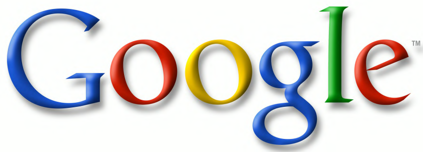

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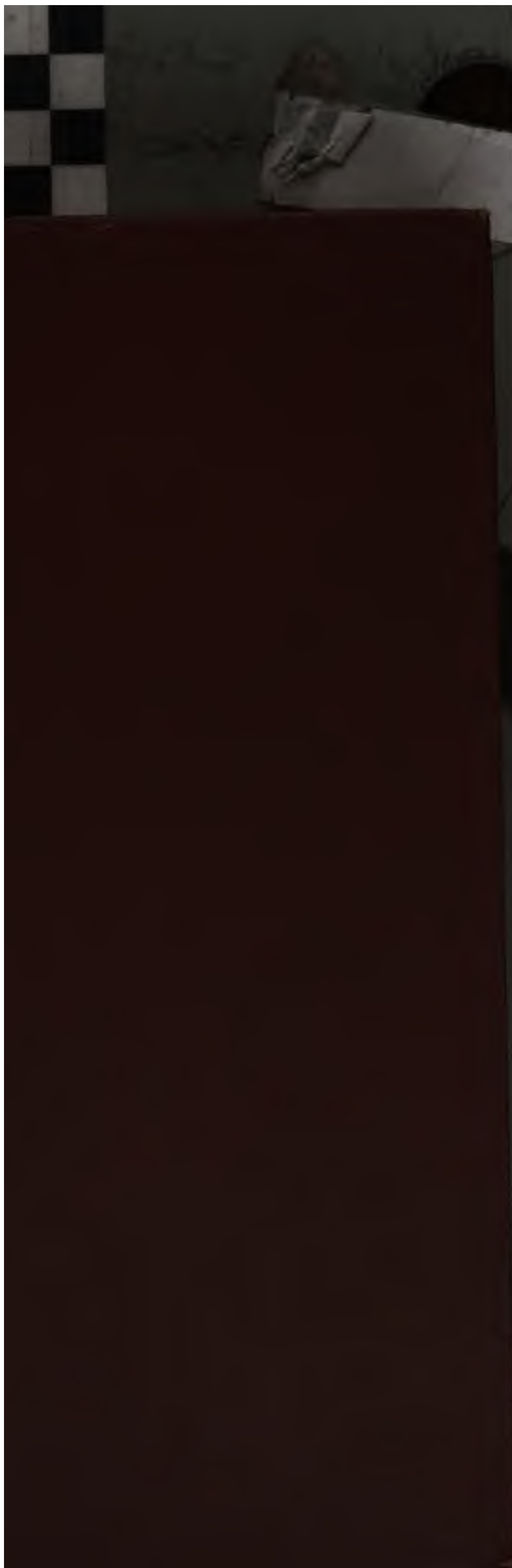

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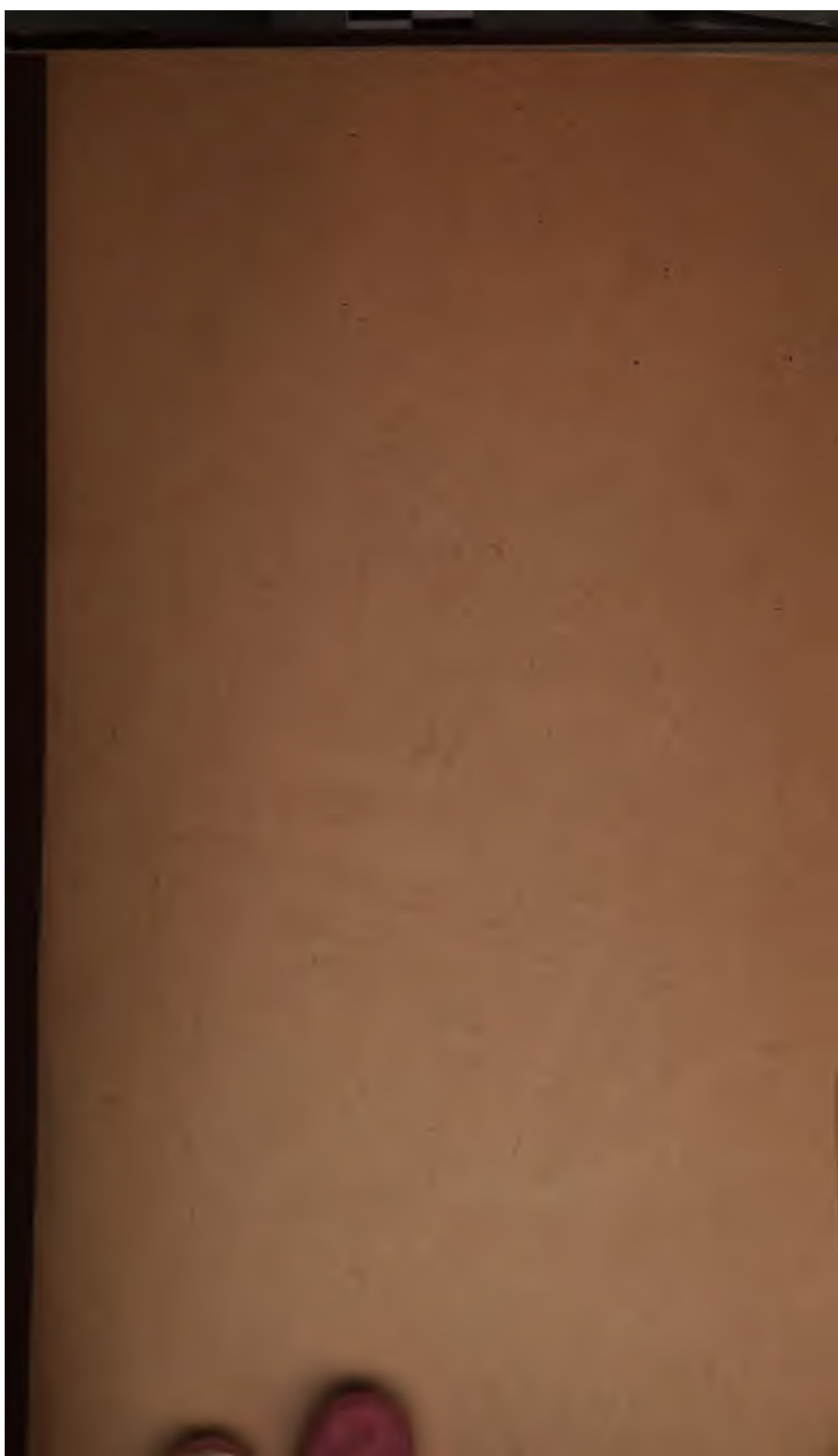

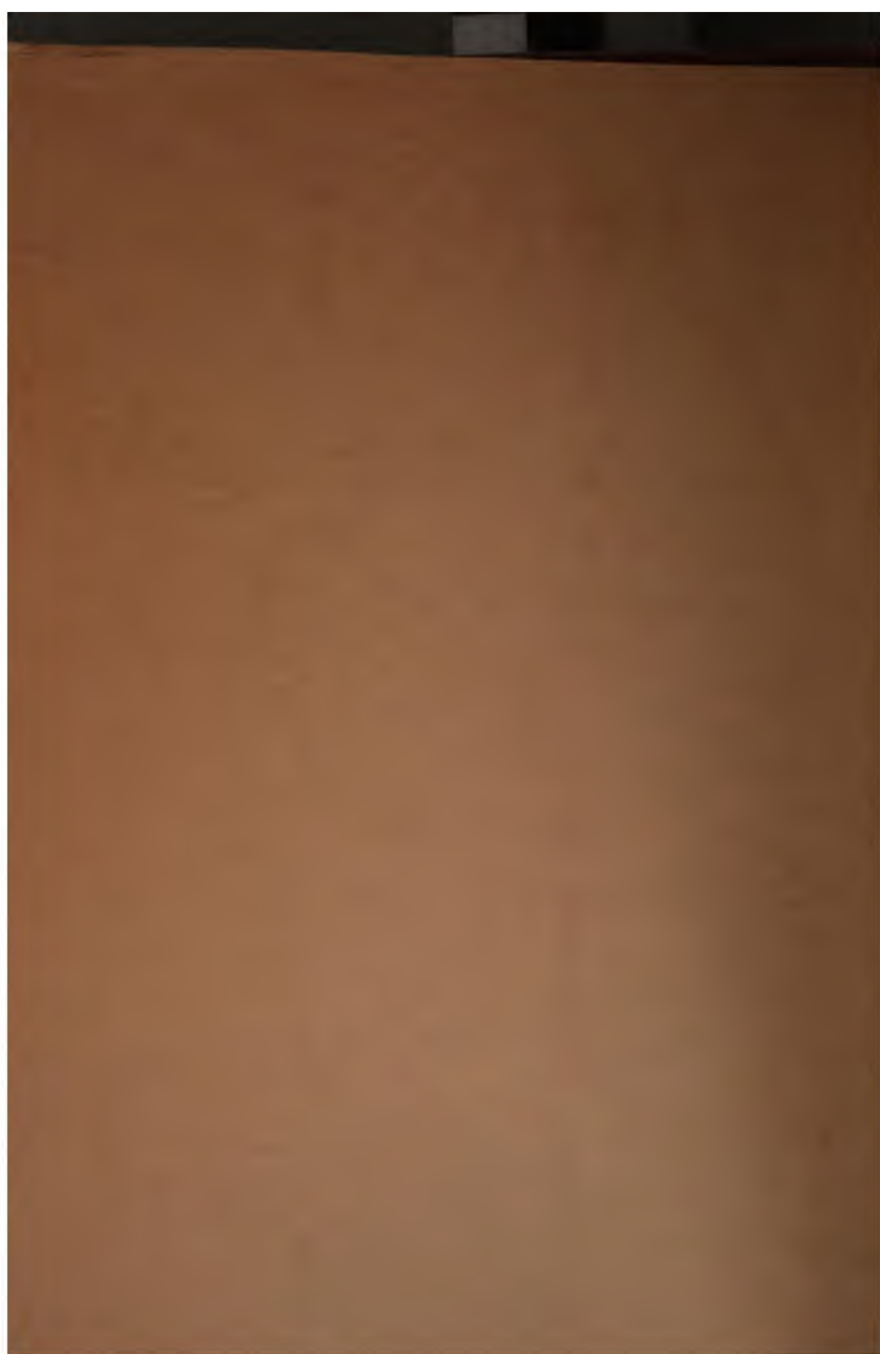

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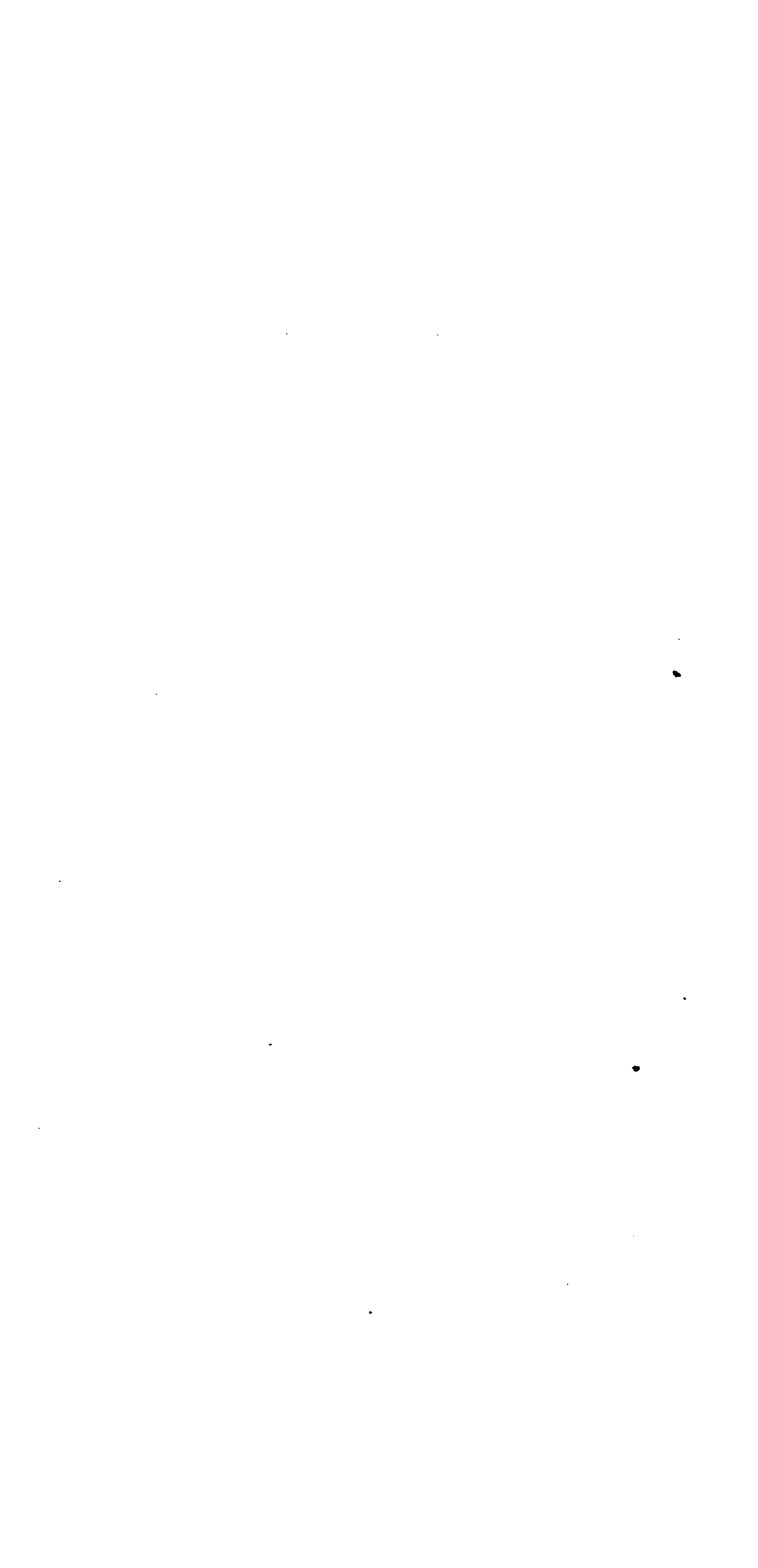

THE MEXICAN GODDESS OF DEATH.

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VOL. V. JANUARY, 1883. NO. 1.

ON THE INTERPRETATION OF THE EARLY MYTHOLOGIES OF GREECE AND INDIA.

BY F. G. FLEAY, M. A.

Read before the Royal Society of Literature, London, Eng., February, 1882.

This essay has grown so much and changed so much during its composition, that it will probably conduce to clearness if I premise a few words of explanation. I originally intended to confine it to the question of interpretation of the Homeric heroes, but I found it impossible to treat of them apart from the principal deities of Greece and India; it was, however, necessary to confine my subject within some definite limits, or I should have exceeded the bounds which are imposed by the fact that the paper had to be read and discussed in some two hours. The limited subjects I have chosen are these: the twelve Adityas, the twelve Olympian Gods, and the twelve principal Homeric heroes. Even then the range is too large, and I have had either to omit, or relegate to notes, many facts which seem to support my hypothesis. The immediate reason for my writing at all was the conviction that, while the methods of the comparative mythologists and many of the results attained by Max Müller, Cox, Bréal, Kuhn, Schwartz, Mannhardt and others, were undoubtedly of great value, still the tendency shown by them to select some one physical phenomenon, the sun, the dawn, or the storm, as providing in itself sufficient ground for the interpretation of large collections of myths, was repugnant to common sense, and led in application to most absurd results. It seemed to me, also, that the meaning of the original myths could not have so far evaporated at the time when the later Greek and Indian mythologists systematized and arranged them, as not at any rate to have been clear enough to prevent their confusing two deities originally distinct, or separating one into two *in so far as their principal lists were concerned.*

I therefore examined separately into the nature of the twelve Olympian Gods, and the twelve Adityas, and on comparing the results was rewarded by finding that they corresponded very nearly indeed. It will be a help to us if I state very briefly what those results were. I found, or thought I found, three principal deities, under whom the rest might be grouped, viz.: 1, the Storm; 2, the Sun; 3, the Fire. With the Storm come the Darkness, the Thunder and the Clouds; with the Sun, the Moon, the Stars and the Light; with the heavenly or sacrificial Fire, the Twilight, the Dawn and the earthly or volcanic Fire.

