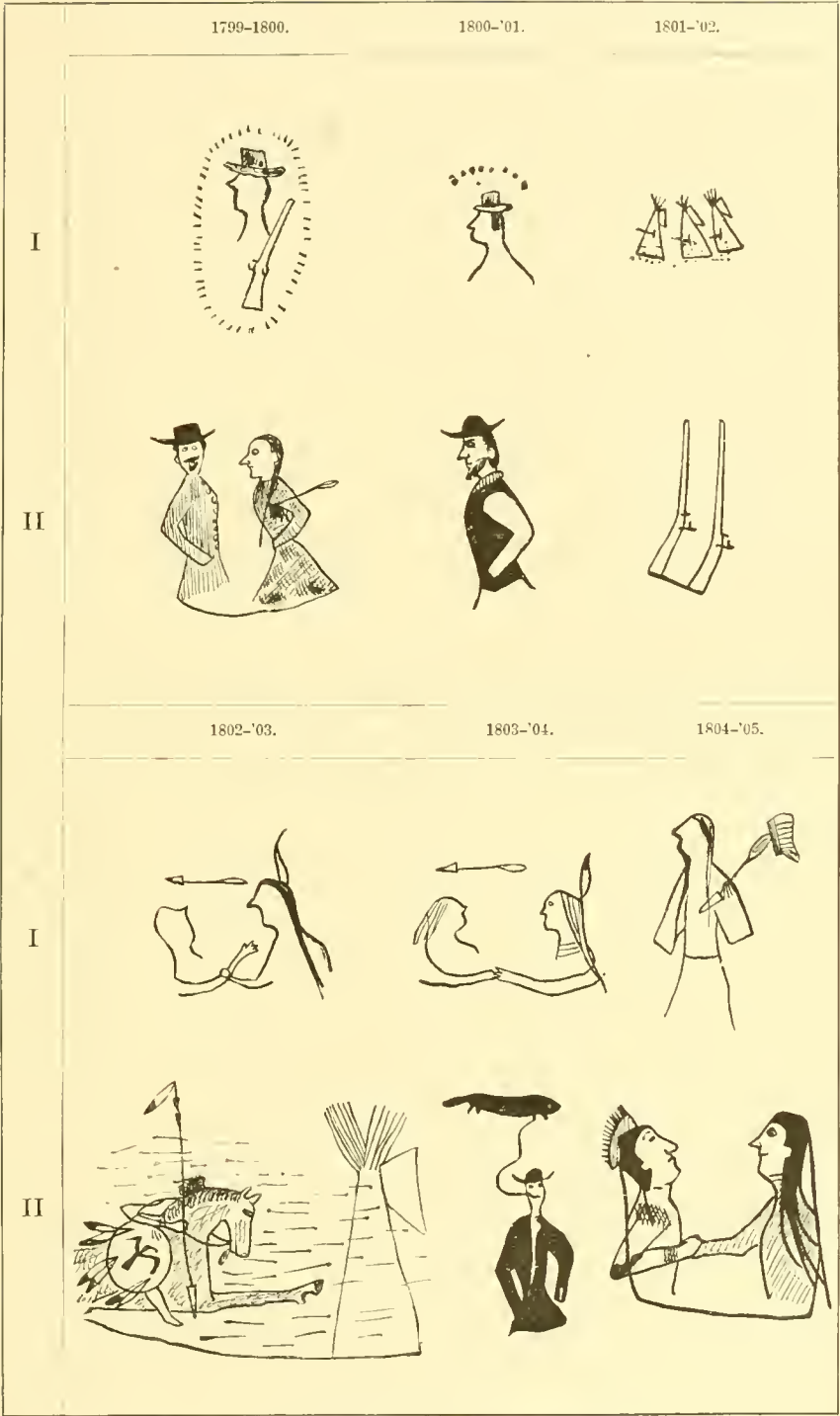
White-Cow-Killer calls it "Plenty-of-woolly-horses winter."

1804-'05.—No. I. An Indian woman who had been unfaithful to a white man to whom she was married was killed by an Indian named Ponka. The symbol for Ponka indicates the name.

No. II. The Omahas came and made peace to get their people, whom the Dakotas held as prisoners.

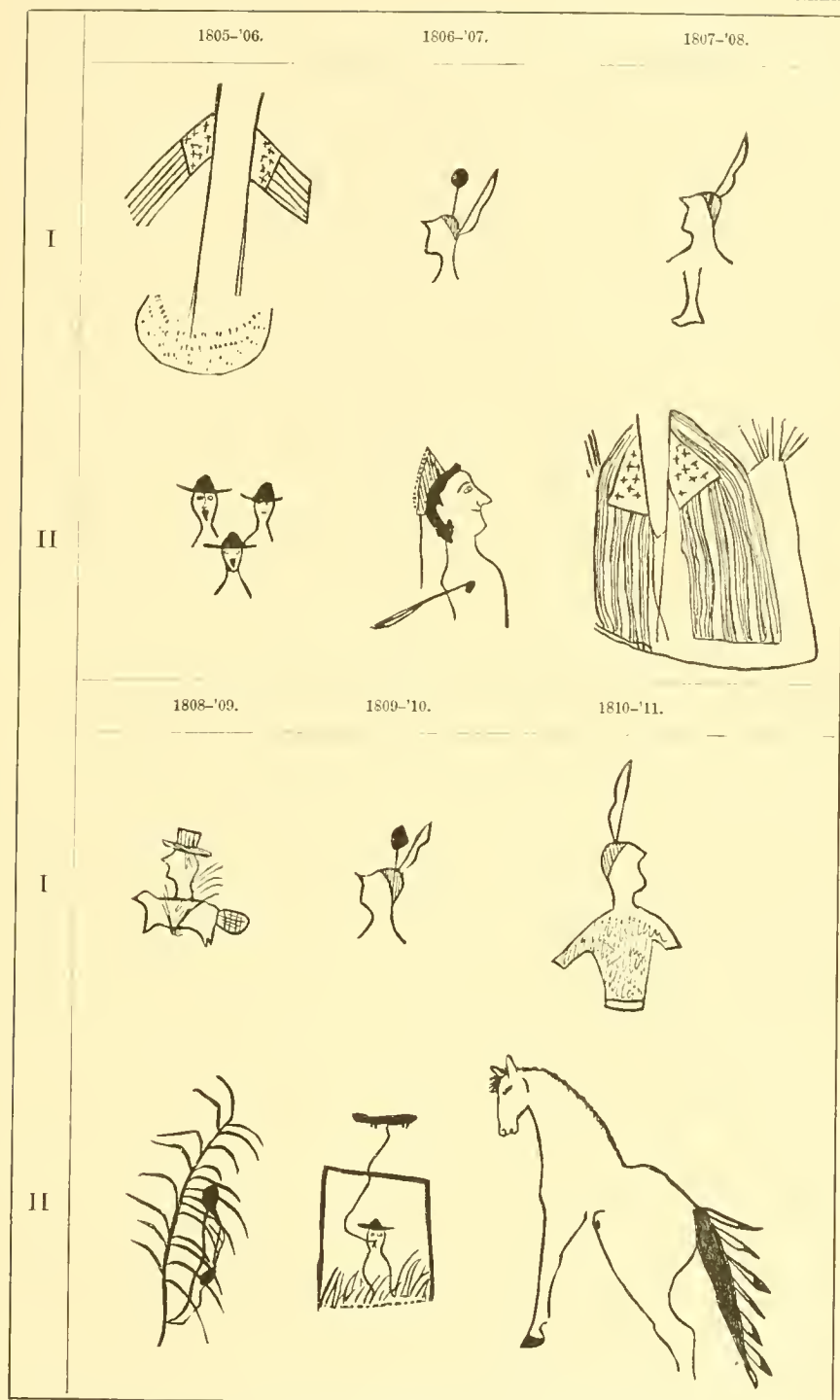
1805-'06.—No. I. The Dakotas had a council with the whites on the Missouri River, below the Cheyenne Agency, near the mouth of Bad Creek (the Lewis and Clarke Expedition?). They had many flags, which the Good-White-Man gave them with their guns, and they erected them on poles to show their friendly feelings. The curved line is to represent the council lodge, which they made by opening several tipis and uniting them at their sides to form a semicircle. The marks are for the people. American-Horse's father was born this year.





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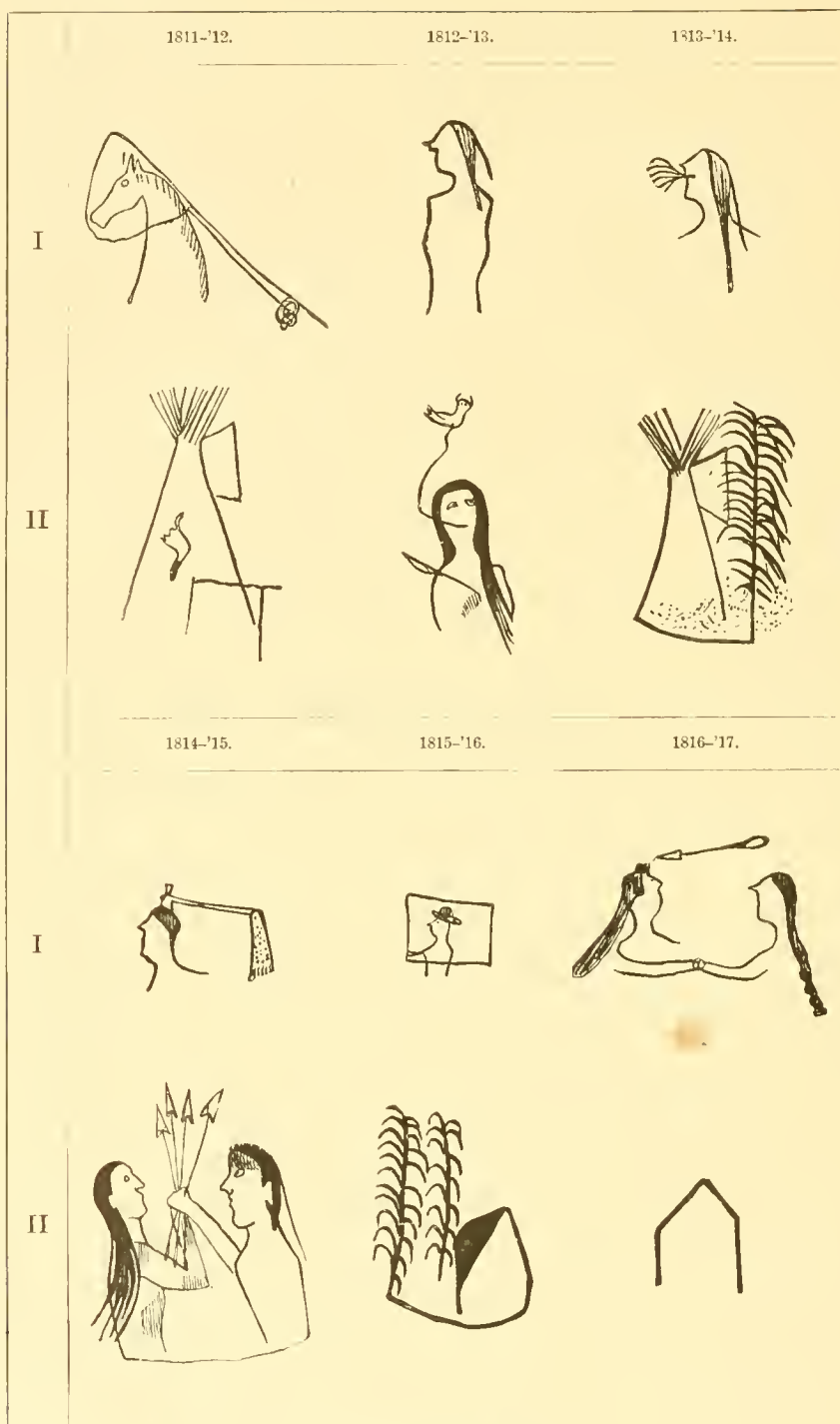




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No. II. Nine white men came to trade. The three covered heads represent the white men.

White-Cow-Killer calls it "Eight-Dakotas-killed winter."

1806-'07.—No. I. Black-Rock, a Dakota, was killed by the Crows. A rock is represented above his head. He was killed with a bow and arrow and was scalped.

No. II. The Dakotas killed an Omaha in the night.

White-Cow-Killer calls it "Killed-while-hunting-eagles winter."

1807-'08.—No. I. Broken-Leg was killed by the Pawnees. His leg had been broken by a bullet in a previous fight with the Pawnees.

No. II. Many people camped together and had many flags flying.

White-Cow-Killer calls it "Red-shirt-killed Winter."

1808-'09.—No. I. Little-Beaver's trading house was burned down.

No. II. A Brulé was found dead under a tree which had fallen on him.

White-Cow-Killer calls it "Blue-Blanket's-father-dead winter."

1809-'10.—No. I. Black-Rock was killed by the Crows. His brother, whose name he had taken, was killed by the Crows three years before.

No. II. Little-Beaver's house was burned.

White-Cow-Killer says, "Little-Beaver's (the white man) house-burned-down winter."

1810-'11.—No. I. Red-Shirt, a Dakota, was killed by the Crows while looking for his ponies near Old Woman's Fork.

No. II. They brought in a fine horse with feathers tied to his tail.

White-Cow-Killer calls it "Came-with-medicine-on-horse's-tail winter."

1811-'12.—No. I. They caught many wild horses south of the Platte River.

No. II. They had very little buffalo meat, as the empty drying pole indicates, but plenty of ducks in the fall.

White-Cow-Killer calls it "Catching-wild-horses winter."

1812-'13.—No. I. Big-Waist's father killed.

No. II. Big-Owl killed.

White-Cow-Killer calls it "Big-Belly's-father-killed winter."

1813-'14.—No. I. Many had the whooping-cough. The cough is represented by the lines issuing from the man's mouth.

No. II. Food was very scarce and they had to live on acorns. The tree is intended for an oak and the marks beneath it for acorns.

White-Cow-Killer calls it "Six-Rees-killed winter."

1814-'15.—No. I. The Dakotas went to a Kaiowa village, about 6 miles from Scott's Bluff, and near the mouth of Horse Creek, to treat for peace; but their intentions were frustrated by one of their number, who drove his hatchet into a Kaiowa's head.

No. II. They made peace with the Pawnees. The man with the blue forehead is a Pawnee, the other is a Dakota, whose body is smeared with clay. The four arrows show that they had been at war, and the clasped hands denote peace.

White Cow-Killer calls it "Kaiowa-hit-on-head-with-axe winter."

Young-Man's-Horses-Afraid, *i. e.*, whose horses are afraid, was born this year. He is now called "Old-Man-afraid-of-his-Horses" by the whites, and his son, the present chief of the Oglálas, is known as "Young-Man-afraid-of-his-Horses." [The present writer has heard another interpretation about "afraid-of-his-horses," *i. e.*, that the man valued his horses so much that he was afraid of losing them. The present representative of the name, however, stated to the writer that the true meaning was "The-young-man-whose-horses-they-fear."]

1815-'16.—No. I. The figure is intended to represent a white man's house.

No. II. Some of the Dakotas built a large house and lived in it during the winter.

White-Cow-Killer calls it "Made-a-house winter."

1816-'17.—No. I. They made peace with the Crows at Pine Bluff. The arrow shows they had been at war.

No. II. They lived in the same house that they did last winter.

White-Cow-Killer calls it "Made-a-house winter."

1817-'18.—No. I. The Oglálas had an abundance of buffalo meat and shared it with the Brulé, who were short of food. The buffalo hide hung on the drying pole, with the buffalo head above it, indicates an abundance of meat.

No. II. The-Brave-Man was killed in a great fight. The fight is shown by the arrows flying to and from him. Having been killed by an enemy, he is scalped.

White-Cow-Killer calls it "Plenty-of-meat winter."

1818-'19.—No. I. A large house was built.

No. II. Many died of the small-pox.

White-Cow-Killer calls it "Little-small-pox winter."

1819-'20.—No. I. Another house was built. The Dakotas made medicine in it.

No. II. In an engagement with the Crows, both sides expended all of their arrows, and then threw dirt at each other. A Crow is represented on the right, and is distinguished by the manner in which the hair is worn.

White-Cow-Killer calls it "Made-a-house-of-old-wood winter."

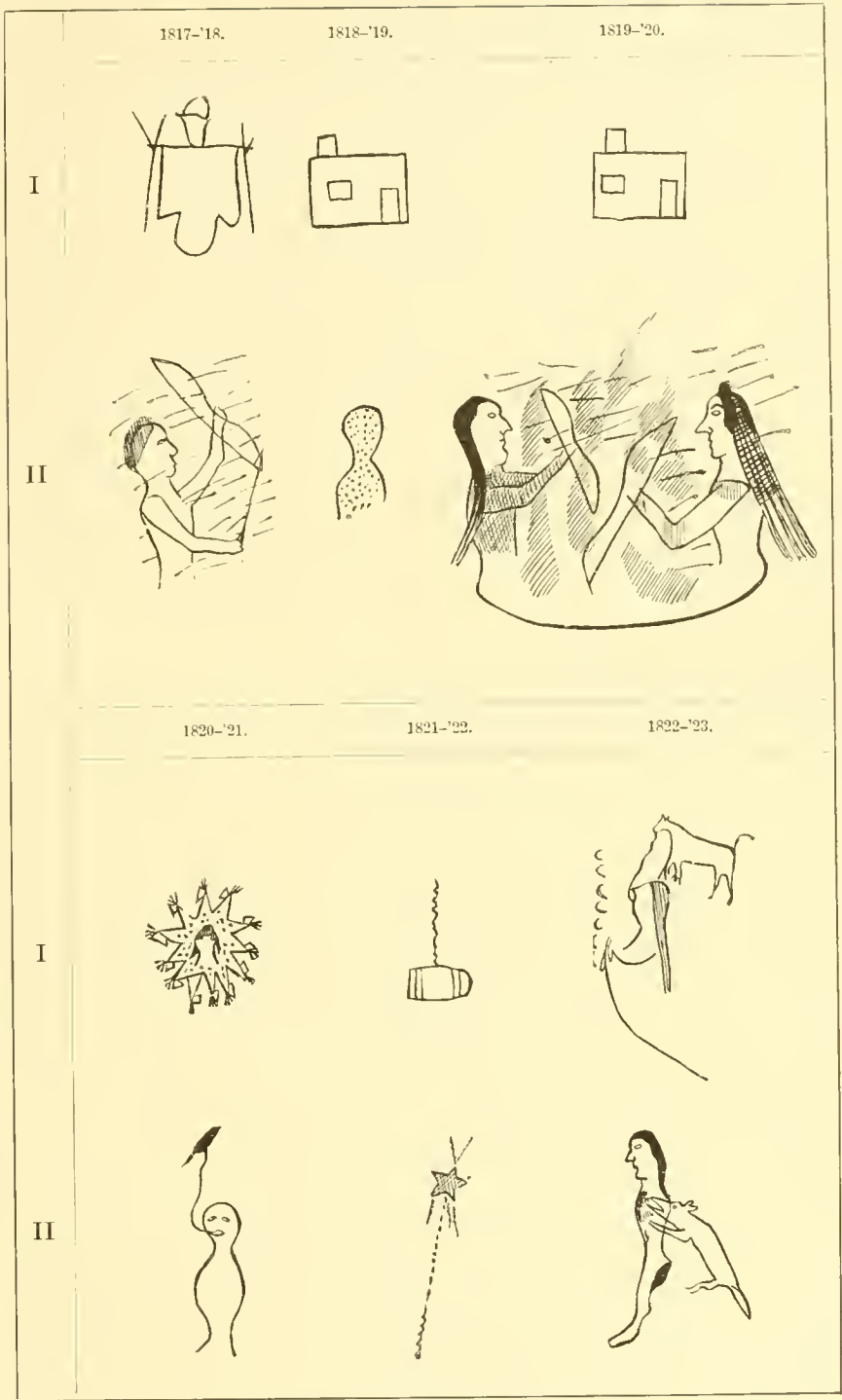
1820-'21.—No. I. The Dakotas assailed and took a Crow village of a hundred lodges. They killed many and took many prisoners.

No. II. A Dakota, named Glue, froze to death.

White-Cow-Killer calls it "Two-arrows-made-a-war-bonnet winter."

1821-'22.—No. I. They had all the *mini wakan* (spirit water or whisky) they could drink. They never had any before. A barrel with a waved or spiral line running from it represents the whisky, the waved line signifying spirit.

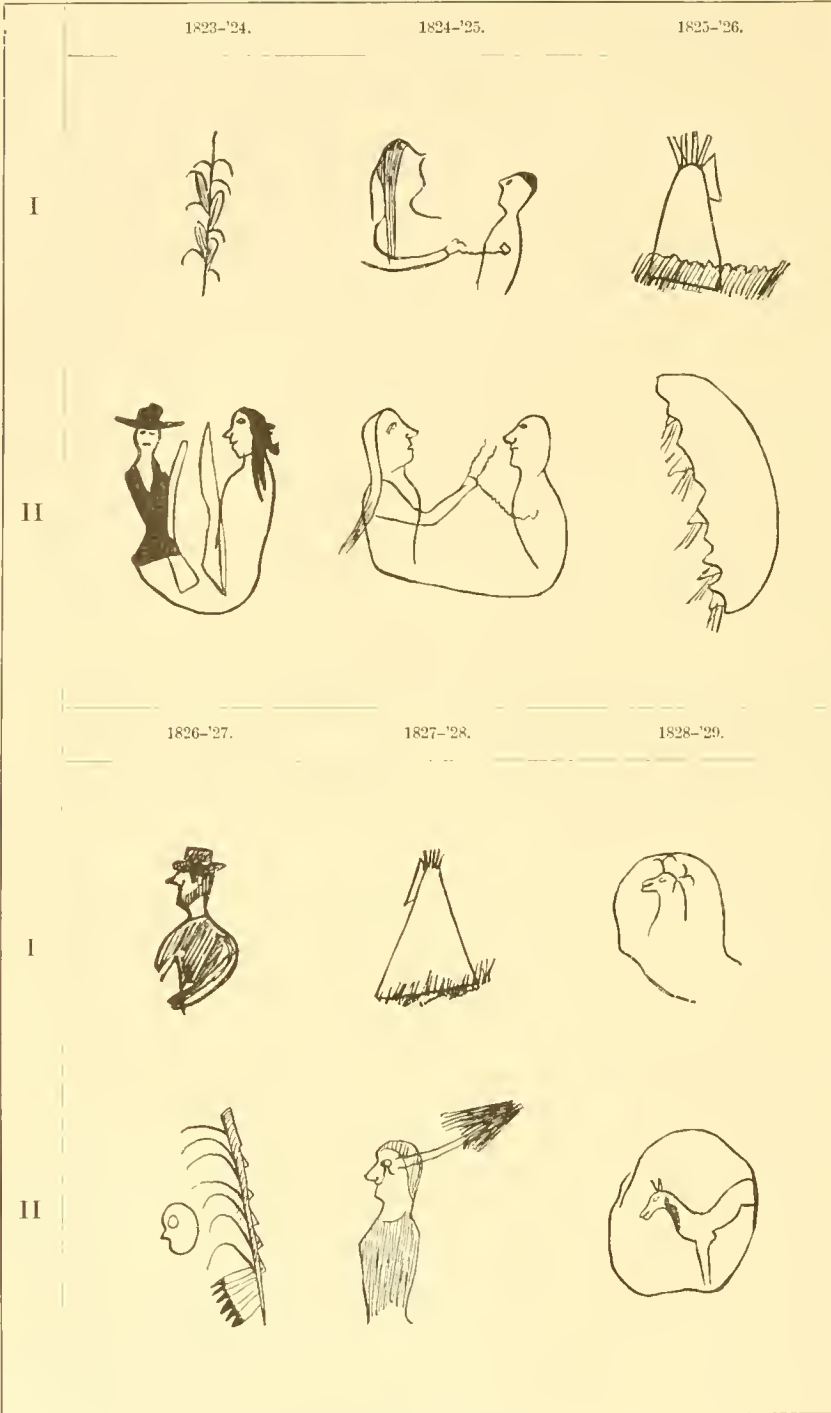
No. II. A large roaring star fell. It came from the east, and shot out sparks of fire along its course. Its track and the sparks are shown in the figure. See also page 111.



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White-Cow-Killer says, "One-star-made-a-great-noise winter."

Battiste Good, alias Wa-po-ctan-qi (Brown-Hat), historian and chief, designated this year as that of his birth. Omaha bullets were whizzing through the village and striking and piercing his mother's lodge as she brought him forth. Red-Cloud also was born.

1822-'23.—No. I. Dog, an Oglála, stole seventy horses from the Crows. Each of the seven tracks stands for ten horses. A lariat, which serves the purpose of a long whip, and is usually allowed to trail on the ground, is shown in the man's hand.

No. II. A Brulé, who had left the village the night before, was found dead in the morning outside the village, and the dogs were eating his body. The black spot on the upper part of the thigh shows he was a Brulé.

White-Cow-Killer says, "White-man-peels-the-stick-in-his-hand-broke-his-leg winter."

1823-'24.—No. I. They had an abundance of corn, which they got at the Ree villages.

No. II. They joined the whites in an expedition up the Missouri River against the Rees.

White-Cow-Killer calls it "Old-corn-plenty winter." For further explanation of the record of this year, see page 111.

1824-'25.—No. I. Cloud-Bear, a Dakota, killed a Dakota, who was a long distance off, by throwing a bullet from his hand and striking him in the heart. The spiral line is again used for *wakan*. The gesture-sign for *wakan* (holy, supernatural) is: With its index-finger extended and pointing upward, or all the fingers extended, back of hand outward, move the right hand from just in front of the forehead spirally upward nearly to arm's length from left to right. [See "Sign Language N. A. Indians," p. 380, by the present writer, in the First Annual Report of the Bureau of Ethnology.]

No. II. Cat-Owner was killed with a spider-web thrown at him by a Dakota. The spider-web is shown reaching to his heart from the hand of the man who threw it. The blood issuing from his mouth and nose indicates that he bled to death. It is a common belief among them that certain medicine men possess the power of taking life by shooting needles, straws, spider-webs, bullets, and other objects, however distant the person may be against whom they are directed.

White-Cow-Killer calls it "Killed-the-women-picking-cherries winter."

1825-'26.—No. I. Some of the Dakotas were living on the bottom-lands of the Missouri River, below the Whetstone, when the river, which was filled with broken ice, unexpectedly rose and flooded their village. Many were drowned or else killed by the floating ice. Many of those that escaped climbed on cakes of ice or into trees.

No. II. Many of the Dakotas were drowned in a flood caused by a rise of the Missouri River, in a bend of which they were camped. The

curved line is the bend in the river; the waved line is the water, above which the tops of the tipis are shown.

White-Cow-Killer calls it "Great-flood-and-many-Indians-drowned winter." [See page 113.]

1826-'27.—No. I. The brother of the Good-White-Man came.

No. II. Held a commemoration of the dead. The pipe-stem and the skull indicate this.

White-Cow-Killer calls it "Long-Whistle-sick winter."

1827-'28.—No. I. The snow was very deep.

No. II. In a fight with the Mandans, Crier was shot in the head with a gun.

White-Cow-Killer calls it "Snow-shoe-making winter."

1828-'29.—No. I. They provided themselves with a large supply of antelope meat by driving antelope into a corral, in which they were easily killed.

No. II. They drove many antelope into a corral and then killed them.

White-Cow-Killer calls it "Many-Rees-killed winter."

1829-'30.—No. I. Striped-Face stabbed and killed his son-in-law for whipping his wife.

No. II. Spotted-Face stabs his son-in-law for whipping his wife.

White-Cow-Killer calls it "Spotted-Face-held-on-long winter."

1830-'31.—No. I. They saw wagons for the first time. Red-Lake, a white trader, brought his goods in them.

No. II. The Crows were approaching a village at a time when there was a great deal of snow on the ground and intended to surprise it, but some herders discovering them the Dakotas went out, laid in wait for the Crows, surprised them, and killed many. A Crow's head is represented in the figure.

White-Cow-Killer calls it "Killed-many-white-buffalo winter."

1831-'32.—No. I. Red-Lake's house, which he had recently built, was destroyed by fire, and he was killed by the accidental explosion of some powder.

No. II. A white man, whom they called Gray-Eyes, shot and killed a man who was working for him.

1832-'33.—No. I. They killed many Gros Ventres in a village which they assaulted.

No. II. All of Standing-Bull's horses were killed, but by whom is unknown. Hoof-prints, blood-stains, and arrows are shown under the horse.

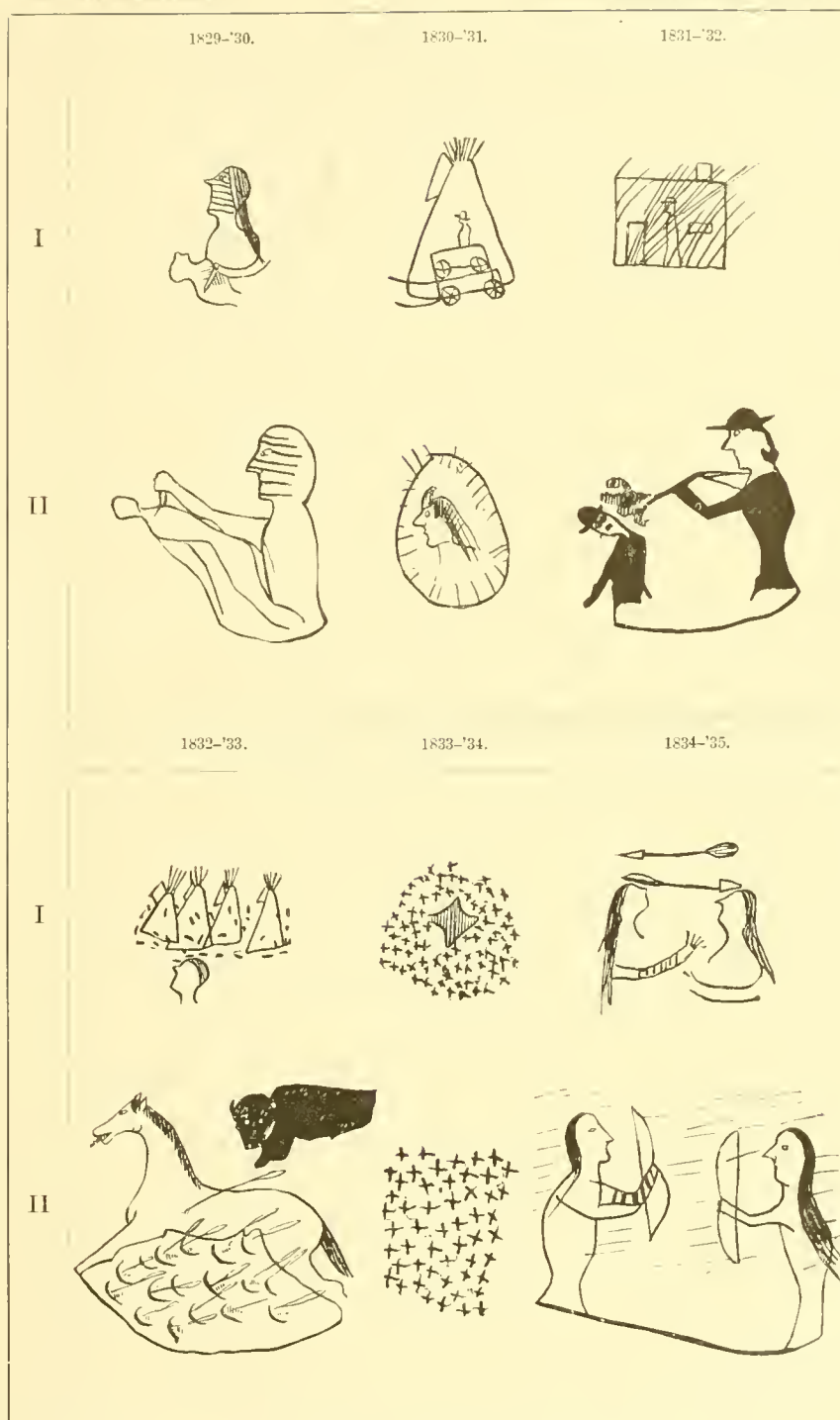
White-Cow-Killer calls it "One-Horn's-leg-broken winter."

1833-'34.—No. I. The stars moved around.

No. II. It rained stars.

White-Cow-Killer calls it "Plenty-stars winter."

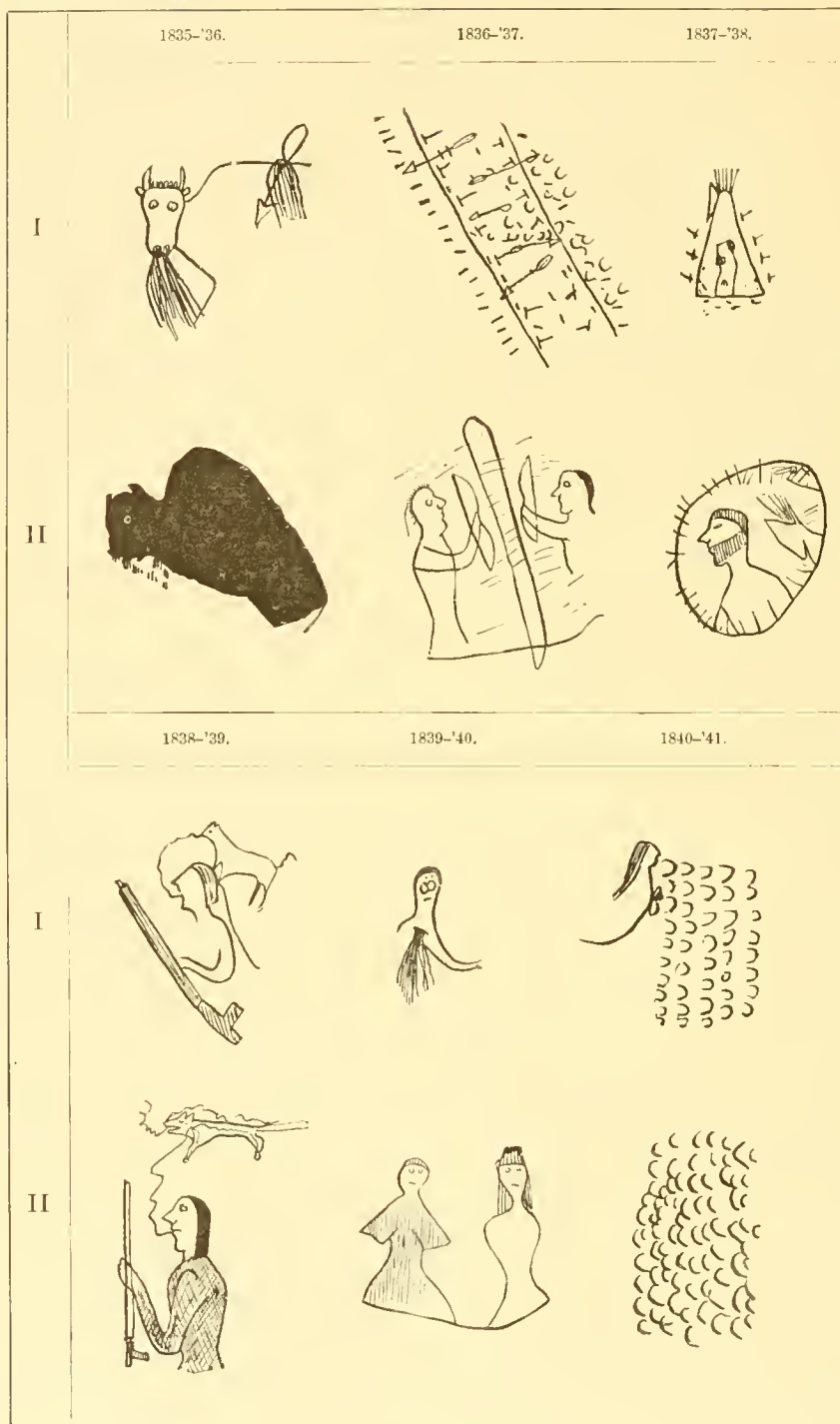
The records [see page 116] all undoubtedly refer to the magnificent meteoric display of the morning of November 13th, 1833, which was witnessed throughout North America, and which they have correctly as-



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signed to the winter corresponding with that of 1833-'34. All of them represent stars as having four points.

1834-'35.—No. I. They were at war with the Cheyennes. The Cheyenne is the one with the stripes on his arm.

No. II. They fought with the Cheyennes. The stripes on the arm are for Cheyenne as before.

White-Cow-Killer calls it "Cheyennes-came-and-one-killed winter."

1835-'36.—No. I. They killed a very fat buffalo bull.

No. II. They killed a very fat buffalo bull.

White-Cow-Killer calls it "Two warriors-killed winter."

1836-'37.—No. I. The Dakotas and the Pawnees fought on the ice on the North Platte River. The former were on the north side, the right-hand side in the figure, the latter on the south side, the left in the figure. Horsemen and footmen on the right are opposed to footmen on the left. Both sides have guns and bows, as shown by the bullet-marks and the arrows. The red marks are for blood-stains on the ice.

No. II. They fought the Pawnees across the ice on the North Platte. The man on the left is a Pawnee.

White-Cow-Killer calls it "Fight-on-ice winter."

1837-'38.—No. I. Paints-His-Cheeks-Red and his family, who were camping by themselves, were killed by Pawnees.

No. II. Paints-His-Face-Red, a Dakota, was killed in his tipi by the Pawnees.

White-Cow-Killer calls it "Five-Fingers-died winter."

1838-'39.—No. I. Spotted-Horse carried the pipe around and took the war path against the Pawnees, to avenge the death of his uncle, Paints-His-Cheeks-Red.

No. II. Crazy-Dog, a Dakota, carried the pipe around and took the war path. The waved or spiral lines denote crazy.

White-Cow-Killer says, "Paints-his-Chin's-todge all-killed winter."

When a warrior desires to make up a war party he visits his friends and offers them a filled pipe as an invitation to follow him, and those who are willing to go accept the invitation by lighting and smoking it. Any man whose courage has been proved may become the leader of a war party. Among the Arapahos the would-be leader does not invite any one to accompany him, but publicly announces his intention of going to war. He fixes the day for his departure and states where he will camp the first night, naming some place not far off. The morning on which he starts, and before leaving the village, he invokes the aid of the sun, his guardian by day, and often, to propitiate him, secretly vows to undergo penance, or offer a sacrifice on his return. He rides off alone, carrying his bare pipe in his hand, with the bowl carefully tied to the stem to prevent it from slipping off. If the bowl should at any time accidentally fall to the ground, he considers it an evil omen, and immediately returns to the village, and nothing could induce him to proceed, as he thinks that only misfortune would attend him if he did. Some-

times he ties eagle or hawk plumes to the stem of his pipe, and, after quitting the village, repairs to the top of some hill and makes an offering of them to the sun, taking them from his pipe and tying them to a pole, which he erects in a pile of stones. (Some of the stone-heaps seen on the hills in the Arapaho country originated in this way, but most of them were made by dreamers, who withdraw from their people to devote themselves in solitude to contemplation, fasting, and prayer, in order to work themselves into a state of rapture, hoping to have visions and receive messages from spirits.) Those who intend to follow him usually join him at the first camp, equipped for the expedition; but often there are some who do not join him until he has gone further on. He eats nothing before leaving the village, nor as long as the sun is up; but breaks his fast at his first camp, after the sun sets. The next morning he begins another fast, to be continued until sunset. He counts his party, saddles his horse, names some place six or seven miles ahead, where he says he will halt for awhile, and again rides off alone with his pipe in his hand. After awhile the party follow him in single file. When they have reached his halting place he tells them to dismount and let their horses graze. They all then seat themselves on the ground on the left of the leader, forming a semicircle, facing the sun. The leader fills his pipe, all bow their heads, and, pointing the stem of the pipe upward, he prays to the sun, asking that they may find an abundance of game, that dead-shots may be made, so that their ammunition will not be wasted, but reserved for their enemies; that they may easily find their enemies and kill them; that they may be preserved from wounds and death. He makes his petition four times, then lights his pipe, and after sending a few whiffs of smoke skyward as incense to the sun, hands the pipe to his neighbor, who smokes and passes it on to the next. It is passed from one to another, toward the left, until all have smoked, the leader refilling it as often as necessary. They then proceed to their next camp, where probably others join them. The same programme is carried out for three or four days before the party is prepared for action.

1839-'40.—No. I. Left-Handed-Big-Nose was killed by the Shoshoni. His left arm is represented extended, and his nose is very conspicuous. American-Horse was born in the spring of 1840.

No. II. They killed a Crow and his squaw, who were found on a trail.

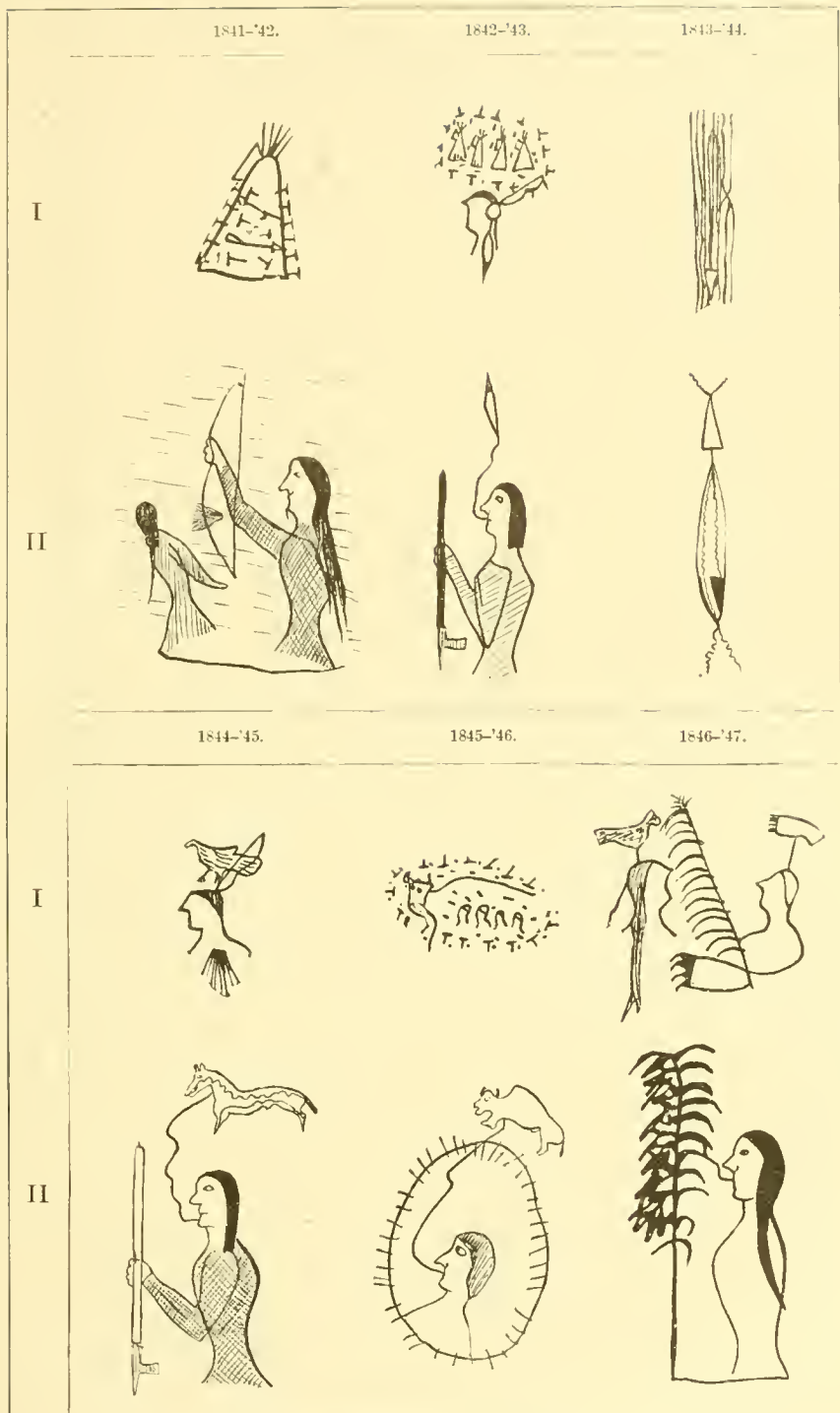
White-Cow-Killer calls it "Large-war-party-hungry-eat-Pawnee-horses winter."