This rough enumeration will of course be modified in the course of the paper; for instance the historical devolopment of the starry sky into that of the circumambient ocean; of the connection of the clear light with the lightning; of the derivation of the Moon-worship from that of the life-giving soma-cup will have to be taken into account. As far as we need at present, however, it will suffice for a hypothetical list. I do not find any important Indian deity mentioned in the Rig Veda who is not included in the list; and of the chief Greek gods only Hades and Dionysus are omitted, neither of whom can claim to be of early importance: Hades, in fact, is a development of Hermes, and Dionysus a variant of Soma, probably of foreign introduction.

In order, then, to have a clear idea of the nature of the Homeric heroes, we must begin by an examination of the deities to whom they are alleged to be akin; and this the rather because recent theories have tended to confuse them. According to Max Müller, for instance, Athené is the Dawn; Aphrodite is the Dawn; Eos is the Dawn; Helene is the Dawn. According to Mr. Cox, Apollo is the Sun; Achilles is the Sun; Paris is (sometimes) the Sun; Hector is the Sun.

It does not commend itself to common sense, either that these Suns and Dawns should oppose themselves, wound themselves, and even kill themselves, while they imagine that they are wounding and killing somebody else, or that their origin should have been so obscure as to allow the same deity to have developed into several with incomparable and contradictory attributes. It is true that in the Rig-Veda we find great overlapping in the attributes of individual deities; we find also general statements that the several deities are to be regarded as individualizations of one central Supreme Light or Heat; but yet there is a distinct recognition of at least the undermentioned powers of nature if not of more, both in the Rig and in the Iliad. It seems to me that the mythologists have been misled by trying to identify the supreme Greek goddesses with feminine powers in the Veda; whereas these latter, with

the exception of Ushas (Eos, the Dawn), and Prithivé, the Earth, are mere shadowy reflexes of the corresponding male deities. Hence the tendency to over-estimate the one or two Goddesses that had some importance in the Sanscrit book. I now proceed to my enumeration.

1. The Day, as shown in the cloudy, thundering sky; Indra, Zeus, Jupiter. That Indra is functionally replaced by Zeus, there can be no doubt; and we must not shut our eyes to that fact because Zeus is etymologically equivalent to Dyaus. He is not the light Ether, but dwells on its confines (R.-V., i, 52, 12, 13), and fills the air with cloud-waters. He also corresponds to Cronus, and kills his father, Dyaus-Kasyapa, just as Cronus mutilates Uranus.

2. The Twilight, Hermes. I need only refer to the monograph of M. Ploix, which is conclusive as to the character of this deity. That he is identical with the Vedic Pushan is not, however, admitted, yet the identity appears certain. Pushan is a herdsman, the lover of Suryâ, the golden dawn; aids in the revolutions of day and night, is the tutelary god of travelers, and conducts the spirits of the dead to the other world. Nevertheless, Messrs. Roth and Bothlingk say that he is a solar deity, and their opinion has been generally adopted. He has two forms, one white, one black; reigns over magical appearances; has power over Day and Night; is parent of Heaven and Earth; in all respects he corresponds to Hermes, the Twilight (R.-V., vi, 58).

3. The Night, as shown in the starlit sky. This sky was supposed to move in the waters, and the waters themselves to be extended not only round the earth, but also in a watery atmosphere which shared with the air the space intermediate between heaven and earth. Hence Varuna, originally the starry sky, became gradually the ruler of the waters, like Poseidon, who retained, on the other hand, many of the darker elements of Varuna.

4. The Fire, especially as the formative power who makes the thunderbolts or dwells in the volcano.* Tvashtri, Hephæstus.

5. The crushing storm, the mountain tempest; Rudra, Ares, the Maruts.

6. The Sun; Surya, Phœbus-Apollo.

Thus far we have plain sailing; but the rest of my list is by no means so accordant with received doctrine.

The Latin form of Hephæstus, Vulcanus, is identical with Tu-bal-Cain; just as Bal-der and Beli are with Abel or Yabal. I may be pardoned for here pointing out that the identification of Yabal and Tubal Cain with Abel and Cain, given by Reuss in his *L'histoire Sainte et le loi*, i., 308 (1st edition, 1880), was communicated by me to Dr. J. W. Donaldson in 1859. (See *Jashar*, 2d edition, p. 375.)

7. Originally the light, the Ether, Mitra, the sunlit sky; not by any means to be confused with the cloud-sky of Indra. In still earlier times Yrita seems to have held the supreme position: Indra displaced as Zeus did Uranus; whence Athene, the Greek goddess of the light, is called Tritogeneia. That Athene is not the Dawn, as Max Müller and Sayce suppose, will be evident to any careful reader of Ruskin's "Queen of the Air." Hence, also, in my opinion, she is called Glaucopis, blue-faced. Hence, also, when Hephæstus, the lightning, has eleaved the *head of Zeus, the Zenith, Athene, the light, springs into existence. Müller's notion that the head of Zeus is the East cannot be defended. The nature of Athene is clearly shown in Iliad, iv., 75–80.

8. The Dark Night. This conception easily passes into that of the Infinite on the one hand and into that of the Earth on the other; for the Indian mind looked on the visible separation of Earth and Sky at early dawn as a veritable creation; until the light parted them they existed only as Aditi, the undistinguished darkness, the idefinite, the earth. I take Aryaman to bear the same relation to Mitra that Varuna does to Indra; but in any case Demeter, whether as Earth-mother or Divine-mother, and Leto, the mother of Phœbus, are the Greek deities who ultimately embody the two phases of this conception, which was originally single.

9. The Dawn, or Sunrise. The Dawn-goddess herself, so clear both in the Sanscrit and Greek writings as Ushas or Eos; but this phenomenon was too complex to be dismissed so simply; the red Dawn† was followed by the golden sun-glow, Savitri, when regarded as merely a phenomenon of light, Surya, when the appearanee of the sun's visible orb was thought of. The idea of the Day-break seems also to have been inseparable from that of the morning saerifice. Agni, the Fire, performs this in heaven as the priest does on earth; the flame and smoke of the earthly sacrifice are said to carry the soma-juice up to Indra. There are then two dawns, the golden and the red; the latter is denoted by the rosy-fingered Eos, the former in my opinion by the gold-throned, though ‡white-armed Here (from Svara, bright). The golden-armed Savitri, or sunrise, would then correspond to the gold chain, by which Here was suspended in the sky by Zeus, and to the golden-throned Chrysothronos' Here.

10. The life-drink or Soma. The soma-juice vaporized in the sacrifice passes into the air and forms a misty atmosphere,

*In R. V., i., 50, 2, Agni is the head of the sky and the navel of the earth; the head of the sky is here clearly the zenith.

†The Dawn produces Agni, the sacrifice, Savitri, the golden sunrise, and Surya, the Sun. Cf. R. V., vii., 78, 3; i., 43, 1, &c.

‡Savitri becomes Pushan, the generator. R. V., v., 81, 5, i. e., in the evening. Savitri must be the Sun-glow, not the Sun.

which covers the earth like Varuna, the covering ocean. From this drink Indra derives his courage; from it, all nature directly or indirectly receives its life; but Soma, even in the Rig Veda begins to modify this meaning and to become identified with the moon, which in later mythologies still retained the attribute of giving life and wealth, as the cornucopia or sangreal. In like manner Artemis, originally the giver of health and riches, in later Greek mythology beeomes the moon-goddess. The change is identical with that in the case of Soma, and seems to point to a commencement of this change before the Greek branch was parted from the other members of the Aryan stock. Soma as the Moon-God supplanted Chandramas, the original moon-deity.

11. The mist or cloud, looked on sometimes as the Thunder-bearer, but much oftener as the rain-giver and life-generator, Parjanya. I have no hesitation in assigning this function to Aphrodite, the foam-born, under whose feet the grass springs up, as she walks. Only as a cloud or mist-goddess can I find how she could have developed into the goddess of fertility, of beauty, of love; and with the greatest respect for the eomparative philologists, I must regard the notion that Aphrodite and Athene are the same personages, the Dawn, as an instance of a dangerous and contagious monomania. I may notice that in the Iliad it is the cloud-gods that can be wounded by heroes; at one time the storm-cloud, Ares; at another, the rain-cloud, Aphrodite. In Æschylus, frag. 41 (Danaidis) Aphrodite says: "Rain falling from the moist heaven impregnates the earth, who brings forth for mortals both food for sheep and sustenance for Demeter; and the beauty of the trees is perfected from a marriage of showers. *Of these things I am a part cause.*" This is pretty clear; still clearer is the identification of Aphrodite and Charis, the chief of the Charites or Harits, horses of the Sun, so well worked out by Max Müller; but horses in the Veda are clouds, and I think nothing but clouds, never sun rays.

12. The Fire, Agni; whether as lightning in the air, or the flame of sacrifice on the earth. The Greek correlative is Hestia, the central hearth-flame. This goddess does not appear in Iliad XX, where Zeus summons *all* the gods and permits them to take part in the contest; her place is filled by Xanthus, the brown river, which in Book VI. belongs to Lycia (light-land), and in Book XXI. is burnt up by Hephæstus. I take this river to be simply the smoke-stream ascending from the sacrifice; but of this more anon. The above statements are summed up in the following table, which it will be noticed includes all the gods in Iliad XX., the twelve great Olympian gods, and all the principal deities of the Rig Veda:

NIGHT-SKY; STARS. Varuna. (Uranus.) Poseidon.	LIGHT, ÆTHER. Mitra. Athene.	DARK; EARTH. Aryaman. Leto. Demeter.	DAY-SKY; CLOUD. Indra, Vaya. Zeus. (Dyaus.)
SUN. Surya. Apollo.	SUN-GLOW; DAWN. Savitri. (Ushas, Eos.) Here.	FIRE, THE CRAFTSMAN. Tvashtri. Hephæstus.	STORM; WIND. Rudra. Ares. (Maruts.)
LIFE-DRINK; MOON. Soma; Chandramas. Artemis.	TWILIGHT. Pushan. Hermes.	FIRE OF THE SACRIFICE Agni. Hestia.	RAIN; MIST. Parjanya. Aphrodite.

Before entering on the more general application of these identifications, I will adduce one simple instance of a myth from the Odyssey, which has hitherto yielded such unsatisfactory results in the hands of the mythologists, that Mr. Sayce is reduced to the shift of doubting its Greek origin, and suggests that it, like the labors of Hercules, may turn out to be Accadian. When Odysseus comes to the Cyclops' land, and finds the deep cave where Polyphemus harbored his sheep and goats, he takes the strong wine given him by the priest of the Sun, and goes to the cave, where, after the Cyclops has fed on two of his companions, he induces him to drink this wine, obtained from the stream of nectar and ambrosia. When the Cyclops sleeps, Odysseus puts out his eye, and he and his companions escape under the sheep as they go out of the cave. Mr. Cox makes Polyphemus the storm-cloud, and his eye the sun, seen through the cloud, so that Odysseus, the Sun, destroys himself. De Gubernatis accepts this; I cannot. Polyphemus, son of Poseidon, that is, of Varuna, the starry sky, must be a dark deity, in fact he is the darkness itself: his cave is the night, in which he hides the cloud-flocks; his eye is the moon; Odysseus, the twilight, the universal traveller, another form of the shifty Hermes, gives Polyphemus the soma-drink, that soma which forms a vaporous atmosphere and hides the starry heavens in the Veda, which puts to sleep or obscures the moon, the eye of Polyphemus in this story. Odysseus then puts out the eye with the fiery lightning-stake made of olive wood, the tree of Athene, the light goddess, so that thunder-shouts from the giant roar all over the cavern. The thunder-storm completely obscures the moon, already dimmed by the soma-halo of mist. The storm ceases, morning comes, and Odysseus-Criophorus, the wearer of Hermes' cap which gives invisibility, escapes in the violet-colored wool of the sheep-clouds of the dawn. The ram, under which Odysseus escapes, is sacrificed, burnt up by the heat of the rising sun, to cloud-compelling Zeus.

Let us now turn to the story of the Iliad, or rather to that of Achilles, which forms the original nucleus of that poem.

Agamemnon refuses to ransom Chryseis, the daughter of Chrysis, priest of Apollo. Apollo plagues the Greeks; Aga-

memnon resigns Chryseis, and takes Briseis from Achilles, the son of Thetis*, who then withdraws from the contest against the Trojans. Agamemnon, Odysseus, Diomedes, Eurypylus and Machaon are wounded and withdraw from the fight. The Trojans drive the Greeks to their trenches. Achilles allows Patroclus to appear in his armor. Patroclus kills Sarpedon; Hector kills Patroclus; Achilles, in new arms made by Hephæstus, at Thetis' request, takes the field. He fights with Æneas, Xanthus and Hector, whom he slays.

Briseis is unquestionably Brisaya, a form of the changeful cloud. Chryseis can only be a being of the same class; they are both called "fair-cheeked," etc. But Brysaya is not the dawn; therefore Briseis and Chryseis are not Dawns, and Achilles is not a solar hero. But it does not follow that he is not identifiable with any other deity. He can hardly be the Wind; let us try then the third great deity of the Veda supreme triad, the Fire. Is Achilles Agni? I think he is: but in this interpretation we must carefully bear in mind the identity of the sacrifices in heaven and earth, and the quasi-identity of the priestly fire and celestial lightning.

In the early morning Agamemnon-Indra, the king of men, the wide ruler, is in possession of Chryseis, the fair-cheeked cloud. Chryseis is absorbed by the heat of the sun, or perhaps merely illumined and turned into gold by him; in either case Indra has to resign her to the Sun, but in revenge he seizes on Briseis, the dark smoke of the morning sacrifice, as it mounts into the air. When Briseis is gone, the fire goes down, and although it is kept alight, it only smoulders until the other great sacrifice in the evening. During the day, however, though Achilles does not fight, there is no universal truce: his alter ego, the golden sunrise, dressed in the fiery armour of his Amphitryon, slays Sarpedon, the Lycian archer, by the river Xanthus, the child of Zeus, the creeping darkness. Hector, the dark storm, kills Patroclus. When evening is at hand, the sacrifice is again offered. The libation is poured on the fire, and the soma-vapor is formed into a new cloud-armour, dazzling and moon-like, by Tvashtri-Hephæstus. Nevertheless, the flame cannot rise clearly; it is strangled by the ruddy brown smoke; Xanthus is fighting with Achilles. Æneas, the cloud, the mist-born, has been conquered, but the smoke would yet destroy the flame, did not the fiery heat of Hephæstus come to its aid; the fire burns up the smoke, the flame of the sacrifice ascends victoriously, and contends with the storm for the possession of Ilion, the sky. The storm is defeated and retreats rapidly, but Achilles is swift of foot, over-

*So Agni is born of the waters, his mothers. R. V., ix., 91, 6.

takes him and wounds him. The waters of the firmament are stained with blood, the body of Hector is mangled and scattered round the walls of Ilion, and nothing remains but the victorious Achilles, towering over the flaming funeral pile of the dead Patroclus.

Such, it seems to me, is the simple seed out of which the magnificent epic of the Achilles grew, but besides this main story there are others involved which require explanation. For instance, the siege story. Paris, rightly identified by Max Müller with Pani, one of the dark storm-powers, has stolen away Helene, or Sarama: the dawn has disappeared with a storm-cloud. Menelaus, the starry sky of night, is forsaken by Helene. But Agamemnon-Zeus, the thunderer, gathers his armies, attacks Paris in spite of the solar powers, and recovers Helene. The dawn comes back to the night sky after the conflict of the day, and the taking of the heaven town of Troy. But in the story, as in the Achilles-quarrel, the conflict is between the fire and light on the one hand, the sun and cloud on the other. The Gods on the Greek side are Athene, Poseidon, Hephæstus, Hermes, Here; while the Trojans were aided by Phœbus, Leto, Artemis, Aphrodite, Ares aud Xanthus; but these classes of gods must not be confused; we can not have a solar Achilles and a solar Ulysses fighting against a solar Hector and a solar Æneas; any more than we can have a Dawn Athene opposing a Dawn Aphrodite. The historical working of the human mind is more logical than the mythologists of our time are willing to allow.

Again, Achilles is invulnerable, except in the heel, the part nearest the ground. The flame cannot be wounded, even its smoke-armour can only be pierced where there is a chink; but the ignited fuel, the lowest part of the fire can be attacked, for it is vulnerable; and when it is killed, the whole flame dies. If Achilles is the sun, as Mr. Cox tells us, how is he more vulnerable in one part than another? If Achilles is a mere hero, and not a double of some deity, how can he be invunerable in any part, while even Ares and Aphrodite can be wounded? It is true these latter gods only bleed celestial echoes, but that is accounted for in my theory by their being both water-holding clouds. Why Max Müller's Dawn-Maiden should bleed echos does not appear. Again, the innumerable stories in which three brothers appear, one swift, one clever, and one strong, lead us back to the swift-footed Achilles, the many-wiled Odysseus, and the mighty Diomedes. These are certainly distinct personages: Diomedes does not appear in later traditions so extensively as the others; but Odysseus, the crafty hero of the Odyssey, the darling of Athene, who abides so

long in inaction with Calypso, resists the effects of Circe's wine, blinds the giant Polyphemus, whose men eat the flesh of the sun's cows, leaving only the empty skins, is certainly Hermes, the crafty thief.

Of course, in the limits of a paper, I can not give a detailed examination into these interpretations, and must content myself with merely indicating results. There is, however, one more myth connected with Paris, which I cannot pass over; I mean his judgment in favor of Aphrodite, which led to the Trojan war. According to Mr. Cox, Paris for this occasion only, acts the part of the Sun. Three goddesses, viz., the Bright Sky, the Dawn and the DAWN, require his verdict on their charms; he decides in favor of Dawn number two, and is promised by her that he shall have Dawn number three for his bride. According to my view, the goddesses are the bright golden sunrise, the clear light sky, and the delicate sea-born mist encircled with the cestus of irridescent light; the dark cloud chooses the mist, and is rewarded by the possession of the dawn, who departs with him, forsaking her true husband, the brilliant star-lit heaven.

With regard to Achilles and Odysseus there is much I must leave unnoted or imperfectly considered. Mark, however, that Achilles is made invulnerable by being plunged in the Styx, or according to Apollodorus, by being immersed alternately in fiery heat and immortalizing ambrosia (Soma); that he was brought up by the centaur Chiron and fed on the entrails of lions and bears; that when disguised at the court of Lycomedes he was called Pyrrha; that his ashes were placed in an urn made by Hephæstus and given by Dionysus to the Nereids. All this is palpably clear if Achilles be the sacrificial flame, but inextricably involved if we take him to be the sun. Again in the Odysseus story, who is Circe, at whose land the hero arrives after long westward travel, and yet finds himself at the abode and choruses of the dawn, and the rising of the sun? Who is she whose enchantment cannot change the shape of the Hermes-protected hero, but can alter those of his companions? Surely the Dawn and Sun theory breaks down here. Is Circe the round horizon, which is either East or West, or both; which foreshortens and distorts the cloud-shapes, but cannot alter the invisible twilight? Or is she not rather a moon Goddess? But it is not my present object to write a commentary on these poems, or even to explain all the details in them. Enough if I succeed in proving that the deities and the heroes are not so monotonously fashioned on one model as our recent mythologists would have us believe; and if I can vindicate their comparative method, for which we are so much indebted

[illegible] to a belief in the special [illegible]

I now come to an [illegible] necessary for the accurate understanding of the preceding remarks, although as being of a technical nature I have deferred its consideration until now.

In the Rig Veda the number of the Adityas is stated to be [illegible] the names of six of them are given [illegible] Aryaman, Mitra, Varuna, Amsa, Bhaga, Daksha. [illegible] that Aditi had eight sons, but that the eighth, Martanda, was not at first presented to the gods. In the [illegible] Veda and again in the [illegible] Brahmana, the names of these eight are given [illegible] Indra in the place of [illegible] Dhatri [illegible] and the other five as above, but in the Rig [illegible] Savitri, the sun and the moon are also [illegible] and the attempts made to get these included [illegible] identifying Surya, Savitri and Vivasvat are by [illegible] It seems impossible to doubt that more than [illegible] Adityas were recognized even before the compilation of the Rig. In later writings twelve Adityas are continually enumerated; the list, which occurs both in the Mahabharata and in the Vishnu Purana, may be regarded as the normal one, viz.: 1. Dhatri; 2. Aryaman; 3. Mitra; 4. Varuna; 5. Amsa; 6. Bhaga; 7. Indra; 8. Vivasvat; 9. Savitri; 10. Vishnu; 11. Pushan; 12. Tvashtri. Slight variations occur in the other lists, *e. g.*, in another Mahabharata list Jayanta and Bhaskara take place of Savitra and Vivasvat; in a list in the Harivansa, *Ravi, Man., Parjanya* replace Dhatri, Savitri, Vivasvat; in a second list from the same work, Purvandana replaces Indra, and *Parjanya* Savitri; finally, in a list from the Bhagavita, *Vidhatri* replaces Amsa; Sacra, Indra; and Umbrana, Vishnu. It will be noticed that Pushan and Tvashtri, who occur in every one of these later lists, are never called Adityas in the Rig Veda, a fact which points distinctly to a gradually developed increase in the number. The next question that suggests itself is, who are Dhatri, Amsa, Bhaga and Vivasvat? They are all obscure deities, of whom comparatively little notice is taken in the Rig Veda, but as they are included in the original eight Adityas, they must have been important at any rate in the early stage of mythological development. Bhaga has been rightly identified with the sun by most mythologists; Amsa, his companion in the lists, is probably the moon; and a careful comparison of such passages in the latter books of the Rig, as that in x, 190, 3: "Dhatri in the beginning formed the Sun and the Moon (*i. e.*, Bhaga and Amsa), the Heaven and the Earth (*i. e.*, Varuna and Aryaman, or Dyaus and Prithivi), the Air and the Light (*i. e.*, Indra and Mitra)," with his position

at the head of the lists and the details of Rudra's attack on Daksha's sacrifice (Muir, *Sanscrit texts*, vol. iv.), leaves little doubt in my mind that Dhatri is an older form of Rudra. Vivasvat is much more puzzling. From the Aditya lists he would seem to be equivalent to Parjanya, the thundering rain-cloud, who in two lists replaces him; but Max Müller and others say he is the Sun; and Muir says he is "the firmament expanding to the sight through the approaching light." Let us see what is known about him. He is the husband of Saranyu, and father of two pairs of twins; first the Asvins, then of Yama and Yamî (R. V., x., 17, 1). But in another hymn the parents of Yama and Yamî are called the Gandharva and his watery wife (Apyâ Yoshâ, V., x., 10, 4), but the mother of Yama and Yamî is not Vivasat's wife, but one made like her and substituted for her (R. V., x., 17, 1). Again, the Gandharvas are children of the great Gandharva, but there we come on a certain connection with the Greek myths. For the gandharvas are the centaurs, and the offspring of Ixion and Nephele; who must, therefore, correspond to Vivasvat and the substitute for Apyâ Yoshâ, who is Hêrê. In the other corresponding Greek myth, Castor and Pollux, with Helene and Clytemnestra, correlate to the Asvins, with Yama and Yamî. Here the parents are Zeus and Leda; but Zeus does not appear in his own form; he is the thundergod disguised as a white swan, that is, as a white cloud. The form assumed by Vivasvat as father of the Asvins (the horsemen), is that of a horse, which leads us to the third Greek form of the myth, in which Cronus (as a horse) and Phityra are the parents of the centaurs. This whole body of myth must correspond and be consistent. It will not do to shuffle Vroasvatnow into the place of the Sun, now of the Sky; to make Ixion a Sun god and Vivasvat a Sky god; to make Leda the dark and Vivanat's wife the dawn, or the wind, as the modern mythologists do. A consistent interpretation must be found, or the riddle must be given up.

Now it is necessary for this solution to have a clear conception of daybreak as implied in the Veda myths: it has several stages; starting from 1, the dark, we have successively, 2, the gloaming, or false daybreak, in which the clouds are whitened by the light; 3, the twilight, or true daybreak, which the grey light spreads round the horizon; 4, the red dawn; 5, the golden sun-glow; 6, the rising sun. In the myths which we are considering, the Asvins, Castor and Pollux, correspond to stage 2, the lower of them, Polydeuces, having a greater share of the dark moisture, the upper, Castor, having more light. The Cen-

taurs* are clouds similarly lit up, half light, half dark and rainy, but unconnected with the day-break; they exist at any hour of the day. The red dawn (4) is Helene†, the darkness Clytemnestra (1). We can now see why Clytemnestra and Polydeuces come from one egg, Castor and Helene from the second; Yami and Yama, the daybreak and nightfall, correspond fairly enough to Helene and her sister, and easily glide in later developments into the notions of birth and death. The other stages of the morning are: 3, Hermes; Pushan, the twilight; 5, Savitri, Here, the golden sunglow; 6, Surya, the risen sun; Suryâ (fem.), being the sun while not completely above the horizon, and so practically identical with Here. These are the offspring: their mothers, Nephele, Saranyu, Phityra, Apyâ, Yoshâ, are slightly varying forms of mist; the fathers, Vivasvat, the horse, Ixion, Cronus, the horse, Zeus, the swan-cloud, are all thunder-carrying clouds. I do not say thunder gods but thunder-carrying gods. The thunder was not deified by the Hindoos and the Greeks as it was by the Norsemen; it was only an instrument in the hands of the deities, Indra, Parjanya, Zeus or Athene. We can now see what Ixion's punishment means: the cloud is fastened to the wheel of the horizon with its four spokes, North, East, West and South, and whirled round it in lightning flames. How he can have been taken for a Sun-god I cannot understand. We can also see how the Erinys of the Greeks comes from the misty confusion, Saranyu, which is the true avenger of crime; but we must pass on to other matters connected with Vivasvat. His cloud nature, and therefore my identification of him with Parjanya‡ is clearly confirmed by the Satapatha Brahamana, iii., i, 33, when we read that Marttanda or Vivasvat was born without any distinction or shape, and that the other Adityas had to shape him. Still more to our purpose is it that Vivasvat's messenger, Matarisvan, or Atharvan, brought back Agni from afar, where he had hidden himself. We find in the Greek in like manner that Hermes brings fire to man. But this same story

*Another form of this myth gives us Poseidon in horse-form, and Demeter-Erinys as parents of Despoina; or Poseidon and Demeter as parents of the horse Arion. Here Poseidon, in the form of a horse, is the sea-water raised into a cloud by evaporation. Erinys is Saranyu-Demeter, the divine goddess (Deometer), not the earth; the horse Arion is the Gandharva, and Despoina (Dasapatni) must be of a like nature with Arion. Demeter has a double function in Greek mythology, just as Oineus has; the apparent etymologies from De (for Ge, the earth, and Oinos, wine, having led to identification with Gaia and Dionysus, in place of Tethyo (the cloud-mother), and Ares.

†Eos, the red dawn, has rosy arms and a golden throne, and is drawn by white horses. Here, the golden dawn, has white arms and golden feet, and is drawn by the multicolored peacocks. Those who have seen a sunrise may read the opening lines of Browning's Pippa Palses, and they will recognize the exactness of the mythical description. Moreover, Here borrows the rainbow Cestus of Aphrodite, which is identical with the iris-hued peacock-clouds that draw her chariot. The wives of Castor and Polydences are Hilæira, the Dawn, and Phœbe, the Moon; this again shows their character.

‡The eighth son of Aditi, Marttanda or Vivasvat, had no arms or legs, no shape; and the Adityas shaped him (Muir's *Sanscrit texts*, v., 56, note); Vritra, the ahi, the cloud, has no arms or legs (R. V., i., 32-7); Vritra and Vivasvat are clearly of the same physical nature.

is clearly identical with that of Odysseus bringing back Achilles, when he had disguised himself in female garments in a distant court; and we get a further confirmation of the identity of Agni and Achilles; of Hermes, Odysseus, and Matvrisnan.

I have now identified the twelve Adityas with the twelve principal Veda gods, and having previously identified these latter with the twelve Olympian deities, it only remains to see if heroes engaged in the Troy war other than Ulysses and Achilles may be looked on as reflexes of gods.

The chief warriors on the Grecian side were Agamemnon, Menelaus, Diomede, Patroclus, Odysseus; Achilles, Nestor and Ajax; on the Trojan side, Glaucus, Æneas, Paris, Pandarus, Sarpedon, Hector. Of these, Nestor and Ajax seem to be reflections of Odysseus and Achilles; Agamemnon, the king of men, corresponds to Zeus; and as the day-sky is accordingly killed at the winter solstice by the darkness, Clytemnestra; while Ægisthus, the goat-drawn twilight, looks on approvingly.* Menelaus, Agamemnon's brother, is, as we have seen, Poseidon. Pandarus, who wounds him, is certainly the Lycian Apollo; Pandarus wields Apollo's bow, and no mortal can do that. This opposition of Pandarus and Menelaus corresponds to that between Apollo and Poseidon in Iliad XX. Sarpedon, the creeping darkness, the Lycian bowman, correlates to Leto; and his slayer, Patroclus, the golden sunrise, clad in the Achillean armour of the sacrificial fire, to Here; Hermes and his antitype, Odysseus, do not do very much in the fighting way, while Artemis is probably represented by Glaucus.† The other leader from Lycia or light-land, Diomed, who is driven off by Hector (who in Iliad V. is expressly identified with Ares, the storm), who also fights with Æneas, is certainly the lightning-wielder Athene. Æneas repeats the contest of Aphrodite, the lightning-wounded mist, and retires from the conflict in a way corresponding with that of his mother. But I cannot dwell on these identifications. I will, however, add a few words on Xanthus. Xanthus is a river of Lycia (light-land), full of whirlpools, that combats Achilles and is dried up by Hephæstus; Xanthus the ruddy and Balius the piebald (brown and gray) are also the horses of Achilles;

*The children of Agamemnon are Orestes, the Sun; Iphigeneia, the Moon, and Electra, the Dawn. For the identification of Agamemnon and Zeus, see Iliad, XI., 17-46, especially noting the Gorgon or Ægis on his shield.

†Glaucus is rather puzzling Jason forsakes Medea for Glauce, Glaucus loves Scylla, who is poisoned by Ceres; another Glaucus, like Diomedes of Thrace, feeds his mares on human flesh. All these, and the name, "the glistening," point to a god of light. But he is undoubtedly a sea-god; I take him to be the moon reflected in the waters, or the waters reflecting the moon, as the case may be. This agrees with the interpretation that my theory requires, of Jason as the twilight, Circe as the full moon, Medea as the moon in her phases, and also with the relation between Selene, the moon, and Seilenus, the glistening moonlit stream; the connection between Selene and Seilenus etymologically being the same as that between Aither, Aitho, Athene (cf. Selas, Selene). That Medea is the moon in her phases as a time-marker, appears from her destroying her children, as Heracles, the sun, in his annual course, and Cronus, the year, destroy theirs.