1840-'41.—No. I. Sitting-Bear, American-Horse's father, and others, stole two hundred horses from the Flat Heads. A trailing lariat is in the man's hand.

No. II. They stole one hundred (many) horses from the Snakes.

White-Cow-Killer calls it "Little-Thunder's-brothers-killed winter."

1841-'42.—No. I. The Oglálas engaged in a drunken brawl, which re-





sulted in a division of the tribe, the Kiyuksas (Cut-Offs) separating from the others.

No. II. The Oglálas got drunk on Chug Creek, and engaged in a quarrel among themselves, in which Red-Cloud's brother was killed, and Red-Cloud killed three men. Cloud-Shield (Mahpiya-Wahacanka) was born.

1842-'43.—No. I. Feather-Ear-Rings was killed by the Shoshoni. The four lodges and the many blood-stains intimate that he was killed at the time the four lodges of Shoshoni were killed.

No. II. Lone-Feather said his prayers, and took the war path to avenge the death of some relatives.

White-Cow-Killer calls it "Crane's-son-killed winter."

1843-'44.—No. I. The great medicine arrow was taken from the Pawnees by the Oglálas and Brulés, and returned to the Cheyennes, to whom it rightly belonged.

No. II. In a great fight with the Pawnees they captured the great medicine arrow which had been taken from the Cheyennes, who made it, by the Pawnees. The head of the arrow projects from the bag which contains it. The delicate waved lines (intended probably for spiral lines) show that it is sacred.

White-Cow-Killer calls it "The Great-medicine-arrow-comes-in winter."

Battiste Good's record gives the following for the same year:

"Brought-home-the-magic-arrow winter. This arrow originally belonged to the Cheyennes, from whom the Pawnees stole it. The Dakotas captured it this winter from the Pawnees, and the Cheyennes then redeemed it for one hundred horses." His sign for the year is somewhat different, as shown in Figure 46. As before mentioned, an attempt is made to distinguish colors by the heraldic scheme, which in this instance may require explanation. The upper part of the body is sable or black, the feathers on the arrow are azure or blue, and the shaft, gules or red. The remainder of the figure is of an undecided color not requiring specification.

1844-'45.—No. I. Male-Crow, an Oglála, was killed by the Shoshoni.

No. II. Crazy-Horse says his prayers and goes on the war path. The waved lines are used again for crazy.

White-Cow-Killer calls it "White-Buffalo-Bull-killed by-the-Crows winter."

1845-'46.—No. I. White-Bull and thirty other Oglálas were killed by the Crows and Shoshoni.

No. II. White-Bull and many others were killed in a fight with the Shoshoni.

White-Cow-Killer calls it "Many-sick winter."



FIG. 46 — Magic arrow.

1846-'47.—No. I. Big-Crow and Conquering-Bear had a great feast and gave many presents.

No. II. Long-Pine, a Dakota, was killed by Dakotas. He was not killed by an enemy, as he has not lost his scalp.

White-Cow-Killer calls it "Diver's-neck-broken winter."

1847-'48.—No. I. There were a great many accidents and some legs were broken, the ground being covered with ice.

No. II. Many were thrown from their horses while surrounding buffalo in the deep snow, and some had their legs-broken.

White-Cow-Killer calls it "Many-legs-broken winter."

1848-'49.—No. I. American-Horse's father captured a Crow who was dressed as a woman, but who was found to be an hermaphrodite and was killed.

No. II. American-Horse's father captured a Crow woman and gave her to the young men, who discovered that she was an hermaphrodite and killed her.

White-Cow-Killer calls it "Half-man-and-half-woman-killed winter."

It is probable that this was one of those men, not uncommon among the Indian tribes, who adopt the dress and occupation of women. [This is sometimes compulsory, *e. g.*, on account of failure to pass an ordeal.]

1849-'50.—No. I. Many died of the cramps. The cramps were those of Asiatic cholera, which was epidemic in the United States at that time, and was carried to the plains by the California and Oregon emigrants. The position of the man is very suggestive of cholera.

No. II. Making-the-Hole stole many horses from a Crow tipi. The index points to the hole, which is suggestive of the man's name.

White-Cow-Killer calls it "The-people-had-the-cramps winter."

1850-'51.—No. I. Wolf-Robe was killed by the Pawnees.

No. II. Many died of the small-pox.

White-Cow-Killer calls it "All-the-time-sick-with-the-big-small-pox winter."

1851-'52.—No. I. They received their first annuities at the mouth of Horse Creek. A one-point blanket is depicted and denotes dry-goods. It is surrounded by a circle of marks which represent the people.

No. II. Many goods were issued to them at Fort Laramie. They were the first they received. The blanket which is represented stands for the goods.

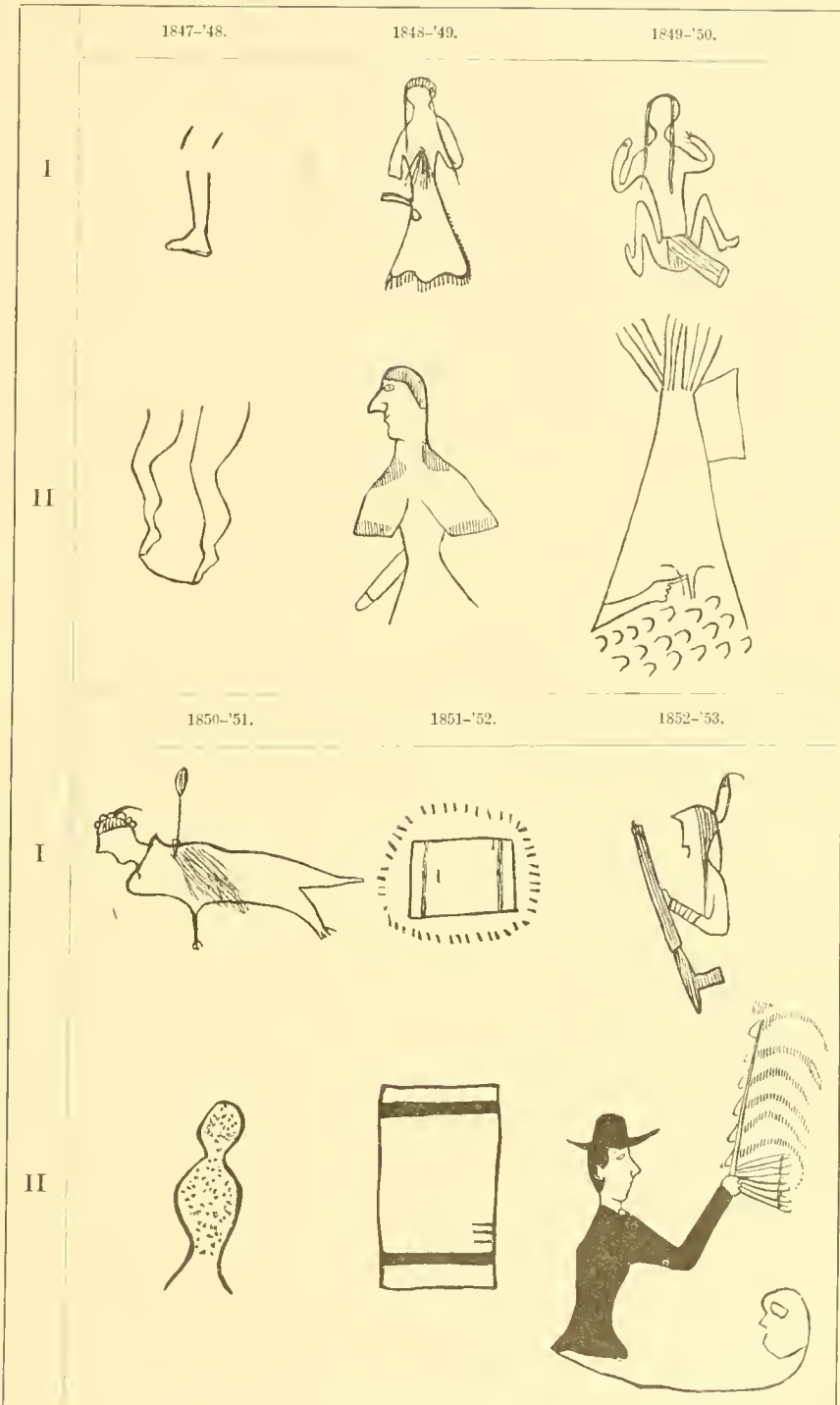
White-Cow-Killer calls it "Large-issue-of-goods-on-the-Platte-River winter."

1852-'53.—No. I. The Cheyennes carry the pipe around to invite all the tribes to unite with them in a war against the Pawnees.

No. II. A white man made medicine over the skull of Crazy-Horse's brother. He holds a pipe-stem in his hand. This probably refers to the custom of gathering the bones of the dead that have been placed on scaffolds and burying them.

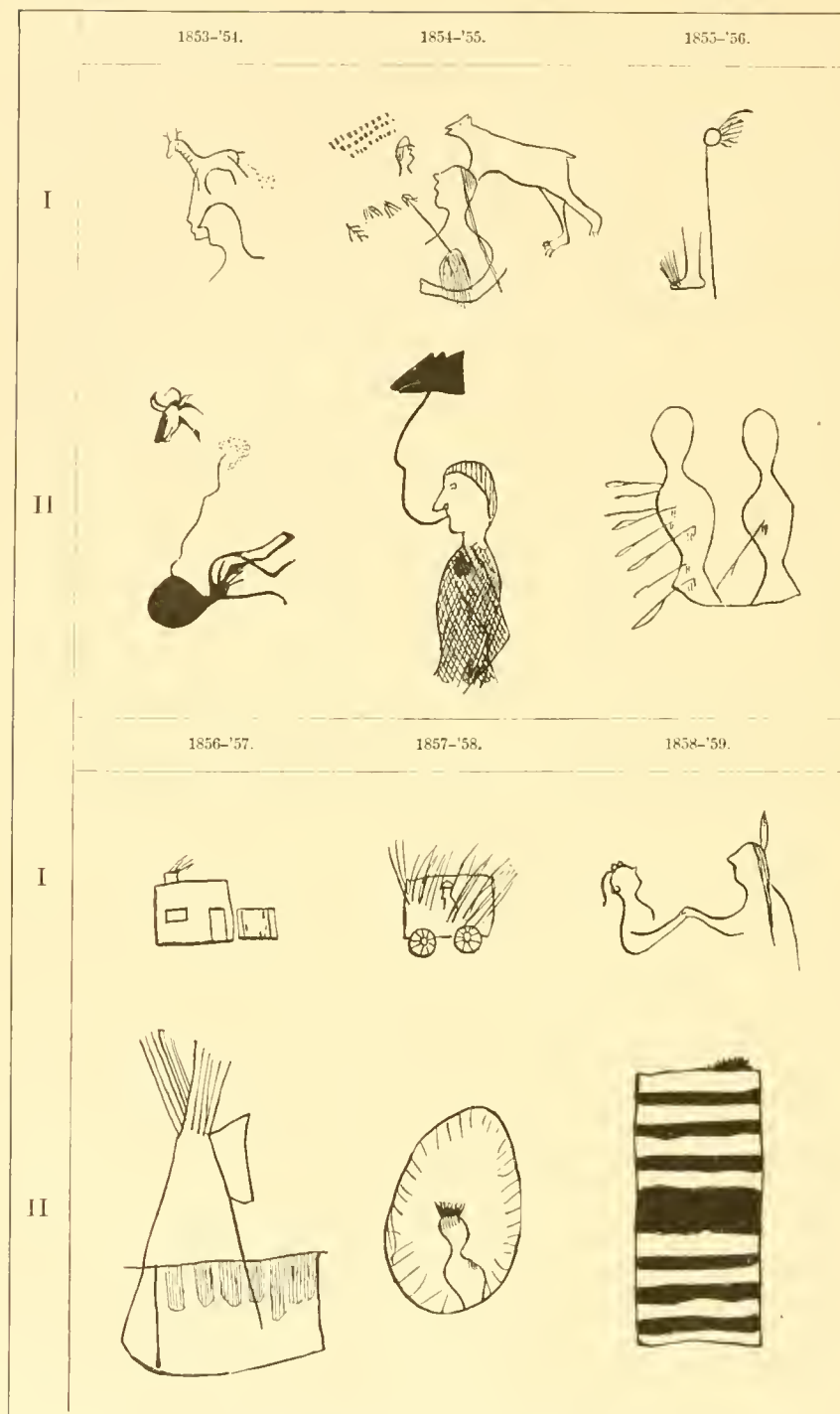
White-Cow-Killer calls it "Great-snow winter."





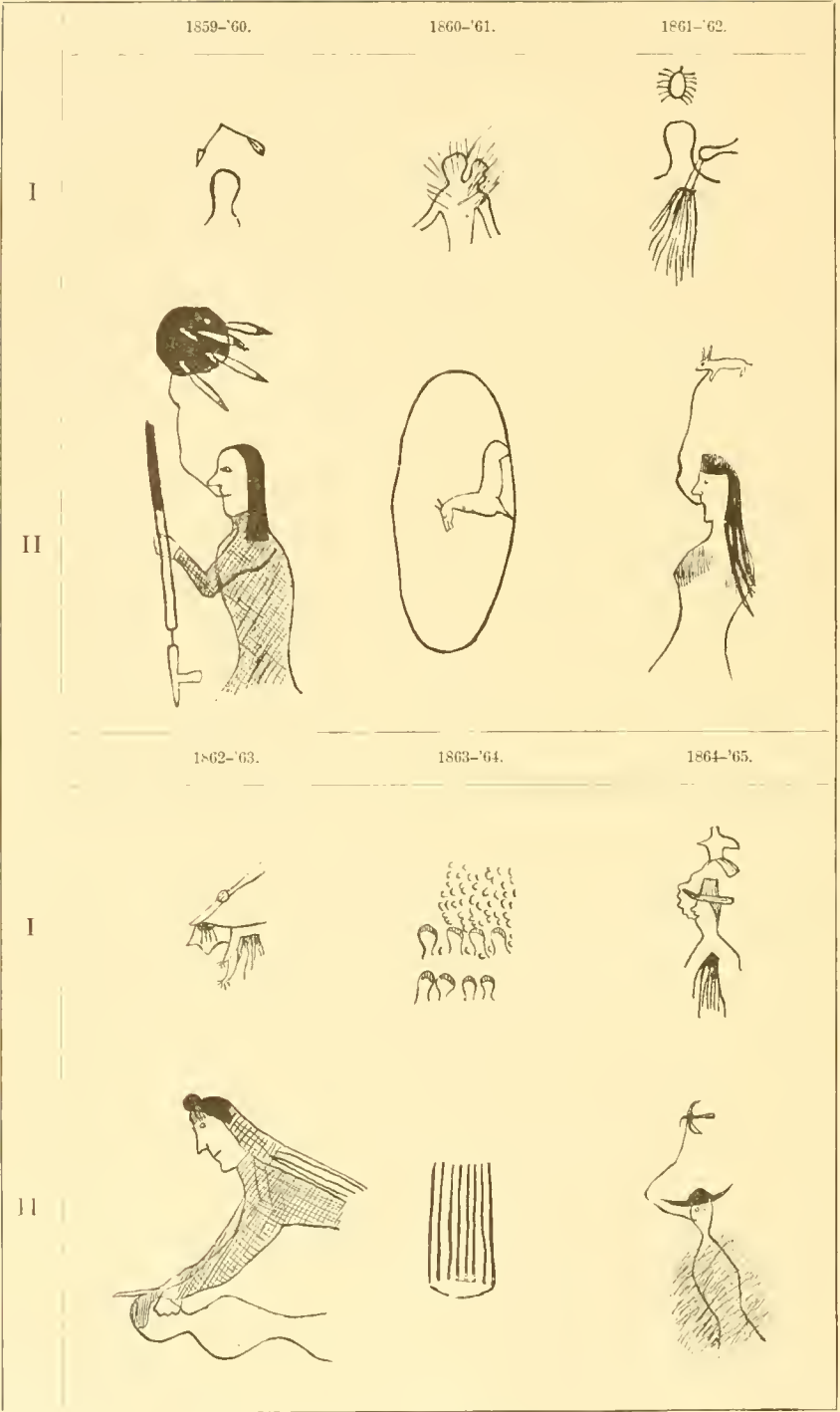






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1853-'54.—No. I. Antelope-Dung broke his neck while surrounding buffalo.

No. II. Antelope-Dung broke his neck while running antelope. His severed head is the only part of his body that is shown.

White-Cow-Killer calls it "Oak-wood-house winter."

1854-'55.—No. I. Conquering-Bear was killed by white soldiers, and thirty white soldiers were killed by the Dakotas 9 miles below Fort Laramie. The thirty black dots in three lines stand for the soldiers, and the red stains for killed. The head covered with a fatigue-cap further shows they were white soldiers. Indian soldiers are usually represented in a circle or semicircle. The gesture-sign for soldier means all in line, and is made by placing the nearly closed hands with palms forward, and thumbs near together, in front of the body and then separating them laterally about two feet.

No. II. Brave-Bear was killed in a quarrel over a calf. He was killed by enemies; hence his scalp is gone.

White-Cow-Killer says, "Mato-wayuhi (or Conquering-Bear) killed-by-white-soldiers winter."

1855-'56.—No. I. A war party of Oglálas killed one Pawnee—his scalp is on the pole—and on their way home froze their feet.

No. II. Torn-Belly and his wife were killed by some of their own people in a quarrel.

White-Cow-Killer calls it "A-medicine-man-made-buffalo-medicine winter."

1856-'57.—No. I. They received annuities at Raw-Hide Butte. The house and the blanket represent the agency and the goods.

No. II. They have an abundance of buffalo meat. This is shown by the full drying pole.

White-Cow-Killer calls it "White-hill-house winter."

1857-'58.—No. I. Little-Gay, a white trader, was killed by the explosion of a can of gunpowder. He was measuring out powder from the can in his wagon while smoking his pipe.

No. II. They surrounded and killed ten Crows.

White-Cow-Killer calls it "Bull-hunting winter."

1858-'59.—No. I. They made peace with the Pawnees. The one on the left is a Pawnee.

No. II. They bought Mexican blankets of John Richard, who bought many wagon-loads of the Mexicans.

White-Cow-Killer calls it "Yellow-blanket-killed winter."

1859-'60.—No. I. Broken-Arrow fell from his horse while running buffalo and broke his neck.

No. II. Black-Shield says prayers and takes the war path to avenge the death of two of his sons who had been killed by the Crows.

White-Cow-Killer calls it "Black-Shield's-two boys-go hunting-and-are-killed-by-the-Crows winter."

1860-'61.—No. I. Two-Face, an Oglála, was badly burnt by the explosion of his powder-horn.

No. II. They capture a great many antelope by driving them into a pen.

White-Cow-Killer calls it "Babies-all-sick-and-many-die winter."

1861-'62.—No. I. Spider was killed (stabbed) in a fight with the Pawnees.

No. II. Young-Rabbit, a Crow, was killed in battle by Red-Cloud.

White-Cow-Killer calls it "Crow-Indian-Spotted-Horse-stole-many-horses-and-was-killed winter."

1862-'63.—No. I. The Crows scalped an Oglála boy alive.

No. II. Some Crows came to their camp and scalped a boy.

White-Cow-Killer calls it "Crows-scalp-boy winter."

1863-'64.—No. I. The Oglálas and Minneconjous took the war path against the Crows and stole three hundred Crow horses. The Crows followed them and killed eight of the party.

No. II. Eight Dakotas were killed by the Crows. Here eight long marks represent the number killed.

White-Cow-Killer calls it "Dakotas-and-Crows-have-a-big-fight-eight-Dakotas-killed winter."

1864-'65.—No. I. Bird, a white trader, went to Powder River to trade with the Cheyennes. They killed him and appropriated his goods.

No. II. Bird, a white trader, was burned to death by the Cheyennes. He is surrounded by flames in the picture.

White-Cow-Killer calls it "Big-Lips-died-suddenly winter."

1865-'66.—No. I. General Maynadier made peace with the Oglálas and Brulés. His name, the sound of which resembles the words "many deer," is indicated by the two deers' heads connected with his mouth by the lines.

No. II. Many horses were lost by starvation, as the snow was so deep they couldn't get at the grass.

1866-'67.—No. I. They killed one hundred white men at Fort Phil. Kearny. The hats and the cap-covered head represent the whites; the red spots, the killed; the circle of characters around them, rifle or arrow shots; the black strokes, Dakota footmen; and the hoof-prints, Dakota horsemen. The Phil. Kearny massacre occurred December 21, 1866, and eighty-two whites were killed, including officers, citizens, and enlisted men. Capt. W. J. Fetterman was in command of the party.

No. II. Lone-Bear was killed in battle.

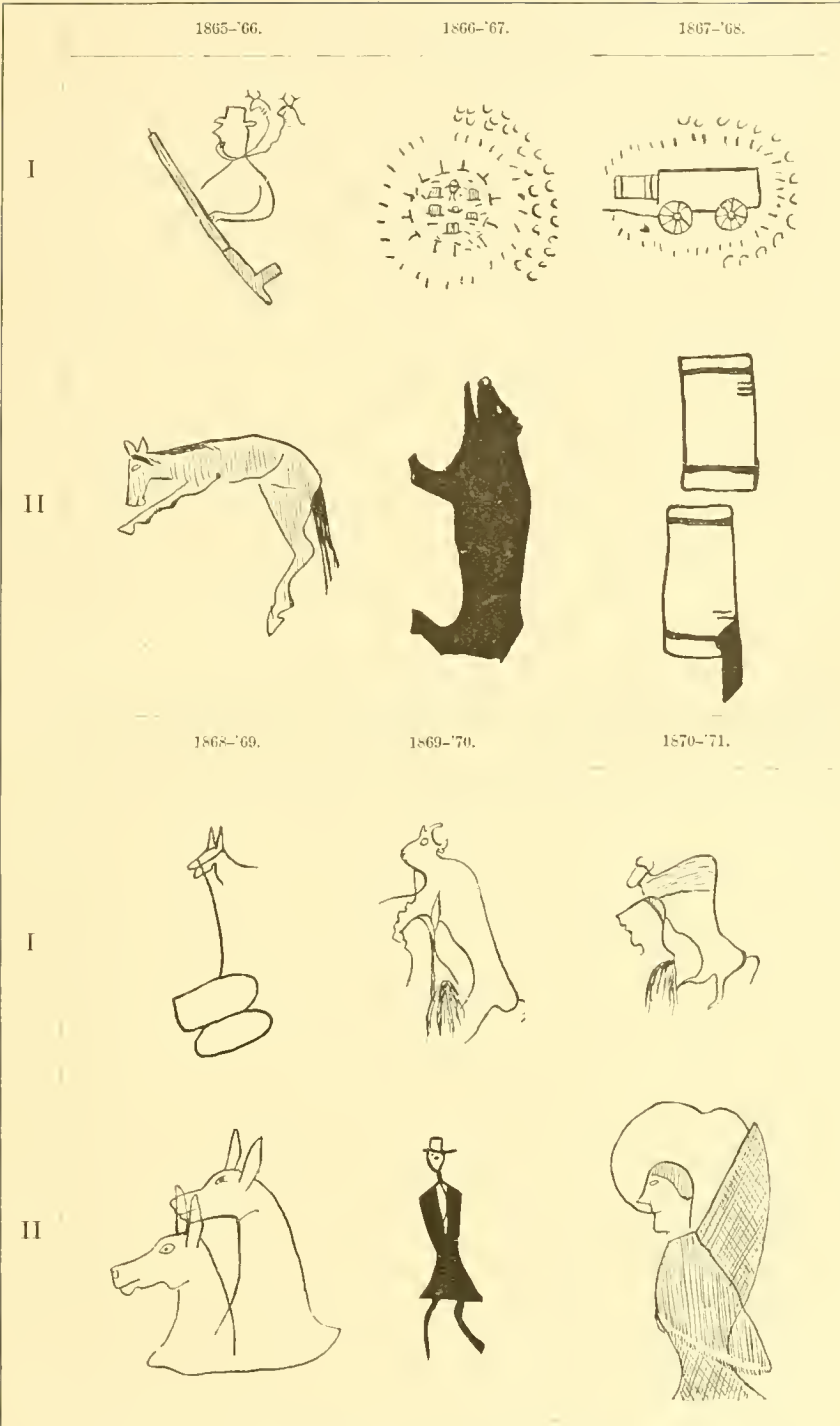
White-Cow-Killer calls it "One-hundred-white-men-killed winter."

1867-'68.—No. I. They captured a train of wagons near Tongue River. The men who were with it got away. The blanket represents the goods found in the wagons.

No. II. Blankets were issued to them at Fort Laramie.

White-Cow-Killer calls it "Seven-Pawnees-killed winter."

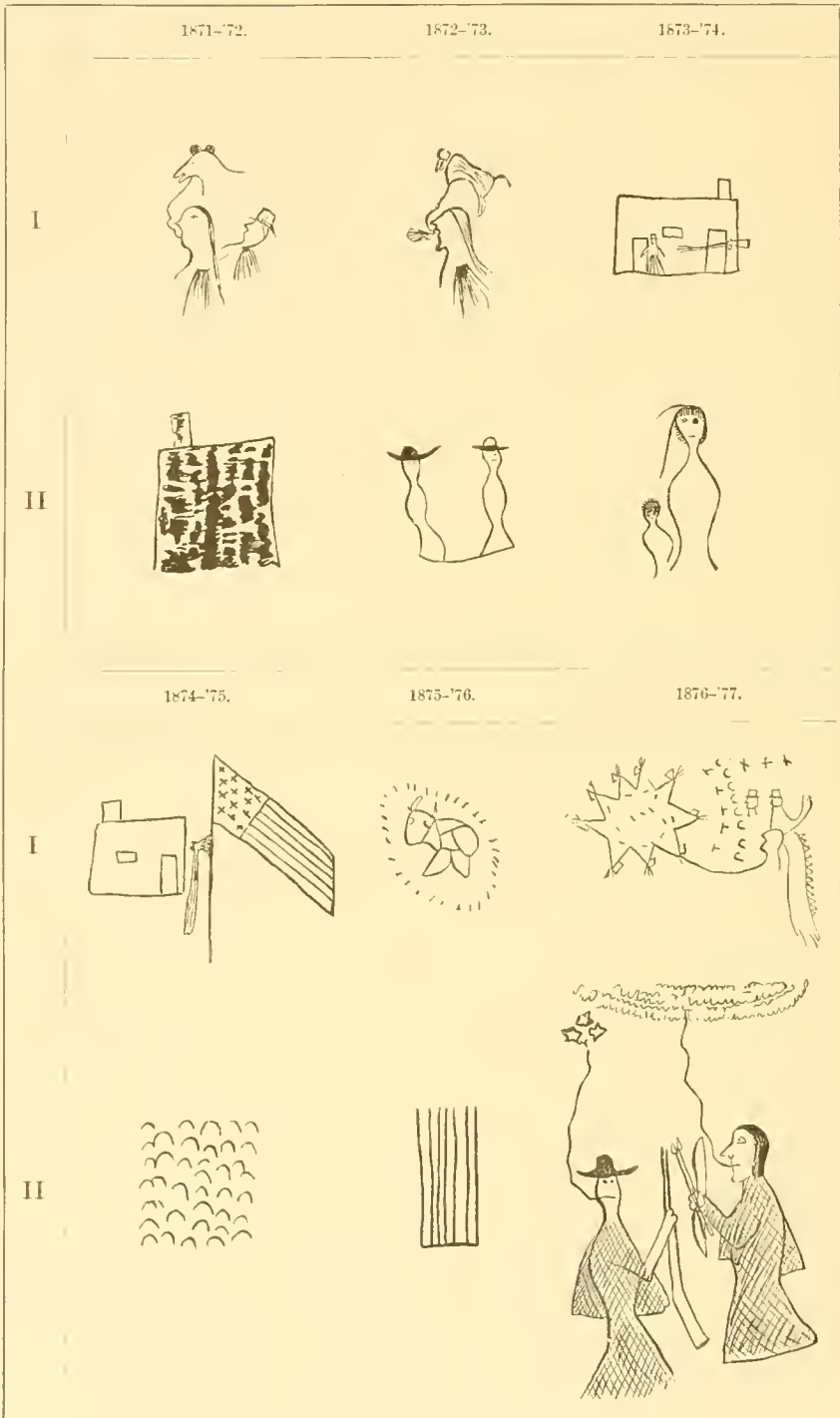
1868-'69.—No. I. They were compelled to sell many mules and horses



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to enable them to procure food, as they were in a starving condition. They willingly gave a mule for a sack of flour. The mule's halter is attached to two sacks of flour.

No. II. They had to sell many mules and horses to get food, as they were starving.

White-Cow-Killer calls it "Mules-sold-by-hungry-Sioux winter."

1869-'70.—No. I. Tall-Bull was killed by white soldiers and Pawnees on the south side of the South Platte River.

No. II. John Richard shot a white soldier at Fort Fetterman, Wyoming, and fled north, joining Red-Cloud.

White-Cow-Killer calls it "Tree-fell-on-woman-who-was-cutting-wood-and-killed-her winter."

1870-'71.—No. I. High-Back-Bone, a very brave Oglála, was killed by the Shoshoni. They also shot another man, who died after he reached home.

No. II. High-Back-Bone was killed in a fight with the Snakes (Shoshoni).

White-Cow-Killer calls it "High-Back-Bone-killed-by-Snake-Indians winter."

1871-'72.—No. I. John Richard shot and killed an Oglála named Yellow-Bear, and the Oglálas killed Richard before he could get out of the lodge. This occurred in the spring of 1872. As the white man was killed after the Indian, he is placed behind him in the figure.

No. II. Adobe houses were built by Maj. J. W. Wham, Indian agent (now paymaster, United States Army), on the Platte River, about 30 miles below Fort Laramie.

White-Cow-Killer calls it "Major-Wham's-house-built-on-Platte-River winter."

1872-'73.—No. I. Whistler, also named Little-Bull, and two other Oglálas, were killed by white hunters on the Republican River.

No. II. Antoine Janis's two boys were killed by Joe (John?) Richard.

White Cow-Killer calls it "Stay-at-plenty-ash-wood winter."

1873-'74.—No. I. The Oglálas killed the Indian agent's (Seville's) clerk inside the stockade of the Red Cloud Agency, at Fort Robinson, Nebraska.

No. II. They killed many Pawnees on the Republican River.

1874-'75.—No. I. The Oglálas at the Red Cloud Agency, near Fort Robinson, Nebraska, cut to pieces the flag staff which their agent had had cut and hauled, but which they would not allow him to erect, as they did not wish to have a flag flying over their agency. This was in 1874. The flag which the agent intended to hoist is now at the Pine Ridge Agency, Dakota.

No. II. The Utes stole all of the Brulé horses.

1875-'76.—No. I. The first stock cattle were issued to them. The figure represents a cow or spotted buffalo, surrounded by people. The gesture-sign also signifies spotted buffalo.

No. II. Seven of Red-Cloud's band were killed by the Crows.

White-Cow-Killer calls it "Five-Dakotas-killed winter."

1876-'77.—No. I. The Oglálas helped General Mackenzie to whip the Cheyennes. The Indian's head represents the man who was the first to enter the Cheyenne village. The white man holding up three fingers is General Mackenzie, who is placed upon the head of the Dakota to indicate that the Dakotas backed or assisted him. The other white man is General Crook, or Three Stars, as indicated by the three stars above him.

[This designation might be suggested from the uniform, but General Crook did not probably wear during the year mentioned or for a long time before it the uniform either of his rank as major-general of volunteers or as brevet major-general in the Army, and by either of those ranks he was entitled to but two stars on his shoulder-straps.]

No. II. Three-Stars (General Crook) took Red-Cloud's young men to help him fight the Cheyennes. A red cloud, indicating the chief's name, is represented above his head.

White-Cow-Killer calls it "General-Mackenzie-took-the-Red-Cloud-Indians'-horses-away-from-them winter."

1877-'78.—No. I. A soldier ran a bayonet into Crazy-Horse, and killed him in the guard-house, at Fort Robinson, Nebraska (September 5, 1877).

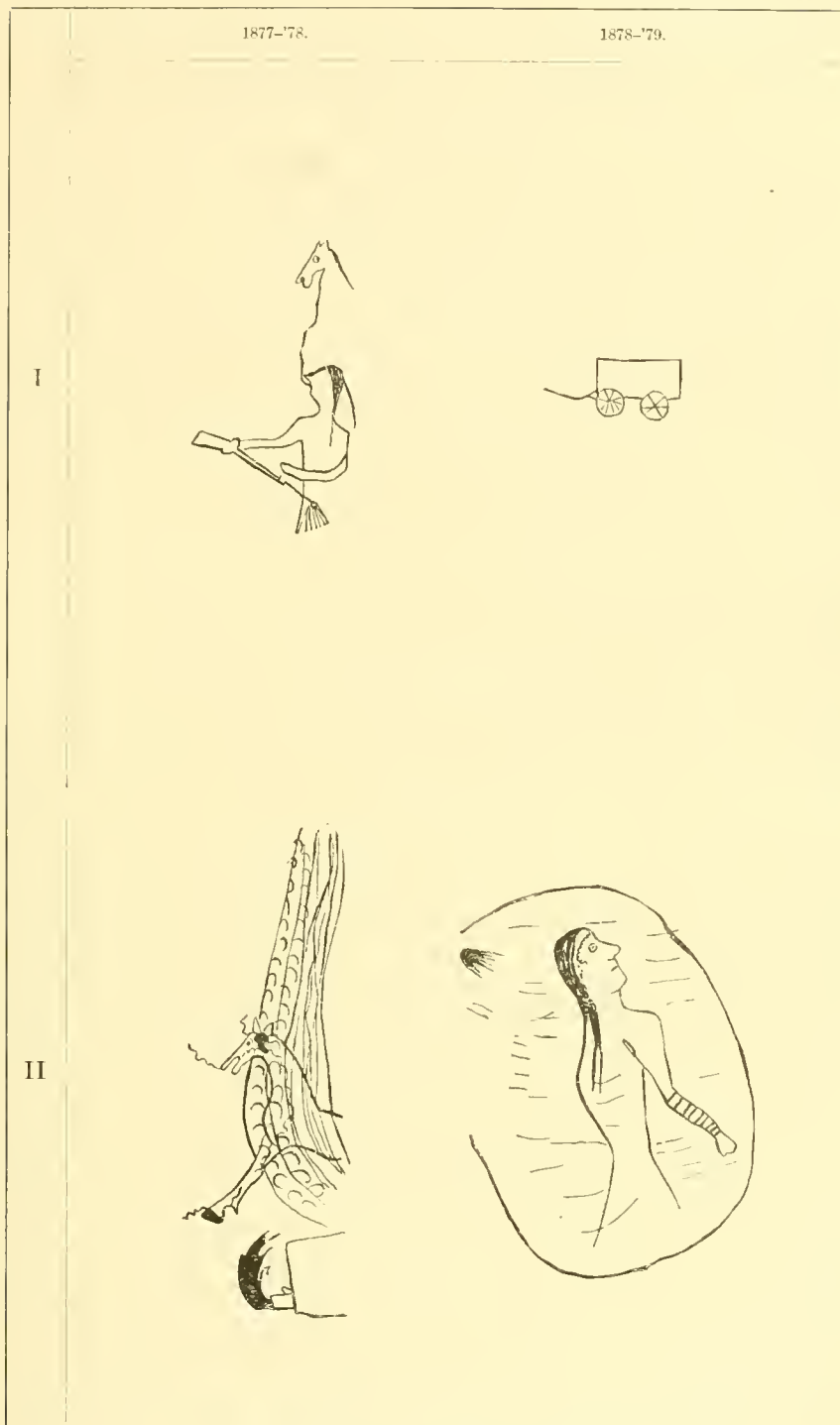
No. II. Crazy-Horse's band left the Spotted Tail Agency (at Camp Sheridan, Nebraska), and went north, after Crazy-Horse was killed at Fort Robinson, Nebraska. Hoof-prints and lodge pole tracks run northward from the house, which represents the Agency. That the horse is crazy is shown by the waved or spiral lines on his body, running from his nose, foot, and forehead.

White-Cow-Killer calls it "Crazy-Horse-killed winter."

1878-'79.—No. I. Wagons were given to them.

No. II. The Cheyenne who boasted that he was bullet and arrow proof was killed by white soldiers, near Fort Robinson, Nebraska, in the intrenchments behind which the Cheyennes were defending themselves after they had escaped from the fort.

White-Cow-Killer calls it "Wagons-given-to-the-Dakota-Indians winter."



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## NOTIFICATION.

This is an important division of the purposes for which pietographs are used. The pietographs and the objective devices antecedent to pietographs under this head that have come immediately to the writer's attention, may be grouped as follows: 1st. Notice of departure, direction, etc. 2d. Notice of condition, suffering, etc. 3d. Warning and guidance. 4th. Charts of geographic features. 5th. Claim or demand. 6th. Messages or communications. 7th. Record of expedition.

### NOTICE OF DEPARTURE AND DIRECTION.

Dr. W. J. Hoffman obtained the original of the accompanying drawing, Fig. 47, from Naumoff an Alaskan native, in San Francisco, Califor-

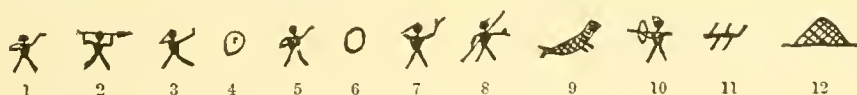


FIG. 47.—Alaskan notice of hunt.

nia, in 1882, also the interpretation, with text in the Kiatexamut dialect of the Innuit language.

The drawing was in imitation of similar ones made by the natives, to inform their visitors or friends of their departure for a certain purpose. They are depicted upon strips of wood which are placed in conspicuous places near the doors of the habitations.

Dr. Hoffman has published a brief account of this drawing as well as the succeeding one, in the *Trans. Anthropol. Soc. Washington*, II, 1883, p. 134, Fig. 3, and p. 132, Fig 2.

The spelling adopted in the Innuit text, following in each case the explanation of characters, is in accordance with the system now used by the Bureau of Ethnology.

The following is the explanation of the characters:—

1. The speaker, with the right hand indicating himself, and with the left pointing in the direction to be taken.
2. Holding a boat paddle—going by boat.
3. The right hand to the side of the head, to denote *sleep*, and the left elevated with one finger elevated to signify *one*—one night.

4. A circle with two marks in the middle, signifying an island with huts upon it.

5. Same as No. 1.

6. A circle to denote another island.

7. Same as No. 3, with an additional finger elevated, signifying *two*—two nights.

8. The speaker with his harpoon, making the sign of a sea lion with the left hand. The flat hand is held edgewise with the thumb elevated, then pushed outward from the body in a slightly downward curve.

9. A sea lion.

10. Shooting with bow and arrow.

11. The boat with two persons in it, the paddles projecting downward.

12. The winter, or permanent habitation of the speaker.

The following is the text in the Aigaluxamut dialect, with an inter-linear translation:

Hui	ta-wá-ut	ai-wí-xa-na	kui-gí-qtá-mũn	a-xi-lú-mũk	ka-wá-xa-lú-a,
I	there	go (with boat)	that island	one	sleep there,
	(to that place)				
tea-lí	hui	ai-wí-lu-a	a-xá-mũn	kui-gí-qtá-mũn,	ta-wá-ni
then	I	go	another	that island,	there
				(indicated)	two
ka-wá-xa-lú-a,	hui	pí-qlú-a	a-xí-lú-mũk'	wi-ná-mũk	tea-lí
sleeps,	1	catch	one	sea lion	then
(nights)					return
nú-nan	m'nan.				
(to) place	mine.				

The following is of a similar nature, and was obtained under circumstances similar to the preceding.



FIG. 48.—Alaskan notice of departure.

The explanation of the above characters is as follows:

1, 3, 5, 7, represent the person spoken to.

2. Indicates the speaker with his right hand to the side or breast, indicating *self*, the left hand pointing in the direction in which he is going.

4. Both hands elevated, with fingers and thumbs signifies many, according to the informant. When the hands are thus held up, in sign-language, it signifies *ten*, but when they are brought toward and backward from one another, *many*.

6. The right hand is placed to the head to denote sleep—*many sleeps*, or, in other words, *many nights and days*; the left hand points downward, *at that place*.

8. The right hand is directed toward the starting point, while the left is brought upward toward the head—to *go home*, or *whence he came*.



The following is the text in the same dialect last mentioned, with translation :

Hui	a-qteí-kua	a-xlá mǔn	nn-ná-mǔn,	am-lié-ka mǔ'-ik	ha-wá-xa-lu-a,
I	go	(to) another	place,	many	sleeps
			(settlement)		(nights)

ta-wá-ní, tca-lí' hui a-ni-qlú-a.

there,	then	I	return.
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The drawing presented in Figure 49 was made by a native Alaskan, and represents information to the effect that the artist contemplates making a journey to hunt deer. The drawing is made upon a narrow strip of wood, and placed somewhere about the door of the house, where visitors will readily perceive it.



FIG. 49.—Alaskan notice of hunt.

1. Represents the contour lines of the country and mountain peaks.
2. Native going away from home.
3. Stick placed on hill-top, with bunch of grass attached, pointing in the direction he has taken.
4. Native of another settlement, with whom the traveler remained over night.
5. Lodge.
6. Line representing the end of the first day, *i. e.*, the time between two days; rest.
7. Traveler again on the way.
8. Making signal that on second day (right hand raised with two extended fingers) he saw game (deer, 9) on a hill-top, which he secured, so terminating his journey.
9. Deer.

Figures 50, 51, and 52 were drawn by Naumoff, under the circumstances above mentioned, and signify "Have gone home."



FIG. 50.—Alaskan notice of direction.