Xanthus is again one of Hector's horses; horses in the Veda are clouds, and the only way of reconciling the various uses of this name in Homer seems to me to interpret it as meaning the smoke-clouds of the freshly lit sacrifice; these endeavor to extinguish the fire, Achilles, but are consumed by the heat Hephæstus; while in another aspect they, brown with refracted light, gray in reflected, are regarded as the horses of the sacrificial fire, or as the cloud horses of Hector–Areș, the storm. The identity of Hector's and Achilles' horses is also shown by the appearance of Podargus in the Hector list, while Podarge, the storm Harpy is with Zephyrus the parent of the horses of Achilles. Homer says these horses fly with the wind, and so in R. V., 94, 10, Agni yokes to his car ruddy horses as rapid as the wind. We find, then, that with very slight variations, the opposed couples of gods are repeated in the heroes.

I will now pass on to some miscellaneous matters confirming my main theory; and first, to Argus, the dog of Odysseus, who dies at the return of his master. Argus in the Io myth is the many-eyed starry night, who watches over Io, and is at last put to sleep by Hermes, the twilight. So when Odysseus, the twilight, comes home, Argus, who has watched over Penelope, sinks in the sleep of death; Penelope, the moon, being hidden by day in a veil of light, which she unweaves at nightfall. Compare the soma-veil, R. V., ix., 22, 6, and the luminous network woven by the dawns, R. V., i., 94, 3, and Pallas in her weaving contest with Arachne. As to the four eyes of Argus in the Hesiodic form of the legend, these cannot make Argus a double twilight to be killed by the single twilight Hermes, merely because Orthros has two heads. Agni also has four eyes, R. V., i., 21, 13, and Yama's dogs have four eyes, R. V., x., 14, 11. This simply means that Agni can see east, west, north and south; it does not make a double twilight of him.

Another confirmation of my theory may be found in the relation of Indra to Surya in the Rig Veda. Indra broke a wheel of Surya's car and cast it into space; it was, however, not destroyed, and on it the life of all depends. R. V., iv., 28, 2. He did this when he created day and night, and for the advantage of Coutsa, iv., 30, 3, 4; he gave this wheel to Coutsa, v., 39, 10, who is identified with Etasa, v., 31, 11. At the same time he reduced the dawn to dust, iv., 30, 9, 10, and shattered her car, which dissolved. Surely this means that Coutsa, the moon, has a one-wheeled car as well as the sun; it is broken (in its phases), but is the gift of light and the life-giver as much as the sun's own. The separation of these two wheels could only take place when day and night were

created, and when the dawn, Here, was hung up in her golden chains in the sky.

The parentage of Pan, the morning breeze, also gives us confirmation of my theory. Pan is at one time described as the son of Hermes and Penelope, and of Hermes and Callisto at another; but Callisto was long since shown by Müller to be identical with Artemis, and the husband of Penelope is Odysseus. Hence Odysseus is the same as Hermes, the twilight, and Penelope as Callisto, Artemis, the moon.

Achilles, again, is identical with Meleager and Demophoon. The invulnerable Meleager, whose death depends on the burning of the fated brand, points directly to the interpretation of the sacrificial fire, and cannot be stretched to a solar explanation; while the hiding in fire at night, when the embers are raked, and the anointing with ambrosia (the soma-libation) in the morning, common to the stories of Achilles and Demophoon, are almost beyond a doubt only to be explained in the same way. The other form of the myth, in which Achilles is dipped in the Styx, and is only to be wounded in the heel, is also clear; the upper flame is invulnerable; only by attacking the burning fuel at its base can the fire be extinguished, and the hero who accomplishes this is Paris, god of the storm-cloud, the archer of the Veda. Patroclus wears armour of flame, and so does Diomed, forged by Hephæstus; but the golden sunrise and the glistening Ether are neither of them vulnerable in the heel only, as the sacrificial fire is.

At the risk of tediousness, I take another confirmatory instance, the use of the lyre by the gods of Greece; Orpheus, Hermes, Amphion and Apollo, all possess a magic lyre, to the sound of which all nature dances, towers build themselves, and flocks and herds assemble. But Orpheus, who precedes Eurydice, the Dawn, in his return from the underworld, is no sun-god; he is the first appearance of gray light in the sky. Hermes, who loves, not the dawn, but the moon, whether as Callisto, Penelope, or Proserpine, is the more extended twilight preceding the sunrise. He has invented the lyre and used it to arouse nature from her sleep; but he has to disappear before Apollo, who takes his lyre and keeps it all the day. Amphion is a repetition of Apollo. I have not space to follow out the parallel of the births of Amphion and Lethus, sons of Zeus and Antiope, with those of Apollo and Artemis, children of Zeus and Leda; but I may note that, while Apollo, Hermes, and Pan are all shepherds, they are so with a difference; that the herds of Apollo are 350 cows, or day clouds, and 350 sheep, or night clouds; that the flocks of Hermes are rams and sheep, night clouds, like those of Polyphemus (the shepherd Ahi. R.

V., i., 32, 11); but brought forth by the twilight from the night cavern (R. V., i., 124, 7) in which the Cyclops keeps them. Pan, on the other hand, the morning wind, has the shaggy wind-tom, goat-clouds, which he calls, not by tender lyre-breathing, but by shrill whistle from his pipes. All through the analogy of light and sound is pressed to an extent which moderns find a difficulty in realizing, although such words as "clear" still exist in their original twofold signification. Beyond any special argument, however, I would value the very structure of the books, in which our traditions are embodied, the Rig Veda and the Iliad. The Rig is divided into mandalas, and these again into hymns, 1017 in all; more than half these are addressed to Agni or Indra. These two are the supreme deities in the Rig. One-quarter the remainder are addressed to Soma, but these are put in a mandala of their own, indicating a split between the Soma worship and that of Agni and Budna; not that Soma is not acknowledged in the other hymns, just as Indra and Agni are in his, but a predominance is given to the one cult or the other, as the case may be. The only other deities to whom hymns are prominently addressed are the Asvens and Dawn deities, who obtain somewhere about half as many as Soma. All this coincides with the prominence given to Agni-Achilles and Indra-Agamemnon on the Greek side, and to the importance of the Lycian heroes in the Trojan. All the other deities in the Rig share only some quarter of the whole book. As regards the structure of the Iliad, I may mention that some years since I examined this subject, but the publication of Mr. Geddes' book deterred me from appearing as a rival to so admirable a performance, although my investigations were finished when his work appeared. I did not agree with his results in two points. Firstly, my Achilleid, or original nucleus of the Iliad, contained several books (XIII, xva) less than his, and consisted of i–viii, xi, xii, xv*b, xvi, xviii—xxii. Secondly, I did not think that the additions were by the author of the Odyssey, and written in praise of Odysseus, but that they were by a third hand and meant to glorify Diomed. In any case the sun-god is not the hero of either book; he is on the losing side in both; and if we want to find the solar hero magnified we must turn not to Homer or the Rig Veda, but to the legend of the siege of Troy by Heracles, which is a pendant (not a parallel) to the siege by the powers of light and sacrificial fire.

I add the following table for the convenience of any reader who may wish to check the consistency of my results by reference. I have used such tables in examining the works of

Messrs. Max Müller, Cox, &c., and have not found them bear the test:

	Deified Phenomena.	Adityas.	Vedic Gods.	Homeric Heroes.	Homeric Gods.	Olympian.	Hesiodic Uranids.
1	Storm.	Dhatri.	Rudra, Maruts	Hector, Paris.	Ares.	Ares.	Crios.
2	Darkness. Earth.	Aryaman.	Aryaman. Prithin.	Sarpedon.	Leto.	Demeter.	Rhea.
3	Light-sky.	Mitra.	Mitra.	Diomedes.	Athene.	Athene.	Eurybates [Mnemosyne].
4	Star-sky.	Varuna.	Varuna.	Menelaus.	Poseidon.	Poseidon.	Oceanus.
5	Moon.	Amsa.	Chandramas.	Glaucus.	Artemis.	Artemis.	Phœbe.
6	Sun.	Bhaga.	Surya.	Pandarus.	Apollo.	Apollo.	Hyperion.
7	Thunder-sky.	Daksha-Aditya.	Indra.	Agamemnon.	Zeus.	Zeus.	Cronus.
8	Cloud.	Vivasat.	Parjanya.	Æneas.	Aphrodite.	Aphrodite.	Tethys.
9	Twilight.	Pushan.	Pushan.	Odysseus (Nestor)	Hermes.	Hermes, Hades	Crios.
10	Sunglow. Dawn.	Savitri.	Savitri. Ushas.	Patroclus.	Here.	Here. Eos.	Theia [Euryphæssa Aithra.]
11	Volcanic fire.	Tvashtri.	Tvashtri. }	Achilles. }	Hephæstus.	Hephæstus.	Iapetus.
12	Sacrifice fire.	Vishnu.	Agni. }	(Ajax) }	Xanthus.	Hestia.	Themis [Clymene].

The Storm-gods are 1, 2, 7, 8.
The Sun-gods are 3, 4, 5, 6.
The Fire-gods are 9, 10, 11, 12.

The married pairs in Hesiod are 1 and 5; 4 and 8; 6 and 10; 7 and 2; 9 and 3; 11 and 12.

INDIAN MIGRATIONS, AS EVIDENCED BY LANGUAGE.

BY HORATIO HALE.

Part I. The Huron-Cherokee Stock.

The only satisfactory evidence of the affiliation or direct relationship of two communities, apart from authentic historical records, is to be found in their speech. When the languages of two nations or tribes show a close resemblance in grammar and vocabulary, we may at once infer a common descent, if not of the whole, at least of some portion of the two communities. This is a rule which, so far as experience goes, admits of no exception. The cases which are frequently referred to, of negroes in the West Indies and the Southern States who speak English, French, Spanish and Dutch, and of Indians in Canada and Mexico who speak French and Spanish, are not exceptions, but may, in fact, be reckoned among the strongest evidences in proof of the rule; because we know historically that, in every one of those cases, there has been not merely an intimate connection of these negroes and Indians with people of the nations whose languages they have adopted, but a large infusion of the blood of those nations. It may be affirmed with confidence that no contrary example can be shown. If an explorer should find in the heart of Africa, or in some newly discovered island of Australasia, a black and woolly-haired people whose language showed in its numerals, its pronouns, its names for near relationships, and the conjugation of its verbs, indubitable traces of resemblance to the Arabic tongue, we should infer without hesitation, not merely that this people had been at some time visited by Arabs, but that an Arabian people had been in some way intermingled among them for generations, and had left, along with their language, a large infusion of Arab blood. If, besides the resemblance of speech, there should be a resemblance of physical traits,—if the people not only spoke a language similar to the Arabic, but had the stature, features, complexion and hair of Arabs,—we should entertain no doubt that they were, in the main, of Arabian descent.

When the evidence of language has satisfied us that two communities are thus connected, our next inquiry relates to the nature of the connection. Is one of them derived from the other, and if so, which was the ancestral stock? Or is this connection that of brotherhood, and do they deduce their origin

* A paper read at the meeting of the American Association for the Advancement of Science, held at Montreal, in August, 1882.

and their languages, like the Latin nations of Southern Europe, from a common ancestry? The clues which will lead us to the solution of these questions must again be sought in the evidence of language, and generally in minute and careful comparison of words and grammatical forms; but this evidence may be reinforced by that of tradition, which, when it exists, will usually be found to correspond with that of language. The Hindoo tradition, which makes the Aryans enter India from the northwest in prehistoric times, and gradually overrun the northern portion of the peninsula, accords strictly, as every scholar knows, with the deductions drawn from the study of the languages of that region. So, too, the Polynesian race, which peopled the groups of the Pacific Ocean, from the Sandwich Islands on the north to New Zealand on the south, and from Easter Island in the east to the Depeyster Group, four thousand miles distant in the west, is traced back, by the joint evidence of language and tradition, to a starting point or center of migration in the Samoan or Navigator Islands, near the western limit of this vast region. Though the emigration which peopled some of the eastern groups must have taken place at least three thousand years ago, the fact of its occurrence is unquestionable. This instance is made the more notable by the circumstance that neither the source nor the direction of the migration is such as merely geographical considerations would have led us to conjecture. New Zealand and the Sandwich Islands are by far the largest groups of Polynesia. When first known to Europeans, each of these groups contained a much greater population than the mother group of Samoa. From either of them the usual course of winds and currents would carry a fleet of canoes to the other islands of Polynesia far more readily than from the Navigator Islands, whence the voyager must make his way to the eastern groups directly in the teeth of the trade-winds. These considerations, however, have had no weight in the minds of ethnologists against the decisive test of language, reinforced, as it is, by the evidence of native tradition.

In studying the languages of this continent we are naturally led to inquire how far we can apply these tests of language and tradition in tracing the connection and migration of the Indian tribes. It is evident at once that in making such inquiries we are confined in each case to tribes speaking languages of the same stock. For though there is, unquestionably, a certain general congruity of structure among Indian languages of different stocks, sufficient to strengthen the common opinion, derived from physical and mental resemblances, which classes the people who speak them in one race, yet this con-

gruity does not comprise that distinct and specific similarity in words and forms which is required as a proof of direct affiliation. In the present state of philological science we must, therefore, as has been said, limit our inquiries to the tribes of each distinct linguistic family, including, however, such as may possibly have been formed by the intermixture of tribes of different stocks.

The group of kindred tribes to which, in pursuing these inquiries, my attention was first directed, was that which is commonly known as the Huron-Iroquois family, but which I should be rather inclined, for reasons that will be hereafter stated, to denominate the Huron-Cherokee stock. A peculiar interest attaches to the aboriginal nations of this kinship. Surrounded as they usually were, in various parts of the continent, by tribes of different lineage,—Algonkin, Dakota, Choctaw, and others,—they maintained everywhere a certain pre-eminence, and manifested a force of will and a capacity for political organization which placed them at the head of the Indian communities in the whole region extending from Mexico to the Arctic circle. Their languages show, in their elaborate mechanism, as well as in their fulness of expression and grasp of thought, the evidence of the mental capacity of those who speak them. Scholars who admire the inflections of the Greek and Sanscrit verb, with their expressive force and clearness, will not be less impressed with the ingenious structure of the verb in Iroquois. It comprises nine tenses, three moods, the active and passive voices, and at least twenty of those forms which in the Semitic grammars are styled conjugations. The very names of these forms will suffice to give evidence of the care and minuteness with which the framers of this remarkable language have endeavored to express every shade of meaning. We have the diminutive and augmentative forms, the cis-locative and trans-locative, the duplicative, reiterative, motional, causative, progressive, attributive, frequentative, and many others. I am aware that some European and American scholars, shocked to find their own mother-tongues inferior in this respect not only to the Sanscrit and Greek, but even to the languages of some uncivilized tribes, have adopted the view that inflections are a proof of imperfection and a relic of barbarism. They apparently forget that if they vindicate in this way a superiority for their native idiom over the Greek and the Iroquois, they reduce it at the same time, not only below the Mandchu and Polynesian tongues, but beneath even the poverty-stricken speech of the Chinese.*

*** In support of the opinion expressed in the text, I may cite two very eminent authorities. Professor Max Müller, who acquired a knowledge of the Iroquois language from a Mohawk undergraduate at Oxford (now Dr. Oronhyatekha, of London, Ont.), remarks in a**

The constant tradition of the Iroquois represents their ancestors as emigrants from the region north of the great lakes, where they dwelt in early times with their Huron brethren. This tradition is recorded, with much particularity, by Cadwallader Colden, Surveyor General of New York, who in the early part of the last century composed his well-known "History of the Five Nations." It is told in a somewhat different form by David Cusick, the Tuscarora historian, in his "Sketches of Ancient History of the Six Nations;" and it is repeated by Mr. L. H. Morgan in his now classical work, "The League of the Iroquois," for which he procured his information chiefly among the Senecas. Finally, as we learn from the narrative of the Wyandot Indian, Peter Clarke, in his book entitled "Origin and Traditional History of the Wyandotts," the belief of the Hurons accords in this respect with that of the Iroquois. Both point alike to the country immediately north of the St. Lawrence, and especially to that portion of it lying east of Lake Ontario, as the early home of the Huron-Iroquois nations.

How far does the evidence of language, which is the final test, agree with that of tradition? To answer this question we have to inquire which language, the Huron or the Iroquois, bears marks of being oldest in form, and nearest to the mother language,—or, in other words, to the original Huron-Iroquois speech. Though we know nothing directly of this speech, yet, when we have several sister-tongues of any stock, we can always reconstruct, with more or less completeness, the original language from which they were derived; and we know, as a general rule, that among these sister-tongues, the one which is most complete in its form and in its phonology is likely to be nearest in structure, as well as in the residence of those who speak it, to this mother speech. Thus, if history told us nothing on the subject, we should still infer that, among what are termed the Latin nations of Europe, the Italians were nearest to the mother people,—and, in like manner, that the original home of the Aryans was not among the Teutons or the Celts, but somewhere between the speakers of the Sanscrit and of the Greek languages.

Our materials for a comparison of the Huron and the Iroquois are not as full as could be desired. They are, however,

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letter to the author: "To my mind, the structure of such a language as the Mohawk is quite sufficient evidence that those who worked out such a work of art were powerful reasoners and accurate classifiers." Not less emphatic is the judgment expressed by Professor Whitney, in his admirable work on the "Life and Growth of Language." Speaking generally of the structure of American languages, but in terms specially applicable to those of the Huron-Cherokee stock, he observes: "Of course there are infinite possibilities of expressiveness in such a structure; and it would only need that some native-American Greek race should arise, to fill it full of thought and fancy, and put it to the uses of a noble literature, and it would be rightly admired as rich and flexible, perhaps beyond anything else that the world knew." See also the excellent works of the distinguished missionary author, the Rev. J. A. Cuoq, of Montreal, on the Iroquois and Algonquin languages, in which abundant examples are given of the richness and power of those tongues.

quite sufficient to show that the Huron represents the older form of their common speech. A single point of phonology may be deemed decisive of this question. The Iroquois dialects, as is well known, have no labial letter. Neither *m*, *b*, or *p* is found in any Iroquois word, and the language is spoken without closure of the lips. But in the Huron speech, or rather (as there were at least two distinct dialects of this speech), in that form of it which is spoken by the Wyandots (or Wendat), and which bears the marks of being the oldest form of this language, the sound of the *m* is frequently heard. A comparison of the words in which this sound occurs with the corresponding words of the Iroquois dialects, shows beyond question that this sound once existed in the mother-tongue from which these words were derived, and has been lost in the Iroquois. We find that this Huron *m* has at least five distinct sounds or combinations of sounds to represent it in the Iroquois. By this fact we are reminded of the similar fate which has befallen in English the Teutonic guttural *ch* (as heard in the German words *Buch*, *Loch*, *lachen*, &c.), which, after surviving for a time in the Anglo-Saxon language, has disappeared from the English speech. In some English words, as we know, its place has been taken by the palatal *k; Buch* has become *book*, *machen* is changed to *make*, and so on. In other cases it is converted to *tch;* the German *pech* is our *pitch*, the German *dach* is our *thatch*. In still other cases it is changed to *f*, as in *laugh* from *lachen*, *soft* from *sacht;* while in many more instances it has been dropped altogether as a distinct element, its former existence being merely indicated by its influence on the sound of the preceding vowel,—as in *thought* from the German *dachte*, *high* from the German *hoch*, *might* from the German *macht*, and so on, in numerous words which will occur to every student of etymology. In close accordance with this treatment of the German guttural by the English organs of speech is that of the Huron labial by the Iroquois. In many instances the Huron *m* becomes *w* in Iroquois. Thus *tementaye*, " two days, " becomes in Onondaga *tewentaye; yameheon*, " dead, " is in Cayuga *yawehēǫn; skatamendjäwe*, "one hundred," becomes in Mohawk *askatawaniäwi*. Sometimes the sound of the nasal *ñ* (resembling the French nasal in *bon*), is introduced before the *w;* thus the Huron *oma*, "to-day," becomes *oñwa* in Mohawk; the pronominal prefix *homa*, "their," becomes *hoñwa*. Frequently this latter combination is further reinforced by the hard palatal element *k* or *g*, after the nasal; thus the Huron *rume*, "man," becomes in Mohawk *ruñgwe* or *ruñkwe;* "he loves us," which is *somandoroñkwa* in Huron, becomes *soñkwanoroñkwa* in

Mohawk. Sometimes the *m* is replaced by a nasal followed by an aspirate; thus *somăa*, "thou alone," becomes *soñhăa*. The Huron *mema*, "tobacco," is singularly transformed. The first *m* becomes in Iroquois *oy*, and the second is represented by the combination *ñkw*, thus giving us the Mohawk *oyeñkwa*. In these instances the Huron words are undoubtedly the original forms, from which the Iroquois words are derived. Some other evidences of a similar kind, which show that the Huron is the elder speech, will be hereafter adduced, though they may perhaps hardly be deemed necessary.

Our next inquiry relates to the course which the emigration pursued after crossing the St. Lawrence. The Iroquois proper (omitting for the present the Tuscaroras), are divided into five tribes or "nations," speaking dialects so dissimilar that the missionaries have been obliged to treat them as distinct languages. The difference between the Mohawk and the Seneca tongues is at least as great as that which exists between the Spanish and Portuguese languages. These five tribes, when they were first known to Europeans, occupied the northern portion of what is now the State of New York, their territory extending from the Hudson river on the east to the Genesee on the west. The easternmost tribe was the Mohawk. Directly west of them lay the Oneidas, followed in regular order by the Onondagas, Cayugas and Senecas. Of these tribes the Seneca was much the largest, comprising nearly as many people as all the rest together. The Onondagas were the central, and, to a certain extent, the ruling nation of the league. If we had not the evidence of language and tradition to guide us, the natural presumption would be that either the Senecas or the Onondagas were the parent tribe, of which the others were offshoots. But tradition and language alike award this position to the Mohawks. This nation was styled in council the "eldest brother" of the Iroquois family. The native historian Cusick distinctly affirms that the other tribes broke off from the Mohawk people, one after another, and as each became a separate nation, "its language was altered." The words thus quoted express briefly, but accurately, the necessary result of several generations of separate existence. It remains to show how the test of language confirms the tradition, and proves beyond question that the course of migration flowed from east to west. The following comparative list is derived from vocabularies, all of which have been recently taken down by the writer from the lips of members of the various tribes. The Wyandot words are placed first, as being probably nearest to the original forms in the parent language. Then follow the five Iroquois tribes, in regular order, from east to west; and

finally the Tuscarora, a sister, rather than a daughter, of the Mohawk, closes the list. In this comparison, certain inflections of the verb "to love" have been selected, as showing how the course of derivation is disclosed both by the changes of sounds and by the grammatical variations.*

It would not be easy to find a more striking and beautiful example than the annexed list furnishes of the operation of a well-known linguistic law. I refer to the law of "phonetic decay," as it is called by Professor Max Müller, who has described its origin and effect, with his usual clearness of style and fulness of illustration, in the Second Series of his "Lectures on Language." He there shows how words, either by lapse of time or change of locality, are apt to undergo a course of reduction and contraction, due to the desire of economizing effort in speaking. The words are softened and worn away, like stones undergoing what geologists call the process of degradation. Thus, to adopt and extend some of his examples, the German *Habicht* becomes the Anglo-Saxon *hafoc*, and the English *hawk;* the German *sprechen* becomes the Anglo-Saxon *sprecan*, and the English *speak;* the German *haupt* becomes the Anglo-Saxon *heafod*, and the English *head*. So, drawing our examples from words of another origin, the Latin *scutarius* becomes in old French *escuyer*, in English *squire;* the Latin *capitulum* becomes in French *chapitre*, in English *chapter*, and so on. Referring to our table of Huron-Iroquois derivatives, it will be noticed that the Wyandot *heskwandoróñkwa* is softened in Mohawk to *ehtshisewanoróñkwa* by a uniform process of what may be termed deliquescence. The initial aspirate of the Wyandot word is dropped (or perhaps changed in position); the first *k* is softened to *tsh*, precisely as the name of the great orator, which in Latin was *Kikero*, becomes *Tshitshero* in Italian pronunciation; the sibilant *s* changes its place, and the hard sound of *nd* becomes simply *n*. The still softer Oneida utterance contracts the first three syllables of the Mohawk (*eh-tshi-se*) to *ets*, and changes the trilled *r* to the liquid *l*, giving us *etswanolonkwa*. The Onondaga, pursuing the same process, changes the initial *ets* to the still softer *hese*, and drops the *r* altogether, still retaining, however,—though with a slight change,—the vowels which preceded and followed it, and thus converts the word to *hesewanoeñkwa*. The Cayuga, following in due order, contracts these two vowels into one, and converts the initial *hese* into *ses*, but introduces, by a slight reversion to

*In the orthography followed in this paper the consonants have generally the same sounds as in English, and the vowels the same sounds as in Italian and German. The *j* is sounded as in French, or like the English *z* in *azure*. The German guttural *ch* is represented by *kh* or (when softened) by *gh*. The French nasal *n* is expressed by the Spanish *ñ*. The short *u* (as it is called) in *but* is denoted by *u*. The emphatic syllable of a word is indicated by an acute accent, or, when the vowel is long, by the usual horizontal mark above it, as *ā*, *ē*, &c.

	WYANDOT.	MOHAWK.	ONEIDA.	ONONDAGA.	CAYUGA.	SENECA.	TUSCARORA.
I love thee	*yondoróñkwa*	*konoróñkwa*	*konolóñkwa*	*konoéñkwa*	*konõñhkwa*	*konõñkwa*	*kenoréñkwa*
I love him	*endoróñkwa*	*rinoróñkwa*	*linolóñkwa*	*henoéñkwa*	*henõñhkwa*	*henõñkwa*	*kianoréñkwa*
He loves thee	*ejandoróñkwa*	*hianoróñkwa*	*hianolóñkwa*	*hianoéñkwa*	*yanõñhkwa*	*yanõñkwa*	*yasanoréñkwa*
He loves us	*somandoróñkwa*	*soñkwanoróñkwa*	*soñkwanolóñkwa*	*soñkwanoéñkwa*	*soñkwanõñhkwa*	*sonkwanõñkwa*	*yeñkinoréñkwa*
He loves you	*heskwandoróñkwa*	*ehtshisewanoróñkwa*	*etswanolóñkwa*	*hesewanoéñkwa*	*seswanõñhkwa*	*seswanõñkwa*	*yetshinoréñkwa*
He loves them	*hayondoróñkwa*	*sakonoróñkwa*	*sakonolóñkwa*	*sakonoéñkwa*	*sakonõñhkwa*	*sakonõñkwa*	*kayenoréñkwą*
We love them	*hekwandoróñkwa*	*yakinoróñkwa*	*yakinolóñkwa*	*akinoéñkwa*	*akinõñhkwa*	*etshinõñkwa*	*yenkinoréñkwa*
Ye love me	*skwandoróñkwa*	*takwanoróñkwa*	*takwanolóñkwa*	*skwanoéñkwa*	*skwanõñhkwa*	*skwanõñkwa*	*skwanoréñkwa*
Ye love him	*heskwandoróñkwa*	*ehtshisewanoróñkwa*	*etswanolóñkwa*	*hesewanoéñkwa*	*seswanõñhkwa*	*seswanõñkwa*	*yetshinoréñkwa*
They love thee	*kesandoróñkwa*	*yesanoróñkwa*	*yesanolóñkwa*	*esanoéñkwa*	*kaesanõñhkwa*	*esanõñkwa*	*kayesanoréñkwa*
They love him	*homandoróñkwa*	*roñwanoróñkwa*	*lonwanolóñkwa*	*hoñwanoéñkwa*	*hoñwanõñhkwa*	*onwanõñkwa*	*kayenoréñkwa*
They love us	*hamandoróñkwa*	*yonkinoróñkwa*	*yonkinolóñkwa*	*onkinoéñkwa*	*onkinõñhkwa*	*onkinõñkwa*	*yonkinoréñkwa*
They love them	*homatindoróñkwa*	*sakotinoróñkwa*	*sakotinolóñkwa*	*hayakonoéñkwa*	*oñwatinõñhkwa*	*onwanõñkwa*	*kayenoréñkwa*

harshness of utterance, an aspirate after the following nasal, giving us *seswanōñhkwa*. And, finally, the Senecas of the extreme west drop that unnecessary aspirate, and in lieu of the difficult Wyandot word *heskwandoróñkwa*, and the seven-syllabled Mohawk term, *ehtshisewanoróñkwa*, give us a word of four syllables, *seswanōñkwa*, quite as easily spoken and at least as euphonious as its English translation, "he loves you." No person accustomed to the study of linguistics will doubt, after carefully examining this comparative list, that the Mohawk presents the earliest form of the Iroquois speech, and is itself a later form than the Wyandot. It will be equally evident that the Tuscarora, though closely allied to the Mohawk, is rather a sister than a daughter language. It is clear that the separation of the Tuscaroras from the proper Iroquois took place in early times, and that each language has since pursued its own course of development,—that of the Iroquois in their chosen abode along the Mohawk River, and that of the Tuscaroras in their southern asylum, between the Roanoke and the Alleghany Mountains.

Following the same course of migration from the northeast to the southwest, which leads us from the Hurons of eastern Canada to the Tuscaroras of central North Carolina, we come to the Cherokees of northern Alabama and Georgia. A connection between their language and that of the Iroquois has long been suspected. Gallatin, in his "Synopsis of Indian Languages," remarks on this subject: "Dr. Barton thought that the Cherokee language belonged to the Iroquois family, and on this point I am inclined to be of the same opinion. The affinities are few and remote, but there is a similarity in the general termination of syllables, in the pronunciation and accent, which has struck some of the native Cherokees. We have not a sufficient knowledge of the grammar, and generally of the language, of the Five Nations to decide that question."

The difficulty arising from this lack of knowledge is now removed; and with it all uncertainty disappears. The similarity of the two tongues, apparent enough in many of their words, is most strikingly shown, as might be expected, in their grammatical structure, and especially in the affixed pronouns, which in both languages play so important a part. The resemblance may, perhaps, best be shown by giving the pronouns in the form in which they are combined with a suffixed syllable to render the meaning expressed by the English *self* or *alone*,—"I myself," or "I alone," &c.

	IROQUOIS.	CHEROKEE.
I alone	*akoñhāa*	*akwŭñsŭñ*
Thou alone	*soñhāa*	*tsŭñsŭñ*
He alone	*raoñhāa* (*haoñhāa*)	*uwasŭñ*
We two alone	*onkinoñhaā*	*ginŭñsŭñ*
Ye two alone	*senoñhāa* (Huron, *stoñhaa*)	*istŭñsŭñ*
We alone (pl.)	*onkioñhāa*	*ikŭñsŭñ*
Ye alone	*tsioñhāa* (Huron, *tsonhaa*)	*itsŭñsŭñ*
They alone	*rononhaā* (*hononhāa*)	*unŭñsŭñ*

If from the foregoing list we omit the terminal suffixes *hāa* and *sŭñ*, which differ in the two languages, the close resemblance of the prefixed pronouns is apparent. Equally evident is the fact that the Cherokee pronouns, particularly in the third person singular and plural, and in the first person dual and plural, are softened and contracted forms of the Iroquois pronouns.