His explanation of Figure 50 is as follows:

When one of a hunting party is about to return home and wishes to inform his companions that he has set out on such return, he ascends the hill-top nearest to which they became separated, where he ties a bunch of grass or other light colored material to the top of a long stick or pole. The lower end of the stick is placed firmly in the ground, leaning in the direction taken. When another hill is ascended, another stick with

similar attachment is erected, again leaning in the direction to be taken. These sticks are placed at proper intervals until the village is sighted. This device is employed by Southern Alaskan Indians.

He also explained Figure 51 as follows:



FIG. 51.—Alaskan notice of direction.

Seal hunters adopt the following method of informing their comrades that they have returned to the settlement. The first to return to the regular landing place sometimes sticks a piece of wood into the ground, leaning toward the village, upon which is drawn or scratched the out-line of a baidarka, or skin canoe, heading toward one or more outlines of lodges, signifying that the occupants of the boat have gone toward their homes. This is resorted to when the voyage has been a dangerous one, and is intended to inform their

companions of the safe arrival of some of the party.

This device is used by coast natives of Southern Alaska and Kadiak.

He also explained Figure 52 as follows:



FIG. 52.—Alaskan notice of direction.

When hunters become separated, the one first returning to the forks of the trail puts a piece of wood in the ground, on the top of which he makes an incision, into which a short piece of wood is secured horizontally, so as to point in the direction taken by the individual.

The following instance is taken from the Narrative of an Expedition to the Source of St. Peter's River, \* \* under the command of Stephen H. Long, major U.S. Top. Eng. [commonly known as Keating's Long's Expedition]. Philadelphia, 1824. Vol. I, p. 217.

When we stopped, says Major Long, to dine, White Thunder, (the Winnebago chief that accompanied me,) suspecting that the rest of his party were in the neighborhood, requested a piece of paper, pen and ink, to communicate to them the intelligence of his having come up with me. He then seated himself and drew three rude figures, which at my request he explained to me. The first represented my boat with a mast and flag, with three benches of oars and a helmsman; to show that we were Americans, our heads were represented by a rude cross, indicating that we wore hats.

The representation of himself was a rude figure of a bear over a kind of cypher representing a hunting ground. The second figure was designed to show that his wife was with him; the device was a boat with a squaw seated in it; over her head lines were drawn in a zigzag direction, indicating that she was the wife of White Thunder. The third was a boat with a bear sitting at the helm, showing that an Indian of that name had been seen on his way up the river, and had given intelligence where the party were. This paper he set up at the mouth of Kickapoo Creek, up which the party had gone on a hunting trip.

The following is extracted from an Account of an Expedition from Pittsburgh to the Rocky Mountains, \* \* \* under the command of Major Stephen H. Long [commonly known as James' Long's Expedition]. Philadelphia, 1823. Vol. I, p. 478.

At a little distance [on the bank of the Platte River], in front of the entrance of this breastwork, was a semicircular row of sixteen bison skulls, with their noses pointing down the river. Near the center of the circle which this row would describe, if continued, was another skull marked with a number of red lines.

Our interpreter informed us that this arrangement of skulls and other marks here discovered, were designed to communicate the following information, namely, that the camp had been occupied by a war party of the Skeeree or Pawnee Loup Indians, who had lately come from an excursion against the Cimaancias, Ietaus, or some of the western tribes. The number of red lines traced on the painted skull indicated the number of the party to have been thirty-six; the position in which the skulls were placed, that they were on their return to their own country. Two small rods stuck in the ground, with a few hairs tied in two parcels to the end of each, signified that four scalps had been taken.

When a hunting party of the Hidatsa has arrived at any temporary camping ground, from which point a portion of the members might leave on a short reconnoitering expedition, the remainder, upon leaving for a time, will erect a pole and cause it to lean in the direction taken. At the foot of this pole a buffalo shoulder-blade or other flat bone is placed, upon which is depicted the object causing departure. For instance, should buffalo or antelope be discovered, an animal of the character sighted is rudely drawn with a piece of charred wood or red lead, the latter being a substance in the possession of nearly every warrior to use in facial decoration, etc.

When a Hidatsa party has gone on the war path, and a certain number is detailed to take another direction, the point of separation is taken as the rendezvous. After the return of the first party to the rendezvous, should the second not come up in a reasonable length of time, they will set sticks in the ground leaning in the direction to be taken, and notches are cut into the upper ends of the sticks to represent the number of nights spent there by the waiting party.

A party of Hidatsa who may be away from home for any purpose whatever often appoint a rendezvous, from which point they return to their respective lodges. Should an individual return to the rendezvous before any others and wish to make a special trip for game or plunder, he will, for the information of the others, place a stick of about 3 or 4 feet in length in the ground, upon the upper end of which a notch is cut, or perhaps split, for the reception of a thinner piece of twig or branch having a length of about a foot. This horizontal top piece is inserted at one end, so that the whole may point in the direction to be taken. Should the person wish to say that the trail would turn at a right angle, to either side, at about one-half the distance of the whole journey in prospect, the horizontal branch is either bent in that direction or a naturally-curved branch is selected having the turn at the middle of its entire length, thus corresponding to the turn in the trail. Any direction can be indicated by curves in the top branch.

## NOTICE OF CONDITION.

According to Masta, chief of the Abnaki, members of that tribe remove the bark of trees in prominent places to denote that the inhabitants of the nearest lodge are in a starving condition.

The Ottawa and the Potawatomi Indians indicate hunger and starvation by drawing a black line across the breast or stomach of the figure of a man. (See Fig. 145, page 221.) This drawing is placed upon a piece of wood, either incised or with a mixture of powdered charcoal and glue water, or red ocher. This is then attached to a tree or fastened to a piece of wood, and erected near the lodge on a trail, where it will be observed by passers by, who are expected to alleviate the sufferings of the native who erected the notice.

Figure 53 illustrates information with regard to distress in another village, which occasioned the departure of the party giving the notification. The drawing was made for Dr. W. J. Hoffman, in 1882, by Nau-moff, in imitation of drawings prepared by Alaska natives. The designs are traced upon a strip of wood, which is then stuck upon the roof of the house belonging to the recorder.



FIG. 53.—Alaskan notice of distress.

1. The summer habitation, showing a stick leaning in the direction to be taken.

2. The baidarka, containing the residents of the house. The first person is observed pointing forward, indicating that they "go by boat to the other settlement."

3. A grave stick, indicating a death in the settlement.

4, 5. Summer and winter habitations, denoting a village.

The drawing, Figure 54, made for Dr. Hoffman in 1882, by a native, in imitation of originals in Alaska, is intended to be placed in a conspicuous portion of a settlement which has been attacked by a hostile force and finally deserted. The last one to leave prepares the drawing upon a strip of wood to inform friends of the resort of the survivors.

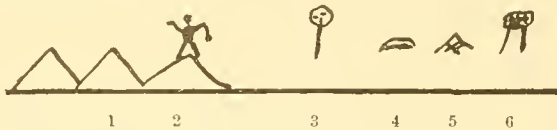


FIG. 54.—Alaskan notice of departure and refuge.

1. Represents three hills or ranges, signifying that the course taken would carry them beyond that number of hills or mountains.

2. The recorder, indicating the direction, with the left hand pointing to the ground, *one* hill, and the right hand indicating the number *two*, the number still to be crossed.

3. A circular piece of wood or leather, with the representation of a face, placed upon a pole and facing the direction to be taken from the settlement. In this instance the drawing of the character denotes a hostile attack upon the town, for which misfortune such devices are sometimes erected.

4, 5. Winter and summer habitations.

6. Store house, erected upon upright poles.

This device is used by Alaska coast natives generally.

In connection with these figures reference may be made to a paper by the present writer in the First Annual Report of the Bureau of Ethnology, p. 369, showing the devices of the Abnaki.

Dr. George Gibbs (Contributions to N. A. Ethnology, Vol. I, p. 222) says of "symbolic writing" of the northwest tribes:

I am not aware how far this may be carried among the Sound tribes. Probably there is no great essential difference between them and their neighbors of the plains in this art. It may perhaps be best explained by an example given me by a veteran mountaineer, Dr. Robert Newell, of Champoeg. A party of Snakes are going to hunt strayed horses. A figure of a man, with a long queue, or scalp lock, reaching to his heels, denoted Shoshonee; that tribe being in the habit of braiding horse- or other hair into their own in that manner. A number of marks follow, signifying the strength of the party. A foot-print, pointed in the direction they take, shows their course, and a hoof-mark turned backward, that they expect to return with animals. If well armed, and expecting a possible attack, a little powder mixed with sand tells that they are ready, or a square dotted about the figures indicates that they have fortified.

The design shown in Figure 55 is in imitation of etchings made by natives of Southern Alaska to convey to the observer the information that the recorder had gone away to another settlement the inhabitants of which were in distress. The drawings were put on a strip of wood and placed at the door of the house where it might be seen by visitors or inquirers.



FIG. 55.—Notice of departure to relieve distress. Alaska.

Naumoff gave the following explanation:

1. A native making the gesture of indicating *self* with the right hand, and with the left indicating direction and *going*.

2. The native's habitation.

3. Scaffold used for drying fish. Upon the top of the pole is placed a piece of wood tied so that the longest end points in the direction to be taken by the recorder.

4. The baidarka conveying the recorder.

5. A native of the settlement to be visited.

6. Summer habitation.



7. "Shaman stick" or grave stick, erected to the memory of a recently deceased person, the cause of which has necessitated the journey of the recorder.

8. Winter habitation. This, together with No. 6, indicates a settlement.

Fig. 56, also drawn by Naumoff, means "ammunition wanted."



FIG. 56.—Ammunition wanted. Alaska.

When a hunter is tracking game, and exhausts his ammunition, he returns to the nearest and most conspicuous part of the trail and sticks his ihú'uk in the ground, the top leaning in the direction taken. The ihú'uk is the pair of sticks arranged like the letter A, used as a gun-rest. This method of transmitting the request to the first passer is resorted to by the greater number of coast natives of

Southern Alaska.

Fig. 57, also drawn by Naumoff, means "discovery of bear; assistance wanted."



FIG. 57.—Assistance wanted in hunt. Alaska.

When a hunter discovers a bear, and requires assistance, he ties together a bunch of grass, or other fibrous matter, in the form of an animal with legs, and places it upon a long stick or pole which is erected at a conspicuous point to attract attention. The head of the effigy is directed toward the locality where the animal was last seen.

This device is also used at times by most of the Southern Alaskan Indians.

Figure 58 was also drawn by Naumoff, and signifies "starving hunters."

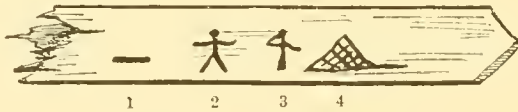


FIG. 58.—Starving hunters. Alaska.

Hunters who have been unfortunate, and are suffering from hunger, scratch or draw upon a piece of wood characters similar to those figured, and place the lower end of the stick in the ground on the trail where the greatest chance of its discovery occurs. The stick is inclined toward the locality of the habitation. The accompanying explanation will serve to illustrate more fully the information contained in the drawing.

1. A horizontal line denoting a canoe, showing the persons to be fishermen.

2. An individual with both arms extended signifying *nothing*, corresponding with the gesture for negation.

3. A person with the right hand to the mouth, signifying *to eat*, the left hand pointing to the house occupied by the hunters.

4. The habitation.



The whole signifies that there is *nothing to eat* in the *house*. This is used by natives of Southern Alaska.

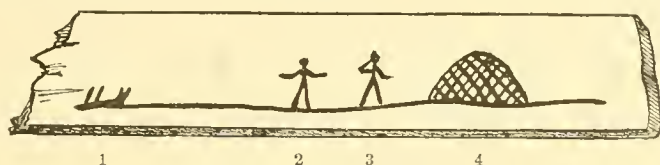


FIG. 59.—Starving hunters. Alaska.

Figure 59, with the same signification, and from the same hand, is similar to the preceding in general design. This is placed in the ground near the landing place of the canoemen, so that the top points toward the lodge.

The following is the explanation of the characters :

1. Baidarka, showing double projections at bow, as well as the two individuals, owners, in the boat.
2. A man making the gesture for *nothing*. (See in this connection Figure 155, page 235.)
3. Gesture drawn, denoting *to eat*, with the right hand, while the left points to the lodge.
4. A winter habitation.

This is used by the Alaskan coast natives.

#### WARNING AND GUIDANCE.

An amusing instance of the notice or warning of "No thoroughfare" is given on page 383 of the present writer's paper, *Sign Language among North American Indians*, in the First Annual Report of the Bureau of Ethnology. It was taken from a rock-etching in Cañon de Chelly, New Mexico. A graphic warning against trespass appears in Schoolcraft, Vol. I, Plate 48, Figure B, op. page 338.

During his connection with the geographic surveys west of the one hundredth meridian under the direction of Capt. G. M. Wheeler, U. S. Army, Dr. Hoffman observed a practice which prevailed among the Tivátikai Shoshoni, of Nevada, in which heaps of stones were erected along or near trails to indicate the direction to be taken and followed to reach springs of water.

Upon slight elevations of ground, or at points where a trail branched into two or more directions, or at the intersection of two trails, a heap of stones would be placed, varying from 1 to 2 or more feet in height, according to the necessity of the case, to attract attention. Upon the top of this would be fixed an elongated piece of rock so placed that the most conspicuous point projected and pointed in the course to be

followed. This was continued sometimes at intervals of several miles unless indistinct portions of a trail or intersections demanded a repetition at shorter distances.

A knowledge of the prevalence of this custom proved very beneficial to the early prospectors and pioneers.

Stone circles and stone heaps of irregular form were also met with, which to a casual observer might be misleading. These resulted from previous deposits of edible pine nuts, which had been heaped upon the ground and covered over with stones, grass, and earth to prevent their destruction by birds and rodents. These deposits were placed along the trails in the timbered regions to afford sustenance to Indians who had failed in the hunt, or who might not reach camp in time to prevent suffering from hunger.

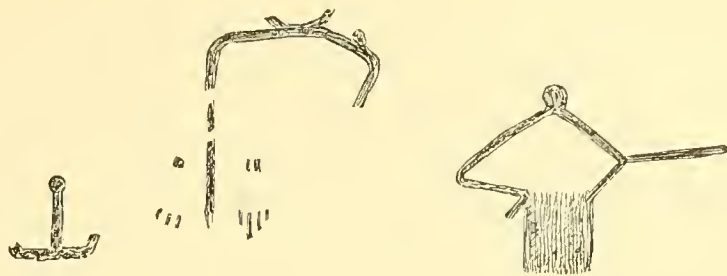
Plate LXXX (A, B, C) represents colored pictographs found by Dr. Hoffman in 1884 on the North Fork of the San Gabriel River, also known as the Azuza Cañon, Los Angeles County, California. Its description is as follows:

A and B are copies, one-sixteenth natural size, of rock painting found in the Azuza Cañon, 30 miles northeast of Los Angeles, California.

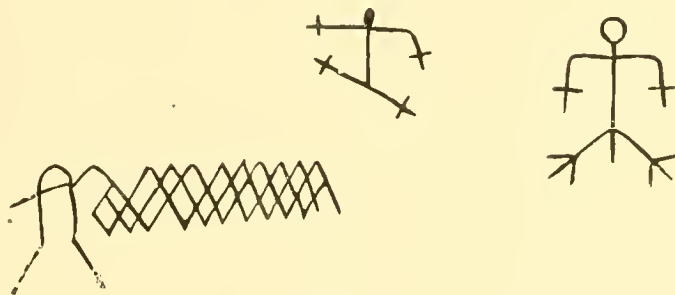
The bowlder upon which the paintings occur measures 8 feet long, about 4 feet high, and the same in width. The figures occur on the eastern side of the rock, so that the left arm of the human figure on the right points toward the north.

The map (C) at the bottom of the plate presents the topography of the immediate vicinity and the relative positions of the rocks bearing the two illustrations. The map is drawn on a scale of 1,000 yards to the inch.

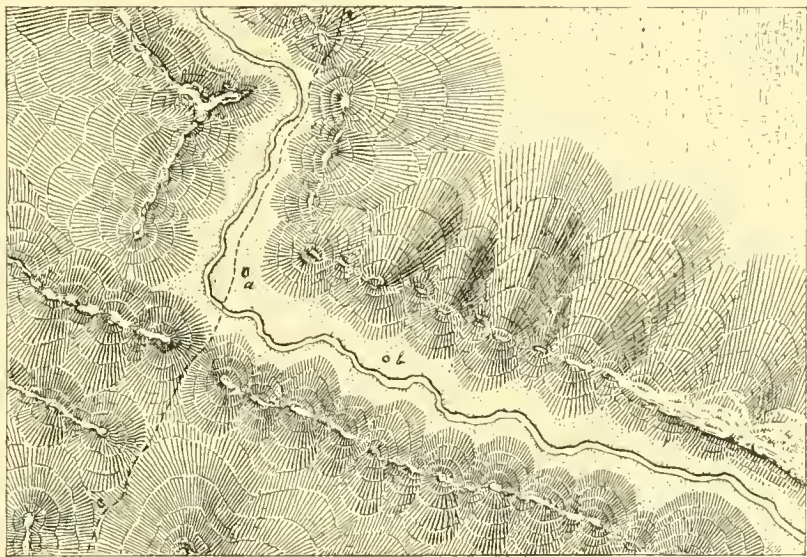
The stream is the North Fork of the San Gabriel River, and is hemmed in by precipitous mountains, with the exception of two points marked *c, c*, over which the old Indian trail passed in going from the Mojave Desert on the north to the San Gabriel Valley below, this course being the nearest for reaching the mission settlements at San Gabriel and Los Angeles. In attempting to follow the water-course the distance would be greatly increased and a rougher trail encountered. The pictograph A, painted on the rock marked *b* on the map C, shows characters in pale yellow, upon a bowlder of almost white granite, which are partly obliterated by weathering and annual floods, though still enough remains to indicate that the right-hand figure is directing the observer to the northeast, although upon taking that course it would be necessary to round the point a short distance to the west. It may have been placed as a notification of direction to those Indians who might have come up the cañon instead of on the regular trail. Farther west, at the spot marked *a* on the map, is a granite bowlder bearing a large number of paintings part of which have become almost obliterated. These were drawn with red ocher (ferrie



A.



B.



C.

ROCK PAINTINGS IN AZUZA CAÑON, CALIFORNIA.



oxide). A selection of these is shown in B on the plate. This is on the western face of the rock, almost vertical. This also appears to refer to the course of the trail, which might readily be lost on account of the numerous mountain ridges and spurs. The left-hand figure appears to place the left hand upon a series of ridges, as if showing pantomimically the rough and ridged country over the mountains.

The middle figure represents gesture, which in its present connection may indicate direction of the trail, *i. e.*, toward the left, or northward in an up-hill course, as indicated by the arm and leg, and southward, or downward, as suggested by the lower inclination of the leg, and lower forearm and hand on the right of the illustration.

The right-hand figure, although similar in manner of delineating gesture and general resemblance to the Shoshonian method, is not yet determined in that connection.

These illustrations, as well as other pictographs on the same rock, not at present submitted, bear remarkable resemblance to the general type of Shoshonian drawing, and from such evidence as is now attainable it appears more than probable that they are of Chemehuevi origin, as that tribe at one time ranged thus far west, though north of the mountains, and also visited the valley and settlements at Los Angeles at stated intervals to trade. It is also known that the Mojaves came at stated periods to Los Angeles as late as 1845, and the trail indicated at point *a* of the map would appear to have been their most practicable and convenient route. There is strong evidence that the Mokis sometimes visited the Pacific coast and might readily have taken this same course, marking the important portion of the route by drawings in the nature of guide boards.

#### CHARTS OF GEOGRAPHIC FEATURES.

Dr. W. J. Hoffman states that when at Grapevine Springs, Nevada, in 1871, the Pai Uta living at that locality informed the party of the exact location of Las Vegas, the objective point. The Indian sat upon the sand, and with the palms of his hands formed an oblong ridge to represent Spring Mountain, and southeast of this ridge another gradual slope, terminating on the eastern side more abruptly; over the latter he passed his fingers to represent the side valleys running eastward. He then took a stick and showed the direction of the old Spanish trail running east and west over the lower portion of the last-named ridge.

When this was completed the Indian looked at the members of the party, and with a mixture of English, Spanish, Pai-Uta, and gesture signs, told them that from where they were now they would have to go southward, east of Spring Mountain, to the camp of Pai-Uta Charlie, where they would have to sleep; then indicating a line southeastward to



another spring (Stump's) to complete the second day; then he followed the line representing the Spanish trail to the east of the divide of the second ridge above named, where he left it, and passing northward to the first valley, he thrust the short stick into the ground and said, "Las Vegas."

It is needless to say that the information was found to be correct and of considerable value to the party.

Schoolcraft (Vol. I, p. 334, Pl. 47, Fig. B) mentions that the discovery, on one of the tributaries of the Susquehanna River, "of an Indian map drawn on stone, with intermixed devices, a copy of which appears in the first volume of the collections of the Historical Committee of the American Philosophical Society, Philadelphia, proves, although it is thus far isolated, that stone was also employed in that branch of inscription. This discovery was in the area occupied by the Lenapees, who are known to have practiced the art, which they called *Ola Walum*."

The Tegna Pueblos, of New Mexico, "traced upon the ground a sketch of their country, with the names and locations of the pueblos occupied in New Mexico," a copy of which, "somewhat improved," is given in Vol. III, Pacific R. R. Explorations, 1856, Part III, pp. 9, 10.

A Yuma map of the Colorado River, with the names and locations of tribes within its valley, is also figured in the last mentioned volume, page 19. The map was originally traced upon the ground.

A Pai-Uta map of the Colorado River is also figured in the same connection, which was obtained by Lieutenant Whipple and party.

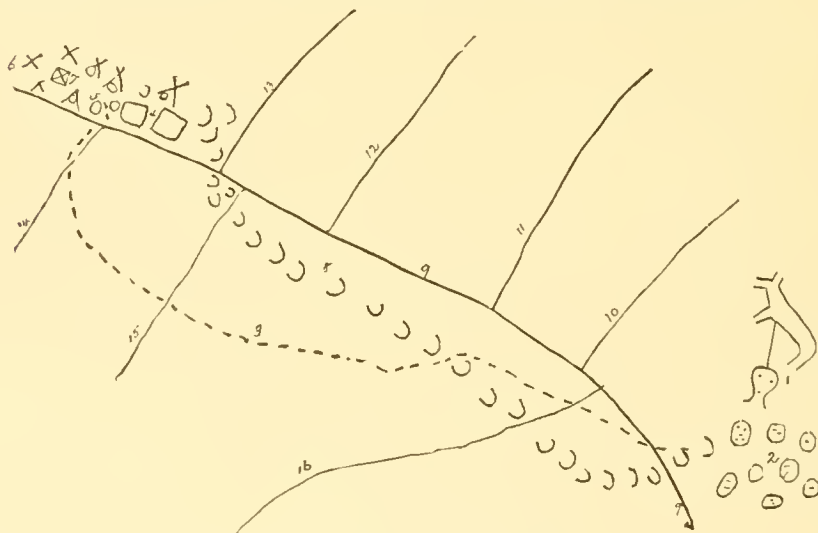


FIG. 60.—Lean-Wolf's map. Hidatsa.

Lean-Wolf, of the Hidatsa, who drew the picture of which Figure 60 is a fac-simile, made a trip on foot from Fort Berthold to Fort Buford, Dakota, to steal a horse from the Dakotas encamped there. The



returning horse tracks show that he attained the object in view, and that he rode home. The following explanation of characters was made to Dr. Hoffman, at Fort Berthold, in 1881:

1. Lean-Wolf, the head only of a man to which is attached the outline of a wolf.
2. Hidatsa earth lodges, circular in form, the spots representing the pillars supporting the roof. Indian village at Fort Berthold, Dakota.
3. Human footprints; the course taken by the recorder.
4. The Government buildings at Fort Buford (square).
5. Several Hidatsa lodges (round), the occupants of which had intermarried with the Dakotas.
6. Dakota lodges.
7. A small square—a white man's house—with a cross marked upon it, to represent a Dakota lodge. This denotes that the owner, a white man, had married a Dakota woman who dwelt there.
8. Horse tracks returning to Fort Berthold.
9. The Missouri River.
10. Tule Creek.
11. Little Knife River.
12. White Earth River.
13. Muddy Creek.
14. Yellowstone River.
15. Little Missouri River.
16. Dancing Beard Creek.

#### CLAIM OR DEMAND.

Stephen Powers states that the Nishinam of California have a curious way of collecting debts. "When an Indian owes another, it is held to be in bad taste, if not positively insulting, for the creditor to dun the debtor, as the brutal Saxon does; so he devises a more subtle method. He prepares a certain number of little sticks, according to the amount of the debt, and paints a ring around the end of each. These he carries and tosses into the delinquent's wigwam without a word and goes his way; whereupon the other generally takes the hint, pays the debt, and destroys the sticks." See *Contrib. to N. A. Ethnology*, Vol. III, 321.

Dr. W. J. Hoffman says, "When a patient has neglected to remunerate the Shaman [Wikteöm'nĩ of the Yokötsan linguistic division] for his services, the latter prepares short sticks of wood, with bands of colored porcupine quills wrapped around them, at one end only, and every time he passes the delinquent's lodge a certain number of them are thrown in as a reminder of the indebtedness." See *San Francisco (Cal.) Western Lancet*, XI, 1882, p. 443.

## MESSAGES AND COMMUNICATIONS.

Figure 61 is a letter sent by mail from a Southern Cheyenne, named Turtle-following-his-Wife, at the Cheyenne and Arapaho Agency, Indian Territory, to his son, Little-Man, at the Pine Ridge Agency, Dakota Territory. It was drawn on a half-sheet of ordinary writing paper, without a word written. It was inclosed in an envelope, which was addressed to "Little-Man, Cheyenne, Pine Ridge Agency," in the ordinary manner, written by some one at the first-named agency. The letter was evidently understood by Little-Man, as he immediately called upon Dr. V. T. McGillycuddy, Indian agent at Pine Ridge Agency, and was



FIG. 61.—Letter to Little-Man from his father Cheyenne.

aware that the sum of \$53 had been placed to his credit for the purpose of enabling him to pay his expenses in going the long journey to his father's home in Indian Territory. Dr. McGillycuddy had, by the same mail, received a letter from Agent Dyer, inclosing \$53, and explaining the reason for its being sent, which enabled him also to understand the pictographic letter. With the above explanation it very clearly shows, over the head of the figure to the left, the turtle following the turtle's wife united with the head of the figure by a line, and over the head of the other figure, also united by a line to it, is a little man. Also over

the right arm of the last-mentioned figure is another little man in the act of springing or advancing toward Turtle-following-his-Wife, from whose mouth proceed two lines, curved or hooked at the end, as if drawing the little figure towards him. It is suggested that the last-mentioned part of the pictograph is the substance of the communication, *i. e.*, "come to me," the larger figures with their name totems being the persons addressed and addressing. Between and above the two large figures are fifty-three round objects intended for dollars. Both the Indian figures have on breech-cloths, corresponding with the information given concerning them, which is that they are Cheyennes who are not all civilized or educated.

The illustration, Figure 62, was made by a native Alaskan, and represents a native of the Teninahs making a smoke signal to the people of the village on the opposite shore of a lake, so that a boat may be sent to carry the signalist across. The K'niqamūt band of the Tenina have no boats, as they live inland, and therefore resort to signaling with smoke when desiring transportation. On account of this custom they are termed "Signal People." If the pictograph could be transmitted in advance of the necessity, the actual use of the smoke signal, with consequent delay in obtaining the boat, would be avoided.

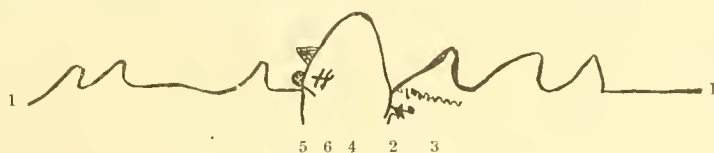


FIG. 62.—Drawing of smoke signal. Alaska.

1. Represents the mountain contour of the country.
2. A Tenina Indian.
3. Column of smoke.
4. Bird's-eye view of the lake.
5. The settlement on opposite shore of lake.
6. Boat crossing for the signalist.

Under this head of messages and communications may be included the material objects sent as messages, many accounts of which are published. It is to be expected that graphic representations of the same or similar objects, with corresponding arrangement, should have similar significance. Among the Indians painted arrows, bearing messages when discharged, are familiar. The Turkish Selam, or flower letters, are in the same category.

The following account of a "diplomatic packet" is extracted from Schoolcraft, Vol. III, p. 306, *et seq.*:

In the month of August, 1852, a message reached the President of the United States, by a delegation of the Pueblos of Tesnue in New Mexico, offering him friendship and intercommunication; and opening, symbolically, a road from the Moqui country to Washington. \* \* \*

This unique diplomatic packet consists of several articles of symbolic import. The first is the official and ceremonial offer of the peace-pipe. This is symbolized by a joint of the maize, five and a half inches long, and half an inch in diameter. The hollow of the tube is filled by leaves of a plant which represents tobacco. It is stopped to secure the weed from falling out, by the downy yellow under plumage of some small bird. Externally, around the center of the stalk, is a tie of white cotton twisted string of four strands, (not twisted by the distaff,) holding, at its end, a small tuft of the before-mentioned downy yellow feathers, and a small wiry feather of the same species. The interpreter has written on this, "The pipe to be smoked by the President." \* \* The object is represented in the cut, A, [represented in Figure 63.]

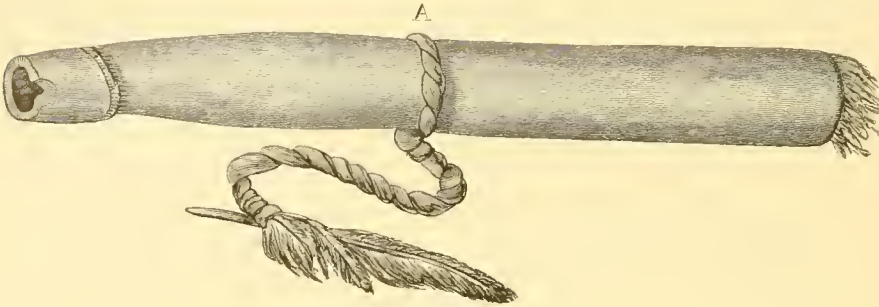


FIG. 63.—Part of diplomatic packet.

The second symbol consists of two small columnar round pieces of wood, four and a half inches long, and four-tenths in diameter, terminating in a cone. The cone is one and a half inches long, and is colored black; the rest of the pieces are blue; a peace color among the Indians south, it seems, as well as north. This color has the

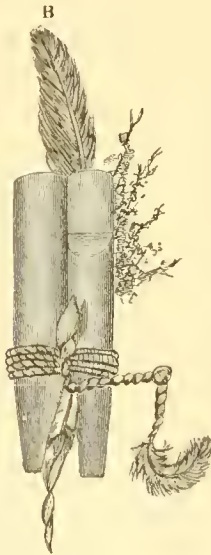


FIG. 64.—Part of diplomatic packet.



FIG. 65.—Part of diplomatic packet.

appearance of being produced by the carbonate of copper mixed with aluminous earth; and reminds one strongly of the blue clays of the Dacotahs. The wood, when cut, is white, compact, and of a peculiar species. A notch is cut at one end of one of

the pieces, and colored yellow. A shuck of the maize, one end of which, rolled in the shape of a cone, is bound up by cotton strings, with a small bird's feather, in the manner of the symbolic pipe. There is also tied up with the symbolic sticks, one of the secondary feathers and bits of down of a bird of dingy color. The feather is naturally tipped with white. Together with this, the tie holds a couple of sticks of a native plant or small seed of the prairie grass, perhaps. It may, together with the husk of the maize, be emblematic of their cultivation. The whole of the tie represents the Moquis. The following cut, B, [reproduced in Figure 64,] represents this symbol:

The third object is, in every respect, like B, [reproduced in Figure 64,] and symbolizes the President of the United States. A colored cotton cord, four feet long, unites these symbols. Six inches of this cord is small and white. At the point of its being tied to the long colored cord there is a bunch of small bird's feathers. This bunch, which symbolizes the geographical position of the Navajoes, with respect to Washington, consists of the feathers of six species, the colors which are pure white, blue, brown, mottled, yellow, and dark, like the pigeon-hawk, and white, tipped with brown. (See the preceding cut, C.)

The interpreter appends to these material effigies or devices [which are arranged as in D, reproduced in Figure 66] the following remarks.

"These two figures represent the Moqui people and the President; the cord is the road which separates them; the feather tied to the cord is the meeting point; that

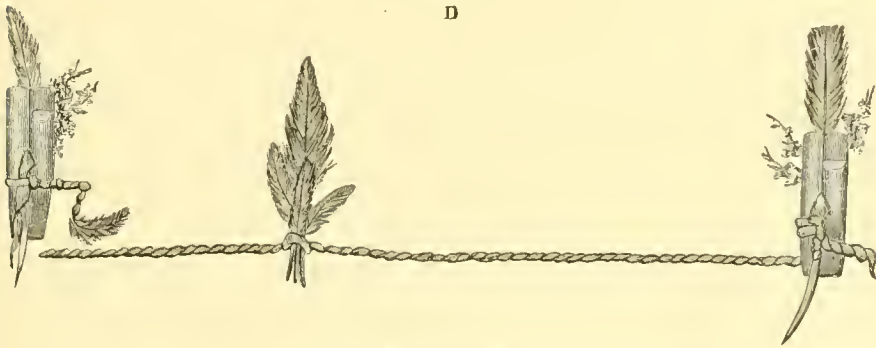


FIG. 66.—Part of diplomatic packet.

part of the cord which is white is intended to signify the distance between the President and the place of meeting; and that part which is stained is the distance between the Moqui and the same point. Your Excellency will perceive that the distance between the Moqui and place of meeting is short, while the other is very long.

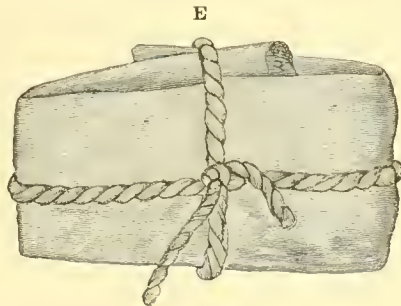


FIG. 67.—Part of diplomatic packet.

"The last object of this communication from the high plains of New Mexico, is the most curious, and the most strongly indicative of the wild, superstitious notions of the



Moqui mind. It consists of a small quantity of wild honey, wrapped up in a wrapper or inner fold of the husk of the maize, as represented in E, [reproduced in Figure 67.] It is accompanied by these remarks:

"A charm to call down rain from heaven.—To produce the effect desired, the President must take a piece of the shuck which contains the wild honey, chew it, and spit it upon the ground which needs rain; and the Moquis assure him that it will come."

The Maori used a kind of hieroglyphical or symbolical way of communication; a chief inviting another to join in a war party sent a tattooed potato and a fig of tobacco bound up together, which was interpreted to mean that the enemy was a Maori and not European by the tattoo, and by the tobacco that it represented smoke; he therefore roasted the one and eat it, and smoked the other, to show he accepted the invitation, and would join him with his guns and powder. Another sent a water-proof coat with the sleeves made of patchwork, red, blue, yellow, and green, intimating that they must wait until all the tribes were united before their force would be water-proof, *i. e.*, able to encounter the European. Another chief sent a large pipe, which would hold a pound of tobacco, which was lighted in a large assembly, the emissary taking the first whiff, and then passing it round; whoever smoked it showed that he joined in the war. See *Te Ika a Mani*, by Rev. Richard Taylor, London, 1870.

#### RECORD OF EXPEDITION.

Under this head, many illustrations of which might be given besides several in this paper, see account of colored pictographs in Santa Barbara County, California, page 34 *et seq.*, Plates I and II, also Lean-Wolf's trip, Figure 60, page 158. Also, Figures 135 and 136, pages 214 and 215.



## TOTEMIC.

This is one of the most striking of the special uses to which pictography has been applied by the North American Indians. For convenience, the characters may be divided into: First, tribal; Second, gentile; and Third, personal designations.

### TRIBAL DESIGNATIONS.

A large number of these graphic distinctions are to be found in the Dakota Winter Counts.

Rev. J. Owen Dorsey reports that the Tsiñ side of the Osage tribe, when on a war party, have the face painted red, with mud upon the cheek, below the left eye, as wide as two or more fingers.

The Hañka side of the tribe paint the face red, with a spot of mud upon the right cheek, below the eye, as wide as two or more fingers.

For an ingenious method of indicating by variation of incisions on trees, the tribal use of paint by the Absaroka and Dakota respectively, see page 62.

Figure 68 shows the tribal designation of the Kaiowa by the Dakota, taken from the winter count of Battiste Good, 1814-'15. He calls the winter "Smashed-a-Kaiowa's-head-in winter." The tomahawk with which it was done is in contact with the Kaiowa's head.

The sign for Kaiowa is made by passing the hands—naturally extended—in short horizontal circles on either side of the head, and the picture is probably drawn to represent the man in the attitude of making this gesture, and not the involuntary raising of the hands upon receiving the blow, such attitudes not appearing in Battiste Good's system.



FIG. 68.—Kaiowa.

Figure 69 is the tribal sign of the Arikara made by the Dakotas, taken from the winter count of Battiste Good for the year 1823-'24, which he calls "General———first-appeared-and-the Dakotas-aided-in-an-attack-on-the-Rees winter"; also "Much-corn winter."



FIG. 69.—Arikara.

The gun and the arrow in contact with the ear of corn show that both whites and Indians fought the Rees.

The ear of corn signifies "Ree" or Arikara Indians, who are designated in gesture language as "Corn Shellers."

Figure 70 is the tribal designation of the Omahas by the Dakotas, taken from the winter count of Battiste Good.



FIG. 70.  
Omaha.

A human head with cropped hair and red cheeks signifies Omaha. This tribe cuts the hair short and uses red paint upon the cheeks very extensively. This character is of frequent occurrence in Battiste Good's count.

Figure 71 is the tribal designation of the Pani by the Dakotas, taken from Battiste Good's winter count for the year 1704-'05.



FIG. 71.—Pani.

He says: The lower legs are ornamented with slight projections resembling the marks on the bottom of an ear of corn [husks], and signifies Pani.

A pictograph for Cheyenne is given in Figure 78, page 173, with some remarks.

Figure 72 is the tribal designation for Assiniboine by the Dakotas from winter count of Battiste Good for the year 1709-'10.

The Dakota pictorial sign for Assiniboine or Hohe, which means the voice, or, as some say, the voice of the musk-ox, is the outline of the vocal organs, as they conceive them, and represents the upper lip and roof of the month, the tongue, the lower lip, and chin and neck. The view is lateral, and resembles the sectional aspect of the mouth and tongue.



FIG. 72.—Assiniboine.

Figure 73 is the tribal designation of the Gros Ventres, by the same tribe and on the same authority.

Two Gros Ventres were killed on the ice by the Dakotas in 1789-'90. The two are designated by two spots of blood on the ice, and killed is expressed by the blood-tipped arrow against the figure of the man above. The long hair, with the red forehead, denotes the Gros Ventre. The red forehead illustrates the manner of applying war paint, and applies, also, to the Arikara and Absaroka Indians, in other Dakota records. The horizontal blue band signifies ice.



FIG. 73.—Gros Ventre.

Stephen Powers says (Contrib. to N. A. Ethnology, III, p. 109) the

Mattoal, of California, differ from other tribes in that the men tattoo. "Their distinctive mark is a round blue spot in the center of the forehead."

He adds: Among the Mattoal—

The women tattoo pretty much all over their faces.

In respect to this matter of tattooing there is a theory entertained by some old pioneers which may be worth the mention. They hold that the reason why the women alone tattoo in all other tribes is that in case they are taken captives their own people may be able to recognize them when there comes an opportunity of ransom. There are two facts which give some color of probability to this reasoning. One is that the California Indians are rent into such infinitesimal divisions, any one of which may be arrayed in deadly feud against another at any moment, that the slight differences in their dialects would not suffice to distinguish the captive squaws. A second is that the squaws almost never attempt any ornamental tattooing, but adhere closely to the plain regulation mark of the tribe.

Paul Marcoy, in *Travels in South America*, N. Y., 1875, Vol. II, page 353, says of the Passés, Yuris, Barrés, and Chummanas, of Brazil, that they mark their faces (in tattoo) with the totem or emblem of the nation to which they belong. It is possible at a few steps distant to distinguish one nation from another.

#### GENTILE OR CLAN DESIGNATIONS.

Rev. J. Owen Dorsey reports of the Osages that all the old men who have been distinguished in war are painted with the decorations of their respective gentes. That of the Tsion wactake is as follows: The face is first whitened all over with white clay; then a red spot is made on the forehead, and the lower part of the face is reddened; then with the fingers the man scrapes off the white clay, forming the dark figures, by letting the natural color of the face show through.

In Schoolcraft, V, 73, 74, it is stated that by totemic marks the various families of the Ojibwa denote their affiliation. A guardian spirit has been selected by the progenitor of a family from some object in the zoological chain. The representative device of this is called the totem. A warrior's totem never wants honors in their reminiscences, and the mark is put on his grave-post, or *adjedatig*, when he is dead. In his funeral pictograph he invariably sinks his personal name in that of his totem or family name. These marks are, in one sense, the surname of the clan. The personal name is not indicative of an Indian's totem.

The same custom, according to Rev. J. Owen Dorsey, prevails among the Omahas; and with the exception of that portion which relates to the drawing of the totemic mark upon the grave post the above remarks apply also to the Dakotas, of Northern Dakota, according to the observations of Dr. Hoffman. The Pueblos, remarked Mr. James Stevenson in a conversation with the writer, depict the gens totems upon their vari-

ous forms and styles of ceramic manufacture. The peculiar forms of secondary decoration also permit the article to be traced to any particular family by which it may have been produced.

#### PERSONAL DESIGNATIONS.

This head may be divided into (1) Insignia, or tokens of authority. (2) Connected with personal name. (3) Property marks. (4) Status of the individual. (5) Signs of particular achievement.

#### INSIGNIA OR TOKENS OF AUTHORITY.

A large number of examples are presented in connection with other divisions of this paper. Many more are noted in Schoolcraft, especially in Vol. I, plates 58 and 59, following page 408. In addition the following may be mentioned :

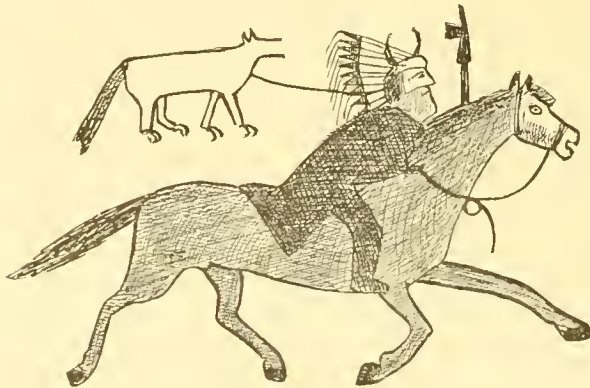


FIG. 74.—Lean-Wolf. Partisan.