To form the verbal transitions, as they are termed, in which the action of a transitive verb passes from an agent to an object, both languages prefix the pronouns, in a combined form, to the verb, saying, "I-thee love," "thou-me lovest," and the like. These combined pronouns are similar in the two languages, as the following examples will show:

	IROQUOIS.	CHEROKEE.
I-thee	*koñ* or *koñye*	*guñya*
I-him	*ria*, *hia*	*tsiya*
He-me	*raka*, *haka*	*akwa*
He-us	*soñkwa*	*teawka*
Thou-him	*hia*	*hiya*
Thou-them	*s'heia*	*tegihya*
They-me	*roñke*, *hoñke*	*guñkwa*
They-us	*yoñke*	*teyawka*

The following list will show the similarity in other words of common occurrence:

	IROQUOIS.	CHEROKEE.
Woman	*yuñgwe*, *yeoñ* (Seneca)	*ageyŭñ*
Boy	*haksāa*	*atsatsa*
Girl	*yiksāa*	*ayayutsa*
Fire	*otsile*	*atsilŭñ*
Water	*aweñ*	*ama*
Lake	*uniatale*	*uñdale*
Stone	*ononya*	*nŭñya*
Sky	*kaloñhia*	*galŭñloi*
Arrow	*ka'na'*	*gane*
Pipe	*kanuññawa*	*ganŭññawa*
Beaver	*tsutayi* (Huron)	*tawyi*
Great	*kowa*	*ekwa*
Old	*akayoñ*	*ogayŭñli*

The resemblance in most cases is here so great that the doubt which has existed as to the connection of the two languages may seem unaccountable. It must be stated, however, that these words are selected from a much larger list of vocables, in most of which the resemblance is not so apparent. In some of them it exists, but greatly disguised by singular distortions of pronunciation; while in others the Cherokee words differ utterly from those of the Huron-Iroquois languages, and are apparently derived from a different source. There seems, in fact, to be no doubt that the Cherokee is a mixed language, in which, as is usual in such languages, the grammatical skeleton belongs to one stock, while many of the words are supplied by another. As is usual, also, in mixed languages, a change in the phonology of the language has taken place. A language which two races combine to speak must be such as the vocal organs of both can readily pronounce. In the Huron-Iroquois dialects syllables frequently end with a consonant. In the Cherokee every syllable terminates either in a vowel or in a nasal sound. In Iroquois, for example, five is *wisk;* in Cherokee it becomes *hiski*, a word which in their pronunciation is divided *hi-ski*. The Iroquois *raksot* or *haksut*, grandfather, is in Cherokee softened and lengthened to *etutu*. The probable, or at least possible, cause of this mixture, and the source from which the exotic element of the language may have been derived, will be hereafter considered. Meanwhile, the striking fact has become evident that the course of the migration of the Huron-Cherokee family has been from the northeast to the southwest, that is from eastern Canada, on the Lower St. Lawrence, to the mountains of Northern Alabama.

NATIVE RACES OF COLOMBIA, S. A.

BY E. G. BARNEY.*

(Third Paper.)

MAGDALENA.

The State of Magdalena occupies the northeastern angle of the United States of Colombia. Its northern front, including the Peninsula of Goajira, is near 250 miles in extent. The coast line, owing to the frequent indentations, is probably 200 miles more. Its western boundary is the river Magdalena, along which it extends about 225 miles in right line distance, and probably 450 miles by the sinuosities of the river. The southern boundary is the State of Santander, but this line is very short, not being more than thirty miles in length. The eastern boundary is the paramo, or dividing ridge of the eastern range of the Northern Andes, which separates the State from Venezuela. This paramo varies between 10,000 to 14,000 feet above the sea, and has but few practicable passes and no roads whatever within the State of Magdalena. The Peninsula of Goajira is practically a part of the State, but at present is a territory of the general government. Santa Marta is the capital, and was founded in 1525. There lies within the State a sierra, corresponding in general direction with the coast, from which it is forty miles distant. At about the centre of this sierra, a branch of it turns northward to the sea. A little west of the centre rise three snow-clad volcanic cones, which by Humboldt are stated to be 15,000 feet above sea level, but if Haswell is correct as to the elevation of the snow line, at 10° from the equator, the elevation of the mountain peak must be 17,000 feet above the sea, as more than 2,000 feet from the top downward is always covered. Several other considerable elevations are situated within the lines of the sierra and its ramifications, and two considerable mountains are observed nearer to the capital of the State.

This much of geography and topography seems to be required to enable the reader to follow the description hereafter given of the native tribes of this section, at the time of their conquest by adventurers from Spain. The jurisdiction of the governor of Santa Marta at first was nominally confined between the river and and the eastern Cordillera of the Andes, and extended south to the Equator. From the time of the discovery of this coast, in 1498, by Columbus, it had been fre-

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quently visited by adventurers for the purpose of robbery, piracy or commerce, and Rodrigo Bastides, one of the least objectionable of them, and the founder and first governor of Santa Marta, had traded along the coast from the Oronoco to the Gulf of Darien as early as 1502. His conduct had been such toward the natives that so far from opposing they voluntarily aided in the foundation of the new city, and had his policy been pursued by his successors, it is believed by all parties to-day, that the entire country could have been civilized and Christianized without bloodshed, and that the gain of individual and national wealth would have been immensely greater at the time of the conquest and since. Nearly all the various tribes within the limits of the present State had taken the first steps toward civilization. They were husbandmen, many of them irrigated their lands, many of their towns were built with taste and regularity and were cleanly kept. Their dwellings were commodious and tastefully shaded with fruit trees of various kinds. Their industry was more than sufficient for their wants. They had at certain points annual or semi-annual fairs, for the purposes of traffic. They were warlike but placable. They were not cruel in war. Torture and the scalping-knife were unknown. Their customs varied somewhat in the different tribes, but in many respects were the same. They were like each other in some particulars and different in others. Some cremated their dead, preserving their ashes in urns within their houses. Others embalmed by drying slowly before a fire and filling the cavities of the body with odorous spices and gums. Others, again, buried their dead with all their implements of husbandry and war, and with all their wealth. Thus far the writer has found no evidence of the sacrifice of human life to the manes of the deceased among these tribes. They possessed skill in carving in wood and stone imitations of the human form, but whether intended as idols or mementoes of dead chieftains is a little in doubt. That some of them had adoratorios is proven by a few relics which have escaped the destroying hands of a fanatical priesthood, many of whom might better have improved their own lives before attempting to teach others. One of those found within this State and destroyed by Padre Friar Francisco Romero de Augustinos Calzados, but partially restored, may be roughly described as follows: A dome with capital or chimney—nearly perfect—surmounting a circular wall, the front being gone; within a circular altar, a good representation of a human head and neck mounted on a pedestal in the centre of the altar and wearing a helmet, well represented, long mustaches extending down either side of the mouth below the chin. On

the left a figure less in height, which seems to represent a bishop, with mitre, robe, &c., but with both arms cut off a little below the shoulders. On the right, upon the same altar, are two implements. Back of the altar on the left is a figure with animal heads. The animals' heads bear some resemblance to the nutria, which is very common here, but the ridges on the heads are not seen in the living animal. Suspended from cross beams above are also two human heads with helmets or something which would serve the purpose. One of these figures shows the mustaches, but they are shorter; the face of the other figure is smooth. These heads hang a little higher than the head of the central figure, and on either side of it. In front of the altar are grouped quivers with arrows, a bow, two war clubs, something that may represent a flag, a helmet with plume, a tambourine, cymbal, a fair representation of a tenor drum, and a curved plate which may represent the broken side of another drum. These last, however, may only be given to exhibit curiosities and relics which have no connection with the adoratorio.

The tribes nearest Santa Marta were the Gaira, Taganga and Dorsino. Back of these, on the western slopes of the Sierra of Herrera, as it was called by the early Spaniards, but known to-day as the Sierra Nevada of Santa Marta, were the Bonda and the Pocigeyaca, while the Concha, Chenagua and others, occupied the coast toward the east. Besides these, the hommocks within the Cienega or overflowed lands, were occupied by numerous tribes of fishermen. So long as Roderigo Bastidas remained, all was peace and prosperity with the colony, but, as says the Spanish proverb, "La avaricia se siempre rompio el saco"—"avarice always bursts the bag," and so in this case, the desire of sudden wealth, regardless of consequences, caused a few to attempt the assassination of the Governor, hoping thereby to obtain greater liberty from his successor to plunder the natives. They were only able to seriously wound their victim, but, although the murderers were hanged, the Governor was compelled to go to San Domingo for medical aid, and died before reaching his destination. Palomino, his successor, so far yielded to the clamors of the colonists as to permit attacks upon the Zaca, Chairama, Guachaca, Origua, and other tribes at a distance, preserving peace with those near at hand, to ensure a supply of food for the colonists.

Palomino was noted for his skill in horsemanship, was strong, powerful, and of great endurance. Two Spaniards, adopting the modes of the Indians, went out first as spies, and preparing surprises for the troops which followed, the unfortunate natives were attacked, and being unprepared, were easily over-

come. These tribes were despoiled of their golden ornaments, and the able bodied prisoners were brought into Santa Marta and were from thence sent to San Domingo as slaves, under pretense that they were *Caribs*. From this time until his death, Palomino began to be feared as the plague by the Indians. Another Governor, Vadillo, was sent out from San Domingo, who brought reinforcements, and, by agreement, the two rivals for the office joined their forces for more extended expeditions, and when the tribes of the plains were overcome, they proceeded to attack those living on the mountain slopes.

The Bonda being aware of the plans of the invaders, were prepared, and gave them their first defeat. Soon after, followed a still more terrible one from the Pocigueyaca, which is mentioned in the historic poem of Juan de Castellana, who was himself a cavalry soldier in the expedition, and subsequently a priest in Cartagena and Tunga. His history was first written in prose, but afterward in verse. He is regarded as very accurate, except in a few instances where he received his information at second hand, where his dates are sometimes erroneous.

He says of this expedition:

"They mustered of soldiers seven hundred,
"And with them marched Palomino,
"By way of the road of the marshes,
"Which ends in a half-day's journey;
"Down the coast, toward Cartagena,
"There was encountered a large fishing ground,
"Where fishes are found so abundant
"That the owner presented a balsa* load.

* * * * *

"Within the compass of these marshes
"Are very many people of war."

* * * * *

"Pocigueyaca: good basis for a poem;
"To Spaniards, a province so horrible,
"In memories of those wept so tenderly,
"Whose bones still lie, unsepulchred,
"Dead, at the hands of that people,
"*So sternly defending their own*,
"And to this day, here, 'tis well known,
"That never a Spaniard boasts of victory."

One object of giving these translations, is to inform the reader of the sources from which are gleaned the facts from which to judge of the character and number of the natives, and another to show the class of writers from whose printed works or MSS. they have been obtained.

The Spaniards, finding themselves baffled by the Bonda and Pocigueyaca, next made an attempt on the Tairone, with a similar result. Desperate at these failures, they turned their

*"Balsa load," a large raft full.

attention to the east, where a sloping plain, sixty miles in length and nearly as wide, extends from the foot of the northern side of the cordillera to the ocean, and here again, the historian before quoted, being an eye-witness, must describe the country and its inhabitants for us.

"It was a land of plains, in longitude full twenty leagues,
"In width, no less, between the sea and bordering mountains,
"Except in parts, where one or both, bent from their general courses;
"Within its borders are large forests, open plains and rich savannas,
"Between the sea and Sierra of Herrera and the Hacha* river,
"The land is finely cultivated. The towns near all the streams
"Flowing from the mountains, are well and strongly built;
"Their streets straight and well kept. The houses, in gardens put,
"Are strong and commodious, and in front of each are porticos,
"Beneath the shade of which, the natives enjoyed the cool breezes
"During the heated hours of day. This custom, being general,
"The name by Spaniards given the country, was La Ramada.†"

The style of dress prevailing among these people at the time of their conquest, was about the same as that of Eden, before the serpent chief made a morning call on our great-great * * * * * * grand-mother Eve, and, in the temporary absence of her husband, introduced the subject of dress and fashions. But the maidens had introduced innovations, if not improvements, and the men, too, like Adam of old, were not averse to partaking of the same fruit, and hence we find our poet-historian—from his cloister saying:

"Those naked nymphs, with teeth of pearl,
"And side-long looks, from brilliant eyes,
"Rivalling in hue their shining hair,
"Which fell, well combed, in graceful groups,
"O'er shoulders, neck and bosom,
"Did not appear so badly, while pendant hung
"From nostrils, ears and neck, arms, wrists and thighs,
"Rich jewels of purest gold, worked inartistically."

In the attempt to devastate this rich and well-populated region, Palomino lost his life, and his rival, Vadillo, occupied more than a year in despoiling it, robbing and enslaving its people, whose very tambourines and other musical instruments were banded and ornamented with gold. The amount of wealth taken from the Ramada is said to have been immense, but the sum is not stated.

Thus the country of this simple, if barbarous people, was changed from an Eden into a desert, but if we may judge from subsequent movements, the fugitive Indians returned again and again to their once happy homes, and attempted to rekindle the sacred fires at their family hearths. But again and again were they raided, until after a period of nearly fifty years, when an expedition entered this devoted section for purposes of

*The Chickasa, of Miss., and other tribes of the South, called rivers Hotchie, as spelled by the whites. Here we find an Indian river with the same name—Hacha in Spanish.

†Ramada is *provincial* for Enramada, but in this country is used to include any structure with roof and open sides.

plunder. Superior arms and intelligence prevailed, and the entire country was divided among the conquerors, the few remaining natives either having fled or were enslaved.

In this entrance, in a large enclosure, were found a great number of wooden statues, roughly carved, and standing with one end fixed firmly in the ground. These are supposed to have been erected in memory of fallen Caciques, but may possibly have been idols. The extent of the territory may be understood from the fact that in the many expeditions which entered the country, it was reserved for the last, at the termination of near half a century, to discover these interesting relics.

So, too, after half a century of battling for their homes and firesides, the Bonda, Tairone and Pocigueyaca were finally subdued or scattered.

There were found figures in wood and stone, and many other evidences of a more advanced civilization. Among others the palace of the Cacique of the Pocigueyaca, was found to occupy three sides of a triangle, the inside of which was graded and paved, and each of the three buildings were large enough to lodge comfortably 300 men.

One historian, Colonel Joachin Acosta, who published one volume in Madrid in 1848, evidently a painstaking investigator and an industrious searcher among old records, says that to relate in detail all the interesting events of the period of the conquest of the territory under consideration, would fill a large volume, and therefore, he only refers to a sufficient number to prove the determined and yet peaceable character of the natives. Below will be found a free translation of pages 365 to 369 of vol. 1st of the work above referred to.

"A volume would be required in which to write the details "of the different important occurrences between the Spaniards "and the native races of the territory near to Santa Marta, but "it is only possible to give a resume of some of the more im-"portant ones, that the reader may know the firmness and "tenacity with which the natives maintained their rights to the "soil of their fathers, the frequency with which they revolted "under the tyranny of the Spanish power, when by some fatal-"ity they had become subdued by the invader, the cruel repris-"als sought by their enemy, when victorious, and the industry "and placability of the native in peace. While Gov. L. Man-"jarres was in power, his just but firm treatment of the natives "secured peace and general content, but on his temporary recall "to Spain, the Bonda and Tairone put the city of Santa Marta "in such peril that the citizens were compelled to ask assist-"ance from Bogota, the then seat of the 'Real Andimcia.'

"Pedro de Ursua was sent from the land of the muses, and "entering the land of the Taironas in 1569, after a terribly "severe battle, subdued for the time that valiant and hardy "people. Manjarres, on returning from Spain, constructed a "fort in the land of the Bonda, upon which two cannon were "mounted, and the place duly garrisoned. On the death of "Manjarres, soon after, his son had charge of Indian affairs until "the arrival of D. L. Rojas, the new Governor. The latter, "in 1571, sent Capt. Castro to establish a town in the land of "the Pocigueyaca. The very beginning of this attempt brought "on a war with that powerful people. Not being able to sur-"mount the cordillera by the western front, Capt. Castro fol-"lowed the bed of the river D. Diego, passing around by the "towns of Domo and Bojaco, with whom the Spaniards were "at peace, crossing the river by a bridge of bejucas*, con-"structed by the Indians, and climbing certain sierras, returned "again to the river, above the chief town of the Pocigueyaca, "which was found deserted, their approach having been discov-"ered, but not in time to arrange for the defense of the place. "The houses of the town were well constructed, and a triangu-"lar plaza, well graded and paved, had upon each of its three "sides large, well-built houses, which were the palaces of the "Cacique, each being large enough to comfortably lodge 300 "persons. The tribes surrounding this town were industrious, "made statues of stone and hard wood, also beads of divers "colors from shells. A temporary peace was made, and the "usual solemnities of founding a town were had, but both "peace and town were of short duration. The various parties "sent out to explore obtained a view of the distant Magdalena "river, and saw a multitude of populous and well cultivated "valleys, but their conduct was not such as to placate the "natives, the result being that the entire nation rose in arms. "Castro, with some loss, was compelled to retire, and was, on "arrival at Santa Marta, arrested by the Governor for having "deserted the enterprise. He was compelled to make another "attempt, which resulted in the loss of the greater part of his "force, and among them the nephew of the Governor, who "was taken alive and hanged by the Indians, in the place "where, a few days previously, he had hanged a native chief.

"The Spaniards thought that the courage and desperation "shown by the natives in this fight was owing to the fact that "one of the blood-hounds, used by the enemy, and described "as being very ferocious, was killed by a poisoned arrow, "which penetrated the quilted cotton shield in which the dog

*Bejuca-vine. Bridges of this kind were found in Cauca, Antioqua, and other points, constructed by the natives. They are light but strong, and last many years.

"was enclosed, it being the custom of the Spaniards to cover "both men and beasts with this protection, to render the poi- "soned arrows of the natives ineffective.

"The Bonda did not look patiently npon the establishment "of a fort in their midst, and, in 1575, took advantage of the "withdrawal of part of the garrison, to protect Santa Marta "from French pirates, to storm the fort, and raze it to the "ground. The victors here found large quantities of the golden "ornaments which had been previously robbed from them "and other tribes, and which had been sent out to the fort to "prevent the French pirates from obtaining them. Attacked "thus by sea and land, the citizens of Santa Marta asked aid "from Cartagena, which was sent by land, under Capt. José "Guerra. The Spanish Guarda-Costa arrived about the same "time, and drove off the pirates, and an attempt was made to "subdue the Bonda, which resulted in the defeat of Castro, and "the movement of the victors upon the city, but on learning "that the Guarda-Costa had 500 men of the land force, they "retired. Gov. Rojas availed himself of the presence of the "squadron to rebuild the fort, but to little purpose, as it was "so closely blockaded that provisions could only be sent out "from the city under strong escort.

"In 1576, Don Lope de Orvisco arrived, to replace Rojas. "He was the first after Bastidas to attempt colonizing the "country on the basis of cultivating the soil, and raising cattle. "He brought out 300 men, one-third of whom were married "and had families. He also brought an abundance of the best "implements of husbandry known at the time in Spain. He at "once made known to the Indians that he had come to estab- "lish a firm and durable peace, and called upon the Caciques of "tribes, friendly or otherwise, to meet him in council. Nearly "all came, and the Governor's frank and pleasant manner did "not fail of effect. On hearing the complaints from the Bonda, "of the cruelties and violences practiced on them by the sol- "diers of the fort, he at once said that among friends forts are "not necessary, and the following day ordered the fort razed, "and the garrison removed. Nearly all the tribes voluntarily "accepted the propositions of the Governor, which were emi- "nently just, and the land enjoyed a peace and security not "known before in the history of the colony. So much so, that "any individual might travel alone in whatever direction with- "out peril, and the Governor immediately commenced the con- "struction of roads, to the distance of thirty leagues from the "city, and stocked with cattle the large districts made desert "by a series of cruel wars."

This long quotation is given as a sample of the evidence before us of the placable disposition of the native tribes, and the facility with which the 8,000,000 souls within the boundaries of the present Colombia, might have been made the source of greater wealth to Spain and her citizens than has been derived from all her colonies, as the result of bloodshed, injustice and oppression.

The valley of the Zazari, to-day known as the River Cesar, has its source in one of the valleys between the cordillera of Santa Marta and the eastern cordillera of the Andes, and flowing in a general southwestern direction enters the Magdalena River near the line of Santander, its course being about 150 miles in a direct line, and probably twice as much following the river's deviations. This rich valley was inhabited by numerous tribes, much like those already described. About the sources of the river the Arnaco were perhaps the most warlike and most powerful. About half way down the river, on the slopes of a cordillera running northward from the Sierra Nevada, lived the Chimilla, and still lower down, in a land of rich savannas, beautiful lakes and sloping table lands, were the Tamalamaque. The intervening territory along and near the river gave sustenance to other tribes of less importance. The Governor of Coro, a colony established in Venezuela in 1530, not satisfied with the wealth of his own territory, determined to raid the natives of the province of Santa Marta, and for this purpose, with two hundred soldiers, infantry and cavalry, and several hundreds of Indian carriers, left Lake Maracaibo, crossed the cordillera after much toil and suffering, and striking the head waters of the Zazari or Cesar, began his plundering career in the Valley of Upas; but the natives having a choice of ground, among the rocky defiles, were too much for the invaders, and they soon left that section to seek more favorable ground for the charge of cavalry. This they at length found in the land of the Tamalamaque. This rich and powerful people were taken by surprise—surprise at the coming of the strangely bearded and dressed men, still more at the sight of horses and dogs—and were paralyzed with terror when they saw these strange monsters swimming across the lake to the island where the women and children had been placed to be out of harm's way. This easy victory was rendered complete by the capture of the principal cacique, who was much beloved by his people. Here the booty was so great that Alfinger, the Governor, sent a part of his force with it to Coro, with orders to pay for the outfit they had started with, purchase more arms and ammunition and obtain more soldiers. Awaiting their return he remained an unwelcome guest in the

land of the Tamalamaque, having first by a ruse disarmed its inhabitants. After a year of anxious waiting, the invader struck southward into the territory of the present State of Santander, but meeting only opposition from the warlike natives, he at length turned toward the eastern cordillera, to find a passage back to Venezuela. After suffering from want of food, and every variety of ill due to a life in unknown tropical forests, where each step in advance must be hewn with the axe or machete, he was compelled to send a small party forward to seek some way out of their difficult position. In a few days this party returned, bringing the welcome news of large towns, great fields of cultivated ground, &c., which Juan de Castellana gives in the words following: They

"Gave notice of large towns,
"Long fields of cultivated ground,
"Which appearances and representations,
"The complement of all their hopes,
"So elated the hungry squadrons,
"That forming well-ordered columns,
"Filing their lances and swords,
"Joyfully they made their marches,
"Not without encountering the natives,
"In great masses of bowmen,
"And at each step in advance,
"Increased the number of warriors."

Meeting such opposition the adventurers were compelled to seek a new passage over the cordillera, which after much suffering was accomplished. In one of the frequent combats Alfinger was mortally wounded, and only seventy of the party of two hundred succeeded in recaching Coro. The party first sent back had had if possible, a worse fate. Their gold had been buried at the foot of a Ceiba tree, which could never after be found. Most of the party had died of starvation. One had been adopted into the family of a native chief, had married his daughter, and had become the medicine man of the tribe when encountered by the few remaining members of Alfinger's party. He accompanied his friends to Coro, but soon returned to the wild life of the Indian.

ANCIENT VILLAGE ARCHITECTURE IN AMERICA.

INDIAN AND MOUND BUILDERS' VILLAGES.

BY STEPHEN D. PEET.

Village life and village architecture are subjects which connect themselves closely with the antiquities of this continent. The one may be said to be a picture of prehistoric society, and the other the framework in which the picture is set.

Taken together, they furnish much information concerning prehistoric times, and no treatise on the subject would be complete without their testimony. The suggestiveness of the study renders it very important that both should be examined with much carefulness, for by the means we may be able to explain many of those prehistoric works which have baffled the most patient investigations, and possibly to understand many things which have puzzled the student and nonplused the theorist. It may be said that village life is a peculiarity which was more common among the prehistoric races than the historic. One fact that shows this is, that wherever history begins, there a description is given of villages, showing that society, throughout prehistoric times, was thus divided. The term *pagan* signifies village, and was applied to the Greeks, whose villages were so numerous. There are prevalent tribes in India, which have never passed out of this primitive state; each village is ruled by a chief of its own, and is separate and independent of every other. In Africa, village life is very common, and presents many points of resemblance to that which prevailed among the tribes in America. The resemblances between the arrangement of the houses or huts in these, and that of the wigwams of an ordinary Indian encampment are very striking. The circular enclosures which are so often seen, resemble the circular embankments which prevailed among the Mound Builders, and we can almost imagine the chief seat of Umazila's kingdom, among the Zulus, to be a Mound Builders' village. This fact, then, presents to us a picture of ancient society which nothing else can.

One thing noticeable in connection with the early history of this country, and especially the descriptions given by travellers, explorers and early discoverers, is that village life was very prevalent here. If we take the accounts written by Garcillasso de la Vega, or the Portuguese traveller, we shall find that villages are laid down on the route which Ferdinand de

Soto took across the country, in great numbers, and that, while the fields were full of corn and other rich products of the soil, the people were almost universally gathered into these. The seven cities of Cibola have been described in connection with Coronado's march, made into the deep interior in 1536, and have been identified in recent times as situated among the Zunis in New Mexico. The voyage of Jacques Cartier was made up the St. Lawrence, but the terminating point was at the village of Hochelega, where Montreal now stands. Captain John Smith has described the villages which prevailed on the James River, such as belonged to Powhatan, the great chief. The first Journal of the Pilgrims brings before us a country desolated, deprived of its inhabitants, and only a few *caches* of corn left as signs of its habitation, yet the early record makes mention of the villages of the Narragansetts, the Massachusetts, Poquonnocks and Pequods. The Jesuit Relations indicate the prevalence of Indian villages throughout Canada and New York State; the travels of Joliet, Hennepin, La Salle and Marquette reveal the existence of many in the deep interior. The researches of antiquarians are also making known the fact that village life was prevalent in prehistoric times of remoter date, and the sites of the villages are being identified, and the peculiarities of village architecture are becoming known.

But a question arises as to the way in which we are to study the ancient village life of this continent. If, as has been shown, it is so important, both for the purpose of learning the cultus of the people and the condition of society in prehistoric times, we ought to have some way of ascertaining the particulars concerning it. In answer to this question, we would say that there are several ways in which we may secure information. *First*, we may take the deseriptions of travellers, especially of those who were permittted to look upon the native villages in their undisturbed condition. *Second*, we may take the tribal organizations as they exist now, and trace out what elements are essential to a village life; and what peculiarities embody themselves in village architecture. *Third*, we may study the structures themselves, and ascertain from their general character and surroundings and probable uses, what was involved in this life.

To this last source of evidence we would especially call attention, since the various structures which have been preserved are the objects in which the archæologists are interested. The historian may present a picture of village life from the descriptions which he reads; the ethnologist may also study the tribal organization and give an explanation of village life,

with all its customs, and habits, and various peculiarities, but the archæologist must rely mainly upon the study of the works themselves. These may have been preserved in a very fragmentary and imperfect condition, but in them he must recognize the picture which to others is nearly invisible, and trace through these fragments the outlines of a life which has departed. He must people the ruins with a race which has passed away, and though, perhaps, no other record of them is given than that which is preserved in their works, he must by this means make us acquainted with all their manners and habits. The works become to him the main source of information. The relics may indicate something as to the stages of progress and social advancement of the people, their art and skill being thus manifested, and their social condition and employment also being suggested by these. But for all that inner life which constitutes the real social state, architecture is the main source of evidence. This is the book which the archæologist needs to read if he is to ascertain anything of the real condition of the prehistoric races. He may, indeed, compare its record with that of history, and may draw much from ethnology by way of explanation, but his chief study will be the structures which have been preserved.

It is, therefore, with a view of ascertaining what the prehistoric state of society was, that we have taken for our subject, at this time, the Ancient Village Architecture of America. In treating of it we shall divide the architecture according to geographical localities, and according to the race-lines.

We do not now enter into the question whether there was really any difference between the modern Indians and the ancient Mound Builders, or whether these were the same in race and character with the ancient Puebloes and inhabitants of Mexico and Nicaragua, but we take the races as they are presented to us, calling them by their common names, and shall study their works separately, taking for granted that the ordinary classification of the races is a correct one.

First, then, we shall take the villages which are supposed to belong to the modern Indians, and study their architecture. We acknowledge that the Indian villages, as they exist at the present time, furnish to us very poor pictures of prehistoric times. The temporary and frail habitations which are found in these villages are certainly inferior specimens of architecture, hardly worthy of the name. The sites of the ancient villages are lost, and no record of their primitive location can be discovered. The changes which have come upon the native races have modified their habits, and almost broken up village life. There are localities where these changes have occurred

many times. Tradition shows this, as well as the evidence of the monuments. The civilized races of Mexico, for instance, have records which go back to the twelfth century, and some of them as early as the sixth century. It is ascertained from these records that successive waves of population have swept over the country. Different grades of society are manifest in that region. So there are many other sections of the country where there have been many changes in the population.

The changes which have occurred during historic times are only illustrative of others which occurred long before history began, so that it would seem that great obscurity would gather over the subject. Yet we maintain that even from the fragmentary and mutilated tribes which are still existing on this continent, we may gain hints as to ancient village architecture which will be very profitable. Notwithstanding all the changes which have occurred we may see in their structures and their settlements the remains of an architecture which once prevailed, and whose laws and principles are not altogether lost. As inferior as these structures are and ever were, it is probable that they contain the germs of more perfect works.

We draw the distinction between Red Indians and Mound Builders; between modern and ancient Puebloes; between Aztecs, Toltecs and Chicemecs, thus acknowledging the changes of population. Where we find the aborigines occupying the localities which were once the habitat of other races, we find that their architecture is very different, yet it is a question whether they do not represent village life as it existed before them.

The life which they lead, the customs which they have inherited, the tribal organization which they have preserved, are all interpreters to us of works which are now in ruins, but which were once filled with a life like their own.

It is probable that the very Indian villages which seem so insignificant preserve in themselves elements which existed in the earliest times. We know of some of the tribes, especially those which are situated west of the Missouri River among the mountains of the west, that they actually occupy the villages which their ancestors erected, and in their mode of life we may see the explanation of structures which would otherwise baffle our comprehension. Of those which were formerly east of these rivers, but have been removed and are now gathered in the Indian reservations, there are traditions, and historical records, which may, in the light of their present state and customs, also be interpreted, and so their ancient village system may become known.

Taking the ruins, then, of the more ancient works, and the architecture which has been preserved in some degree of perfection, and interpreting them by present customs and organism, we may learn much concerning the prehistoric races.

It is also probable that the ancient village sites will be identified more and more as history is written, and the minute particulars of village life in the various localities will be described.