Figure 74 is a copy of a drawing made by Lean-Wolf, second chief of the Hidatsa, to represent himself. The horns on his head-dress show that he is a chief. The eagle feathers on his war-bonnet, arranged in the special manner portrayed, also show high distinction as a warrior. His authority as "partisan," or leader of a war party is represented by the elevated pipe. His name is also added with the usual line drawn from the head. He explained the outline character of the wolf, having a white body with the mouth unfinished, to show that it was hollow, nothing there, *i. e.*, lean. The animal's tail is drawn in detail and dark to distinguish it from the body.

The character for "partisan" is also shown in the Dakota winter counts for the year 1842-43. See Plate XXIII.

Figure 75 (extracted from the First Annual Report Bureau of Ethnology, Fig. 227), drawn and explained by an Oglala Dakota, exhibits four erect pipes to show that he had led four war parties.



FIG. 75.—Two-Strike as Partisan.

#### PERSONAL NAME.

The names of Indians as formerly adopted or bestowed among themselves were and still remain connotive, when not subjected to white influence. They very often refer to some animal, predicating an attribute or position of that animal. On account of their objective, or at least ideographic, character, they almost invariably admit of being expressed in sign-language; and for the same reason they can with the same ease be portrayed in pictographs. Abundant proof of this is given in two collections *infra*, viz., the Ogalala Roster and the Red-Cloud Census. The device generally adopted by the Dakotas to signify that an object drawn in connection with a human head or figure was a name totem or a personal name of the individual, is to connect that object with the figure by a line drawn to the head or more frequently to the mouth of the latter. The same tribes make a distinction in manifesting that the gesture-sign for the object gestured is intended to be the name of an individual, by passing the index forward from the mouth in a direct line after the conclusion of the sign for the object. This signifies, "that is his name,"—the name of the person referred to.

A similar designation of an object as a name by means of a connected line is mentioned in Kingsborough's Mexico, Vol. I, Plate 33, part 4, and text, Vol. VI, page 150. Pedro de Alvarado, one of the companions of Cortez, was red-headed. Because of this the Mexicans called him *Tona-tihu*, the "Sun," and in their picture-writing his name was represented by a picture of that luminary attached to his person by a line.



As a general rule Indians are named at first according to a clan or gentile system, but in later life one generally acquires a new name, or perhaps several names in succession, from some special exploits or adventures. Frequently a sobriquet is given which is not complimentary. All of the names subsequently acquired as well as the original names are so connected with material objects or with substantive actions as to be expressible in a graphic picture, and also in a pictorial sign. The determination to use names of this connotive character is shown by the objective translation, whenever possible, of such European names as it became necessary for them to introduce frequently into their speech. William Penn was called *Onas*, that being the word for feather-quill in the Mohawk dialect. The name of the second French governor of Canada was Montmagny, erroneously translated to be "great mountain," which words were correctly translated by the Iroquois into *Onontio*, and this expression becoming associated with the title has been applied to all successive Canadian governors, though the origin having been generally forgotten, it has been considered to be a metaphorical compliment. Governor Fletcher was named by the Iroquois *Cajenquiragoe*, "the great swift arrow," not because of his speedy arrival at a critical time, as has been supposed, but because they had somehow been informed of the etymology of his name, "arrow-maker" (*Fr. fléchier*). A notable example of the adoption of a graphic illustration from a similarity in the sound of the name to known English words is given in the present paper in the Winter Count of American-Horse for the year 1865-'66, page 144, where General Maynadier is made to figure as "many deer."

While, as before said, some tribes give names to children from considerations of birth and kinship according to a fixed rule, others confer them after solemn deliberation. They are not necessarily permanent. A diminutive form is frequently bestowed by the affection of the parent. On initiation a warrior always assumes or receives a name. Until this is established he is liable to change his name after every fight or hunt. He will generally only acknowledge the name he has himself assumed, perhaps from a dream or vision, though he may be habitually called by an entirely different name. From that reason the same man is sometimes known under several different epithets. Personal peculiarity, deformity, or accident is sure to fix a name, against which it is vain to struggle. Girls do not habitually change names bestowed in their childhood. It may also be remarked that the same precise name is often given to different individuals in the same tribe, but not so frequently in the same band, whereby the inconvenience would be increased. For this reason it is often necessary to specify the band, sometimes also the father. For instance, when the writer asked an Indian who Black-Stone, a chief mentioned in the Dakota winter counts, was, the Indian asked, first, what tribe was he; then, what band; then, who was his father; and, except in the case of very noted persons, the identity is not proved



without an answer to these questions. A striking instance of this plurality of names among the Dakotas was connected with the name Sitting-Bull, belonging to the leader of the hostile band, while one of that name was almost equally noted as being the head soldier of the friendly Dakotas at Red-Cloud Agency. The present writer also found a number of Dakotas named Lone-Dog when in search of the recorder of the winter count above explained. The case may be illustrated by christian names among civilized people. At the time when a former President of the United States was the leading topic of conversation, nearly any one being asked who bore the name of Ulysses would be able to refer to General Grant, but few other christian names would convey any recognized identity. Indeed, the surname may be added and multiplicity with confusion still remain. Very few men have names so peculiar as not to find them with exact literation in the directories of the large cities.

Among the many peculiarities connected with Indian personal names, far too many for discussion here, is their avoidance of them in direct address, terms of kinship or relative age taking their place. Major J. W. Powell, in some remarks before the Anthropological Society of Washington, on the functions performed by kinship terms among Indian tribes, stated that at one time he had the Kaibab Indians, a small tribe of northern Arizona, traveling with him. The young chief was called by white men "Frank." For several weeks he refused to give his Indian name, and Major Powell endeavored to discover it by noticing the term by which he was addressed by the other Indians; but invariably some kinship term was employed. One day in a quarrel his wife called him "Chuarumpik (Yucca-heart.)" Subsequently Major Powell questioned the young chief about the matter, who explained and apologized for the great insult which his wife had given him by stating that she was excused by great provocation. The insult consisted in calling the man by his real name.

The following is quoted for comparison with the name-system of the Indians of Guiana, from Everard F. im Thurn, *op. cit.*, p. 219, *et seq.*:

The system under which the Indians have their personal names is intricate, and difficult to explain. In the first place, a name, which may be called the proper name, is always given to a young child soon after birth. It is said to be proper that the peaman, or medicine-man, should choose and give this name; but, at any rate now, the naming seems more often left to the parents. The word selected is generally the name of some plant, bird, or other natural object. Among Arawak proper names may be mentioned *Yambenassi* (night-monkey) and *Furi-tokoro* (tobacco-flower), and among Maensi names *Ti-ti* (owl), *Cheripung* (star?), and *Simiri* (locust-tree). But these names seem of little use, in that owners have a very strong objection to telling or using them, apparently on the ground that the name is part of the man, and that he who knows the name has part of the owner of that name in his power.

To avoid any danger of spreading knowledge of their names, one Indian, therefore, generally addresses another only according to the relationship of the caller and the called, as brother, sister, father, mother, and so on; or, when there is no relationship, as boy, girl, companion, and so on. These terms, therefore, practically form the names actually used by Indians amongst themselves. But an Indian is just as un-

willing to tell his proper name to a white man as to an Indian; and, of course, between the Indian and the white man there is no relationship the term for which can serve as a proper name. An Indian, therefore, when he has to do with a European, asks the latter to give him a name, and if one is given to him, always afterwards uses this. The names given in this way are generally simple enough—John, Peter, Thomas, and so on. But sometimes they are not sufficiently simple to be comprehended and remembered by their Indian owners, who therefore, having induced the donor to write the name on a piece of paper, preserve this ever after most carefully, and whenever asked for their name by another European, exhibit the document as the only way of answering. Sometimes, however, an Indian, though he cannot pronounce his English names, makes it possible by corruption. For instance, a certain Macusi Indian was known to me for a long time as Shassapoon, which I thought was his proper name, until it accidentally appeared that it was his 'English name,' he having been named by and after one Charles Appun, a German traveler.

The original of Figure 76 was made by Lean-Wolf, second chief of the Hidatsa, for Dr. W. J. Hoffman in 1881, and represents the method which this Indian has employed to designate himself for many years past. During his boyhood he had another name. This is a cursive, or perhaps it may be called cursive, form of the name, which is given more elaborately in Figure 74.



FIG. 76.—Lean-Wolf.

Figure 77 is taken from the winter count of Battiste Good for the year 1841-'42. He calls the year "Pointer-made-a-commemoration-of-the-dead winter." Also "Deep-snow winter."

The extended index denotes the man's name, "Pointer," the ring and spots, deep snow.



FIG. 77 —Pointer.

The spots denoting snow occur also in other portions of this count, and the circle, denoting *quantity*, is also attached in Figure 141, p. 219, to a forked stick and incloses a buffalo head to signify *much meat*. That the circle is intended to signify quantity is probable, as the gesture for "much" or "quantity" is made by passing the hands upward from both sides and together before the body, describing the upper half of a circle, *i.e.*, showing a heap.

Figure 78 is also from the winter count of Battiste Good for the year 1785-'86. This year he calls "The-Cheyennes-killed-Shadow's-father winter."

The umbrella signifies Shadow; the three marks under the arrow, Cheyenne; the blood-stained arrow in the man's body, killed; Shadow's name and the umbrella in the figure intimates that he was the first Dakota to carry an umbrella. The advantages of the umbrella were soon recognized by the Dakotas, and the first they obtained from the whites were highly prized.

In the record prepared by Battiste Good this is the only instance where the short vertical lines below the arrow signify Cheyenne. In all others these marks are numerical, and denote the number of persons killed. That these short lines signify Cheyenne may be attributable

to a practice of that tribe, to make transverse cuts in the forearm after or before going into a conflict, as an offering or vow to the Great Spirit for success. Cheyennes are thus represented in the winter count of Cloud-Shield for 1834-'35 (see page 139) and 1878-'79 (see page 146.)

Mr. P. W. Norris has presented a buffalo robe containing a record of exploits, which was drawn by Black-Crow, a Dakota warrior, several years ago. The peculiarity of the drawings is, that the warrior is represented in each instance in an upright position, the accompanying figure being always in a recumbent posture, representing the enemy who was slain. Instead of depicting the personal name above the fallen personage with a line connecting the two, the name of the enemy is placed above the head of the victor in each instance, a line extending between the character and the speaker or warrior whose exploits the characters represent. The latter seems to proclaim the name of his victim. A pipe is also figured between the victor and the vanquished, showing that he is entitled to smoke a pipe of celebration.

A copy of the whole record was shown to the Mdewakantawan Dakotas, near Fort Snelling, Minnesota, in 1883, and the character reproduced in Figure 79, about which there was the most doubt, was explained as signifying "many tongues," *i. e.*, Loud-Talker, being the name of the person killed.

The circle at the end of the line running from the mouth contains a number of lanceolate forms, the half of each of which is black, the other white. They have the appearance of feathers. These figures signify voice, the sounds as issuing from the mouth, and correspond in some respect to those drawn



FIG. 79.—Loud-Talker.

by the Mexicans with that significance. The considerable number of these figures, signifying intensity, denotes loud voice, or, as given literally, "loud talker," that being the name of the victim.

It is however to be noted that "Shield," an Oglala Dakota, says the character signifies Feather-Shield, the name of a warrior formerly living at the Pine Ridge Agency, Dakota.



FIG. 78.—Shadow.

## AN OGALALA ROSTER.

Plates LII to LVIII represent a pictorial roster of the heads of families, eighty-four in number, in the band or perhaps clan of Chief Big-Road, and were obtained by Rev. S. D. Hinman at Standing Rock Agency, Dakota, in 1883, from the United States Indian agent, Major McLaughlin, to whom the original was submitted by Chief Big-Road when brought to that agency and required to give an account of his followers.

Chief Big-Road and his people belong to the Northern Ogalala (accurately Oglala), and were lately hostile, having been associated with Sitting-Bull in various depredations and hostilities against both settlers and the United States authorities. Mr. Hinman states that the translations of the names were made by the agency interpreter, and although not as complete as might be, are, in the whole, satisfactory. Chief Big-Road "is a man of fifty years and upwards, and is as ignorant and uncompromising a savage, in mind and appearance, as one could well find at this late date."

The drawings in the original are on a single sheet of foolscap paper, made with black and colored pencils, and a few characters are in yellow ocher—water-color paint. On each of the seven plates, into which the original is here divided from the requirements of the mode of publication, the first figure in the upper left-hand corner represents, as stated, the chief of the sub-band, or perhaps, "family" in the Indian sense.

On five of the plates the chief has before him a decorated pipe and pouch, the design of each being distinct from the others. On Plates LIV and LV the upper left hand figure does not have a pipe, which leads to the suspicion that, contrary to the information so far received, the whole of the figures from Nos. 11 to 45 inclusive, on Plates LIII, LIV, and LV, constitute one band under the same chief, viz., No. 11. In that case Nos. 23 and 36 would appear to be leaders of subordinate divisions of that band. Each of the five chiefs has at least three transverse bands on the cheek, with differentiation of the pattern.

It will be noticed that each figure throughout the plates, which carries before it a war club, is decorated with three red transverse bands, but that of No. 30, on Plate LIV, and No. 48 on Plate LVI, have the three bands without a war club.

The other male figures seem in some instances to have each but a single red band; in others two bands, red and blue, but the drawing is so indistinct as to render this uncertain.

It will be observed, also, that in four instances (Nos. 14, 44, 45, and 72) women are depicted as the surviving heads of families. Their figures do not have the transverse bands on the cheek.

Also that the five chiefs do not have the war club, their rank being shown by pipe and pouch. Those men who are armed with war clubs, which are held vertically before the person, indicate (in accordance with a similar custom among other branches of the Dakota Nation, in which, however, the pipe is held instead of the club) that the man has at some time led war parties on his own account. See pages 118 and 139.













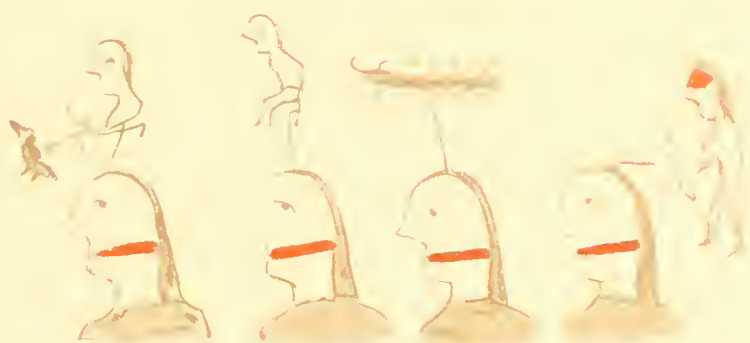
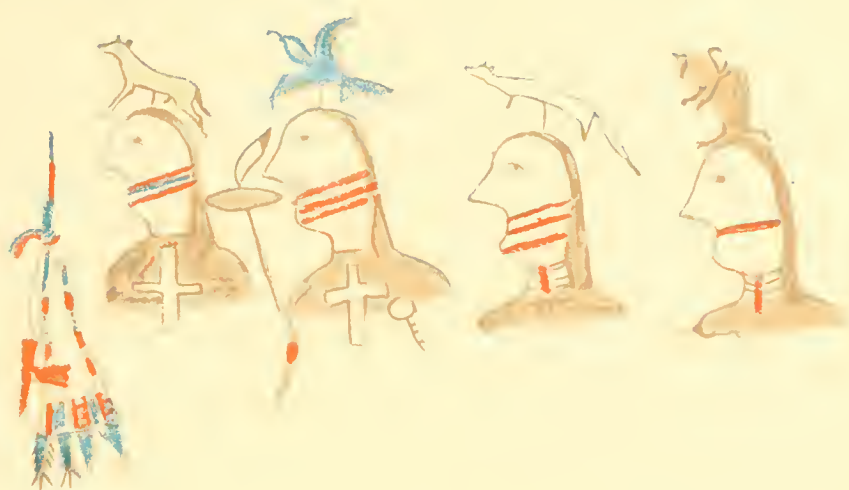
























*English names of the figures in the Ogalala Roster.*

- |                            |  |
|----------------------------|--|
| No. 1. Big-road.           | No. 45. Deaf-woman.  |
| 2. Bear-looking-behind.    | 46. Long-dog. Erroneously<br>printed Wall dog on<br>Plate LVI. |
| 3. Brings-back-plenty.     | 47. Iron-hawk.   |
| 4. White buffalo.          | 48. Pretty-weasel.   |
| 5. The-real-hawk.          | 49. Short-buffalo.   |
| 6. Shield-boy.             | 50. Bull-with-bad-heart.                                       |
| 7. The-bear-stops.         | 51. Four crows.  |
| 8. Wears-the-feather.      | 52. Tall-white-man.  |
| 9. Dog-eagle.              | 53. Eagle-hawk.  |
| 10. Red-horn-bull.         | 54. Lone-man.  |
| 11. Low-dog.               | 55. Causes-trouble-ahead.                                      |
| 12. Charging-hawk.         | 56. Makes dirt ("foul").                                       |
| 13. White-tail.            | 57. Black-road.  |
| 14. Blue-cloud (woman).    | 58. Shot-close.  |
| 15. Shield.                | 59. Iron-crow.   |
| 16. Little-eagle.          | 60. Running-horse.   |
| 17. Spotted-skunk.         | 61. Owns-an-animal-with-<br>horns.                             |
| 18. White-bear.            | 62. Blue-cloud-man.  |
| 19. White-hair.            | 63. Fingers.   |
| 20. His-fight.             | 64. Sacred-teeth.  |
| 21. Center-feather.        | 65. Searching-cloud.   |
| 22. Kills-Crows (Indians). | 66. Female-elk-boy.  |
| 23. The-bear-spares-him.   | 67. Little-owl.  |
| 24. White-plume.           | 68. Pretty-horse.  |
| 25. Fears-nothing.         | 69. Running-eagle.   |
| 26. Red crow.              | 70. Makes-enemy.   |
| 27. The-last-bear.         | 71. Prairie-chicken.   |
| 28. Bird-man.              | 72. Red-flute-woman.   |
| 29. Horse-with-horns.      | 73. Little-hawk.   |
| 30. Fast-elk.              | 74. Standing-buffalo.  |
| 31. Chief-boy.             | 75. Standing-bear.   |
| 32. Spotted-elk.           | 76. Iron-white-man.  |
| 33. Carries-the-badger.    | 77. Bear-whirlwind.  |
| 34. Red-earth-woman.       | 78. Sacred-crow.   |
| 35. Eagle-clothing.        | 79. Blue-hawk.   |
| 36. Has-a-war-club.        | 80. Hard-to-kill.  |
| 37. Little-buffalo.        | 81. Iron-boy.  |
| 38. Has-a-point (weapon.)  | 82. Painted-rock.  |
| 39. Returning-scout.       | 83. Yellow-wolf.   |
| 40. Little-killer.         | 84. Made-an-enemy.   |
| 41. Whistler.              |  |
| 42. Tongue.                |  |
| 43. Black-elk.             |  |
| 44. Lone-woman.            |  |

The information yet obtained from the author of the pictograph concerning its details is meager, and as it will probably be procured no unimportant conjectures are now hazarded. It is presented for the ideography shown, which may in most cases be understood from the translation of the several names into English as given in the preceding list. A few remarks of explanation, occurring to the writer, may be added:

No. 34, on plate LIV, with the translation Red-earth-woman, appears from the scalp-lock and the warrior's necklace to be a man, and Red-earth-woman to be his name.

No. 62 on Plate LVII, probably refers to an Ogalala who was called Arapaho, the interpretation, as well as the blue cloud, being in the Dakota language "Blue cloud," a term by which the Arapaho Indians are known to the Dakotas, as several times mentioned in this paper. In No. 65, Plate LVII, the cloud is drawn in blue, the *searching* being derived from the expression of that idea in gesture by passing the extended index of one hand (or both) forward from the eye, then from right to left, as if indicating various uncertain localities before the person, *i. e.*, searching for something. The lines from the eyes are in imitation of this gesture.

In No. 77, Plate LVIII, is a reproduction of the character given in Red-Cloud's Census, No. 133. See Plate LXVII. The figure appears, according to the explanation given by several Ogalala Dakota Indians, to signify the course of a whirlwind, with the transverse lines in imitation of the circular movement of the air, dirt, leaves, etc., observed during such aerial disturbances.

In No. 78 of the same plate the lines above the bird's head again appear to signify *sacred, mystic*, usually termed "medicine" in other records. Similar lines are in No. 64, Plate LVII.

#### RED-CLOUD'S CENSUS.

The pictorial census, shown in Plates LIX to LXXIX, was prepared under the direction of Red-Cloud, chief of the Dakota at Pine Ridge Agency, Dakota Territory, about two years ago. The individuals referred to and enumerated are the adherents of Red-Cloud, and do not represent all the Indians at that Agency. Owing to some disagreement the agent refused to acknowledge that chief as head of the Indians at the agency, and named another as the official chief. The Indians under Red-Cloud exhibited their allegiance to him by attaching, or having their names attached, to seven sheets of ordinary manilla paper, which were sent to Washington and, while in the custody of Dr. T. A. Bland, of that city, were kindly loaned by him to the Bureau of Ethnology to be copied by photography. The different sheets were apparently drawn by different persons, as the drawings of human heads vary enough to indicate individuality.

The first sheet of the original series contains in the present series of plates Nos. 1-130; the second sheet, Nos. 131-174; third sheet, Nos. 175-



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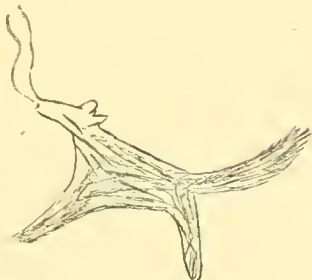
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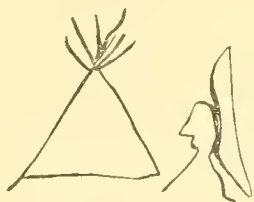
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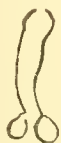
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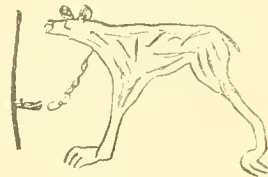
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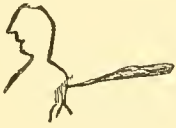


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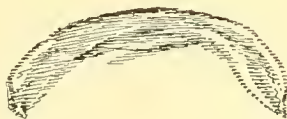
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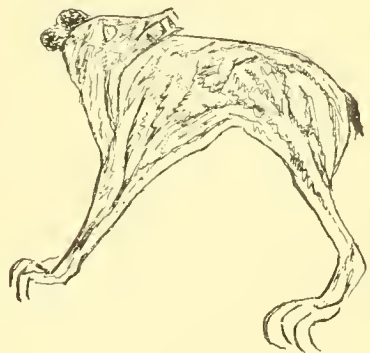
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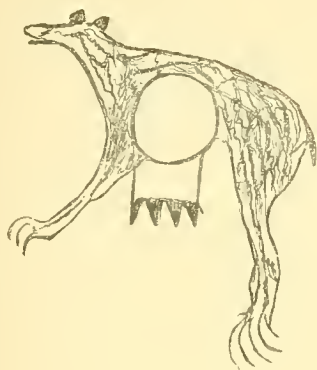


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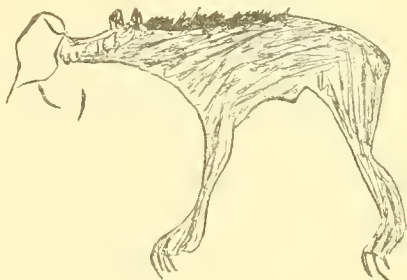




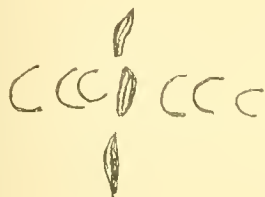
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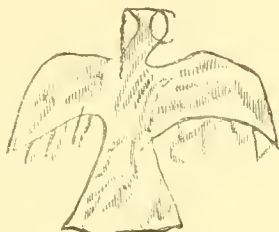
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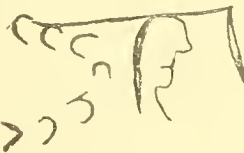
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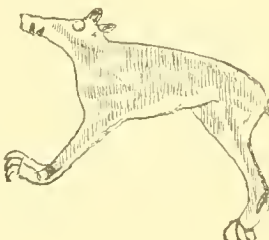
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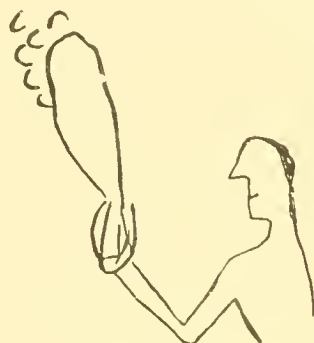
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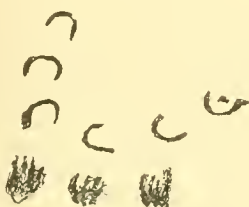
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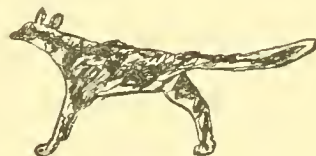
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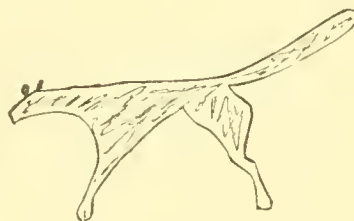
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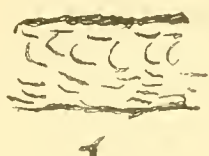


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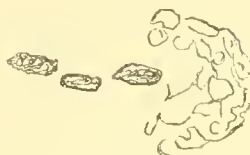
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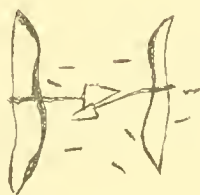
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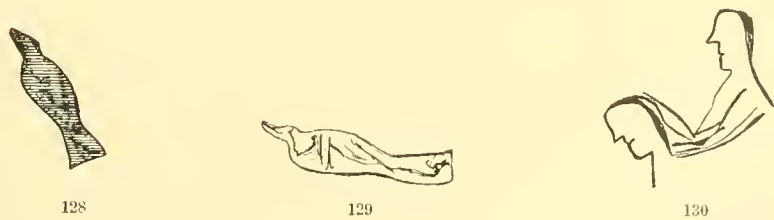
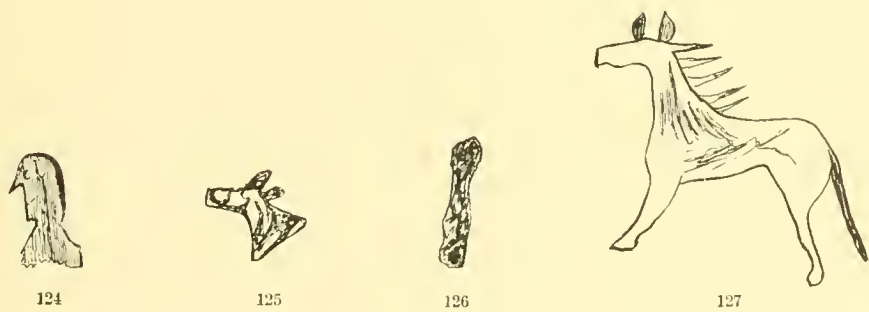
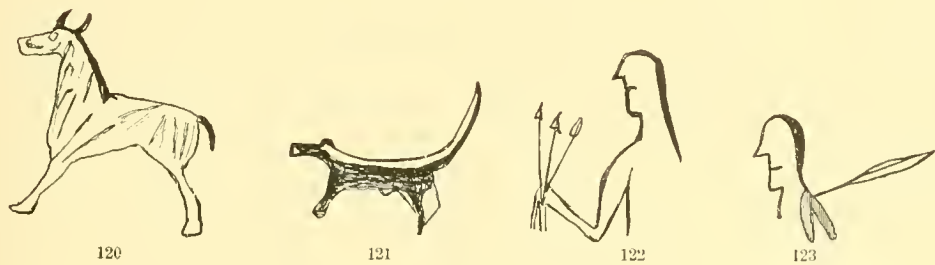
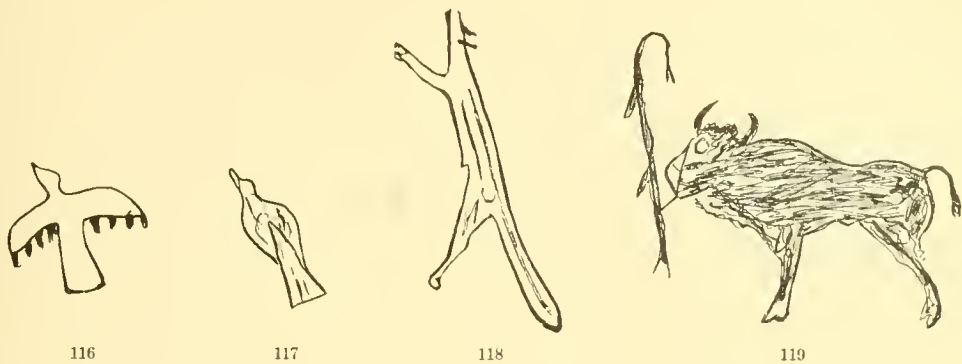


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RED-CLOUD'S CENSUS — RED-SHIRT'S BAND.





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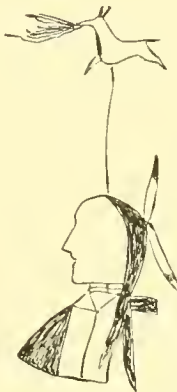
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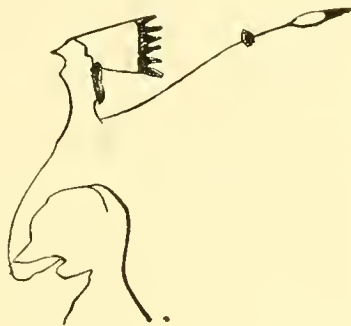
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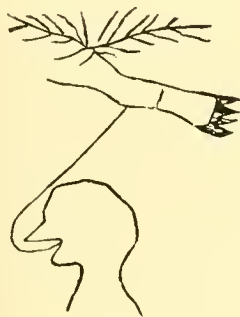
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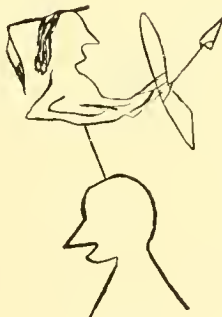
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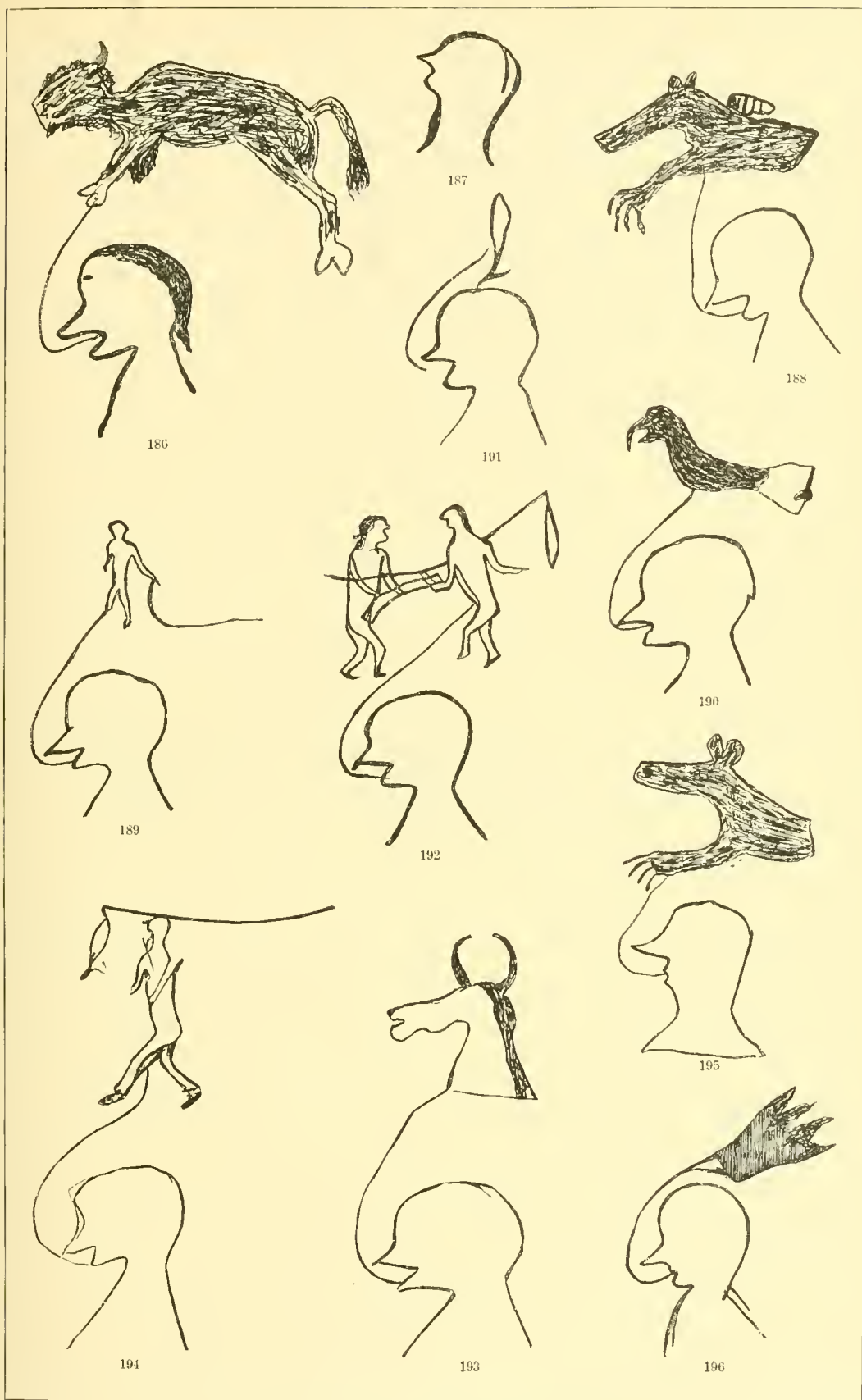


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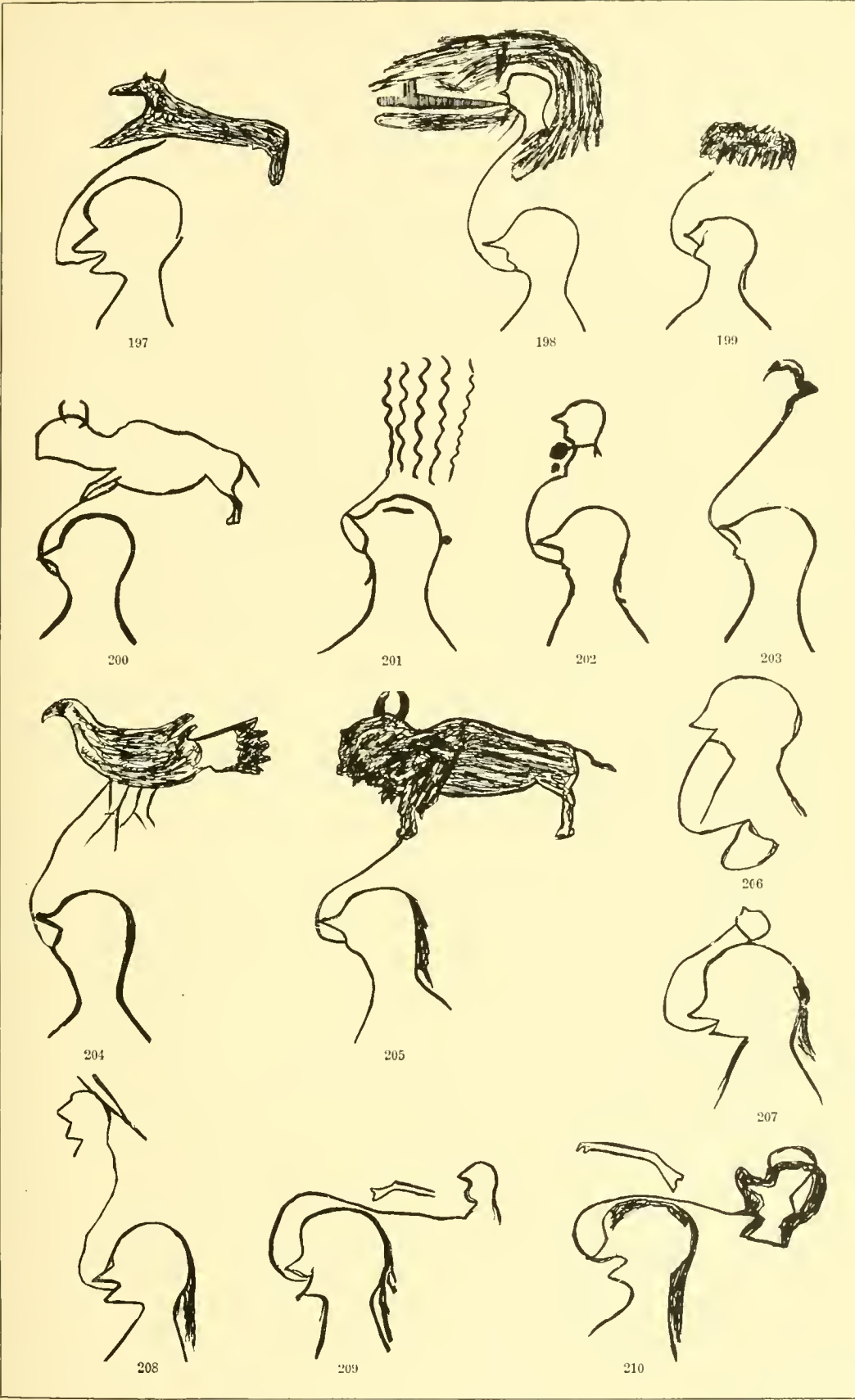


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RED=CLOUD'S CENSUS.—BLACK=DEER'S BAND











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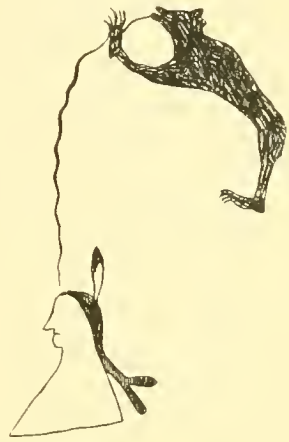




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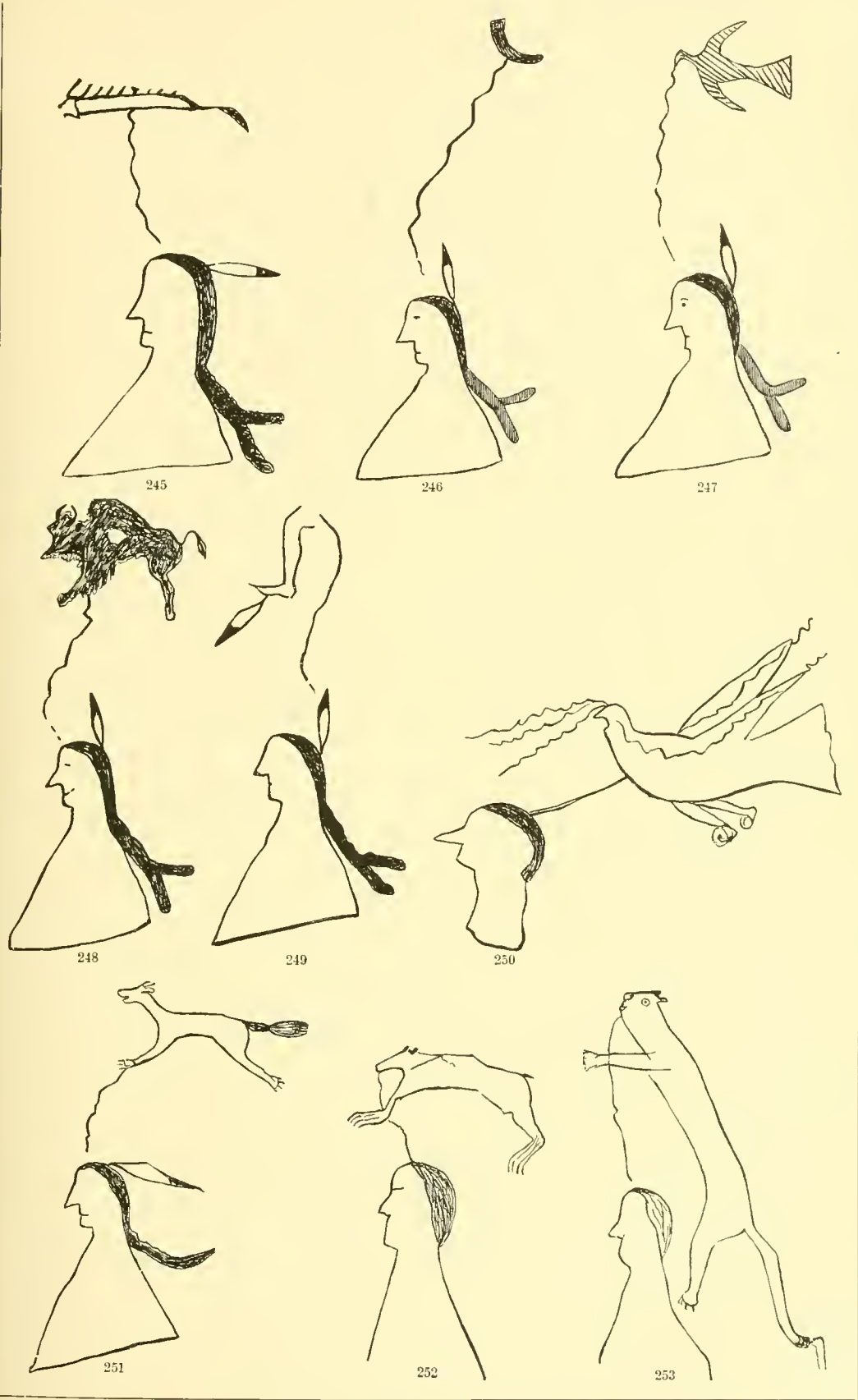
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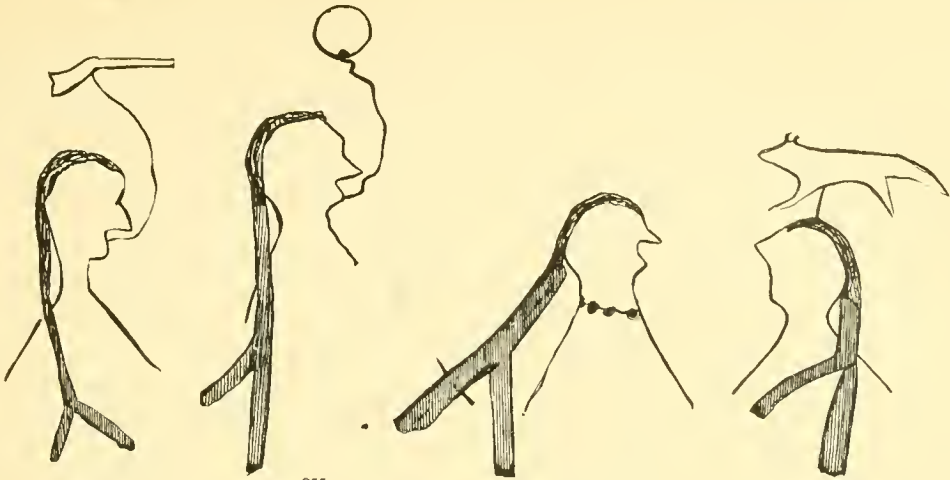
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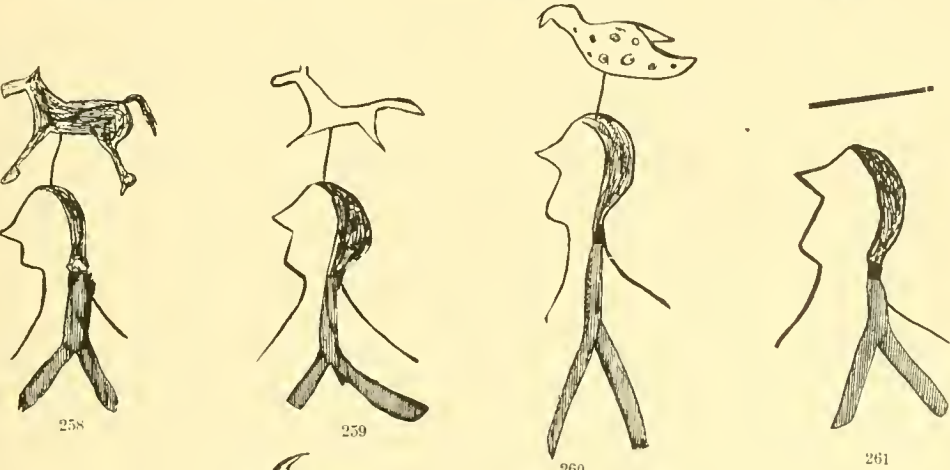


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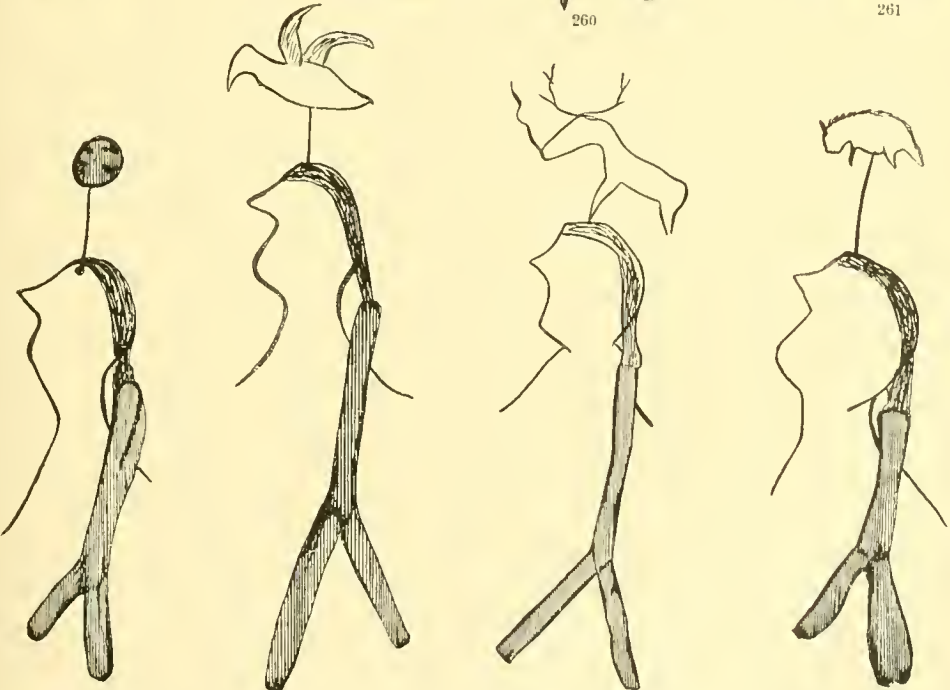


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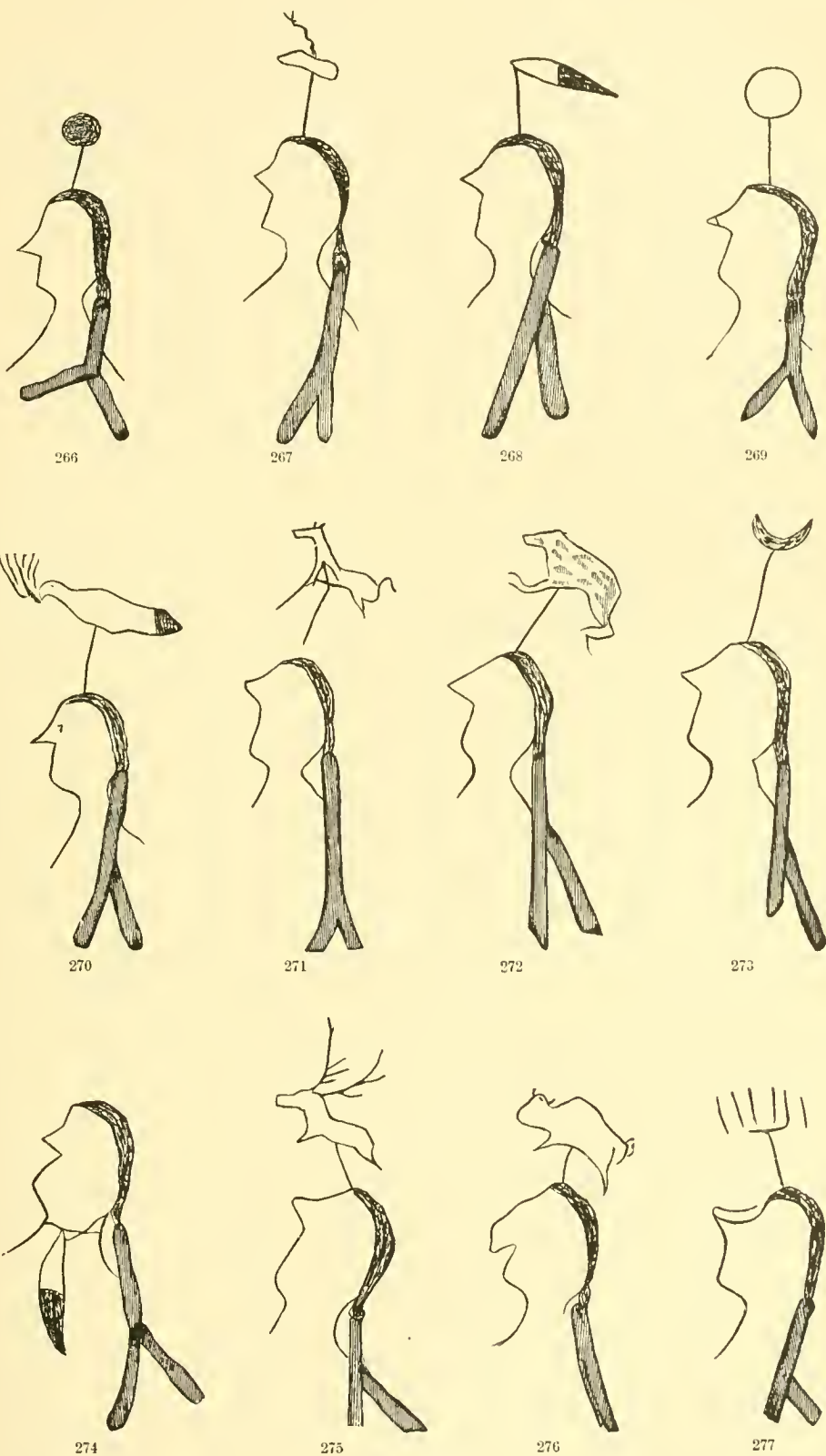
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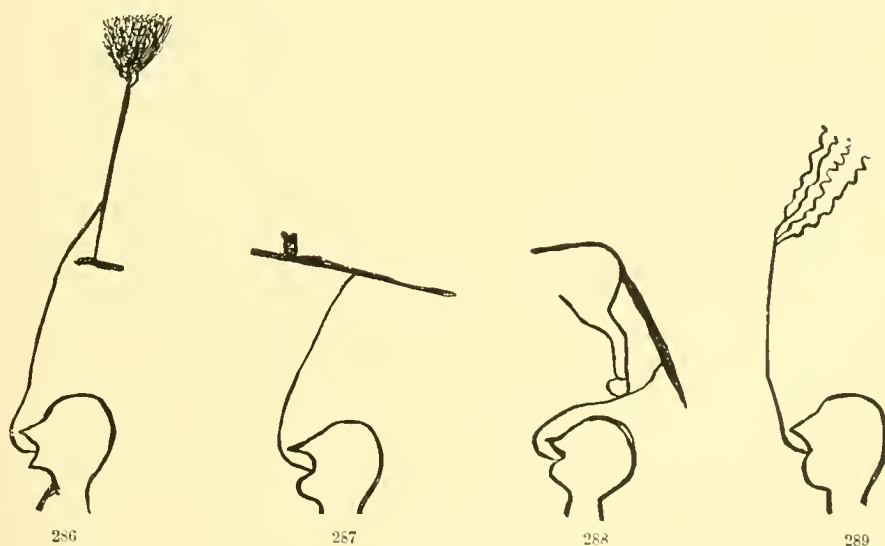
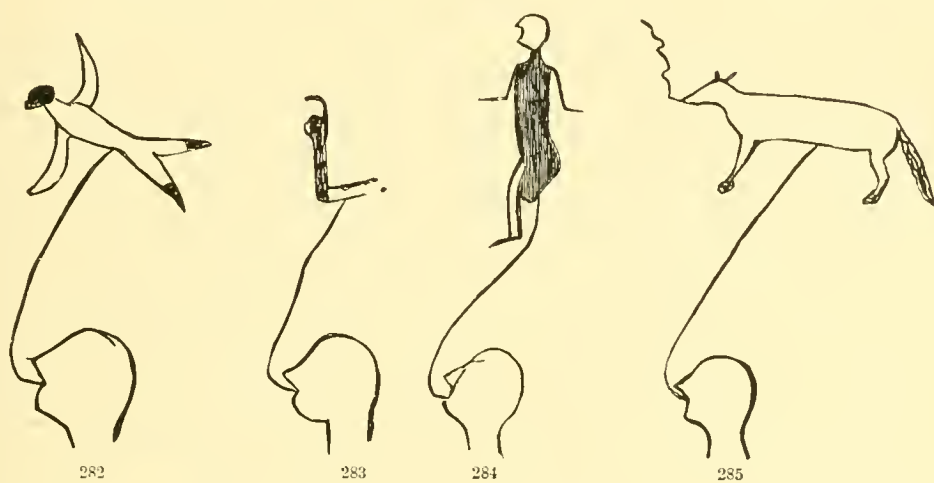
265













210; fourth sheet, Nos. 211-235; fifth sheet, Nos. 236-253; sixth sheet, Nos. 254-277; seventh sheet, Nos. 278-289. This arrangement seems to imply seven bands or, perhaps, gentes.

Dr. V. T. McGillycuddy, Indian agent at Pine Ridge Agency, Dakota, in correspondence, gives the impression that the several pictographs, representing names, were attached as signatures by the several individuals to a subscription list for Dr. T. A. Bland, before mentioned, the editor of *The Council Fire*, in support of that publication, and with an agreement that each should give twenty-five cents. The subscribers were, in fact, the adherents of Red-Cloud. The motive for the collection of pictured names is of little consequence, its interest, as that of the foregoing Ogalala Roster, being in the mode of their portrayal, together with the assurance that they were the spontaneous and genuine work of the Indians concerned.

Many suggestions regarding the origin of heraldry and that of proper names can be obtained from this and the preceding series of plates.

The translation of the names corresponding with the figures is as follows:

*English names of the figures in Red-Cloud's census.*

No. 1. Chief Red-Cloud.	No. 27. Steals-Horses.
2. Top-Man.	28. Kills-by-the-Camp.
3. Slow-Bear.	29. Iron-Hawk.
4. He-Dog.	30. Knock-a-hole-in-the-head.
5. Little Chief.	31. Runs-around.
6. Red-Shirt.	32. Kills-in-tight-place.
7. White-Hawk.	33. Scratch-the-Belly.
8. Cloud Shield.	34. Singer.
9. Good-Weasel.	35. Walking-Bull-Track.
10. Afraid-Eagle.	36. War-Eagle.
11. Bear-Brains.	37. Tree-in-the-Face.
12. War-Bonnet.	38. Kills-the-Enemy-at-Night.
13. Little-Soldier.	39. Wears-the-Bonnet.
14. Little-Dog.	40. War-Bonnet.
15. Call-for.	41. Shot-in-front-the-Lodge.
16. Short-Bull.	42. Kills-in-Lodge.
17. White-Bird.	43. Kills-at-Night.
18. Painted-Face.	44. Tall-White-Man.
19. Iron-Beaver.	45. Strike-First.
20. Big-Leggings.	46. Smoking-Bear.
21. Only-Man.	47. Hump.
22. Mad-Hearted-Bull.	48. Shot-Close.
23. Running-Eagle.	49. Blue-Horse.
24. Ring-Cloud.	50. Red-Elk.
25. White-Bird.	51. Only-Man.
26. Arapaho.	52. Bear-comes-out.

- |                            |                             |
|----------------------------|-----------------------------|
| No. 53. Poor-Elk.          | No. 99. Gap.                |
| 54. Blue-Handle.           | 100. Fills-the-Pipe.        |
| 55. Bad-Yellow-Hair.       | 101. Lodge-Roll.            |
| 56. Runs-by-the-Enemy.     | 102. Red-Bull.              |
| 57. Torn-Belly.            | 103. Runs-his-Horse.        |
| 58. Roman-Nose.            | 104. Licks-with-his-tongue. |
| 59. Old-Cloud.             | 105. Old-Horse.             |
| 60. High-Cloud.            | 106. Tracks.                |
| 61. Bear-Looks-Back.       | 107. Bob-tail-Horse.        |
| 62. Shield Bear.           | 108. White-Elk.             |
| 63. Sees-the Enemy.        | 109. Little-Sun.            |
| 64. Biting-Bear.           | 110. Keeps-the-Battle.      |
| 65. Cut-Through.           | 111. High-Cloud.            |
| 66. Red-Owl.               | 112. Bone-Necklace.         |
| 67. Good Bird.             | 113. Goes-Walking.          |
| 68. Red Fly.               | 114. Iron-Horse.            |
| 69. Kills-Enemy-at-Night.  | 115. Blue-Hatchet.          |
| 70. Flat-Iron.             | 116. Eagle-Bird.            |
| 71. White-Horse.           | 117. Iron-Bird.             |
| 72. Cheyenne-Butcher.      | 118. Long-Panther.          |
| 73. Red-Eagle.             | 119. Bull-Lance.            |
| 74. Kills-Back.            | 120. Black-Horse.           |
| 75. Red-Bear.              | 121. Pook-Skunk.            |
| 76. Poor-Bear.             | 122. Own-the-Arrows.        |
| 77. Runs off-the-Horse.    | 123. Shot.                  |
| 78. Bald-Eagle.            | 124. Red-Boy.               |
| 79. Shot-at.               | 125. Bear-Head.             |
| 80. Little-Ring.           | 126. Hard.                  |
| 81. Runs off-the-Horses.   | 127. Eagle-Horse.           |
| 82. Hard-Ground.           | 128. Blue-Bird.             |
| 83. Shot-at-his-horse.     | 129. Good-Bird.             |
| 84. Red-Deer.              | 130. Caught-the-Enemy.      |
| 85. Yellow-Fox.            | 131. Leafing.               |
| 86. Feather-on-his-head.   | 132. Horned-Horse.          |
| 87. Little-Bear.           | 133. White-Whirlwind.       |
| 88. Spotted Horse.         | 134. Wolf-Ear.              |
| 89. Takes-the-Gun.         | 135. Afraid-of-Elk.         |
| 90. Spotted-Face.          | 136. Feathers.              |
| 91. Got-there-first.       | 137. Tall-Man.              |
| 92. Leaves.                | 138. Elk-Head.              |
| 93. Big-Voice.             | 139. Ring-Owl.              |
| 94. Poor-Dog.              | 140. Standing-Bear.         |
| 95. Goes-through-the-Camp. | 141. Small-Ring.            |
| 96. Big-Road.              | 142. Charging-Hawk.         |
| 97. Brings-lots-of-horses. | 143. Afraid-of-Bull.        |
| 98. Little-Shell.          | 144. Medicine Horse.        |

- |                                  |                         |
|----------------------------------|-------------------------|
| No. 145. Two Eagles.             | No. 190. White-tail.    |
| 146. Red-Shirt.                  | 191. Feathers.          |
| 147. Bear-Nostrils.              | 192. Fighting-Cuss.     |
| 148. Spotted-Horse.              | 193. Horned-Horse.      |
| 149. Afraid-of-Bear.             | 194. Enemies-hit-him.   |
| 150. Little-Bull.                | 195. Black-Bear.        |
| 151. Red-Hawk.                   | 196. Red-War-Bonnet.    |
| 152. Bear-Paw.                   | 197. Black-Weasel.      |
| 153. Eagle-Horse.                | 198. Smokes-at-Night.   |
| 154. Red-Beaver.                 | 199. Little-Cloud.      |
| 155. Spotted-Eagle.              | 200. Good-Bull.         |
| 156. Little-Crow.                | 201. Medicine.          |
| 157. Black-Horse.                | 202. Stone-Necklace.    |
| 158. Mouse.                      | 203. Bad-Horn.          |
| 159. Count-the-Nights.           | 204. High-Eagle.        |
| 160. White-Eagle.                | 205. Black-Bull.        |
| 161. Five-Thunders.              | 206. Man-with-heart.    |
| 162. White-Horse.                | 207. Little-Ring.       |
| 163. Killed-First.               | 208. Goes-in-Front.     |
| 164. Scout.                      | 209. Little-Fighter.    |
| 165. Yellow-Horse.               | 210. Mean-Boy.          |
| 166. Charge-After.               | 211. Red-Hawk.          |
| 167. Black-Bear.                 | 212. White-Bear.        |
| 168. Kills-the-Enemy.            | 213. Many-Shells.       |
| 169. Wolf-stands on-a-Hill.      | 214. Yellow-Knife.      |
| 170. Eagle-Bear.                 | 215. Crazy-Head.        |
| 171. Little-Wolf.                | 216. Shoots-the-Animal. |
| 172. Spotted-Elk.                | 217. Kills two.         |
| 173. Elk-walking-with-his-Voice. | 218. Fast-Horse.        |
| 174. Weasel-Bear.                | 219. Big-Turnip.        |
| 175. Black-Elk.                  | 220. Yellow-Owl.        |
| 176. Takes-Enemy.                | 221. Red-Bull.          |
| 177. Poor-Bull.                  | 222. Garter.            |
| 178. Eagle-Elk.                  | 223. Black-Fox.         |
| 179. Thunder-Pipe.               | 224. Kills-two.         |
| 180. Horse comes-out.            | 225. Grasp.             |
| 181. Old-Mexican.                | 226. Medicine.          |
| 182. Shield.                     | 227. Leaves.            |
| 183. Keeps-the-Battle.           | 228. Big Hand.          |
| 184. Wolf-stands on-Hill.        | 229. Gun.               |
| 185. Bear-Comes-Out.             | 230. Bad-Boy.           |
| 186. Good-Bull.                  | 231. Warrior.           |
| 187. Fog.                        | 232. Afraid-of-Him.     |
| 188. Bear-that-growls.           | 233. Cloud-Ring.        |
| 189. Drags-the-rope.             | 234. Kills-the-Bear.    |
|                                  | 235. Comes-in-Sight.    |

- |                             |                            |
|-----------------------------|----------------------------|
| No. 236. Sits-like-a-Woman. | No. 263. Big-Voiced-Eagle. |
| 237. Surrounds-them.        | 264. White-Elk.            |
| 238. High-Bear.             | 265. Porcupine.            |
| 239. Don't-turn.            | 266. Noon.                 |
| 240. Black-Bird.            | 267. Warrior.              |
| 241. Swallow.               | 268. Eagle-Feather.        |
| 242. Little-Elk.            | 269. Round.                |
| 243. Little-Bird.           | 270. Big-Thunder.          |
| 244. Bear-Back.             | 271. Shot-His-Horse.       |
| 245. Little-Back.           | 272. Red-Bear.             |
| 246. Buffalo-Horn.          | 273. Little-Moon.          |
| 247. Iron-Bird.             | 274. Feather-Necklace.     |
| 248. Bull.                  | 275. Fast-Elk.             |
| 249. Eagle-Track.           | 276. Black-Bull.           |
| 250. Medicine-Bird.         | 277. Light.                |
| 251. Fox.                   | 278. Black-Deer.           |
| 252. White-Bear.            | 279. White-Cow-Man.        |
| 253. Tall-Panther.          | 280. Horse — the-Clothing. |
| 254. Gun.                   | 281. Stabber.              |
| 255. Ring.                  | 282. Eagle-Swallow.        |
| 256. Beads.                 | 283. Afraid-of-him.        |
| 257. Wolf.                  | 284. Red-Boy.              |
| 258. Black-Horse.           | 285. Dog-with-good-voice.  |
| 259. White-Horse.           | 286. Tall-Pine.            |
| 260. Spotted-Owl.           | 287. Pipe.                 |
| 261. Don't-turn.            | 288. Few-Tails.            |
| 262. Red-Star.              | 289. Medicine-man.         |

The remark made above (page 176) in connection with the Ogalala Roster, acknowledging the paucity of direct information as to details while presenting the pictographs as sufficiently interpreted for the present purposes by the translation of the personal names, may be here repeated. The following notes are, however, subjoined as of some assistance to the reader:

No. 2. Top-man, or more properly "man above," is drawn a short distance above a curved line, which represents the character for sky inverted. The gesture for sky is sometimes made by passing the hand from east to west describing an arc. The Ojibwa pictograph for the same occurs in Plate IV, No. 1, beneath which a bird appears.

No. 9. The character is represented with two waving lines passing upward from the mouth, in imitation of the gesture-sign *good talk*, *spiritual talk*, as made by passing two extended and separated fingers (or all fingers separated) upward and forward from the mouth. This gesture is made when referring either to a shaman or to a christian clergyman, or to a house of worship, and the name seems to have been



translated here as "good," without sufficient emphasis, being probably more with the idea of "mystic."

No. 15. The gesture for *come* or *to call to one's self* is shown in this figure.

No. 24. The semicircle for cloud is the reverse in conception to that shown above in No. 2.

No. 26. Arapaho, in Dakota, *magpiyato—blue cloud*—is here shown by a circular cloud, drawn in blue in the original, inclosing the head of a man.

No. 38. Night appears to be indicated by the black circle around the head, suggested by the *covering over with darkness*, as shown in the gesture for night by passing both flat hands from their respective sides inwards and downwards before the body. The sign for *kill* is denoted here by the bow in contact with the head, a custom in practice among the Dakota of striking the dead enemy with the bow or *coup* stick. See also Figure 130, page 211.

No. 43. Night is here shown by the curve for *sky*, and the suspension, beneath it, of a star, or more properly in Dakota signification, a *night sun*—the moon.

No. 59. Cloud is drawn in blue in the original; *old* is signified by drawing a staff in the hand of the man. The gesture for old is made in imitation of walking with a staff.

No. 69. This drawing is similar to No. 38. The differentiation is sufficient to allow of a distinction between the two characters, each representing the same name, though two different men.

No. 131. The uppermost character is said to be drawn in imitation of a number of fallen leaves lying against one another, and has reference to the season when leaves fall—autumn.

No. 161. The thunder-bird is here drawn with five lines—voices—issuing from the mouth.

No. 201. The waving lines above the head signify *sacred*, and are made in gesture in a similar manner as that for *prayer* and *voice* in No. 9.

No. 236. This person is also portrayed in a recent Dakota record, where the character is represented by the "woman seated" only. The name of this man is not "Sits-like-a-Woman," but High-Wolf—Shúnka máwita wa<sup>g</sup>átia. This is an instance of giving one name in a pictograph and retaining another by which the man is known in camp to his companions.

No. 250. The word medicine is in the Indian sense, before explained, and would be more correctly expressed by the word *sacred*, or *mystic*, as is also indicated by the waving lines issuing from the mouth.

No. 289. The character for *sacred* again appears, attached to the end of the line issuing from the mouth.

## PROPERTY MARKS.

The Serrano Indians in the vicinity of Los Angeles, California, formerly practiced a method of marking trees to indicate the corner boundaries of patches of land. According to Hon. A. F. Coronel, of the above-named city, the Indians owning areas of territory of whatever size would cut lines upon the bark of the tree corresponding to certain cheek lines drawn on their own faces, *i. e.*, lines running outward and downward over the cheeks or perhaps over the chin only, tattooed in color. These lines were made on the trees on the side facing the property, and were understandingly recognized by all. The marks were personal and distinctive, and when adopted by land owners could not be used by any other person. This custom still prevailed when Mr. Coronel first located in Southern California, about the year 1843. So is the account, but it may be remarked that the land was probably owned or claimed by a gens rather than by individuals, the individual ownership of land not belonging to the stage of culture of any North American Indians. Perhaps some of the leading members of the gens were noted in connection with the occupancy of the land, and their tattoo marks were the same as those on the trees. The correspondence of these marks is of special importance. It is also noteworthy that the designations



FIG. 80.—Boat paddle. Arikara.

common to the men and the trees were understood and respected.

Among the Arikara Indians a custom prevails of drawing upon the blade of a canoe or bull-boat paddle such designs as are worn by the chief and owner to suggest his personal exploits. This has to great extent been adopted by the Hidatsa and the Mandans. The marks are chiefly horseshoes and crosses (see Figure 80), referring to the capture of the enemy's ponies and to *coups* in warfare or defense against enemies.

The squaws being the persons who generally use the boats during the course of their labors in collecting wood along the river banks, or in ferrying their warriors across the water, have need of this illustration of their husbands' prowess as a matter of social status, it being also a matter of pride. The entire tribe being intimately acquainted with the courage and bravery of any individual, imposition and fraud in the delineation of any character are not attempted, as such would surely be detected and the impostor would be ridiculed if not ostracised. See in connection with the design last figured, others under the heading of Signs of Particular Achievements, page 186.

The brands upon cattle in Texas and other regions of the United



FIG. 81.—African property mark

States where ranches are common, illustrate the modern use of property marks. A collection of these brands made by the writer compares unfavorably for individuality and ideography with the marks of Indians for similar purposes.

The following translation from *Kunst und Witz der Neger* (Art and Ingenuity of the Negro) is inserted for the purpose of comparison between Africa and America. The article was published at Munich, Bavaria, in *Das Ausland*, 1884, No. 1, p. 12.

"Whenever a pumpkin of surprisingly fine appearance is growing, which promises to furnish a desirable water-vase, the proprietor hurries to distinguish it by cutting into it some special mark with his knife, and probably superstitious feelings may co-operate in this act. I have reproduced herewith the best types of such property marks which I have been able to discover."

These property marks are reproduced in Figure 81.

#### STATUS OF THE INDIVIDUAL.

Several notices of pictographs under this head appear in other parts of this paper: among others, designations of chiefs, sub-chiefs, partisans, medicine men or shamans, horse thieves, and squaw men, are shown in the *Winter Counts* and in the *Ogalala Roster*. See also Figure 120, page 204. Captives are drawn in Figure 180, page 242. With reference to the status of women as married or single see pages 64 and 232. For widow, see page 197. Marks for higher and lower classes are mentioned on page 64.

To these may be added the following, contributed by Mr. Gatschet: Half-breed girls among the Klamaths of Oregon appear to have but one perpendicular line tattooed down over the chin, while the full-blood women have four perpendicular lines on the chin. Tattooing, when practiced at this day, is performed with needles, the color being prepared from charcoal.

#### SIGNS OF PARTICULAR ACHIEVEMENTS.

Eagle feathers are worn by the Hidatsa Indians to denote acts of courage or success in war. The various markings have different significations, as is shown in the following account, which, with sketches of the features made from the original objects, were obtained by Dr. Hoffman from the Hidatsa at Fort Berthold, Dakota, during 1881.

A feather, to the tip of which is attached a tuft of down or several strands of horse-hair, dyed red, denotes that the wearer has killed an enemy and that he was the first to touch or strike him with the coup stick. Figure 82.



FIG. 82.—First to strike enemy. Hidatsa.



FIG. 83.—Second to strike enemy. Hidatsa.



FIG. 84.—Third to strike enemy. Hidatsa.

A feather bearing one red bar, made with vermilion, signifies the wearer to have been the second person to strike the fallen enemy with the coup stick. Figure 83.

A feather bearing two red bars signifies that the wearer was the third person to strike the body. Figure 84.

A feather with three bars signifies that the wearer was the fourth to strike the fallen enemy. Figure 85. Beyond this number honors are not counted.

A red feather denotes that the wearer was wounded in an encounter with an enemy. Figure 86.

A narrow strip of rawhide or buckskin is wrapped from end to end with porcupine quills dyed red, though sometimes a few white ones are inserted to break the monotony of color; this strip is attached to the



FIG. 85.—Fourth to strike enemy. Hidatsa.



FIG. 86.—Wounded by an enemy. Hidatsa.



FIG. 87.—Killed a woman. Hidatsa.

inner surface of the rib or shaft of the quill by means of very thin fibers of sinew. This signifies that the wearer killed a woman belonging to a hostile tribe. The figure so decorated is shown in Figure 87. In very fine specimens it will be found that the quills are directly applied to the shaft without resorting to the strap of leather.

The following scheme, used by the Dakotas, is taken from Dahcotah, or Life and Legends of the Sioux around Fort Snelling, by Mrs. Mary Eastman. New York,

1849. Colors are not given, but red undoubtedly predominates, as is known from personal observation.

A spot upon the larger web denotes that the wearer has killed an enemy. Figure 88.

Figure 89 denotes that the wearer has cut the throat of his enemy, and taken his scalp.



FIG. 88.—Killed an enemy.  
Dakota.

FIG. 89.—Cut throat and scalped.  
Dakota.

FIG. 90.—Cut enemy's throat.  
Dakota.

Figure 90 denotes that the wearer has cut the throat of his enemy.

Figure 91 denotes that the wearer was the third that touched the body of his enemy after he was killed.



FIG. 91.—Third to strike. Dakota.

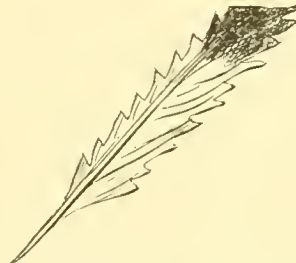


FIG. 92.—Fourth to strike. Dakota.

Figure 92 denotes that the wearer was the fourth that touched the body of his enemy after he was killed.



FIG. 93.—Fifth to strike. Dakota.



FIG. 94.—Many wounds. Dakota.

Figure 93 denotes that the wearer was the fifth that touched the body of his enemy after he was killed.



Figure 94 denotes the wearer has been wounded in many places by his enemy.

The following variations in the scheme were noticed in 1883 among the Mdewakantanwan Dakotas near Fort Snelling, Minnesota.

In personal ornamentation, and for marks of distinction in war, feathers of the eagle are used as among the other bands of Dakotas.

A plain feather is used to signify that the wearer has killed an enemy, without regard to the manner in which he was slain.

When the end is clipped transversely, and the edge colored red, it signifies that the throat of the enemy was cut.

A black feather denotes that an Ojibwa woman was killed. Enemies are considered as Ojibwas, the latter being the tribe with whom the Mdewakantanwan Dakotas have had most to do.

When a warrior has been wounded a red spot is painted upon the broad side of a feather. If the wearer has been shot in the body, arms, or legs, a similar spot, in red, is painted upon his clothing or blanket, immediately over the locality. These red spots are sometimes worked in porcupine quills, or in cotton fiber as obtained from the traders.

Marks denoting similar exploits are used by the Hidatsa, Mandan, and Arikara Indians. The Hidatsa claim to have been the originators of the devices, which were subsequently adopted by the Arikara with slight variation. All of the information with reference to the following figures, 95 to 103, was obtained by Dr. W. J. Hoffman, from chiefs of the several tribes at Fort Berthold, Dakota, during the summer of 1881.

The following characters are marked upon robes and blankets, usually in red or blue colors, and often upon the boat paddles. Frequently an Indian may be seen who has them even painted upon his thighs, though this is generally resorted to only on festal occasions, or for dancing :



FIG. 95.—Successful defense. Hidatsa, etc.



FIG. 96.—Two successful defenses. Hidatsa, etc.

Figure 95 denotes that the wearer successfully defended himself against the enemy by throwing up a ridge of earth or sand to protect the body.

Figure 96 signifies that the wearer has upon two different occasions defended himself by hiding his body within low earthworks. The character is merely a compound of two of the preceding marks placed together.



FIG. 97.—Captured a horse. Hidatsa, etc.

Figure 97 signifies that the one who carries this mark upon his blanket, leggings, boat paddle, or any other property, or his person, has distinguished himself by capturing a horse belonging to a hostile tribe.

Figure 98 signifies among the Hidatsa and Mandans that the wearer was the first person to strike a fallen enemy with a coup stick. It signifies among the Arikara simply that the wearer killed an enemy.

Figure 99 represents among the Hidatsa and Mandans the second person to strike a fallen enemy. It represents among the Arikara the first person to strike the fallen enemy.

Figure 100 denotes the third person to strike the enemy, according to



FIG. 98.—First to strike an enemy. Hidatsa.



FIG. 99.—Second to strike an enemy. Hidatsa.



FIG. 100.—Third to strike an enemy. Hidatsa.

the Hidatsa and Mandan; the second person to strike him, according to the Arikara.

Figure 101 shows among the Hidatsa and Mandan the fourth person to strike the fallen enemy. This is the highest and last number; the fifth person to risk the danger is considered brave for venturing so near the ground held by the enemy, but has no right to wear the mark.

The same mark among the Arikara represents the person to be the third to strike the enemy.

Figure 102, according to the Arikara, represents the fourth person to strike the enemy.

According to the Hidatsa, the wearer of the accompanying mark, Figure 103, would have figured in four encounters; in the two lateral

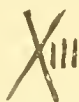


FIG. 101.—Fourth to strike an enemy. Hidatsa.



FIG. 102.—Fifth to strike an enemy. Arikara.



FIG. 103.—Struck four enemies. Hidatsa.

ones, each, he was the second to strike the fallen enemy, and in the upper and lower spaces it would signify that he was the third person upon two occasions.

The mark of a black hand, sometimes made by the impress of an actually blackened palm, or drawn natural size or less, was found upon articles of Ojibwa manufacture in the possession of Hidatsa and Arikara Indians at Fort Berthold, Dakota, in 1881. These Indians say it is an old custom, and signifies that the person authorized to wear the mark has killed an enemy. The articles upon which the designs occurred came from Red Lake Reservation, Minnesota, the Indians of the latter locality frequently going west to Fort Berthold to trade bead and other work for horses.

Further signs of particular achievements are given in Figures 174, 175, 176, 177, and 179, and others may be noticed frequently in the Dakota Winter Counts.



## RELIGIOUS.

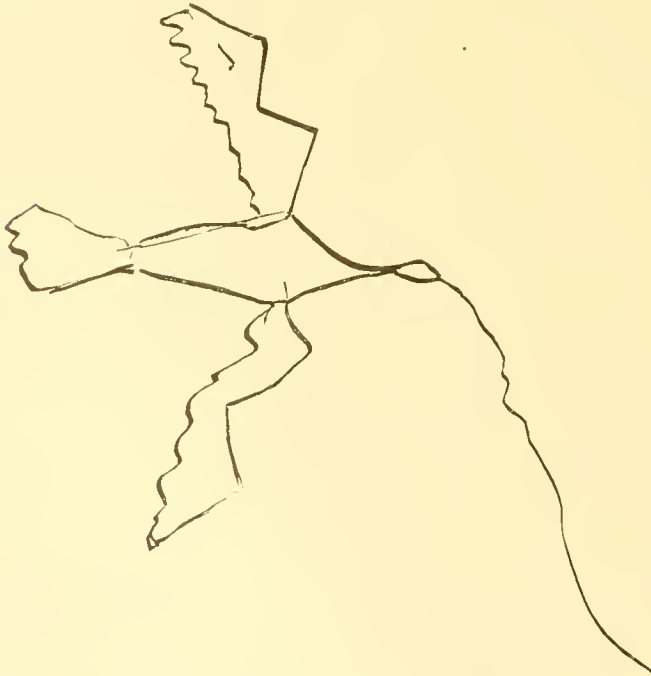
Under this head pictographs already known may be divided into those relating to—

1. Mythic personages.
2. Shamanism.
3. Dances and ceremonies.
4. Mortuary practices.
5. Charms and fetiches.

### MYTHIC PERSONAGES.

Reference may be made to the considerable number of pictographs of this character in Schoolcraft, more particularly in his first volume; also to the *Walum-Olum* or *Bark-Record* of the *Lenni-Lenape*, which was published in Beach's "*Indian Miscellany*," Albany, 1877; and since in *The Lenapé and their Legends*: By Dr. D. G. Brinton. Several examples are also to be found in other parts of the present paper.

Some forms of the *Thunder-Bird* are here presented, as follows:



IG. 104.—Thunder-Bird. Dakota.

Figures 104 and 105 are forms of the thunder-bird found in 1883 among the Dakotas near Fort Snelling, drawn and interpreted by themselves. They are both winged and have waving lines extending from the mouth downward, signifying lightning. It is noticeable that Figure 105 placed vertically, then appearing roughly as an upright human figure, is almost identically the same as some of the Ojibwa *meda* or spirit figures represented in Schoolcraft, and also on a bark Ojibwa record in the possession of the writer.

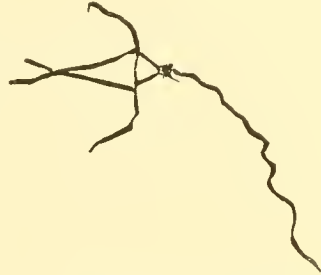


FIG. 105.—Thunder-bird. Dakota.

Figure 106 is another and more cur-sive form of the thunder-bird obtained at the same place and time as those immediately preceding. It is wingless, and, with changed position or point of view, would suggest a headless human figure.

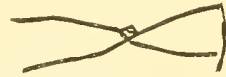


FIG. 106.—Thunaoer-bird. Wingless. Dakota.

The blue thunder-bird, Figure 107, with red breast and tail, is a copy of one worked in beads, found at Mendota, Minnesota. At that place stories were told of several Indians who had presentiments that the thunder-bird was coming to kill them, when they would so state the case to their friends that they might retire to a place of safety, while the victim of superstition would go out to an elevated point of land or upon the prairie to await his expected doom.

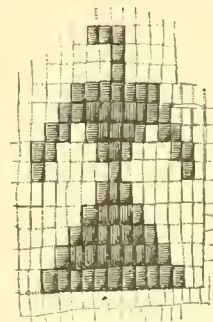


FIG. 107.—Thunder-bird. Dakota.

Frequently, no doubt on account of the isolated and elevated position of the person in a thunder storm, accidents of this kind do occur, thus giving notoriety to the presentiment above mentioned.

A still different form of the Dakota thunder bird is reproduced in Mrs. Eastman's *Dahcotah*, *op. cit.*, page 262. See also page 181 *supra*.

Figure 108 is "Skam-son," the thunder-bird, a tattoo mark copied from the back of an Indian belonging to the Laskeek village of the Haida tribe, Queen Charlotte's Island, by Mr. James G. Swan.

Figure 109 is a Twana thunder bird, as reported by Rev. M. Eells in Bull. U. S. Geol. and Geog. Survey, III, p. 112.

There is at Eneti, on the reservation [Washington Territory], an irregular basaltic rock, about 3 feet by 3 feet and 4 inches, and a foot and a half high. On one side there has been hammered a face, said to be the representation of the face of the thunder bird, which could also cause storms.

The two eyes are about 6 inches in diameter and 4 inches apart and the nose about 9 inches long. It is said to have been made by some man a long time ago, who felt very badly, and went and sat on the rock, and with another stone hammered out the

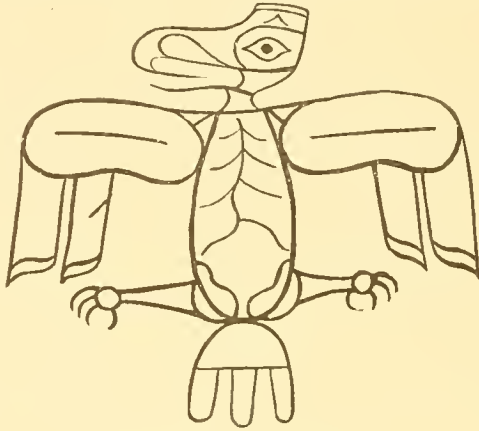


FIG. 108.—Thunder-bird. Haida.

eyes and nose. For a long time they believed that if the rock was shaken it would cause rain, probably because the thunder bird was angry.

Graphic representations of Atotarko and of the Great Heads are

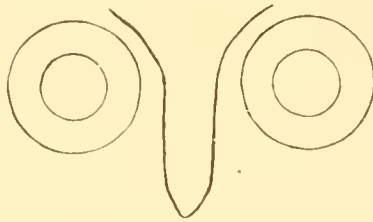


FIG. 109.—Thunder-bird. Twana.

shown in Mrs. Erminnie A. Smith's *Myths of the Iroquois*, in the Second Annual Report of the Bureau of Ethnology. Mythic Personages are also presented in aboriginal drawing by Mr. Charles G. Leland in his work, *the Algonquin Legends of New England*, etc. Boston, 1884.

#### SHAMANISM.

The term Shamanism is a corrupted form of the Sanscrit word for ascetic. Its original application was to the religion of certain tribes of northern Asia, but in general it expresses the worship of spirits with magic arts and fetich-practices. The Shaman or priest pretends to control by incantations and ceremonies the evil spirits to whom death, sickness, and other misfortunes are ascribed. This form or stage of religion

is so prevalent among the North American Indians that the adoption of the term Shaman here is substantially correct, and it avoids both the stupid expression "medicine-man" of current literature and the indefinite title priest, the associations with which are not appropriate to the Indian religious practitioner. The statement that the Indians worship one "Great Spirit" or single overruling personal god is erroneous. That philosophical conception is beyond the stage of culture reached by them and was not found in any tribe previous to missionary influence. Their actual philosophy can be expressed far more objectively and therefore pictorially.

Many instances of the "Making Medicine" are shown in the Dakota Winter Counts; also graphic expressions regarding magic. Especial reference may be made to American-Horse's count for the years 1824-'25 and 1843-'44, in the Corbusier Winter Counts.

Figure 110 was copied from a piece of walrus ivory in the museum of the Alaska Commercial Company, of San Francisco, California, by Dr. Hoffman, and the interpretation is as obtained from an Alaskan native.



FIG. 110.—Shaman exorcising Demon. Alaska.

- 1, 2. The Shaman's summer habitations, trees growing in the vicinity.
3. The Shaman, who is represented in the act of holding one of his "demons." These "evil spirits" are considered as under the control of the Shaman, who employs them to drive other "evil beings" out of the bodies of sick men.
4. The demon or aid.
5. The same Shaman exorcising the demons causing the sickness.
- 6, 7. Sick men, who have been under treatment, and from whose bodies the "evil beings" or sickness has been expelled.
8. Two "evil spirits" which have left the bodies of Nos. 6 and 7.

Fig. 111 represents a record of a Shamanistic nature, and was copied by Dr. Hoffman from an ivory bow in the museum of the Alaska Commercial Company in 1882. The interpretation was also obtained at the same time from an Alaskan native, with text in the Kiatexamnt dialect of the Innu language.

The rod of the bow upon which the characters occur is here represented in three sections, A, B, and C. A bears the beginning of the narrative, extending over only one-half of the length of the rod. The course of the inscription is then continued on the adjacent side of the rod at the middle, and reading in both directions (section B and C), towards the two files of approaching animals. B and C occupy the whole of one side.

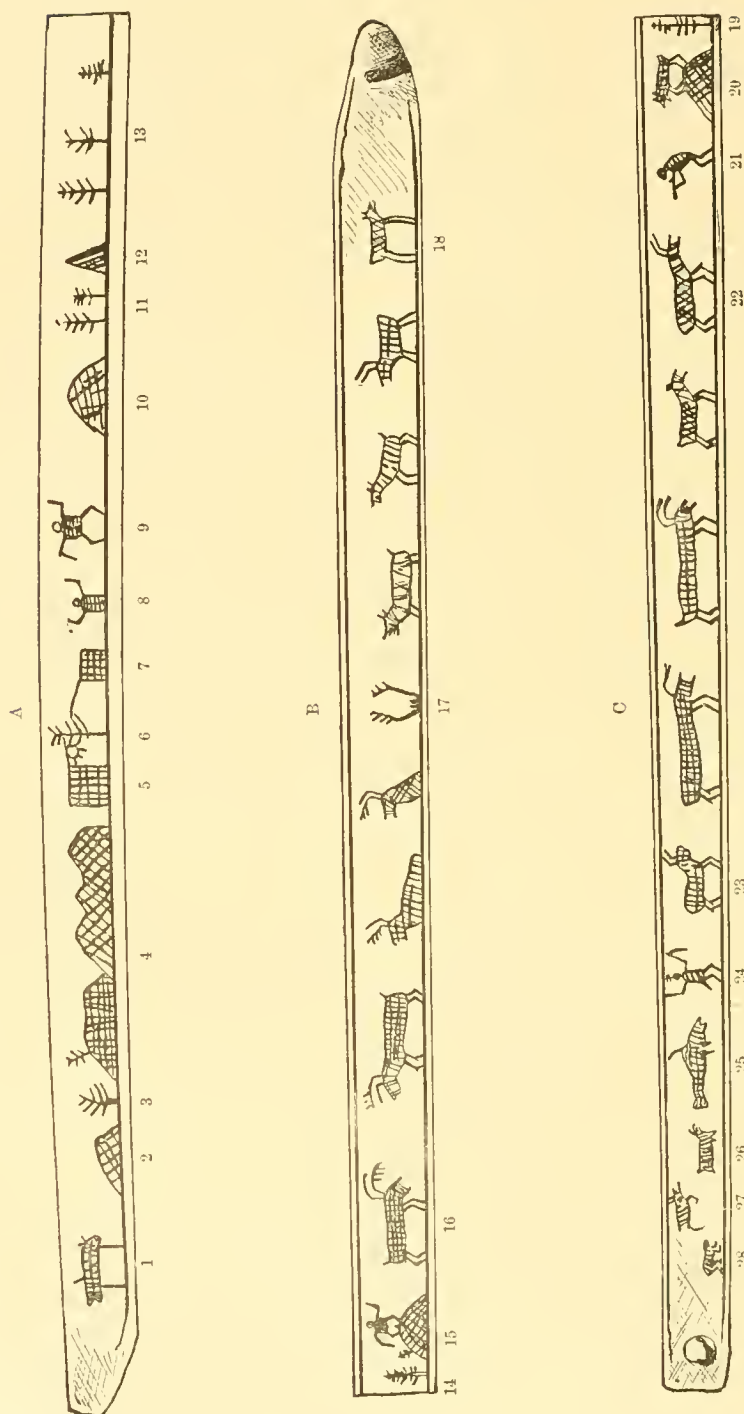


FIG. 111.—Supplication for success. Alaska.

The following is the explanation of the characters.

- A. No. 1. Baidarka or skin boat resting on poles.  
 2. Winter habitation.  
 3. Tree.  
 4. Winter habitations.  
 5. Store-house.  
 6. Tree. Between this and the store-house is placed a piece of timber, from which are suspended fish for drying.  
 7. Store-house. From 1 to 7 represents an accumulation of dwellings, which signifies a settlement, the home of the person to whom the history relates.  
 8. The hunter sitting on the ground, asking for aid, and making the gesture for supplication.  
 9. The Shaman to whom application is made by the hunter desiring success in the chase. The Shaman has just finished his incantations, and while still retaining his left arm in the position for that ceremony, holds the right toward the hunter, giving him the success requested.  
 10. The Shaman's winter lodge.  
 11. Trees.  
 12. Summer habitation of the Shaman.  
 13. Trees in vicinity of the Shaman's residence.
- B No. 14. Tree.  
 15. A Shaman standing upon his lodge, driving back game which had approached a dangerous locality. To this Shaman the hunter had also made application for success in the chase, but was denied, hence the act of the Shaman.  
 16. Deer leaving at the Shaman's order.  
 17. Horns of a deer swimming a river.  
 18. Young deer, apparently, from the smaller size of the body and unusually long legs.
- C. No. 19. A tree.  
 20. The lodge of the hunter (A. 8), who, after having been granted the request for success, placed his *totem* upon the lodge as a mark of gratification and to insure greater luck in his undertaking.  
 21. The hunter in the act of shooting.  
 22-23. The game killed, consisting of five deer.  
 24. The demon sent out by the Shaman (A. 9) to drive the game in the way of the hunter.  
 25-28. The demon's assistants.

The original text above mentioned with interlinear translation, is as follows:

Nu-nūm'-cu-a u-xlá-qa, pi-cú-qi-a kú da ku-lú-mi, ka-xá-qa-lūk'.  
 Settlement man came, hunting go wanted (to), (and) Shaman (he) asked.



Ká-xa-qlũm' mi-ná-qa lu-qú ta-xlí-mu-nũk tu-đu-ia-nũk. Ká-xlá-lũk  
Shaman gave to him five deer, Shaman  
 ũ-qlĩ-nĩ u<sup>n</sup>-i-lũm' kai-na nũn' ka-xá-hu pi-gũ, i-u-nĩ  
went to lodge (where), stand- spirits [incantations] devil  
the top of (winter habitation) ing on top made he,  
 aũ-qkua-glu-bu té-itc-lu-gĩ' té xle mẽn' tun-đu-ia-gũt, taũ-na-cũk  
sent to him [the hun- brought to him five deer, same man  
ter] (and)  
 pi-xlu-nĩ' ta-xlí-mu-nũk tun-đu-i'-a-xa-nũk' tú-gu-xlí-u-qi. A-xli-lum  
he caught five deer killed. Another  
[secured]  
 Ká xla-qlũm' tu-mú-qten-gí.  
Shaman not gave them.  
(To whom application had been made previously.)

## DANCES AND CEREMONIES.

Plate LXXXI exhibits drawings of various masks used in dancing, the characters of which were obtained by Mr. G. K. Gilbert from rocks at Oakley Springs, and were explained to him by Tubi, the chief of the Oraibi Pueblos. They probably are in imitation of masks, as used by the Moki, Zuñi, and Rio Grande Pueblos.

Many examples of masks, dance ornaments, and fetiches used in ceremonies are reported and illustrated in the several papers of Messrs. Cushing, Holmes, and Stevenson in the Second Annual Report of the Bureau of Ethnology. Paintings or drawings of many of them have been found on pottery, on shells, and on rocks.

In this connection the following extract from a letter dated Port Townsend, Washington, June 1, 1883, from Mr. James G. Swan, will be acceptable: "You may remember my calling your attention about a year since to the fact that a gentleman who had been employed on a preliminary survey for the Mexican National Construction Company had called on me and was astonished at the striking similarity between the wooden-carved images of the Haida Indians and the terra-cotta images he had found in the railroad excavations in Mexico.

"I have long entertained the belief that the coast tribes originated among the Aztecs, and have made it a subject of careful study for many years. I received unexpected aid by the plates in Habel's Investigations in Central and South America. I have shown them to Indians of various coast tribes at various times, and they all recognize certain of those pictures. No. 1, Plate 1, represents a priest cutting off the head of his victim with his stone knife. They recognize this, because they always cut off the heads of their enemies slain in battle; they never scalp. The bird of the sun is recognized by all who have seen the picture as the thunder bird of the coast tribes. But the most singular evidence I have seen is in Cushing's description of the Zuñi Indian, as published in the Century Magazine. The Haidas recognize the scenes, particularly the masquerade scenes in the February [1883] number, as similar to their own tomanawos ceremonies. I have had at least a dozen





MOKI MASKS ETCHED ON ROCKS ARIZONA







BUFFALO-HEAD MONUMENT.

Haida men and women at one time looking at those pictures and talk and explain to each other their meaning. One chief who speaks English said to me after he had for a long time examined the pictures, 'Those are our people; they do as we do. If you wish, I will make you just such masks as those in the pictures.'

"These Indians know nothing, and recognize nothing in the Hebrew or Egyptian, the Chinese or Japanese pictures, but when I show them any Central or South American scenes, if they do not understand them they recognize that they are 'their people.'"

According to Stephen Powers (in *Contrib. to N. A. Ethnol.* III, p. 140), there is at the head of Potter Valley, California, "a singular knoll of red earth which the Tâtu or Hûchnom believe to have furnished the material for the creation of the original coyote-man. They mix this red earth into their acorn bread, and employ it for painting their bodies on divers mystic occasions." Mr. Powers supposed this to be a ceremonial performance, but having found the custom to extend to other tribes he was induced to believe the statements of the Indians "that it made the bread sweeter and go further."

See also the mnemonic devices relative to Songs, page 82, and to Traditions, page 84; also page 237.

Plate LXXXII represents stone heaps surmounted by buffalo skulls found near the junction of the Yellowstone and Missouri Rivers by Prince Maximilian zu Wied, and described in his *Reise in das Innere Nord-America*. Coblenz, 1841, II, p. 435. Atlas plate 29. The description by him, as translated in the London edition, is as follows: "From the highest points of this ridge of hills, curious signals are perceived at certain distances from one another, consisting of large stones and granite blocks, piled up by the Assiniboin, on the summits of each of which are placed Buffalo skulls, and which were erected by the Indians, as alleged, for the purpose of attracting the Bison herds, and to have a successful hunt."

This objective monument is to be compared with the pictographs above, "making buffalo medicine," frequent in the Dakota Winter Counts.

Descriptions of ceremonies in medicine lodges and in the initiation of candidates to secret associations have been published with and without illustrations. The most striking of these are graphic ceremonial charts made by the Indians themselves. Figure 38, on page 36, is connected with this subject, as is also No. 7 of Figure 122, page 205. A good illustration is to be found in Mrs. Eastman's *Dahcotah, or Life and Legends of the Sioux*, page 206. Sketches, with descriptions of drawings used in the ceremonials of the Zuñi and Navajo, have been made by Messrs. Cushing and Stevenson and Dr. Matthews, but cannot be published here.

Figure 111*a* was drawn and interpreted by Naumoff, a Kadiak native, in San Francisco, California, in 1882.

It represents the ground plan of a Shaman's lodge with the Shaman curing a sick man.

The following is the explanation :

No. 1. The entrance to the lodge.

No. 2. The fire place.

No. 3. A vertical piece of wood upon which is placed a cross-piece, upon each end of which is a lamp.

No. 4. The musicians seated upon the raised seats furnishing drumming and music to the movements of the Shaman during his incanta-

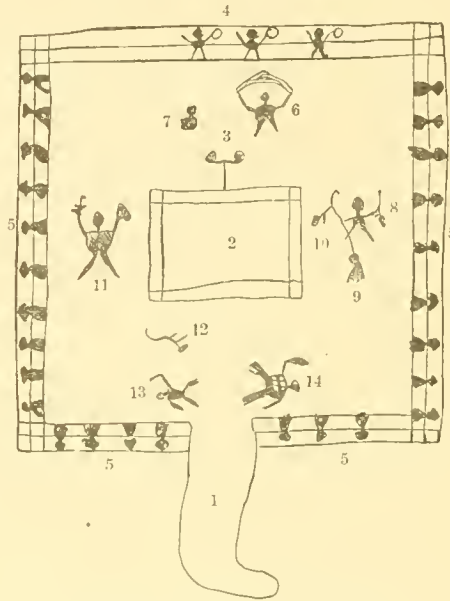


Fig. 111a. Shaman's lodge, Alaska.

tions in exorcising the "evil spirit" supposed to have possession of the patient.

No. 5. Visitors and friends of the afflicted seated around the walls of the lodge.

No. 6. The Shaman represented in making his incantations.

No. 7. The patient seated upon the floor of the lodge.

No. 8. Represents the Shaman in another stage of the ceremonies, driving out of the patient the "evil being."

No. 9. Another figure of the patient; from his head is seen to issue a line connecting it with No. 10.

No. 10. The "evil spirit" causing the sickness.

No. 11. The Shaman in the act of driving the "evil being" out of the room. In his hands are sacred objects, his personal fetish, in which the power lies.

No. 12. The flying "evil one."

Nos. 13, 14. Are assistants to the Shaman, stationed at the entrance to hit and hasten the departure of the evil being.



A chart of this character appears to have been seen among the natives of New Holland by Mr. James Manning, but not copied or fully described in his *Notes on the Aborigines of New Holland* (*Journ. of Royal Society, New South Wales, Vol. XVI, p. 167*). He mentions it in connection with a corrobory or solemn religious ceremony among adults, as follows: "It has for its form the most curious painting upon a sheet of bark, done in various colors of red, yellow, and white ochre, which is exhibited by the priest." Such objects would be highly important for comparison, and their existence being known they should be sought for.

#### MORTUARY PRACTICES.

Several devices indicating death are presented under other headings of this paper. See, for example, page 103 and the illustrations in connection with the text.

According to Powers, "A Yokaia widow's style of mourning is peculiar. In addition to the usual evidences of grief she mingles the ashes of her dead husband with pitch, making a white tar or unguent, with which she smears a band about 2 inches wide all around the edge of the hair (which is previously cut off close to the head), so that at a little distance she appears to be wearing a white chaplet." (See *Contrib. to N. A. Ethnol.*, III, p. 166.) Mr. Dorsey reports that mud is used by a mourner in the sacred-bag war party among the Osages. Many objective modes of showing mourning by styles of paint and markings are known, the significance of which are apparent when discovered in pictographs.

Figure 112 is copied from a piece of ivory in the museum of the Alaska Commercial Company, San Francisco, California, and was interpreted by an Alaskan native in San Francisco in 1882.

No. 1. Is a votive offering or "Shaman stick," erected to the memory of one departed. The "bird" carvings are considered typical of "good spirits," and the above was erected by the remorse-stricken individual, No. 3, who had killed the person shown in No. 2.

No. 2. The headless body represents the man who was killed. In this respect the Ojibwa manner of drawing a person "killed" is similar.

No. 3. The individual who killed No. 2, and who erected the "grave-post" or "sacred stick." The arm is thrown earthward, resembling the Blackfeet and Dakota gesture for "kill."



FIG. 112.—Votive offering, Alaska.



The following is the text in Aígalúxamut:

Nu-ná-mu-quk'	á-x'l-xik'	ái-ba-li	to-qgú-qlu	gú	nú-lu	tenk	nac-quí
Place two	quarrel (with)	one an-	(one) killed him (the	large	knife	took	head
		other,	other) (with a)				
qlu-gú, i-nó-qtelu-gu;	Ka-sá-ba-lik'	na-bõn'	ca-gú-lñk	a-gú-nñ-qua-qlu-hñ'.			
off.	laid him down;	Sbaman	stick	bird	to set (or place) on the		
	(buried)		(offering)	(wooden)	top of (over).		

That portion of the Kauvuya tribe of Indians in Southern California known as the Playsanos, or *lowlanders*, formerly inscribed characters upon the gravestones of their dead, relating to the pursuits or good qualities of the deceased. Dr. W. J. Hoffman obtained several pieces or slabs of finely-grained sandstone near Los Angeles, California, during the summer of 1884, which had been used for this purpose. Upon these were the drawings, in incised lines, of the Fin-back whale, with figures of men pursuing them with harpoons. Around the etchings were close parallel lines with cross lines similar to the drawings made on ivory by the southern Innuít of Alaska.

#### GRAVE-POSTS.

Figures 113 and 114 were procured from a native Alaskan by Dr. Hoffman in 1882, and explained to him to be drawings made upon grave-posts.

Drawings similar to these are made on slabs of wood by devoted friends, or relatives, to present and perpetuate the good qualities of a deceased native. The occupation is usually referred to, as well as articles of importance of which the departed one was the possessor.



1



2



3



4



5

FIG. 113.—Grave-post. Alaska.

Figure 113 refers to a hunter, as land animals are shown as the chief pursuit. The following is the explanation of the characters:

1. The baidarka, or boat, holding two persons; the occupants are shown, as are also the paddles, which project below the horizontal body of the vessel.

2. A rack for drying skins and fish. A pole is added above it, from which are seen floating streamers of calico or cloth.

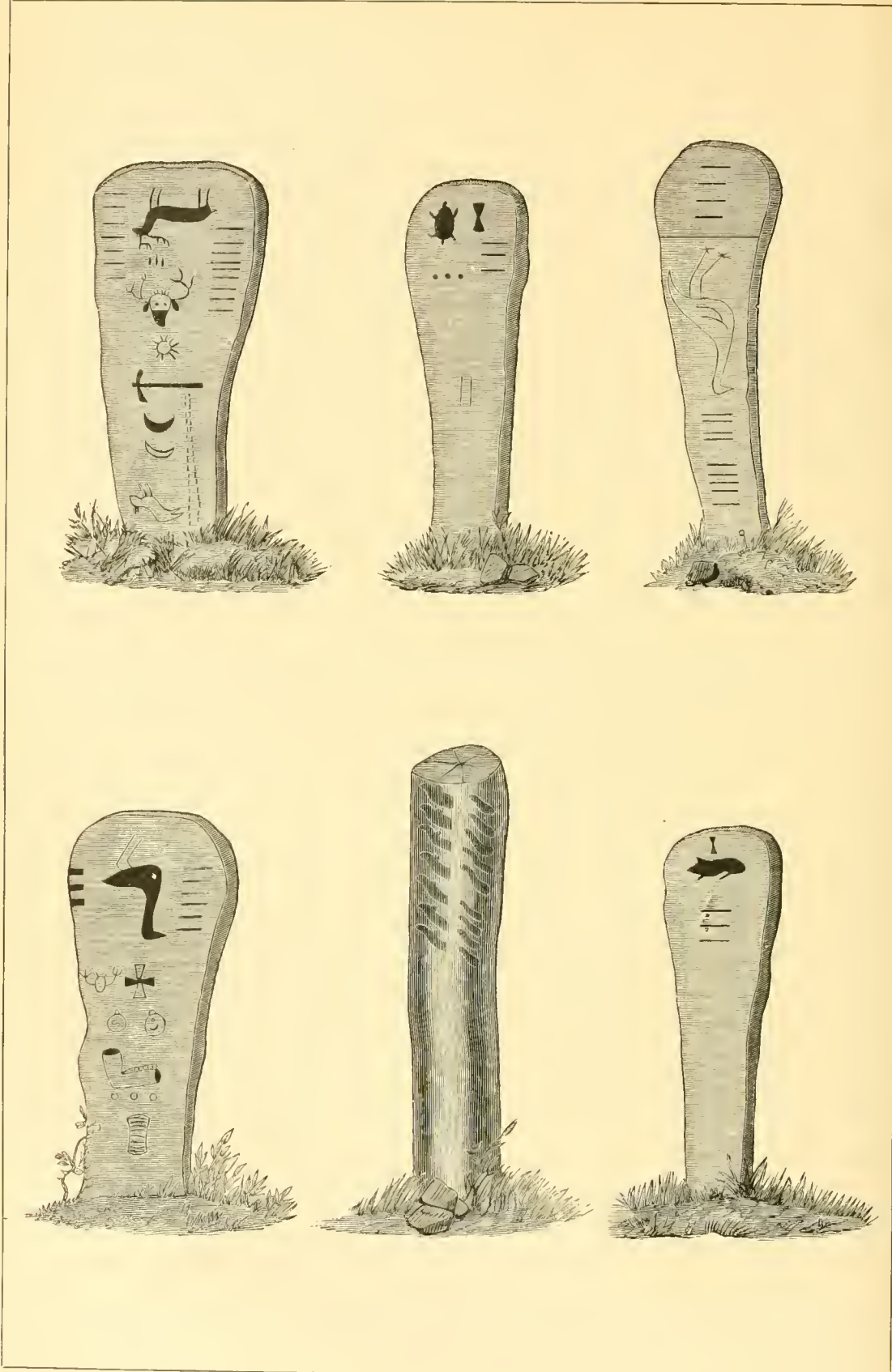
3. A fox.

4. A land otter.

5. The hunter's summer habitations. These are temporary dwellings and usually constructed at a distance from home. This also indicates the profession of a skin-hunter, as the permanent lodges, indicated as winter houses, *i. e.*, with round or dome-like roof, are located

near the sea-shore, and summer houses are only needed when at some distance from home, where a considerable length of time is spent.





OJIBWA GRAVE-POSTS.

The following is the explanation of Figure 114. It is another design for a grave-post, but refers to a fisherman :

1. The double-seated baidarka, or skin canoe.
2. A bow used in shooting seal and other marine animals.
3. A seal.
4. A whale.

The summer lodge is absent in this, as the fisherman did not leave the sea-shore in the pursuit of game on land.

Figure 115 is a native drawing of a village and neighboring burial-ground, prepared by an Alaskan native in imitation of originals seen by him among the natives of the mainland of Alaska, especially the Aigalúqamut. Carvings are generally on walrus ivory; sometimes on wooden slats. In the figure, No. 7 is a representation of a grave-post in position, bearing an inscription similar in general character to those in the last two preceding figures.

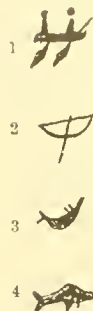


FIG. 114.—  
Grave-post.  
Alaska.

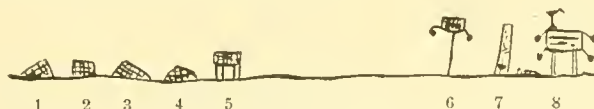


FIG. 115.—Village and burial-grounds. Alaska.

The details are explained as follows :

- No. 1, 2, 3, 4. Various styles of habitations, representing a settlement.
5. An elevated structure used for the storage of food.
6. A box with wrappings, containing the corpse of a child. The small lines, with ball attached, are ornamented appendages consisting of strips of cloth or skin, with charms, or, sometimes, tassels.
7. Grave-post, bearing rude illustrations of the weapons or implements used by a person during his life.
8. A grave scaffold, containing adult. Besides the ornamental appendages, as in the preceding, there is a "Shaman stick" erected over the box containing the corpse as a mark of good wishes of a sorrowing survivor. See object No. 1, in Figure 112.

The following extract from Schoolcraft (Hist. Indian Tribes of the United States, 1851, Vol. I, p. 356, Fig. 46) relates to the burial posts used by the Sioux and Chippewas. Plate LXXXIII is after the illustration given by this author in connection with the account quoted :

Among the Sioux and Western Chippewas, after the body has been wrapped in its best clothes and ornaments, it is then placed on a scaffold, or in a tree, where it remains until the flesh is entirely decayed ; after which the bones are buried, and the grave-posts fixed. At the head of the grave a tabular piece of cedar, or other wood, called the *adjedatig*, is set. This grave-board contains the symbolic or representative figure which records, if it be a warrior, his totem ; that is to say, the symbol of his family, or surname, and such arithmetical or other devices as serve to denote how many times the deceased has been in war parties, and how many scalps he had taken

from the enemy: two facts from which his reputation is essentially to be derived. It is seldom that more is attempted in the way of inscription. Often, however, distinguished chiefs have their war-flag, or, in modern days, a small ensign of American fabric, displayed on a standard at the head of their graves, which is left to fly over the deceased till it is wasted by the elements. Scalps of their enemies, feathers of the bald and black eagle, the swallow-tailed falcon, or some carnivorous bird, are also placed, in such instances, on the adjedatig, or suspended, with offerings of various kinds, on a separate staff. But the latter are super-additions of a religious character, and belong to the class of the ke-ke-wa-o-win-an-tig. The building of a funeral fire on recent graves, is also a rite which belongs to the consideration of their religious faith.

The following quotations and illustrations are taken from Dr. Ferdinand von Hochstetter's New Zealand, before cited. That author says on page 437 *et seq* :

The carved Maori-figures, which are met with on the road, are the memorials of chiefs, who, while journeying to the restorative baths of Rotorna, succumbed to their ills on the road. Some of the figures are decked out with pieces of clothing or kerchiefs: and the most remarkable feature in them is the close imitation of the tattoo-



FIG. 116.—New Zealand grave effigy.

ing of the deceased, by which the Maoris are able to recognize for whom the monument has been erected. Certain lines are peculiar to the tribe, others to the family, and again others to the individual. A close imitation of the tattooing of the face, therefore, is to the Maori the same as to us a photographic likeness; it does not require any description of name.

A representation of one of these carved posts is given in Figure 116.

Another carved post of like character is represented in Figure 117, concerning which the same author says, page 338:



"Beside my tent, at Tahnahn, on the right bank of the Mangapu, there stood an odd half decomposed figure carved of wood; it was designated to me by the natives as a Tiki, marking the tomb of a chief."

The same author states, page 423: "The dwellings of the chiefs at Ohinemutu are surrounded with inclosures of pole-fences; and the Whares and Wharepunis, some of them exhibiting very fine specimens of the Maori order of architecture, are ornamented with grotesque wood-carvings. The annexed wood-cut [here reproduced as Figure 118] is intended as an illustration of some of them. The gable figure, with the lizard having six feet and two heads, is very remarkable. The human figures are not idols, but are intended to represent departed sires of the present generation."



FIG. 117.—New Zealand grave-post.

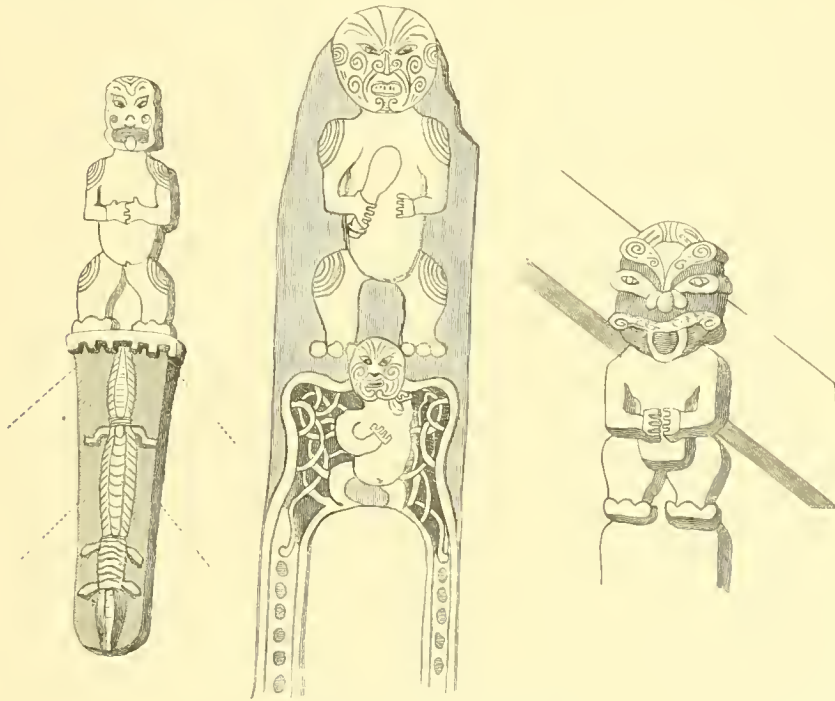


FIG. 118.—New Zealand house posts.

#### CHARMS AND FETICHES.

The use of objects as charms and fetiches is well known. Their graphic representation is not so well understood, although in the attempted interpretation of pictographs it is to be supposed that objects

of this character would be pictorially represented. The following is an instance where the use in action of a charm or fetich was certainly portrayed in a pictograph.

Figure 119, drawn by the Dakota Indians near Fort Snelling, Minnesota, exhibits the use for a fetichistic purpose of an instrument which is

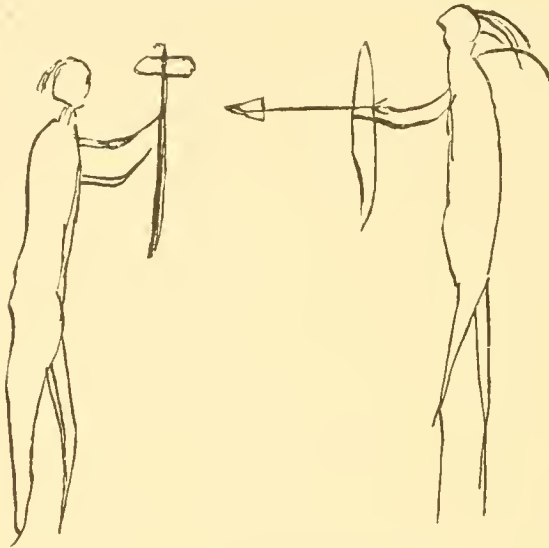


FIG. 119.—Mdewakantawan Fetich.

usually included among war clubs, though this particular object is more adapted to defense than to offense.

The head of the fetich is a grooved stone hammer of moderate size, measuring from an inch and a half to as much as 5 inches in length. A withe is tied about the middle of the hammer in the groove provided for the purpose, having a handle of from 2 to 4 feet in length. The latter is frequently wrapped with buckskin or raw-hide to strengthen it, as well as for ornamental purposes. Feathers attached bear mnemonic marks or designs, indicating marks of distinction, perhaps fetichistic devices not understood.

These objects are believed to possess the peculiar charm of warding off an enemy's missiles when held upright before the body. In the pictograph made by the Dakota Indian, the manner of holding it, as well as the act of shooting an arrow by an enemy, is shown with considerable clearness. The interpretation was explained by the draftsman himself.

Properties are attributed to this instrument similar to those of the small bags prepared by the Shaman, which are carried suspended from the neck by means of string or buckskin cords.

Subject-matter connected with this heading appears in several parts of this paper, *e. g.*, Figure 46, on page 141, and the characters for 1824-'25 on plate XLII.



## CUSTOMS.

Pictographs in the writer's possession, to be classed under this very general heading, in addition to those that are more intimately connected with other headings, and therefore arranged in other parts of this paper, may be divided into those relating to Associations and those exhibiting details of daily life and habits.

## ASSOCIATIONS.

It is well known that voluntary associations, generally of a religious character, have existed among the Indians, the members of which are designated by special paintings and marks entirely distinct from those relating to their clan-totems and name-totems. This topic requires too minute details to be entered upon in this paper after the space taken by other divisions. That it may become a feature in the interpretation of pictographs is shown by the following account:

Dr. W. J. Hoffman obtained a copy of drawings on a pipe-stem, which had been made and used by Ottawa Indians. Both of the flat surfaces bore incisions of figures, which are represented in Figure 120. On each side are four spaces, upon each of which are various characters, three spaces on one side being reserved for the delineation of human figures, each having diverging lines from the head upward, denoting their social status as chiefs or warriors and medicine-men.

Upon the space nearest the mouth is the drawing of a fire, the flames passing upward from the horizontal surface beneath them. The blue cross-bands are raised portions of the wood (ash) of which the pipe-stem is made; these show peculiarly shaped openings which pass entirely through the stem, though not interfering with the tube necessary for the passage of the smoke. This indicates considerable mechanical skill.

Upon each side of the stem are spaces corresponding in length and position to those upon the opposite side. In the lower space of the stem is a drawing of a bear, indicating that the two persons in the corresponding space on the opposite side belong to the Bear gens. The next upper figure is that of a beaver, showing the three human figures to belong to the Beaver gens, while the next to this, the eagle, indicates the opposite persons to be members of the Eagle gens. The upper figure is that of a lodge, the lodge containing a council fire, shown on the opposite side.



FIG. 120.—Ottawa pipe-stem.

The signification of the whole is that two members of the Bear gens, three members of the Beaver gens, and three members of the Eagle gens have united and constitute a society living in one lodge, around one fire, and smoke through the same pipe.

#### DAILY LIFE AND HABITS.

Examples of daily life and habits are given in Figures 121 and 122:

Figure 121 represents an Alaskan native in the water killing a walrus. The illustration was obtained from a slab of walrus ivory in the museum of the Alaska Commercial Company, of San Francisco, California, and interpreted by a native.



FIG. 121.—Walrus hunter. Alaska.

The carving, Figure 122, made of a piece of walrus tusk, was copied from the original in the museum of the Alaska Commercial Company, San Francisco, California, during the summer of 1882. Interpretations were verified by Naumoff, a Kadiak half-breed, in San Francisco at the time. The special purport of some of the characters and etchings is not apparent.

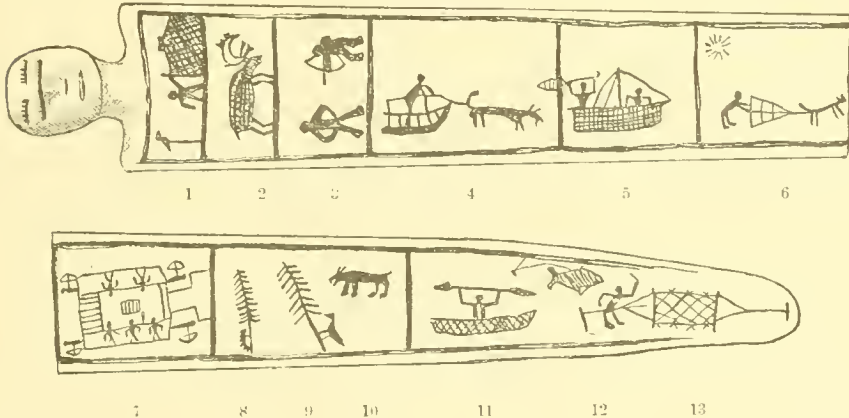


FIG. 122.—Ivory carving with records. Alaska.

In No. 1 is a native whose left hand is resting against the house, while the right hangs toward the ground. The character to his right represents a "Shaman stick" surmounted by the emblem of a bird, a "good spirit," in memory of some departed friend. It was suggested that the grave stick had been erected to the memory of his wife.

No. 2. Represents a reindeer, but the special import in this drawing is unknown.

No. 3. Signifies that one man, the recorder, shot and killed another with an arrow.

No. 4. Denotes that the narrator has made trading expeditions with a dog-sledge.

No. 5. Is a sail-boat, although the elevated paddle signifies that that was the manner in which the voyage was best made.

No. 6. A dog-sled, with the animal hitched up for a journey. The radiating lines in the upper left hand corner, over the head of the man, is a representation of the sun.

No. 7. A sacred lodge. The four figures at the outer corners of the square represent the young men placed on guard, armed with bows and arrows, to keep away those not members of the band, who are depicted as holding a dance. The small square in the center of the lodge represents the fire-place. The angular lines extending from the right side of the lodge to the vertical partition line are an outline of the subterranean entrance to the lodge.

No. 8. A pine tree, upon which a porcupine is crawling upward.

No. 9. A pine tree, from which a bird (woodpecker) is extracting larvæ for food.

No. 10. A bear.

No. 11. The recorder in his boat, holding aloft his double-bladed paddle to drive fish into a net.

No. 12. An assistant fisherman driving fish into the net.

No. 13. The net.

The figure over the man (No. 12) represents a whale, with harpoon and line attached, caught by the narrator.

It will be understood that all personal customs, such, for instance, as the peculiar arrangement of hair in any tribe, are embodied in their pictorial designation by other tribes and perhaps by themselves. See in this connection, page 230.

Among the many customs susceptible of graphic portrayal which do not happen to be illustrated in this paper, an example may be given in the mode in several tribes (*e. g.*, Apache, Muskoki, Dakota and Miztec, of punishing the infidelity of wives, namely, by cutting off the nose. The picture of a noseless woman would, therefore, when made by those tribes, have distinct meaning. The unfaithful wife mentioned on page 134 is drawn with a nose, but in her case the greater punishment of death was inflicted.

## TRIBAL HISTORY.

It is very difficult, if not impossible, to distinguish in pictographs, or, indeed, orally, between historical and traditional accounts obtained from Indians, so that this heading may be connected with one before presented, having relation to Traditions as mnemonically pictured. See page 84.

The Walum-Olum, or Bark Record of the Lenni-Lenapè, before mentioned, as also some of Schoolcraft's pictographic illustrations, may be, in accordance with the judgment of the reader, more or less properly connected with history. The Dakota Winter Counts, including the Corbnsier Winter Counts, in the present paper, while having their chief value as calendars, contain some material that is absolute and veritable tribal history, though seldom of more than local and transient interest. An example from Battiste Good's count for the year 1862-'63, is given in addition, explaining the origin of the title "Brulé" Dakota.

He calls the year "The-people-were-burnt winter," and adds:

They were living somewhere east of their present country, when a prairie fire destroyed their entire village. Many of their children and



FIG. 123.—Origin of Brulé. Dakota.

a man and his wife, who were on foot some distance away from the village, were burned to death. Many of their horses were also burned to death. All the people that could get to a long lake which was near by saved themselves by jumping into it. Many of these were badly burned about the thighs and legs, and this circumstance gave rise to the name, *si-can gu*, translated as Burnt Thigh, and Brulé, by which they have since been known. Battiste Good's character for the year is here given as Figure 123.

This is of later date than the mythical times, even among Indians, and, being verified as it is, must be accepted as historical.

### BIOGRAPHIC.

The pictographs under this head that have come to the writer's notice have been grouped as, *First*, a continuous account of the chief events in the life of the subject of the sketch; *Second*, separate accounts of some particular exploit or event in the life of the person referred to. Pictographs of both of these descriptions are very common.

#### CONTINUOUS RECORD OF EVENTS IN LIFE.

An example of a continuous record is the following "autobiography" of Running-Antelope:

The accompanying illustrations, Figures 124 to 134 are copied from a record of eleven drawings prepared by Running-Antelope, chief of the



FIG. 124.—Killed an Arikara.

Uncpapa Dakota, at Grand River, Dakota, in 1873. The sketches were painted in a large drawing-book by means of water colors, and were made for Dr. W. J. Hoffman, to whom the following interpretations were given by the artist:

The record comprises the most important events in the life of Running-Antelope as a warrior. Although frequently more than one per-



son is represented as slain, it is not to be inferred that all were killed in one day, but during the duration of one expedition, of which the recorder was a member or chief. The bird (*Falco cooperi*?) upon the shield

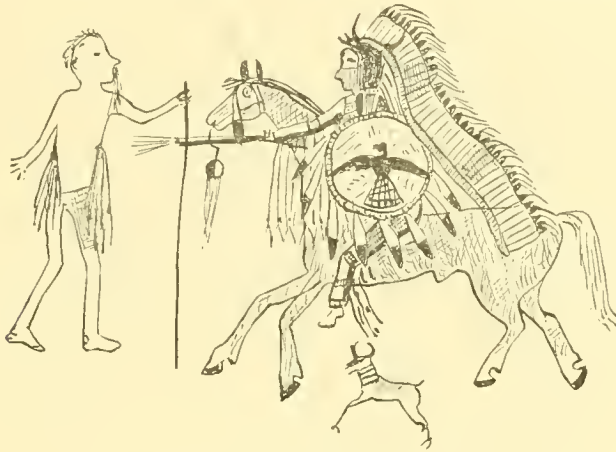


FIG. 125.—Shot and scalped an Arikara.

refers to the clan or band totem, while the antelope drawn beneath the horses, in the act of running, signifies the personal name.

Figure 124. Killed two Arikara Indians in one day. The lance held in the hand, thrusting at the foremost of the enemy, signifies that he

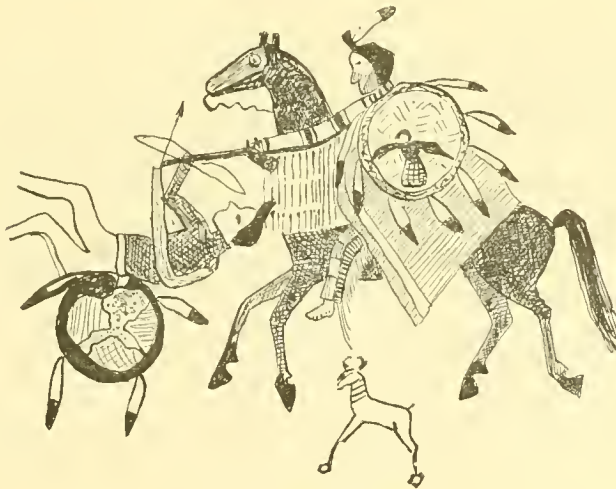


FIG. 126.—Shot an Arikara.

killed the person with that weapon; the left-hand figure was shot, as is shown, by the discharging gun, and afterwards struck with the lance. This occurred in 1853.



Figure 125. Shot and scalped an Arikara Indian in 1853. It appears that the Arikara attempted to inform Running-Antelope of his being unarmed, as the right hand is thrown outward with distended fingers, in imitation of making the gesture for *negation, having nothing*.



FIG. 127.—Killed two warriors.

Figure 126. Shot and killed an Arikara in 1853.

Figure 127. Killed two warriors on one day in 1854.

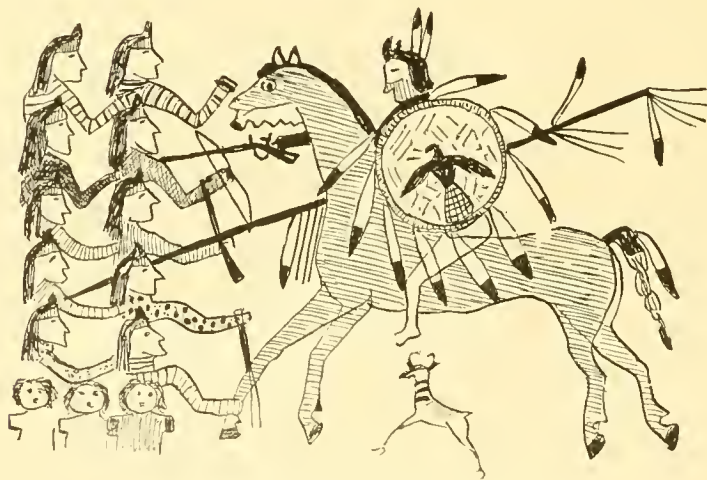


FIG. 128.—Killed ten men and three women.

Figure 128. Killed ten men and three squaws in 1856. The grouping of persons strongly resembles the ancient Egyptian method of drawing.

Figure 129. Killed two Arikara chiefs in 1856. Their rank is shown by the appendages to the sleeves, which consist of white weasel skins. The arrow in the left thigh of the recorder shows that he was wounded. The



FIG. 129.—Killed two chiefs.

scars are still distinct upon the person of Running-Antelope, showing that the arrow passed through the thigh.



FIG. 130.—Killed one Arikara.

Figure 130. Killed one Arikara in 1857. Striking the enemy with a bow is considered the greatest insult that can be offered to another.

The act of so doing also entitles the warrior to count one *coup* when relating his exploits in the council chamber.

Figure 131. Killed an Arikara in 1859 and captured a horse.



FIG. 131.—Killed one Arikara.

Figure 132. Killed two Arikara hunters in 1859. Both were shot, as is indicated by the figure of a gun in contact with each Indian. The cluster of lines drawn across the body of each victim represents the



FIG. 132.—Killed two Arikara hunters.

discharge of the gun, and shows where the ball took effect. The upper one of the two figures was in the act of shooting an arrow when he was killed.

Figure 133. Killed five Arikara in one day in 1863. The dotted line indicates the trail which Running-Antelope followed, and when the Indians discovered that they were pursued, they took shelter in an iso-



FIG. 133.—Killed five Arikara.

lated copse of shrubbery, where they were killed at leisure. The five guns within the inclosure represent the five persons armed.

Figure 134. An Arikara killed in 1865.

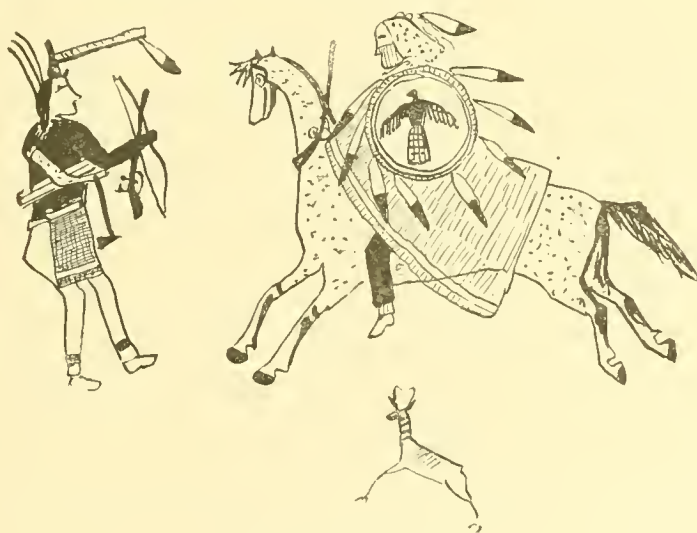


FIG. 134.—Killed an Arikara.

The Arikara are delineated in the above, in nearly all instances, wearing the top-knot of hair, a custom similar to that practiced by the Absa-

roka, though as the latter were the most inveterate enemies of the Sioux, and as the word Palláni for Arikara is applied to all enemies, the Crow custom may have been depicted as a generic mark. The practice of painting the forehead red, also an Absaroka custom, serves to distinguish the pictures as individuals of one of the two tribes.

## PARTICULAR EXPLOITS AND EVENTS.

A record on ivory shown as Figure 135, was obtained by Dr. W. J. Hoffman in San Francisco, California, in 1882, and was interpreted to him by an Alaskan native. The story represents the success of a hunt; the animals desired are shown, as well as those which were secured.

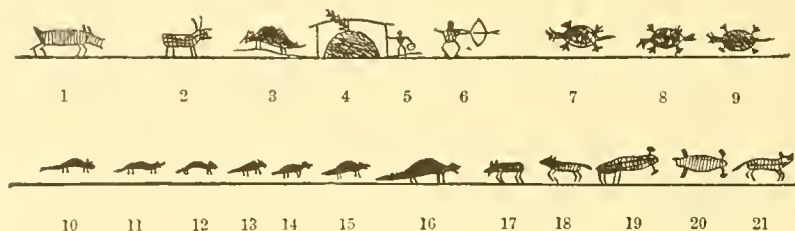


FIG. 135.—Record of hunt. Alaska.

The following is the explanation of the characters :

- 1, 2. Deer.
3. Porcupine.
4. Winter, or permanent, habitation. The cross-piece resting upon two vertical poles constitutes the rack, used for drying fish.
5. One of the natives occupying the same lodge with the recorder.
6. The hunter whose exploits are narrated.
- 7, 8, 9. Beavers.
- 10-14. Martens.
15. A weasel, according to the interpretation, although there are no specific characters to identify it as different from the preceding.
16. Land otter.
17. A bear.
18. A fox.
19. A walrus.
20. A seal.
21. A wolf.

By reference to the illustration it will be observed that all the animals secured are turned toward the house of the speaker, while the heads of those animals desired, but not captured, are turned away from it.

The following is the text in the Kiatexamut dialect of the Innuvit lan-



gnage as dictated by the Alaskan, with his own literal translation into English :

Huí-nu-ná-ga huí-pu-qtú-a-pi-cú-qu-lú-a mus'-qu-lí-quut. Pa-mú qtu-lit'  
 I, (from) my place. I went hunting (for) skins. martens  
 (settlement.)  
 ta-qí-mén, a-mí-da-duk' a-xla-luk', á-qui-á-muk pi-qu-a a-xla-luk'; ku-qu'  
 five, weasel one, land otter caught one;  
 lu-hú-nu-măk' a-xla-luk', tun'-du-muk tú-gu-qlí-n-gú me-lú-ga-nuk', pé luk  
 wolf one, deer (I) killed two, beaver  
 pi-naí-u-nuk, nú-nuk pit'-qu-ní, ma klak-muk' pit'-qu-ní, a-cí-a-na-muk  
 three, porcupine (I) caught none, seal (I) caught none, walrus  
 pit'-qu-ní, ua-qí-la-muk pit'-qu-ní, ta-gú-xa-muk pit'-qu-ní.  
 (I) caught none, fox (I) caught none, bear (I) caught none.

The following narrative of personal exploit was given to Dr. W. J. Hoffman by "Pete," a Shoshoni chief, during a visit of the latter to Washington, in 1880. The sketch, Figure 136, was drawn by the narrator, and the following explanation of characters will be sufficient interpretation to render the figures intelligible.

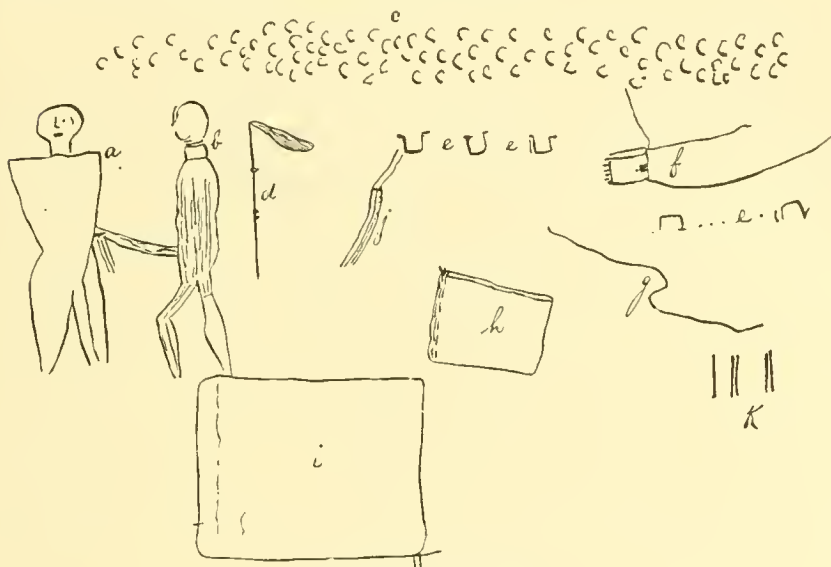


FIG. 136.—Shoshoni horse raid.

- a. Pete, a Shoshoni chief.
- b. A Nez Percés Indian, one of the party from whom the horses were stampeded, and who wounded Pete in the side with an arrow.
- c. Hoof marks, showing course of stampede.
- d. Lance, which was captured from the Nez Percés.
- e, e, e. Saddles captured.
- f. Bridle captured.
- g. Lariat captured.
- h. Saddle-blanket captured.

- i. Body-blanket captured.
- j. Pair of leggings captured.
- k. Three single legs of leggings captured.

Figure 137, copied from Schoolcraft, IV, p. 253, Pl. 32, is taken from the shoulder-blade of a buffalo, found on the plains in the Comanche country of Texas. No. 5 is a symbol showing the strife for the buffalo existing between the Indian and white races. The Indian (1), presented on



FIG. 137.—Comanche drawing on shoulder-blade.

horseback, protected by his ornamented shield and armed with a lance, kills a Spaniard (3), the latter being armed with a gun, after a circuitous chase (6). His companion (4), armed with a lance, shares the same fate.

Figure 138 is taken from the winter count of Battiste Good for the year 1853-'54.



He calls the year Cross-Bear-died-on-the-hunt winter.

The "travail" means, they moved; the buffalo, to hunt buffalo; the bear with mouth open and paw advanced, cross-bear. The involute character frequently repeated in Battiste's record signifies pain in the stomach and intestines, resulting in death. In this group of characters there is not only the brief story, an obituary notice, but an ideographic mark for a particular kind of death, a noticeable name-totem, and a presentation of the Indian mode of transportation.



FIG. 138.—Cross-Bear's death.

The word "travail" appearing above, as given by the interpreter, requires explanation. It refers to the peculiar sledge which is used by many tribes of Indians for the purpose of transportation. It is used on the surface of the ground when not covered with snow, even more than when snow prevails. The word is more generally found in print in the plural, where it is spelled "travaux" and sometimes "travois."

The etymology of this word, which has not yet been found in any Indian language, has been the subject of considerable discussion. The present writer considers it to be one of the class of words which descended in corrupted form from the language of the Canadian voyageurs, and that it was originally the French word "traineau," with its meaning of sledge.

Figure 139 is taken from a roll of birch bark obtained from the Ojibwa Indians at Red Lake, Minnesota, in 1882, known to be more than seventy years old. The interpretation was given by an Indian from that reservation, although he did not know the author nor the history of the record. With one exception, all of the characters were understood and interpreted to Dr. Hoffman, in 1883 by Ottawa Indians at Harbor Springs, Michigan. This tribe at one time habitually used similar methods of recording historic and mythologic data.

No. 1. Represents the person who visited a country supposed to have been near one of the great lakes. He has a scalp in his hand which he obtained from the head of an enemy, after having killed him. The line from the head to the small circle denotes the name of the person, and the line from the mouth to the same circle signifies (in the Dakota method), "That is it," having reference to proper names.

No. 2. The person killed. He was a man who held a position of some consequence in his tribe, as is indicated by the horns, marks used by the Ojibwas among themselves for Shaman, Wabeno, etc. It has been suggested that the object held in the hand of this figure is a rattle, though the Indians, to whom the record was submitted for examination, are in doubt, the character being indistinct.

No. 3. Three disks connected by short lines signify, in the present instance, three nights, *i. e.*, three black suns. Three days from home

was the distance the person in No. 1 traveled to reach the country for which started.

No. 4. Represents a shell, and denotes the primary object of the journey. Shells were needed for making ornaments and to trade.

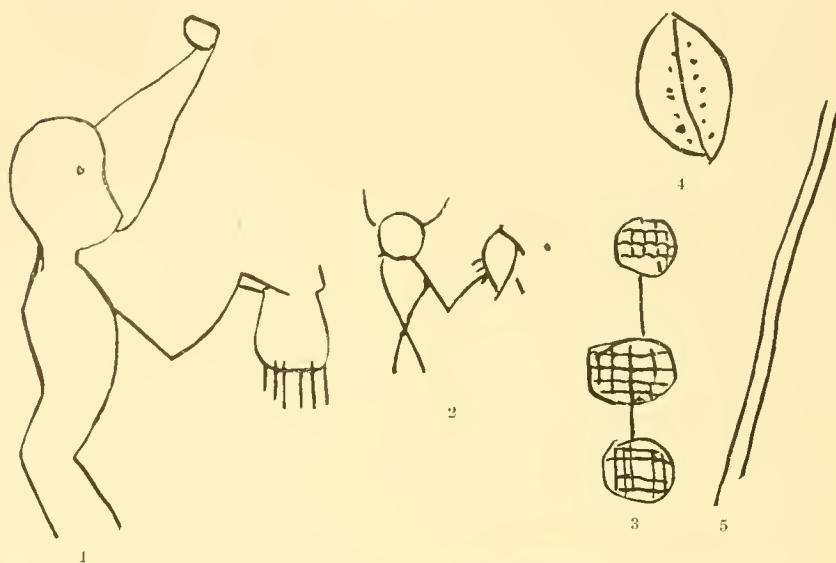


FIG. 139.—Bark record from Red Lake, Minnesota.

No. 5. Two parallel lines are here inserted to mark the end of the present record and the beginning of another.

## IDEOGRAPHS.

The number of instances in this paper in which the picture has been expressive of an idea, and not a mere portraiture of an object, and has amounted sometimes to a graphic representation of an abstract idea, is so great as to render cross-references superfluous. As examples, attention may be invited to Figure 72, page 166, for the idea of "voice," Figure 179, page 241, for that of "war," and the Corbusier winter counts for the year 1876-'77—No. 1, page 146, for that of "support." In addition to them, however, for convenience of grouping under this special heading, the following illustrations (some of which would as properly appear under the head of Conventionalizing) are presented.

## ABSTRACT IDEAS.

Figure 140 is taken from the winter count of Battiste Good, and is drawn to represent the sign for pipe, which it is intended to signify. The sign is made by placing the right hand near the upper portion of the breast, the left farther forward, and both held so that the index and thumb approximate a circle, as if holding a pipe-stem. The remaining fingers are closed.



FIG. 140.—Sign for pipe. Dakota.

The point of interest in this character is that instead of drawing a pipe the artist drew a human figure making the sign for pipe, showing the intimate connection between gesture-signs and pictographs. The pipe, in this instance, was the symbol of peace.

Figure 141, taken from the winter count of Battiste Good for the year 1703-'04, signifies plenty of buffalo meat.

The forked stick being one of the supports of a drying-pole or scaffold, indicates meat. The circle may represent a pit or "cache" in which buffalo meat was placed during the winter of 1703-'04, or it may mean "heap"—*i. e.*, large quantity, buffalo having been very plentiful that year. The buffalo head denotes the kind of meat stored. This is an abbreviated form of the device immediately following, and being fully understood affords a suggestive comparison with some Egyptian hieroglyphs and Chinese letters, both in their full pictographic origin and in their abbreviation.



FIG. 141.—Plenty Buffalo meat. Dakota.

Figure 142 is taken from the same count for the year 1745-'46, in which the drying-pole is supported by two forked sticks or poles, only one of which, without the drying-pole, was indicated in the preceding figure, which is an abbreviated or conventionalized form of the objective representation in the present figure, viz., a scaffold or pole upon which buffalo meat was placed for drying. Buffalo were very plentiful during the winter of 1745-'46, and the kind of meat is denoted by the buffalo head placed above the pole, from which meat appears suspended.



FIG. 142.—  
Plenty Buffalo  
meat. Dakota.

Figure 143 is taken from Prince Maximilian's Travels, *op. cit.* p. 352. The cross signifies, I will barter or trade. Three animals are drawn on the right hand of the cross: one is a buffalo (probably albino); the two others, a weasel (*Mustela Canadensis*) and an otter. The pictographer

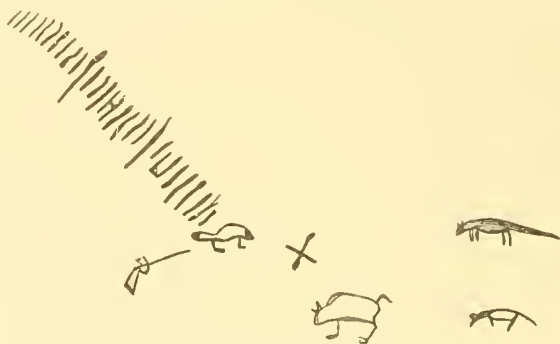


FIG. 143.—Pictograph for trade. Dakota.

offers in exchange for the skins of these animals the articles which he has drawn on the left side of the cross. He has there, in the first place, depicted a beaver very plainly, behind which there is a gun; to the left of the beaver are thirty strokes, each ten separated by a longer line; this means: I will give thirty beaver skins and a gun for the skins of the three animals on the right hand of the cross.



FIG. 144.—Starvation.  
Dakota.

The ideographic character of the design consists in the use of the cross—being a drawing of the gesture-sign for "trade"—the arms being in position interchanged. Of the two things each one is put in the place before occupied by the other thing—the idea of exchange.

Figure 144, from the record of Battiste Good for the year 1720-'21, signifies starvation, denoted by the bare ribs.

This design survives among the Ottawa and Pottawatomie Indians of Northern Michigan, but among the latter a single line only is drawn across the breast, shown in Figure 145. This corresponds, also, with one of the gesture-signs for the same idea.

Figure 146, from the record of Battiste Good for the year 1826-'27, signifies "pain." He calls the year "Ate-a-whistle-and-died winter," and explains that six Dakotas, on the war path, had nearly perished with hunger when they found and ate the rotting carcass of an old buffalo, on which the wolves had been feeding. They were seized soon after with

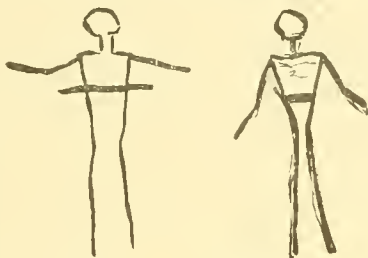


FIG. 145.—Starvation. Ottawa and Pottawatomi.



FIG. 146.—Pain. Died of "whistle." Dakota.

pains in the stomach, their bellies swelled, and gas poured from the mouth and the anus, and they died of a whistle, or from eating a whistle. The sound of gas escaping from the mouth is illustrated in the figure. The character on the abdomen and on its right may be considered to be the ideograph for pain in that part of the body.

#### SYMBOLISM.

The writer has, in a former publication, suggested the distinction to be made between a pictorial sign, an emblem, and a symbol; but it is not easy to preserve the discrimination in reference to ideographic characters which have often become conventionalized. To partly express the distinction, nearly all of the characters in the Dakota Winter Counts are regarded as pictorial signs, and the class represented by tribal signs, personal insignia, etc., is considered to belong to the category of emblems. There is no doubt, however, that true symbols exist among the Indians, as they must exist to some extent among all peoples not devoid of poetic imagination. Some of them are shown in this paper. The pipe is generally a symbol of peace, although in certain positions and connections it sometimes signifies preparation for war, and again subsequent victory. The hatchet is a common symbol for war, and closed hands or approaching palms denote friendship. The tortoise has been clearly used as a symbol for land, and many other examples can be admitted. If Schoolcraft is to be taken as uncontroverted authority, the symbolism of the Ojibwa rivalled that of the Egyptians, and the recent unpublished accounts of the Zuñi, Moki, and Navajo before mentioned indicate the frequent employment of symbolic devices by those tribes which are notably devoted to mystic ceremonies. Nevertheless,



the writer's personal experience is, that often when he has at first supposed a character to be a genuine symbol it has resulted, with better means of understanding, in being not even an ideograph but a mere objective representation. In this connection, the remarks on the circle on page 107, and those on Figure 206, on page 246, may be in point.

Another case for consideration occurs. The impression, real or represented, of a human hand is used in several regions in the world with symbolic significance. For instance, in Jerusalem a rough representation of a hand is reported by Lieutenant Conder (Palestine Exploration Fund, January, 1873, p. 16) to be marked on the wall of every house whilst in building by the native races. Some authorities connect it with the five names of God, and it is generally considered to avert the evil eye. The Moors generally, and especially the Arabs in Kairwan, employ the marks on their houses as prophylactics. Similar hand prints are found in the ruins of El Baird, near Petra. Some of the quaint symbolism connected with horns is supposed to originate from such hand marks. Among the North American Indians the mark so readily applied is of frequent occurrence, an instance, with its ascertained significance, being given on page 187, *supra*.

It has been recently ascertained that the figure of a hand, with extended fingers, is very common in the vicinity of ruins in Arizona as a rock-etching, and is also frequently seen daubed on the rocks with colored pigments or white clay. This coincidence would seem at first to assure symbolic significance and possibly to connect the symbolism of the two hemispheres. But Mr. Thomas V. Keam explains the Arizona etchings of hands, on the authority of the living Moki, as follows:

"These are vestiges of the test formerly practiced among young men who aspired for admission to the fraternity of Salyko. The Salyko is a trinity of two women and a woman from whom the Hopitus [Moki] first obtained corn. Only those were chosen as novices, the imprints of whose hands had dried on the instant."

While the subject-matter is, therefore, ceremonial, there is absolutely no symbolism connected with it. The etchings either simply perpetuate the marks made in the several tests or imitate them.

In the present stage of the study no more can be suggested than that symbolic interpretations should be accepted with caution.

With regard to the symbolic use of material objects, which would probably be extended into graphic portrayal, the following remarks may be given:

The Prince of Wied mentions (*op. cit.*, Vol. 1, p. 244) that in the Sac and Fox tribes the rattle of a rattlesnake attached to the end of the feather worn on the head signifies a good horse stealer. The stealthy approach of the serpent, accompanied with latent power, is here clearly indicated.

Mr. Schoolcraft says of the Dakotas that "some of the chiefs had the skins of skunks tied to their heels to symbolize that they never ran, as



that animal is noted for its slow and self-possessed movements." See *Personal Memoirs of a Residence of Thirty Years with the Indian Tribes on the American Frontier, etc.*, Philadelphia, 1851, p. 214.

This is one of the many customs to be remembered in the attempted interpretations of pictographs. The present writer does not know that a skunk skin, or a strip of skin which might be supposed to be a skunk skin, attached to a human heel, has ever been used pictorially as the ideograph of courage or steadfastness, but with the knowledge of this objective use of the skins, if they were found so represented pictorially, as might well be expected, the interpretation would be suggested, without any direct explanation from Indians.

## IDENTIFICATION OF THE PICTOGRAPHERS.

The first point in the examination of a pictograph is to determine by what body of people it was made. This is not only because the marks or devices made by the artists of one tribe, or perhaps of one linguistic stock if not disintegrated into separated divisions distant from each other, may have a different significance from figures virtually the same

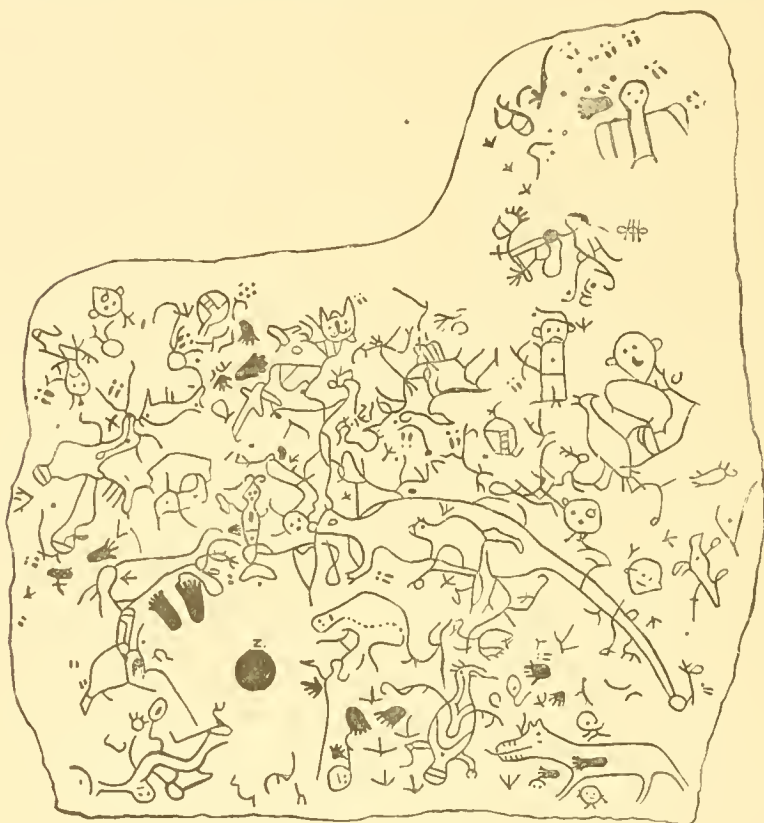


FIG. 147.—Algonkian petroglyph. Millsborough, Pennsylvania.

produced by another tribe or stock, but because the value of the record is greatly enhanced when the recorders are known. In arriving at the identification mentioned it is advisable to study: 1st. The general style or type. 2d. The presence of characteristic objects. 3d. The apparent

subject-matter. 4th. The localities with reference to the known habitat of tribes.

#### GENERAL STYLE OR TYPE.

Although the collection of pictographs, particularly of petroglyphs, is not complete, and their study, therefore, is only commenced, it is possible to present some of the varieties in general style and type.

Figure 147 is presented as a type of the Eastern Algonkian pictographs. It was copied by Messrs. J. Sutton Wall and William Arison, in 1882, from a rock opposite Millsborough, in Fayette County, Pennsylvania, and is mentioned on page 20, *supra*, in connection with the local distribution of petroglyphs. The locality is within the area once occupied by the tribes of the Algonkian linguistic family, and there is apparent a general similarity to the well-known Dighton Rock inscription.

Mr. J. Sutton Wall, of Monongahela City, Pennsylvania, who has kindly furnished the drawing of the etchings, states that the outlines of figures are formed by grooves carved or cut in the rock from an inch to a mere trace in depth. The footprints are carved depressions. The character marked Z (near the lower left-hand corner) is a circular cavity 7 inches deep. The rock is sandstone, of the Waynesburg series.

Mr. Wall has also contributed a copy of the "Hamilton Picture Rock,"



FIG. 148.—Algonkian petroglyph. Hamilton Farm, West Virginia.

of which Figure 148 is an illustration. The etchings are on a sandstone rock, on the Hamilton farm, 6 miles southeast from Morgantown, West Virginia. The turnpike passes over the south edge of the rock.

Mr. Wall furnishes the following interpretation of the figures :

A. Outline of a turkey.

B. Outline of a panther.

C. Outline of a rattlesnake.

D. Outline of a human form.

E. A "spiral or volute."

F. Impression of a horse foot.

G. Impression of a human foot.

H. Outline of the top portion of a tree or branch.

I. Impression of a human hand.

J. Impression of a bear's forefoot, but lacks the proper number of toe marks.

K. Impression of two turkey tracks.

L. Has some appearance of a hare or rabbit, but lacks the corresponding length of ears.

M. Impression of a bear's hindfoot, but lacks the proper number of toe marks.

N. Outline of infant human form, with two arrows in the right hand.

O, P. Two cup-shaped depressions.

Q. Outline of the hind part of an animal.

R. Might be taken to represent the impression of a horse's foot were it not for the line bisecting the outer curved line.

S. Represent buffalo and deer tracks.

The turkey A, the rattlesnake C, the rabbit L, and the "footprints" J, M, and Q, are specially noticeable as typical characters in Algonkian pictography.

Mr. P. W. Sheaffer furnishes in his *Historical Map of Pennsylvania*,



FIG. 149.—Algonkian petroglyph. Safe Harbor, Pennsylvania.

Philadelphia, 1875, a sketch of a pictograph on the Susquehanna River, Pennsylvania, below the dam at Safe Harbor, part of which is repro-

duced in Figure 149. This appears to be purely Algonkian, and has more resemblance to Ojibwa characters than any other petroglyph yet noted from the Eastern United States.

The best type of Western Algonkian petroglyphs known to the writer is reported as discovered by members of the party of Capt. William A. Jones, United States Army, in 1873, and published in his report on Northwestern Wyoming, including the Yellowstone National Park, Washington, 1875, p. 267, *et seq.*, Fig. 50, reproduced in this paper by

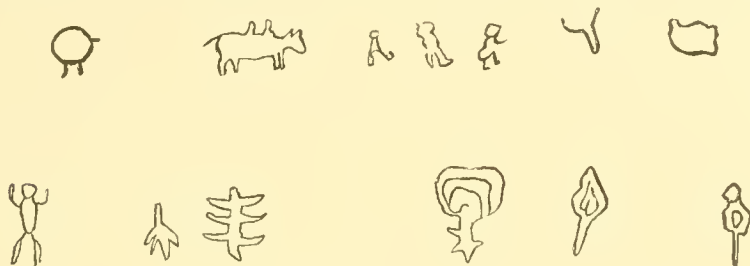


FIG. 150.—Algonkian petroglyph. Wyoming.

Figure 150, in which the greater number of the characters are shown about one-fifth of their size.

An abstract of his description is as follows:

\* \* Upon a nearly vertical wall of the yellow sandstones just back of Murphy's ranch, a number of rude figures had been chiseled, apparently at a period not very recent, as they had become much worn. \* \* \* No certain clue to the connected meaning of this record was obtained, although Pinatsi attempted to explain it when the sketch was shown to him some days later by Mr. F. W. Bond, who copied the inscriptions from the rocks. The figure on the left, in the upper row, somewhat resembles the design commonly used to represent a shield, with the greater part of the ornamental fringe omitted, perhaps worn away in the inscription. We shall possibly be justified in regarding the whole as an attempt to record the particulars of a fight or battle which once occurred in this neighborhood. Pinatsi's remarks conveyed the idea to Mr. Bond that he understood the figure [the second in the upper line] to signify cavalry, and the six figures [three in the middle of the upper line, as also the three to the left of the lower line,] to mean infantry, but he did not appear to recognize the hieroglyphs as the copy of any record with which he was familiar.

Several years ago Dr. W. J. Hoffman showed these (as well as other pictographs from the same locality) to several prominent Shoshoni Indians from near that locality, who at once pronounced them the work of the Pawkees (Satsika, or Blackfeet), who formerly occupied that country. The general resemblance of many of the drawings from this area of country is similar to many of the Eastern Algonkin records. The Satsika are part of the great Algonkian stock.

Throughout the Wind River country of Wyoming many pictographic records have been found, and others reported by the Shoshoni Indians. These are said, by the latter, to be the work of the "Pawkees," as they call the Blackfeet, or more properly Satsika, and the general style of

many of the figures bears strong resemblance to similar carvings found in the eastern portion of the United States, in regions known to have been occupied by other tribes of the same linguistic stock, viz., the Algonkian.

The four specimens of Algonkian petroglyphs presented above in Figures 147-150 show gradations in type. In connection with them reference may be made to the Ojibwa bark record, Figure 139, page 218; the Ojibwa grave-posts, Plate LXXXIII; the Ottawa pipe-stem, Figure 120, page 204, in this paper; and to Schoolcraft's numerous Ojibwa pictographs; and they may be contrasted with the many Dakota and Inuit drawings in this paper.

Mr. G. K. Gilbert has furnished a small collection of drawings of Shoshonian petroglyphs, from Oneida, Idaho, shown in Figure 151. Some of

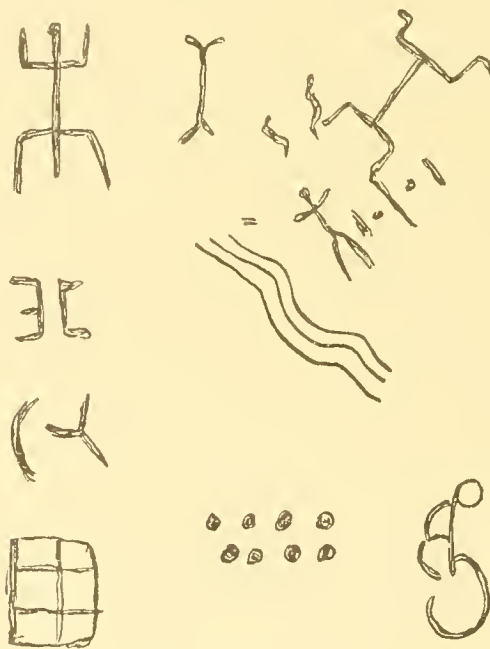


FIG. 151.—Shoshonian petroglyph. Idaho.

them appear to be totemic characters, and to record the names of visitors to the locality.

Five miles northwest from this locality, and one-half mile east from Marsh Creek, is another group of characters, on basalt boulders, apparently totemic, and by Shoshoni. A copy of these, also contributed by Mr. Gilbert, is given in Figure 152.

All of these drawings resemble the petroglyphs found at Partridge Creek, northern Arizona, and in Temple Creek Cañon, southeastern Utah, mentioned *ante*, pages 30 and 26 respectively.



Mr. I. C. Russell, of the United States Geological Survey, has furnished drawings of rude pictographs at Black Rock Spring, Utah, represented in Figure 153. Some of the other characters not represented in the figure consist of several horizontal lines, placed one above another, above which are a number of spots, the whole appearing like a numerical record having reference to the figure alongside, which resembles, to a slight extent, a melon with tortuous vines and stems. The left-hand upper figure suggests the masks shown on Plate LXXXI.

Mr. Gilbert Thompson, of the United States Geological Survey, has discovered pictographs at Fool Creek Cañon, Utah, shown in Figure 154, which strongly resemble those still made by the Moki of Arizona. Several characters are identical with those last mentioned, and represent human figures, one of which is drawn to represent a man, shown by a cross, the upper arm of which is attached to the perineum.

These are all drawn in red color and were executed at three different periods. Other neighboring pictographs are pecked and unpainted, while others are both pecked and painted.

Both of these pictographs from Utah may be compared with the Moki pictographs from Oakley Springs, Arizona, copied in Figure 1, page 30.

Dr. G. W. Barnes, of San Diego, California, has kindly furnished sketches of pictographs prepared for him by Mrs. F. A. Kimball, of National City, California, which were copied from records 25 miles northeast of the former city. Many of them found upon the faces of large rocks are almost obliterated, though sufficient remains to permit tracing. The only color used appears to be red ocher. Many of the characters, as noticed upon the drawings, closely resemble those in New Mexico, at Ojo de Benado, south of Zuñi, and in the cañon leading from the cañon at Stewart's ranch, to the Kanab Creek Cañon, Utah. This is an indication of the habitat of the Shoshonian stock apart from the linguistic evidence with which it agrees.

The power of determining the authorship of pictographs made on materials other than rocks, by means of their general style and type,

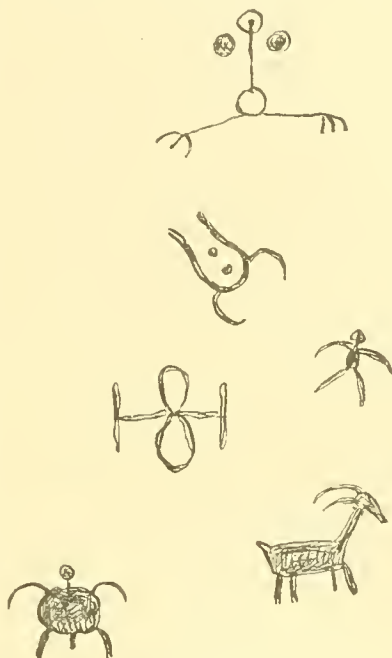


FIG. 152.—Shoshonian petroglyph. Idaho.

can be estimated by a comparison of those of the Ojibwa, Dakota, Haida, and Innu of Alaska presented in various parts of this paper.

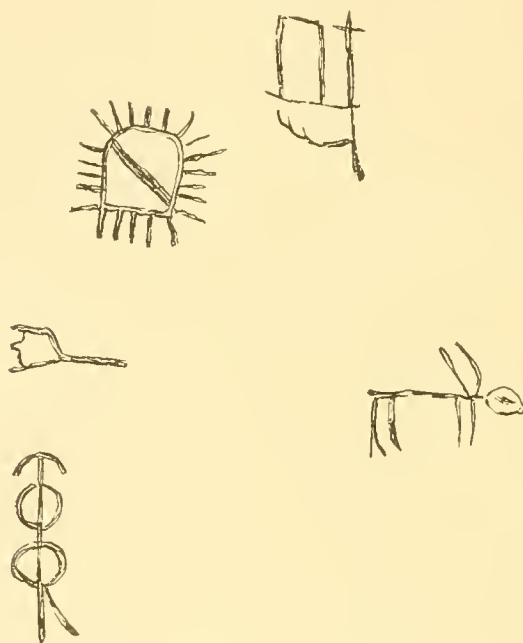


FIG. 153.—Shoshonian petroglyph. Utah.

#### PRESENCE OF CHARACTERISTIC OBJECTS.

With regard to the study of the individual characters themselves to identify the delineators of pictographs, the various considerations of fauna, religion, customs, tribal signs, indeed, most of the headings of this paper will be applicable. It is impracticable now to give further details in this immediate connection, except to add to similar particulars before presented the following notes with regard to the arrangement of hair and display of paint in identification.



FIG. 154.—Shoshonian rock-painting. Utah.

A custom obtains among the Absaroka, which, when depicted in pictographs, as is frequently done, serves greatly to facilitate identification of the principal actors in events recorded. This consists in wearing false hair, attached to the back of the head and allowed to hang down over the back. Horse hair, taken from the tail, is arranged in 8 or 10 strands, each about as thick as a finger, and

laid parallel with spaces between them of the width of a single strand. Pine gum is then mixed with red ocher, or vermilion, when the individual can afford the expense, and by means of other hair, or fibers of any kind laid cross-wise, the strands are secured, and around each intersection of hair a ball of gum is plastered to hold it in place. About 4 inches further down, a similar row of gum balls and cross strings are placed, and so on down to the end. The top of the tail ornament is then secured to the hair on the back of the head. The Indians frequently incorporate the false hair with their own so as to lengthen the latter without any marked evidence of the deception. Nevertheless the transverse fastenings with their gum attachments are present. The Arikara have adopted this custom of late, and they have obtained it from the Hidatsa, who, in turn, learned it of the Absaroka.

In picture-writing this is shown upon the figure of a man by the presence of parallel lines drawn downward from the back of the head, with cross lines, the whole appearing like small squares or a piece of ret.

Dr. George Gibbs mentions a pictograph made by one of the Northwestern tribes (of Oregon and Washington) upon which "the figure of a man, with a long queue, or scalp-lock, reached to his heels, denoted a Shoshonee, that tribe being in the habit of braiding horse- or other hair into their own in that manner." See *Contrib. to N. A. Ethnol.*, Vol. I, p. 222.

This may have reference to the Shoshoni Indians among the extreme Northwestern tribes, but it can by no means be positively affirmed that the mark of identification could be based upon the custom of braiding with their own hair that of animals to increase the length and appearance of the queue, as this custom also prevails among the Absaroka and Arikara Indians of Montana and Dakota, respectively, as above described.

Pictures drawn by some of the northern tribes of the Dakota, the Titon, for instance, show the characteristic and distinctive features for a Crow Indian to be the distribution of the red war paint, which covers the forehead. A Dakota upon the same picture is designated by painting the face red from the eyes down to the end of the chin. Again, the Crow is designated by a top-knot of hair extending upward from the forehead, that lock of hair being actually worn by that tribe and brushed upward and slightly backward. See the seated figure in the record of Running-Antelope in Fig. 127, page 210.

The Pueblos generally, when accurate and particular in delineation, designate the women of that tribe by a huge coil of hair over either ear. This custom prevails also among the Coyotero Apaches, the women wearing the hair in a coil to denote a virgin or an unmarried person, while the coil is absent in the case of a married woman.

The following remarks are extracted from the unpublished "Catalogue of the Relics of the Ancient Builders of the Southwest Tablelands," by Mr. Thomas V. Keam:

"The Maltese cross is the emblem of a virgin; still so recognized by the Mokis. It is a conventional development of a more common emblem of maidenhood, the form in which the maidens wear their hair arranged as a disk of three or four inches in diameter upon each side of the head. This discoidal arrangement of their hair is typical of the emblem of fructification, worn by the maiden in the Mningwa festival. Sometimes the hair, instead of being worn in the complete discoid form, is dressed from two curved twigs, and presents the form of two semi-circles upon each side of the head. The partition of these is sometimes horizontal and sometimes vertical. A combination of both of these styles presents the form from which the Maltese cross was conventionalized. The brim decorations are of ornamental locks of hair which a maiden trains to grow upon the sides of the forehead."

This strongly marked form of Maltese cross, the origin of which is above explained, appears frequently in the pottery, and also in the petroglyphs of the Moki.

Regarding the apparent subject matter of pictographs an obvious distinction may be made between hunting and land scenes such as would be familiar to interior tribes and those showing fishing and water transportation common to seaboard and lacustrine peoples. Similar and more perspicuous modes of discrimination are available. The general scope of known history, traditions, and myths may also serve in identification.

Knowledge of the preisan homes and of the migrations of tribes necessary to ascertain their former habitat in connection with the probable age of rock-etchings or paintings is manifestly desirable.

## MODES OF INTERPRETATION.

It is obvious that before attempting the interpretation of pictographs, concerning which no direct information is to be obtained, there should be a full collection of known characters, in order that through them the unknown may be learned. When any considerable number of objects in a pictograph are actually known, the remainder may be ascertained by the context, the relation, and the position of the several designs, and sometimes by the recognized principles of the art.

The Bureau of Ethnology has been engaged, therefore, for a considerable time in collating a large number of characters in a card-catalogue arranged primarily by similarity in forms, and in attaching to each character any significance ascertained or suggested. As before explained, the interpretation upon which reliance is mainly based is that which has been made known by direct information from Indians who themselves were actually makers of pictographs at the time of giving the interpretation. Apart from the comparisons obtained by this collation, the only mode of ascertaining the meaning of the characters, in other words, the only key yet discovered, is in the study of the gesture-sign included in many of them. The writer several years ago suggested that among people where a system of ideographic gesture-signs prevailed, it would be expected that their form would appear in any mode of artistic representation made by the same people with the object of conveying ideas or recording facts. When a gesture-sign had been established and it became necessary or desirable to draw a character or design to convey the same ideas, nothing could be more natural than to use the graphic form or delineation which was known and used in the gesture-sign. It was but one more step, and an easy one, to fasten upon bark, skins, or rocks the evanescent air pictures of the signs.

The industrious research of Dr. D. G. Brinton, whose recent work, *The Lenâpé and their Legends*, before mentioned, is received as this paper passes through the press, has discovered passages in Rafinesque's generally neglected and perhaps unduly discredited volumes, by which that eccentric but acute writer seems to have announced the general proposition that the graphic signs of the Indians correspond to their manual signs. He also asserted that he had collected a large number of them, though the statement is not clear, for if all Indian pictographs are, in a very general sense, "based upon their language of signs," all of those pictographs might be included in his alleged collection, without an ascertained specific relation between any pictograph and any sign. It is probable, however, that Rafinesque actually had at least valuable notes on the subject, the loss of which is greatly to be regretted.



In the paper "Sign Language among the North American Indians," published in the First Annual Report of the Bureau of Ethnology, a large number of instances were given of the reproduction of gesture lines in the pictographs made by the North American Indians, and they appeared to be most frequent when there was an attempt to convey subjective ideas. These were beyond the range of an artistic skill limited to the rough presentation of objects in outline. It was suggested, therefore, that the part of pictographs which is the most difficult of interpretation in the absence of positive knowledge, was the one in the elucidation of which the study of sign-language would assist. Many pictographs in the present paper, the meaning of which is definitely known from direct sources, are noted in connection with the gesture-signs corresponding with the same idea, which signs are also understood from independent evidence.

So numerous and conclusive are these examples, that it is not necessary to add to them save by presenting the pictograph copied in Figure 155, as one of special importance in this connection.

During the summer of 1882 Dr. W. J. Hoffman visited the Tule River Agency, California, where he found a large rock painting, of which Figure 155 is a copy made by him, the following being his description:

The agency is located upon the western side of the Sierra Nevada in the headwater cañons of the branches of the south fork of Tule River. The country is at present occupied by several tribes of the Yokuts linguistic stock, and the only answer received to inquiries respecting the age or origin of the record was, that it was found there when the ancestors of the present tribes arrived. The local migrations of the various Indian tribes of this part of California are not yet known with sufficient certainty to determine to whom the records may be credited, but all appearances with respect to the weathering and disintegration of the rock upon which the record is etched, the appearance of the coloring matter subsequently applied, and the condition of the small depressions made at the time for mixing the pigments with a viscous substance would indicate that the work had been performed about a century ago.

The Tulare Indians have been residents of that part of the State for at least one hundred years, and the oldest now living state that the records were found by their ancestors, though whether more than two generations ago could not be ascertained.

The drawings were outlined by pecking with a piece of quartz or other silicious rock, to the depth of from a mere visible depression to a third of an inch. Having thus satisfactorily depicted the several ideas, colors were applied which upon examination appear to have penetrated the slight interstices between the crystalline particles of the rock, which had been bruised and slightly fractured by hammering with a piece of stone. It appears probable, too, that the hammering was repeated after application of the colors to insure better results.

Upon a small boulder, under the natural archway formed by the



breaking of the large rock, small depressions were found which had been used as mortars for grinding and mixing the colors. These depressions average 2 inches in diameter and about 1 inch in depth. Traces of color still remain, mixed with a thin layer of a shining substance resembling a coating of varnish, though of a flinty hardness.



FIG. 156.—Rock-painting, Tule River, California.

This coating is so thin that it cannot be removed with a steel instrument, and appears to have become part of the rock itself.

From the animals depicted upon the ceiling it seems that both beaver and deer were found in the country, and as the beaver tail and the hoofs of deer and antelope are boiled to procure glue, it is probable that the

tribe which made these pictographs was as far advanced in respect to the making of glue and preparing of paints as other tribes throughout the United States.

Examination shows that the dull red color is red ocher, found in various places in the valley, while the yellow was an ochereous clay, also found there. The white color was probably obtained there, and is evidently earthy, though of what nature can only be surmised, not sufficient being obtainable from the rock picture to make satisfactory analysis with the blow pipe. The composition of the black is not known, unless it was made by mixing clay and powdered charcoal from the embers. The latter is a preparation common at this day among other tribes.

An immense granite boulder, about 20 feet in thickness and 30 in length, is so broken that a lower quarter is removed, leaving a large square passageway through its entire diameter almost northwest and southeast. Upon the western wall of this passageway is a collection of the colored sketches of which Figure 155 is a reduced copy. The entire face of the rock upon which the pictograph occurs measures about 12 or 15 feet in width and 8 in height. The ceiling also contains many characters of birds, quadrupeds, etc. No. 1 in the figure measures 6 feet in height, from the end of the toes to the top of the head, the others being in proportion as represented.

The attempt at reproducing gestures is admirably portrayed, and the following explanations are based upon such natural gestures as are almost universally in use :

No. 1 represents a person weeping. The eyes have lines running down to the breast, below the ends of which are three short lines on either side. The arms and hands are in the exact position for making the gesture for rain. It was evidently the intention of the artist to show that the hands in this gesture should be passed downward over the face, as probably suggested by the short lines upon the lower end of the tears. This is a noticeable illustration of the general term used by Indians when making the gesture for weeping; *i. e.*, "eye-rain." It is evident that sorrow is portrayed in this illustration, grief based upon the sufferings of others who are shown in connection therewith.

Nos. 2, 3, 4. Six individuals apparently making the gesture for "hunger," by passing the hands towards and backward from the sides of the body, denoting a "gnawing sensation," as expressed by Indians. No. 4 occupying a horizontal position, may possibly denote a "dead man," dead of starvation, this position being adopted by the Ojibwa, Blackfeet, and others as a common way of representing a dead person. The varying lengths of head ornaments denote different degrees of position as warriors or chiefs.

Nos. 5, 6, 7, 8, 9 are individuals in various shapes making gestures for negation, or more specifically *nothing*, *nothing here*, a natural and universal gesture made by throwing one or both hands outward toward either side of the body. The hands are extended also, and, to make the action apparently more emphatic, the extended toes are also shown on

Nos. 5, 6, 7, and 9. The several lines upon the leg of No. 9 refer evidently to trimmings upon the leggings.

No. 10 is strikingly similar to the Alaskan pictographs (see No. 1 of Figure 55, page 153) indicating *self* with the right hand, and the left pointing away, signifying *to go*.

No. 11 is an ornamented head with body and legs, and is unintelligible. This may probably refer to a Shaman, the head being similar to like personages as represented by the Ojibwa and Iroquois.

Similar drawings occur at a distance of about 10 miles southeast of this locality, as well as at other places toward the northwest, and it appears probable that the present record was made by a portion of a tribe which had advanced for the purpose of selecting a new camping place, but failing to find the necessary quantities of food for sustenance, this notice was erected to advise their successors of their misfortune and ultimate departure toward the northwest. It is noticeable, also, that the picture is so placed upon the rock that the extended arm of No. 10 points toward the north.

The foregoing description is substantially the same as published by Dr. Hoffman in Transactions of the Anthropological Society, Washington, II, 1883, pages 128-132.

The limits of this paper do not allow of presenting a list of the characters in the pictographs which have become known. It may be properly demanded, however, that some of the characters in the petroglyph, Figure 1, should be explained. The following is a list of those which were interpreted to Mr. Gilbert, as mentioned on page 29 *supra*.



FIG. 156.



FIG. 157.

Figure 156 is an inclosure, or pen, in which ceremonial dances are performed. Figure 157 is a head-dress used in ceremonial dances.

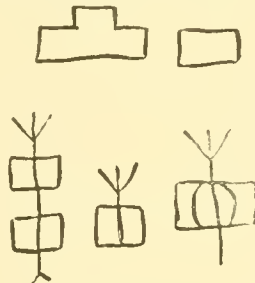


FIG. 158.

Figure 158 shows different representations of houses.

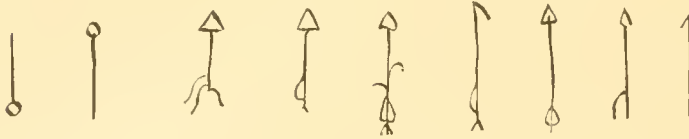


FIG. 159.

FIG. 160.

Figure 159 sketches the frames or sticks used in carrying wood on the back. Figure 160 shows different forms of arrows.



FIG. 161.

Figure 161 represents the blossoms of melons, squashes, etc.



FIG. 162.

FIG. 163.

Figure 162 shows three ways in which lightning is represented. Figure 163 represents clouds.



FIG. 164.

Figure 164 represents clouds with rain descending.

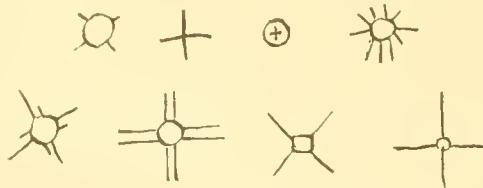


FIG. 165.

Figure 165 shows various forms of stars.

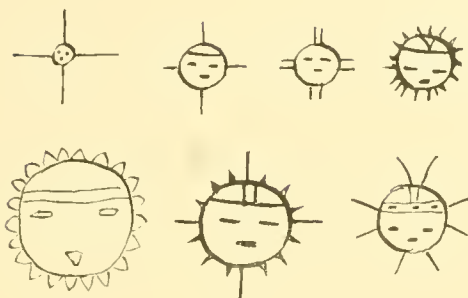


FIG. 166.

Figure 166 shows various representations of the sun.



FIG. 167.

Figure 167 shows various representations of sunrise.

It is of interest in this connection that in the pictorial notation of the Laplanders the sun bears its usual figure of a man's head, rayed, as reported in Schoolcraft, *op. cit.* I, 426. See drawings in Scheffer's *Hist. of Lapland*, London ed., 1704.

It may be desirable also to note, to avoid misconception, that where, through this paper, mention is made of particulars under the headings of Customs, Religions, etc., which might be made the subject of graphic illustration in pictographs, and for that reason should be known as preliminary to the attempted interpretation of the latter, the suggestion is not given as a mere hypothesis. Such objective marks and conceptions of the character indicated which can readily be made objective, are in fact frequently found in pictographs and have been understood by means of the preliminary information to which reference is made. When interpretations obtained through this line of study are properly verified they can take places in the card-catalogue little inferior to those of interpretations derived directly from aboriginal pictographers.

#### HOMOMORPHS AND SYMMORPHS.

It has been already mentioned that characters substantially the same, or homomorphs, made by one set of people, have a different signification among others. Differing forms for the same general conception or idea are also noticed. These may be termed symmorphs. Some examples



under these titles are noted as follows, not for the purpose of giving an even approximately complete list, but merely to show the manner in which they may be compared and sometimes confused with similar characters, some of which appear in other parts of this paper.



FIG. 168.

Figure 168 represents Dakota lodges as drawn by the Hidatsa. These characters when carelessly or rudely drawn can only be distinguished from personal marks by their position and their relation to other characters.



FIG. 169.

Figure 169 signifies earth lodges among the Hidatsa. The circles resemble the ground plan of the lodges, while the central markings are intended to represent the upright poles, which support the roof on the interior. Some of these are similar to the Kadiak drawing for island, Figure 47, page 147.

Figure 170 represents buildings erected by white men; the character is generally used by the Hidatsa to designate Government buildings and traders' stores.



FIG. 170.



FIG. 171.



FIG. 172.



FIG. 173.

Figure 171 is the Hidatsa, the home of the Hidatsa. Inclosure with earth lodges within.

The Arikara sometimes simply mark dots or spots to signify men; when in connection with small crescents to denote horses. The numerical strength of a war party is sometimes shown in this manner, as in Figure 172.



FIG. 174.

Figure 173 was drawn for dead man by the Arikara. Cf. "nothing there," page 168.

Figure 174. In records of personal events the two lines above the head of the fallen enemy denote among the Hidatsa that the person to whom the exploit refers was the second to strike the body.



FIG. 175.



FIG. 176.



FIG. 177.



Figure 175 shows the third person to strike the enemy, as drawn by the Hidatsa.

Figure 176 means a scalp taken. Hidatsa.

Figure 177 signifies, in Hidatsa drawing, the man who struck the enemy, and who took his gun.

The following specimens from the writer's card collection are presented as having some individual interest:

Figure 178 was drawn by a Dakota Indian, at Mendota, Minnesota, and represents a man holding a scalp in one hand, while in the other is the gun, the weapon used in the destruction of the enemy. The short vertical lines below the periphery of the scalp indicate hair. The line crossing the leg of the Indian is only an indication of the ground upon which the figure is supposed to stand.



FIG. 178.

Figure 179 is taken from the winter count of Battiste Good for the year 1840-41. He names it "Came-and-killed-five-of-Little-Thunder's-brothers winter" and "Battiste-alone-returns winter." He explains that the five were killed in an encounter with the Panis. Battiste Good was the only one of the party to escape. The capote is shown, and signifies war, as in several other instances of the same record. The five short vertical lines below the arrow signify that five were killed.

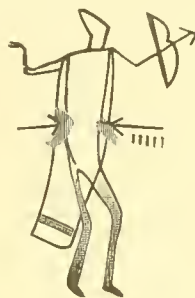


FIG. 179.

Figure 180 is taken from Mrs. Eastman's *Dahcotah, or Life and Legends of the Sionx*, New York, 1849, p. xxvii, and shows a Dakota method of recording the taking of prisoners. Nos. 1 and 3 are the prisoners; No. 1 being a female, as denoted by the presence of mammae, and No. 3 a male. No. 2 is the person making the capture. It is also noted that the prisoners are without hands, to signify their helplessness.

In this connection the following quotation is taken from the *Historical Collections of Louisiana*, Part III, 1851, p. 124, describing a pictograph, as follows: "There were two figures of men without heads and some entire. The first denoted the dead and the second the prisoners. One of my conductors told me on this occasion that when there are any French among either, they set their arms akimbo, or their hands upon their hips, to distinguish them from the savages, whom they represent with their arms hanging down. This distinction is not purely arbitrary;

it proceeds from these people having observed that the French often put themselves in this posture, which is not used among them."

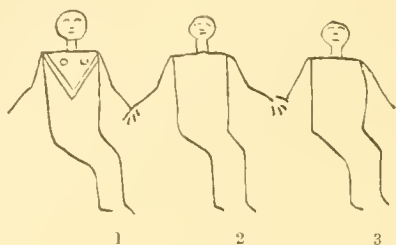
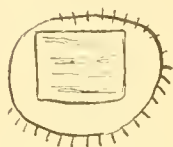
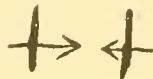


FIG. 180.

Figure 181 is taken from the winter count of Battiste Good for the year 1851-'52. In the year 1851-'52, the first issue of goods was made to

FIG. 181.—Circle of men.  
Dakota.FIG. 182.—Shooting from  
river banks. Dakota.

the Indians, and the character represents a blanket surrounded by a circle to show how the Indians sat awaiting the distribution. The people are represented by small lines running at right angles to the circle.

Figure 182 is also from Battiste Good. An encounter is represented between two tribes, each on the banks of a river, from which arrows were fired across the water at the opposing party. The vertical lines represent the banks, while the opposing arrows denote a fight or an encounter.

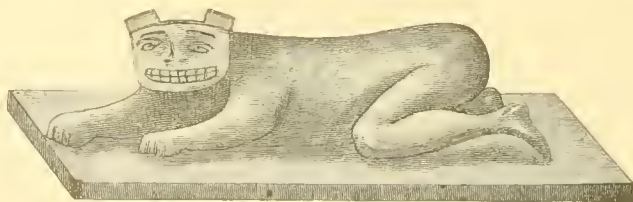


FIG. 183.—Panther. Haida.

The drawing, Figure 183, was made by Mr. J. G. Swan while on a visit to the Prince of Wales Archipelago, where he found two carved figures with panthers' heads, and claws upon the fore feet, and human feet attached to the hind legs. These mythical animals were placed upon either side of a corpse which was lying in state, awaiting burial.

This union of the human figure with that of other animals is of interest in comparison with the well-known forms of similar character in the art of Egypt and Assyria.

The feet of the accompanying Figure 184 cannot be seen, being hidden in the head of the figure beneath. It is squatting, with its hands on its knees, and has a wolf's head. Arms, legs, mouth, jaws, nostrils, and ear-holes are scarlet; eyebrows, irises, and edges of the ears black. The figure is reproduced from *The Northwest Coast of America*, being results of recent ethnological researches from the collections of the Royal Museums at Berlin. (Trans. from German.) New York, Pl. 7, Fig. 3.

The accompanying illustration, Figure 185, represents a knife from Africa, which bears upon both sides of the blade incised characters of the human form, strikingly similar to those found among the Ojibwa. The lines running upward from the head are identical with an Ojibwa form of representing a *meda*, or Shaman, while the hour-glass form of body is also frequently found, though generally used to designate a woman, the lower part of the body representing the skirt. In the present instance, it may have allusion to the peculiar skirt-like dress often worn by the men among the tribes of Northern Africa.

The lines extending from the middle of the body downward to below the skirt and terminating in an irregular knob somewhat resemble the Pueblo method of designating sex, the male being shown by a small cross, and the female by a simple, short, vertical line attached to the perineum.

The upper character, in B, in addition to the line and circle extending downward from the lower extremity, shows a bird's leg and toes at either side. This is also, according to Schoolcraft, an Ojibwa method of depicting a person or being who is endowed with the power of flight into the upper regions, hence one of superior knowledge.

The history of the knife here figured is received from Mr. Thomas M. Chatard, of the National Museum, who in turn obtained it from his father, Mr. F. E. Chatard, Baltimore, Maryland, who writes that it was obtained at Cape Mesurado, Africa, in November, 1822, where the natives had attacked a recently established colony. The Africans were repulsed, and the knife was subsequently picked up on the battle-field and brought to America by the late William Seton, an officer of the United States Navy.



FIG. 184.—Wolf head. Haida.

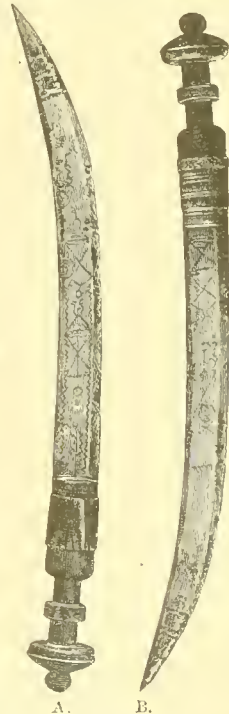


FIG. 185.—Drawings on an African knife.

## CONVENTIONALIZING.

The course of conventionalizing is noticeable in pictographs as well as in gesture-signs, on the one hand, and, on the other, as it appears in all forms of graphic art. The analysis of such conventions in form could be pursued at great length with regard to the pictographs now known in the same manner as has been done with success by Dr. Harrison Allen in his work "An analysis of the Life-form in Art," Philadelphia, 1875. Some suggestions may be obtained from the present paper, especially from examples given under the headings of Ideographs, page 219, and Homomorphs and Symmorphs, page 239. See also conventionalized sign for Ponka in Winter Count No. 1 for 1778-79, on page 131, and for Mandan in the same count for 1783-84, on the same page; also the conventional sign for Cheyenne, Figure 78, page 173; also the device for starvation, Figure 144, page 220, as conventionalized in Figure 145, page 221. The limits of this paper will only allow of submitting in addition the following conventionalized forms of the human figure, in some cases being merely marks arbitrarily used to represent humanity:



FIG. 186.



FIG. 187.



FIG. 188.



FIG. 189.

Figure 186 signifies men among the Arikara. The characters are used in connection with horse-shoes, to denote "mounted men." In other pictographs such spots or dots are merely numerical.

Figure 187 is drawn by the Kiatéxamut branch of the Innuits for man. It is an abbreviated form and rare.

Figure 188, drawn by the Blackfeet, signifies "Man—dead." This is from a pictograph in Wind River Mountains. See Jones's North-western Wyoming, etc., *op. cit.*

Figure 189 is the Kiatéxamut Inuit drawing for man. This figure is armless; generally represents the person addressed.



FIG. 190.



FIG. 191.



FIG. 192.



FIG. 193.

Figure 190 is also a Kiatéxamut Inuit drawing for man. The figure makes the gesture for *negation*.

Figure 191, from a Californian pictograph, is a man, also gesturing *negation*.

Figure 192 is another Californian pictograph for man, making the same gesture.

Figure 193, from Schoolcraft, 1, Pl. 59, No. 91, is the Ojibwa "symbol" for disabled man.



FIG. 191.



FIG. 192.



FIG. 193.



FIG. 194.

Figure 194 is the Kiatéxamut Innuït drawing for Shaman.

Figure 195, used by the Kiatéxamut Innuït, represents man suppleating.

The five figures, 196 to 200, are reproduced from Schoolcraft, Vol. 1, Pl. 58, opp. p. 408. The Numbers attached are those given by that author: Figure 196, No. 6, is the Ojibwa representative figure for man.

Figure 197, No. 10, is used by the Ojibwa to denote a spirit or man enlightened from on high, having the head of the sun.



FIG. 196.



FIG. 197.



FIG. 198.



FIG. 199.

Figure 198, No. 20, is drawn by the Ojibwa for a "wabeno" or Shaman.

Figure 199, No. 30, is the Ojibwa "symbol" for an evil or one-sided "meda" or higher grade Shaman.

Figure 200, No. 29, is the Ojibwa general "symbol" for a meda.

Figure 201 is drawn by the Hidatsa for man.



FIG. 202.



FIG. 203.



FIG. 204.



FIG. 205.

Figure 202, from Schoolcraft, 1, Pl. 58, No. 3, is an Ojibwa drawing of a headless body.

Figure 203, from Schoolcraft, 1, Pl. 58, No. 2, is another Ojibwa figure for a headless body, perhaps female.

Figure 204, contributed by Mr. Gilbert Thompson, is a drawing for man, made by the Moki in Arizona.

Figure 205, reproduced from Schoolcraft, 1, Pl. 64, opposite page 424, is a drawing from the banks of the River Yenesei, Siberia, by Von Strah-

lenberg, in his historical and geographical description of the northern and eastern parts of Europe, Asia, etc. London, 1738.

The similarity to characters on Figure 185 is obvious.

Figure 206, also from Strahlenberg, and quoted in Schoolcraft, Vol. I, Pl. 66, Fig. 4, opp. p. 342, was found in Siberia, and is identical with the character which, according to Schoolcraft, is drawn by the Ojibwa to represent speed and the power of superior knowledge by exaltation to the regions of the air, being, in his opinion, a combination of bird and man.



FIG. 206.

It is to be noticed that some Ojibwa recently examined regard the character merely as a human figure with outstretched arms, and fringes pendant therefrom. It has, also, a strong resemblance to some of the figures in the Dakota Winter Counts (those for 1854-'55 and 1866-'67, pages 121 and 124, respectively), in which there is no attempt understood to signify any thing more than a war-dress.



FIG. 207

Figure 207, according to Schoolcraft, Vol. I, Pl. 58, No. 58, is the Ojibwa drawing symbolic for an American.



## ERRORS AND FRAUDS.

No large amount of space need be occupied in the mention of recognized pictographic frauds, their importance being small, but much more than is now allowed would be required for the discussion of controverted cases.

There is little inducement, beyond a disposition to hoax, to commit actual frauds in the fabrication of rock-carvings. The instances where inscribed stones from mounds have been ascertained to be forgeries or fictitious drawings have been about equally divided between simple mischief and an attempt either to increase the marketable value of some real estate, supposed to contain more, or to sell the specimens.

With regard to the much more familiar and more portable material of engraved pipes, painted robes and like curios, it is well known to all recent travelers in the West who have had former experience that the fancy prices paid by amateurs for those decorations have stimulated their wholesale manufacture by Indians at agencies (locally termed "coffee-coolers"), who make a business of sketching upon ordinary robes or plain pipes the characters in common use by them, without regard to any real event or person, and selling them as curious records.

This pictorial forgery would seem to show a gratifying advance of the Indians in civilization, but it is feared that the credit of the invention is chiefly due to some enterprising traders who have been known to furnish the unstained robes, plain pipes, paints, and other materials for the purpose, and simply pay a skillful Indian for his work, when the fresh antique or imaginary chronicle is delivered.

Six inscribed copper plates were said to have been found in a mound near Kinderhook, Pike County, Illinois, which were reported to bear a close resemblance to Chinese. This resemblance seemed not to be so extraordinary when it was ascertained that the plate had been engraved by the village blacksmith, copied from the lid of a Chinese tea-chest.

Mica plates were found in a mound at Lower Sandusky, Ohio, which, after some attempts at interpretation, proved to belong to the material known as graphic or hieroglyphic mica, the discolorations having been caused by the infiltration of mineral solution between the laminae.

The following recent notice of a case of alleged fraud is quoted from *Science*, Vol. III, No. 58, March 14, 1884, page 334:

Dr. N. Roe Bradner exhibited [at the Academy of Natural Sciences, Philadelphia, Pennsylvania,] an inscribed stone found inside a skull taken from one of the ancient mounds at Newark, Ohio, in 1865. An exploration of the region had been undertaken

in consequence of the finding of stones bearing markings somewhat resembling Hebrew letters, in the hope of finding other specimens of a like character. The exploration was supposed to have been entirely unproductive of such objects until Dr. Bradner had found the engraved stone, now exhibited, in a skull which had been given to him.

This was supplemented by an editorial note in No. 62 of the same publication, page 467, as follows:

A correspondent from Newark, Ohio, warns us that any inscribed stones said to originate from that locality may be looked upon as spurious. Years ago certain parties in that place made a business of manufacturing and burying inscribed stones and other objects in the autumn, and exhuming them the following spring in the presence of innocent witnesses. Some of the parties to these frauds afterwards confessed to them; and no such objects, except such as were spurious, have ever been known from that region.

The correspondent of Science probably remembered the operations of David Wyrick, of Newark, who, to prove his theory that the Hebrews were the mound-builders, discovered in 1860 a tablet bearing on one side a truculent "likeness" of Moses with his name in Hebrew, and on the other a Hebrew abridgment of the ten commandments. A Hebrew bible afterwards found in Mr. Wyrick's private room threw some light on the inscribed characters.

As the business of making and selling archaeological frauds has become so extensive in Egypt and Palestine, it can be no matter of surprise that it has been attempted by the enterprising people of the United States. The Bureau of Ethnology has discovered several centers of that fraudulent industry.

Without further pursuing the subject of mercenary frauds, an example may be mentioned which was brought forth during the researches of the present writer and his assistant, Dr. Hoffman, which is probably as good a case of a modern antique in this line as can be presented. Figure 208 is a copy of a drawing taken from an Ojibwa pipe-stem, obtained by Dr. Hoffman from an officer of the United States Army, who had procured it from an Indian in Saint Paul, Minnesota. On a later and more minute examination, it appeared that the pipe-stem had been purchased at a store in Saint Paul, which had furnished a large number of similar objects, so large as to awaken suspicion that they were in the course of daily manufacture. The figures and characters on the pipe-stem were drawn in colors. In the present figure, which is without colors, the horizontal lines represent blue and the vertical red, according to the heraldic scheme several times used in this paper. The outlines were drawn in a dark neutral tint, in some lines approaching black; the triangular characters, representing lodges, being also in a neutral tint, or an ashen hue, and approaching black in several instances. The explanation of the figures, made before there was any suspicion of their real character, is as follows:

The first figure is that of a bear, representing the individual to whom the record pertains. The three hearts above the line, according to an

expression in gesture language, signifies a brave heart; increased numbers indicating *much* or *many*, *i. e.*, a large brave heart.

The second figure, a circle inclosing a triradiate character, refers to the personal totem. The character in the middle resembles, to some extent, the pictograph sometimes found to represent stars, though in the latter the lines center upon the disks and not at a common point.

The seven triangular characters represent the lodges of a village to which the individual to whom reference is made belongs.

The serpentine line immediately below these signifies a stream or river, near which the village is located.

The two persons holding guns in their left hands, together with another having a spear, appear to be the companions of the speaker, all of whom are members of the turtle gens, as shown by that reptile.

The curve from left to right is a representation of the sky, the sun having appeared upon the left or eastern horizon when the transaction below mentioned was enacted. In an explanation by gesture, or by pictograph, the speaker always faces the south, or conducts himself as if he did so, and begins on the left side to convey the idea of morning, if day; the hand, or line, is drawn all the way from the eastern horizon to the western. The above, then, represents the morning when a female—headless body of a woman—a member of the crane gens, was killed.

The figure of a bear below is the same apparently as number one, though turned to the right. The heart is reversed to denote sadness, grief, remorse, as expressed in gesture-language, and to atone for the misdeed committed in the proceeding the pipe is brought and offering made to the "Great Spirit."

Altogether, the act depicted appears to have been accidental, the woman belonging to the same tribe, as can be learned from the gens of which she was a member. The regret or sorrow signified in the bear, next to the last figure, corresponds with that supposition, as such feelings would not be congruous to the Indian in the case of an enemy.

The point of interest in this pictograph is, that the figures are very skillfully copied from the numerous characters of the same kind repre-

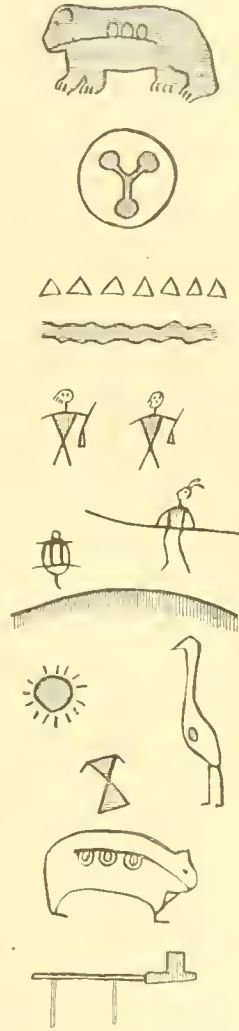


FIG. 208.—Specimen of imitated pictograph.

senting Ojibwa pictographs, and given by Schoolcraft. The arrangement of these copied characters is precisely that which would be natural in the similar work of Indians. In fact, the groups constitute a thoroughly genuine pictograph, and afford a good illustration of the manner in which a record can be made. The fact that it was made and sold under false representations is its objectionable feature.

An inscribed stone found in Grave Creek Mound, near the Ohio River, in 1838, has been the subject of much linguistic contention among those who admitted its authenticity. Twenty-four characters on it have been considered to be alphabetic and one is a supposed hieroglyphic sign. Mr. Schoolcraft says that twenty-two of the characters are alphabetic, but there has been a difference of opinion with regard to their origin. One scholar finds among them four characters which he claims are ancient Greek; another claims that four are Etruscan; five have been said to be Runic; six, ancient Gaelic; seven, old Erse; ten, Phœnician; fourteen, old British; and sixteen, Celteberic. M. Levy Bing reported at the Congress of Americanists at Nancy, in 1875, that he found in the inscription twenty-three Canaanite letters, and translated it: "What thou sayest, thou dost impose it, thou shinest in thy impetuous clan and rapid chamois." (!) M. Manrice Schwab in 1857 rendered it: "The Chief of Emigration who reached these places (or this island) has fixed these statutes forever." M. Oppert, however, gave additional variety by the translation, so that all tastes can be suited: "The grave of one who was assassinated here. May God to avenge him strike his murderer, cutting off the hand of his existence."

For further particulars on this topic reference may be made to Colonel Charles Whittlesey's *Archæological Frauds*, in several tracts, and to *The Mound Builders*, by J. P. MacLean, Cincinnati, 1879, p. 90, *et seq.*

From considerations mentioned in the introduction of this paper, and others that are obvious, any inscriptions purporting to be pre-Columbian showing apparent use of alphabetic characters, signs of the zodiac, or other evidences of a culture higher than that known among the North American Indians, must be received with caution, but the pictographs may be altogether genuine, and their erroneous interpretation be the sole ground of their being discredited.

In this connection some allusion may be made to the learned discussions upon the Dighton rock before mentioned. The originally Algonkian characters were translated by a Scandinavian antiquary as an account of the party of Thorfinn, the Hopeful. A distinguished Orientalist made out clearly the word *melék* (king). Another scholar triumphantly established the characters to be Seythian, and still another made them Phœnician. But this inscription has been so manipulated that it is difficult now to determine the original details.

The course above explained, viz., to attempt the interpretation of all unknown American pictographs by the aid of actual pictographers among the living Indians, should be adopted regarding all remarkable



"finds." This course was pursued by Mr. Horatio N. Rust, of Pasadena, California, regarding the much-discussed Davenport Tablets, in the genuineness of which he believes, and which is not here placed in question. Mr. Rust exhibited the drawings to Dakotas, with the result made public at the late Montreal meeting of the American Association for the Advancement of Science, and also in a letter, an extract from which is as follows:

As I made the acquaintance of several of the older and more intelligent members of the tribe, I took the opportunity to show them the drawings. Explaining that they were pictures copied from stones found in a mound, I asked what they meant. They readily gave me the same interpretation (and in no instance did either interpreter know that another had seen the pictures, so there could be no collusion). In Plate I, of the Davenport Inscribed Tablets [so numbered in the Proceedings of the Davenport Academy, Vol. II], the lower central figure represents a dome-shaped lodge, with smoke issuing from the top, behind and to either side of which appears a number of individuals with hands joined, while three persons are depicted as lying upon the ground. Upon the right and left central margins are the sun and moon, the whole surmounted by three arched lines, between each of which, as well as above them, are numerous unintelligible characters. \* \* \* The central figure, which has been supposed by some to represent a funeral pile, was simply the picture of a dirt lodge. The irregular markings apparently upon the side and to the left of the lodge represent a fence made of sticks and brush set in the ground. The same style of fence may be seen now in any Sioux village.

The lines of human figures standing hand-in-hand indicate that a dance was being conducted in the lodge. The three prostrate forms at right and left sides of the lodge represent two men and a woman who, being overcome by the excitement and fatigue of the dance, had been carried out in the air to recover. The difference in the shape of the prostrate forms indicates the different sexes.

The curling figures or rings above the lodge represent smoke, and indicates that the dance was held in winter, when fire was used.

An example of forced interpretation of a genuine petroglyph is given by Lieutenant J. W. Gunnison, U. S. Top. Engineers, in his work entitled *The Mormons, or, Latter-day Saints, in the Valley of the Great Salt Lake, etc.*, Philadelphia, 1852, pp. 62, 63. He furnishes two illustrations of petroglyphs taken from the cliff in Sam Pete Valley, Utah, not reproduced in this paper, which resemble the general type of the Shoshonian system. On account of various coincidences which have occurred to strikingly keep alive in the mountain brethren their idea of being the chosen of the Lord, these etchings confirm them in the belief of the inspiration of the Book of Mormon. One of their Regents has translated one of them as follows:

I, Mahanti, the 2nd King of the Lamanites, in five valleys in the mountains, make this record in the 12 hundredth year since we came out of Jerusalem. And I have three sons gone to the South country to live by hunting antelope and deer.

Among the curiosities of literature in connection with the interpretation of pictographs may be mentioned *La Vérité sur le Livre des Sauvages*, par L'Abbé Em. Domenech, Paris, 1861, and *Researches into the Lost Histories of America*, by W. S. Blacket, London and Philadelphia, 1884.

Under the head of errors some of the most marked have arisen from the determination of enthusiastic symbolists to discover something mystical in the form of the cross wherever found.

The following quotation is taken from a work by Gabriel de Mortillet, entitled *Le Signe de la Croix avant le Christianisme* (Paris, Reinwald, 1866), p. 173:

On voit qu'il ne peut plus y avoir de doute sur l'emploi de la Croix comme signe religieux, bien longtemps avant le christianisme. Le culte de la Croix, répandu en Gaule avant la conquête, existait déjà dans l'Émilie à l'époque du bronze, plus de mille ans avant Jésus-Christ.

C'est surtout dans les sépultures de Golasecca où ce culte s'est révélé de la manière la plus complète; et là, chose étrange, on a trouvé un vase portant le monogramme ancien du Christ, figure 117 [reproduced in the present paper by Figure 209; the right-



FIG. 209.—Symbols of the cross.

hand figure being from the vase, and that on the left the recognized monogram of Christ], dessiné peut-être mille ans avant la venue de Jésus-Christ. La présence isolée de ce monogramme du Christ au milieu de nombreuses Croix est-elle un fait accidentel entièrement fortuit? Des recherches plus complètes peuvent seules permettre de répondre à cette question.

Un autre fait fort curieux, très-intéressant à constater, c'est que ce grand développement du culte de la Croix, avant la venue du Christ, semble toujours coïncider avec l'absence d'idoles et même de toute représentation d'objets vivants. Dès que ces objets se montrent, on dirait que les Croix deviennent plus rares et finissent même par disparaître.

La Croix a donc été, dans la haute antiquité, bien longtemps avant la venue de Jésus-Christ, l'emblème sacré d'une secte religieuse qui repoussait l'idolâtrie!!!

The author, with considerable naiveté, has evidently determined that the form of the cross was significant of a high state of religious culture, and that its being succeeded by effigies, which he calls idols, showed a lapse into idolatry. The fact is simply that, next to one straight line, the combination of two straight lines forming a cross is the easiest figure to draw, and its use before art could attain to the drawing of animal forms, or their representation in plastic material, is merely an evidence of crudeness or imperfection in designing. It is worthy of remark that Dr. Schliemann, in his "*Troja*," page 107, presents as Fig. 38 a much more distinct cross than that given by M. Mortillet, with the simple remark that it is "a geometrical ornamentation." An anecdote told by Dr. Robert Fletcher, U. S. Army, in connection with his exhaustive paper on *Tattooing Among Civilized People*, published in the *Transactions of the Anthropological Society of Washington*, Vol. II, page 40, is also in point. Some *savants* were much excited over the form of the cross found in tattoo marks on an Arab boy, but on inquiry of the mother as to why the cross had been placed there, she simply answered "because it looked pretty." The present writer will add to the literature on the subject a reference to the cross as shown upon the arm of a Cheyenne in Cloud-Shield's winter count for the year 1790-'91, page 132, *ante*. (See also page 173.) This is explained fully by one of the common gestures for the tribal sign, Cheyenne.



"The extended index, palm upward, is drawn across the forefinger of the left hand, palm inward, several times, left hand stationary; right hand is drawn toward the body until the index is drawn clear off; then repeat. Some Cheyennes believe this to have reference to the former custom of cutting the arm as offerings to spirits, while others think that it refers to a more ancient custom, the cutting of the enemy's fingers for necklaces." The pictograph is simply a graphic representation of this gesture sign. See also the Moki use of the Maltese cross, page 232, the form of which in a rock-painting appears in *x* on Plate II, page 35.

There is no doubt that among the Egyptians and several of the peoples of the eastern hemisphere, ancient and modern, the form of the cross was used symbolically, and there is no more doubt that it was employed in a similar manner by many American tribes with reference to the points of the compass, or rather the four winds. It was also used with many differing significations. See in this paper Figure 60, page 158, Figure 143, page 220, Figure 154, page 230, Figure 165, page 238, and Figure 168, page 240. The ease with which the design was made would tend to its early adoption as a sign, an emblem, or a symbol.

Rev. S. D. Hinman states that among the Dakota, symbolic crosses always have the members equal, or of the "Greek" pattern, and are always worn resting on one foot, not two as in the St. Andrew's cross. They represent the four winds issuing from the four caverns in which the souls of men existed before embodiment. The top of the cross is the cold, all-conquering giant, the north wind. As worn on the body it is nearest the head, the seat of intelligence. The top arm, covering the heart, is the east wind, coming from the seat of life and love. The foot is the burning south wind, indicating as it is worn the seat of passion and fiery lust. The right is the gentle west wind, blowing from the spirit land, covering the lungs, from which at last the breath goes out. The center of the cross is the earth and man, sometimes indicated at that point by a circle surrounding a dot. On the upper arm an arrow is sometimes drawn, on the left a heart, on the right a star, and on the lower a sun.

### SUGGESTIONS TO COLLABORATORS.

The present writer hopes to receive contributions from travelers and observers, not only in North America, but in other parts of the world. Such collaboration will always receive due credit, and when practicable will be reproduced in the language of the collaborator.

The number and the importance of the contributions received upon the collateral branch of sign-language encourages the hope of similar success in this application for assistance in the monograph on pictographs now in preparation.

The main object of the classification both of the text and of the illustrations in the present paper has been to stimulate the research and assist the collaboration invited, so that reference to the various preceding headings is unnecessary. Some practical suggestions may however, be offered as follows :

As a small drawing of large rock inscriptions may give an exaggerated idea of the degree of finish or fineness of the subject, it is desirable, in every instance, to affix the scale of the drawing, or to give a principal dimension that may serve as a guide. A convenient scale for ordinary petroglyphs is one sixteenth of full size. The drawing should be sufficiently close and accurate to show the character of the work. It is desirable to note the lithologic character of the rock or boulder used; whether the drawing has been etched into the face of the rock, or pecked in more deeply with a sharp implement, and the depth of such pecking; whether the design is merely outlined, or the whole body of the figures pecked out, and whether paint has been applied to the pecked surface, or the design executed with paint only. The composition of paint should be ascertained when possible. The amount of weathering or erosion, together with the exposure, or any other feature bearing on the question of antiquity, would prove important. If actual colors are not accessible for representation the ordinary heraldic scheme of colors can be used.

That sketches even by fair artists, are of not high value in accuracy, is shown by the discrepant copies of some of the most carefully-studied pictographs, which discrepancies sometimes leave in uncertainty the points most needed for interpretation. Sketches, or still better, photographs are desirable to present a connected and general view of the characters and the surface upon which they are found. For accuracy of details "squeezes" should be obtained when practicable.

A simple method of obtaining squeezes of petroglyphs, when the lines are sufficiently deep to receive an impression, is to take ordinary

manilla paper of loose texture, and to spread the sheet, after being thoroughly wetted, over the surface desired, commencing at the top. The top edge may be temporarily secured by a small streak of starch or flour paste. The paper is then pressed upon the surface of the rock by means of a soft bristle brush, so that its texture is gently forced into every depression. Torn portions of the paper may be supplied by applying small patches of wet paper until every opening is thoroughly covered. A coating of ordinary paste, as above mentioned, is now applied to the entire surface, and a new sheet of paper, similarly softened by water, is laid over this and pressed down with the brush. This process is continued until three or four thicknesses of paper have been used. Upon drying, the entire mold will usually fall off by contraction. The edge at the top, if previously pasted to the rock, should be cut. The entire sheet can then be rolled up, or if inconveniently large can be cut in sections and properly marked for future purposes. This process yields the negative. To obtain the *positive* the inner coating of the negative may be oiled, and the former process renewed upon the cast.

Pictographs, when of bright colors and upon a light-colored surface, may readily be traced upon tracing linen, such as is employed by topographers. Should the rock be of a dark color, and the characters indistinct, a simple process is to first follow the pictographic characters in outline with colored crayons, red chalk, or dry colors mixed with water and applied with a brush, after which a piece of muslin is placed over the surface and pressed so as to receive sufficient coloring matter to indicate the general form and relative positions of the characters. After these impressions are touched up the true position may be obtained by painting the lines upon the back of the sheet of muslin, or by making a true tracing of the negative.

A mode of securing the outline once adopted was to clear out the channels of the intaglios, then, after painting them heavily, to press a sheet of muslin into the freshly-painted depressions. The objection to this method is the obvious damage inflicted on the inscription. Before such treatment, if the only one practicable, all particulars of the work to be covered by paint should be carefully recorded.

The locality should be reported with detail of State (or Territory), county, township, and distance and direction from the nearest post-office, railway station or country road. In addition the name of any contiguous stream, hill, bluff, or other remarkable natural feature should be given. The name of the owner of the land is of some secondary value, but that indication is liable to frequent changes. The site or station should be particularly described with reference to the surrounding country and to the natural circumstances and geological history of the location.

When numbers and groups of petroglyphs or rock paintings occur, their relation to each other, to the points of the compass, or to topo-

graphical features should be noted, if possible, by an accurate survey, otherwise by numeration and sketching.

The following details should be carefully noted: The direction of the face of the rock. The presence of probable trails and gaps which may have been used in shortening distances in travel. Localities of mounds and caves, if any, in the vicinity. Ancient camping grounds, indicated by fragments of pottery, flint chips, etc. Existence of aboriginal relics, particularly flints which may have been used in pecking; these may be found at the base of the rocks upon which petroglyphs occur. The presence of small mortar-holes which may have served in the preparation of colors.

With reference to pictographs on other objects than rock the material upon which they appear and the substances used in their execution should be reported, as indicated in another part of this paper.

With reference to all kinds of pictographs, it should be noted that mere descriptions without reproduction are of little value. Probable age and origin and traditions relating to them should be ascertained. Their interpretation by natives of the locality who themselves make pictographs or who belong to people who have lately made pictographs is most valuable, especially in reference to such designs as do not represent objects of nature, and which may be either conventional or connected with lines of gesture-signs.