We shall not, in the present essay, undertake to identify any village site, or to describe any specific village architecture, but shall endeavor to give a few hints as to the general traits which mark this architecture. It should be said, however, that a remarkable uniformity prevailed among the villages of the native tribes, so that a description of one really furnishes a picture of them all. This is true of all the modern Indian tribes, especially those which are known to history. The warlike and hunting habits of these Indians rendered village life very transient, and their architecture, accordingly, partook largely of that of an encampment, yet, wherever we find a village of this kind, we shall discover that it is arranged on the same plan as the more permanent residences of the sedentary tribes.

Village life, to be sure, had its stages of development, and architecture partook of those stages. Among the ruder tribes there was less differentiation, so that village architecture would not be so easily distinguished from the military or domestic, but the germs existed, and we may trace these. There were also minor differences, caused by the different modes of life, and by varied ethnical tastes and peculiarities. The material which was used was quite different in the various geographical sections, yet it is because so great uniformity prevailed, and because the essential elements remained so unvarying that we may discover the real system, even in these various sections. This is caused partly by the tribal organization. It may be said that the village life was so prevalent because of the gentile state of the tribes, and the uniformity of the architecture is owing to the same cause. The same general structure of society existed among all the tribes; similar systems of government, similar religious rites and notions prevailed; hence, there would be very similar conditions in village life among all the races.

The tribal organization among the rude and uncivilized races was such as to render village life almost a necessity. Primitive society is generally divided into clusters, in such a way that villages are the natural embodiment of it. The divisions and separations are not such as they are in modern society, into families, but into gentes or clans, phratries and tribes, and this

of itself would involve village residence. Property in severalty requires separate residence, families become isolated, and civilized races are, in some respects, less united than the uncivilized. Until the tribal organization is broken, and individuals come to hold property rather than the tribe, the village or communistic mode of life must prevail. There are tribes which after a long effort and under much pressure from the government, have broken up, and families have taken up farms, and lived separately, as white people do, but ordinarily uncivilized races herd together like animals, and live in bands.

We generally think of hunters as in a lonely and wandering state, scattered through forests and living in isolated dwellings, or stopping where night overtakes them, but even hunting races have organizations which bring them together into clans and tribes, and their homes are as much in villages as the more advanced. In the agricultural life, village architecture might become more thoroughly developed, and the clans might congregate together and form larger settlements, but as long as the tribal organism continues, the gens will still be the basis and unit of society.

As a matter of fact, agriculture among the primitive races preserves rather than destroys village residence. The fields generally surround the villages, but they belong to the common stock, and the products are owned in common by the tribe or gens which occupy the village. If there were lodges in the field, such as are sometimes described by travellers, these were like the lodges of hunters, only temporary residences. When society reached a confederated state, village life became somewhat expanded, but its characteristics remained the same. The gens was the unit, and the house which contained the gens would be a communistic dwelling.

A gens or clan would live together, and a number of these communistic dwellings would constitute a tribal village. Sometimes the villages of a certain district would become united under a common government, and so a confederacy of tribes would occupy the territory, portions of it being allotted to each tribe, and then the villages would belong to the gentes, as subdivisions, while a common central village would be the place of assembly, the whole united together by lines of communication.

Thus taking the whole state of society as it existed in America when the whites first landed here, we not only find the village life everywhere prevalent, but we find the tribal organization at the basis of it. The descriptions of the first explorers and discoverers, compared with the later evidences of the monuments, and the tribal organization, give an explanation of the whole system.

Even the hunter races give indication that the same essential features of society prevailed among them. The encampments which may have existed for a single day, were always arranged in the same order; the chiefs and prominent men always having their places, the clans or gentes always taking a particular place in the circle, and the sacred or civil rites always taking place in the same relative position. In the ruder tribes, such as the Wyandots, the Dacotahs, and the Iroquois, we have the record of certain customs and habits which explain village life to us. These were always essential and prominent. What is more remarkable, the same features appeared among them all. Every village would contain the houses of the inhabitants, the gens of the mother always controlling the name, location and occupants, the totem of the mother being generally affixed. Aside from this, each gens among the Wyandots had a small tract of ground for the purpose of cultivation, which was communal. The wigwam or lodge belonged to the woman of the house. The women of the gens labored together in the common field. The households of each gens were arranged, in the encampments, according to their age and rank, the oldest family placed on the left, the youngest on the right. Each gens, as we have said, had its own place in the tribal encampment, the deer, bear, turtle, hawk, beaver, wolf, etc., being arranged in the camp or village according to their rank. With the Wyandots, the shape of the encampment was that of a horse-shoe.* Each gens had, also, a council-house, the council being composed of the gens' chief and the heads of the houses. Each tribe had its tribal council; each gens, also, had a right to worship its own tutelar god, and each individual had the exclusive right to the possession and use of a particular amulet.

The management of military affairs inhered in the military council and chief; each gentile chief was responsible for the military training of the youth. Prisoners of war were adopted into the tribe, or killed. With most of the war-like tribes, the custom was common of compelling the prisoner to run the gauntlet, and go through some ordeal of fire before he was slain.

Ordinarily, a village would have the domestic and military life combined. The trial of prisoners, perhaps, was conducted at either the central place of the tribe, or at some location occupied by a gens. Beside these, there were many social customs which needed to be provided for. Dances were numerous, and one of the chief objects in arranging for a village

*We are informed by Rev. Dr. Riggs that the Dakotahs had their encampments in the shape of a buffalo's horns, and that the ruling element was always stationed at the point of the horns. The sacrifices and religious rites were, with some tribes, inside of the encampment, and with others outside, but the encampment was always uniform.

site would be to provide a place for these. Ball games were also frequent. As to the religious customs, the native tribes were all very particular in observing these. Religion did not consist in worship, in the modern sense of the word, but it was, nevertheless, thoroughly incorporated into the social fabric. There were medicine men in all the tribes. The initiation of warriors was conducted by them, with many solemn, religious ceremonies. Religious feasts were common. Sacrifices were made, and offerings of great value oftentimes attended these feasts. Burial customs would also have an influence upon the village architecture, as provisions made for burial would be different from other religious ceremonies.

We have, then, in these customs and habits of the native tribes, hints as to what features were common and essential in village architecture. In the migrating tribes, these features could be preserved without much painstaking. Temporary structures would be erected, and the location which might be most convenient, selected. But where the tribes had become settled, and were making permanent homes for themselves, it would be perfectly natural that more attention would be paid to building. Under the circumstances this would appear more promptly in providing conveniences in village architecture, than either domestic or military. Thus village architecture would really be very prominent among even the ruder tribes. While the domestic structures, such as ordinary houses, would remain the same, the council-houses would become larger, and some provision would be made for amusements and for religious ceremonies.

It does not argue anything against the existence of village architecture throughout America, if travellers, who visited the tribes during their migratory state, found only frail, unsubstantial structures marking the sites of the native villages. Travellers among native tribes have not generally understood the tribal organism, and probably saw very little system in the arrangement of villages.

With the migratory tribes, the peculiar ceremonies which belong to their social and religious life would not always find a separate building, but would be practiced out of doors. If they were practiced inside of a house, that house would be so similar to others that an ordinary observer would not notice any difference. When, however, we come to discriminate between the village and the domestic architecture, we look more closely at the descriptions, and discover public buildings, such as council-houses and feast-houses. We discover also public squares used for dances and feasts, and possibly may discover the place where sacred fires were kept, and see even the totem-posts, and various other tribal signs, all of which are

elements of village architecture, and were uniformly and inseparably connected with village life.

Thus, by reading between the lines, we come to recognize what was distinctively village architecture. We are assisted in this also by the paintings which have been transmitted from early times to the present, for in these we discover what the writers have failed to describe, and so trace the separate elements of village architecture as such. There are pictures which give us an idea of the plan and system which generally existed among the Indian villages. Catlin, in his celebrated work, has given us a few. Schoolcraft has also given us pictures and descriptions, and a few others have been preserved from an early period in history.*

We give herewith a picture, which was intended to be descriptive of Indian life as it existed in the very early settlement of this country. It is taken from the paintings of an artist by the name of With, who visited Sir Walter Raleigh's original colony, in 1585. The description of these villages is as follows: "In the town of Pomeiock the buildings are mostly residences of chiefs and men of rank, and near it the sepulcher of their chiefs (A). They have gardens for melons (I), and a palace (K), where they build their sacred fires. At a little distance from the town is the pond (L)."†

"The towns in Virginia are very like those in Florida, not, however, so well or firmly built, and closed with a palisade about the entrance. On one side is the temple (A), fig. 9, of a circular shape, apart from the rest, and covered with mats of straw, and receiving no light except through the entrance. The residence of their chief (B), is constructed of poles fixed in the ground, bound together and covered with mats, which

*We have discovered, also, in the description given by Mr. E. C. Barney of the native tribes of Colombia, that their villages were similarly constructed.

†Sketches of Virginia, DeBry, 1690. Langley's ed., 1841. Contrib. to N. A. Ethnology, Vol. IV.

Village of Secotan.

are thrown off at pleasure to admit as much light and heat as they require. Some of their towns are not enclosed with the palisade, and are much more pleasant. Secotan, for example, is here drawn from nature (see cut). The houses are more scattered, and a greater degree of comfort and cultivation is observable, with the gardens in which tobacco (E) is cultivated, woods filled with deer, and fields of corn. In the fields

they erect a stage (F), in which a sentry is stationed to guard against the depredations of birds and thieves. Their corn they plant in rows (H), for it grows so large, with thick stalk and broad leaves, that one plant would stint the other and never arrive at maturity. They have also a curious place (C) where they convene with their neighbors at their feasts, and from which they go to their feast (D). On the opposite side is their place of prayer (B), arranged in a similar manner." The houses were built around a square, and totem-posts were erected in front of them. In the Mandan villages, as described by Catlin, the sacred fires were inside of the medicine lodge, but his description corresponds closely with that given by other travellers in other sections of the country. It is remarkable that there should be so much uniformity, but these elements of village life, we have said, grew out of the tribal organism, and this was the same in nearly every tribe. We give these pictures and call attention to the description furnished by travellers, since they, by their very uniformity, afford us a clue to the village life of those races which are not so well known. We may, in fact, take these descriptions and study the works of the Mound Builders, and in them, perhaps, find an explanation of those very structures which have so long puzzled archæologists.

It will be noticed in the picture given that we have not only the separate arrangement of cabins, feast circles or dance grounds, which were in a manner common to all villages, but in one the particular lots surrounding the village where the cultivation of the soil was conducted. This picture corresponds with the description given of the villages which Ferdinand De Soto visited. Some of them were surrounded by palisades, and others were on open ground. The totem-posts are noticeable, for these are not often described, and their purpose was not generally understood. The difference between the sacred fires and the dance-circles and places of festivity is also observable. The totem-posts are in each place, in the dance circle and around the sacred fire, though probably used for a different purpose in each.

II. We now call attention in the second place, to the village architecture of the Mound Builders. There are several ways in which the villages of the Mound Builders may be identified.

First, the descriptions given by the early explorers. It is a remarkable fact that the earth-works in the southern states were, when discovered, occupied as village sites. A large number of these villages have been described, and, although the sites have not been identified in later times, yet the descriptions indicate that the very mounds which are now being

studied as objects of so great interest, were then used as residences for the various tribes. Ferdinand de Soto and his army were the first to discover the mounds. Mention is frequently made of them by the historians of the expedition. This mention is incidental, and so connected with the account of the people, and the various incidents of the expedition, as to escape notice, yet the descriptions correspond closely with the works as they are now found. Some of the villages were surrounded by stockades, and were so situated as to be used for defences or for fortifications, but a large number of them are also described as having elevated mounds which were used by the caciques for their residences, and as observatories from which they could overlook the villages. It is not unlikely that some of the more prominent of these mounds may be identified. There are many such mounds described in the narratives. One such is mentioned in Georgia, one in Alabama and one in Mississippi. One mound is described around which there was a terrace wide enough to accommodate twelve horsemen. On another mound the platform was large enough to accommodate twelve or thirteen large houses, which were used for the residence of the family and the tenants of the cacique. This was not far from New Madrid, in Arkansas. It was upon the terrace of one of these mounds that De Soto stood when he uttered his reproaches against his followers, having found out the dissatisfaction and revolt which had arisen among them. This was after he had passed the Mississippi River, and about the time when he became discouraged in his fruitless expedition. The narrative shows that these prominent earthworks were associated universally with village life. Sometimes the dwelling of the cacique would be on the high mound which served as a fortress, the only ascent to it being by ladders. At other times, mention is made of the fact that from the summit of these mounds extensive prospects could be had, and many native villages could be brought to view. The villages are described as seated "in a plain, betwixt two streams; as nearly encircled by a deep moat, fifty paces in breadth, and where the moat did not extend was defended by a strong wall of timber," "near a wide and rapid river, the largest they discovered in Florida"—this was the Mississippi. "On a high artificial mound on one side of the village, stood the dwelling of the cacique, which served as a fortress." Thus, throughout this whole region, from the sea coast at Tampa Bay, in the states of Florida, South Carolina, Georgia, Alabama, Mississippi, Arkansas, these ancient villages appeared, occupied by the various tribes, such as Creeks, Catawbas, Cherokees, Choctaws, Chickasaws, Quapaws, Kansas, and, possibly, Shawnees. They were situated on all the larger streams in the more favor-

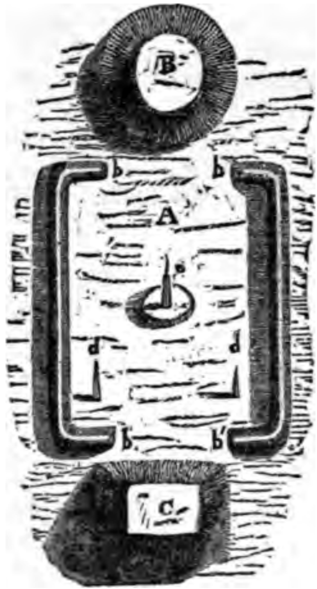
able localities, and the sites of many of them can be identified at the present time.

The characteristics of the villages are made known by the descriptions. There are three or four essential features in village life, which are brought out and made prominent. One is the authority of the chief, the other is the supremacy of the priest, or medicine man, or religious authority; the other is the prevalence of games, feasts, and various ceremonies. These three elements would be likely to be provided for, and whatever the mode of erecting structures, three prominent buildings would appear. We find, as a matter of fact, throughout the southern states, that the rotunda, or hot-house, the "public square," so-called, and the chunky-yards were essential elements in all village architecture. Bartram, in his travels, has described these, although he states that they were erected by a preceding race, and were only temporarily occupied. He states that the Cherokees did not preserve the chunky-yards, but used them as fields, and cultivated them; but the Creeks kept them in good order, and swept them every day.

Mr. C. C. Jones has drawn a description from DeBry, and we quote from his work: "Of the buildings which formed the public square in the Creek village, the first in rank was the Mico's cabin, which fronts the east, and was occupied by the Mico and his counsellors. Second was the warriors' cabin. This fronts the south. At the west end of this cabin sits the chief warrior, and then the rest of the warriors follow, in order of their rank. Third is the cabin of the beloved men, the sachems and elders. This fronts the north. The last in rank is the cabin of the young people. This fronts the west. In addition to these is the rotunda or assembly room, situated, as we have said, in the opposite side or end of the chunky-yard. It was called by the traders the hot-house, and was an assembly-room for all people, old and young. In the center of it was the spiral fire, and it was made the duty of the priest to keep this fire ever burning. Temples were erected at great cost of material and labor.

We present a picture of one of these chunky-yards, taken originally from Bartram's work. The following is the description of it: "The chunky-yards of the Creeks, so called by the traders, is a cubiform area (A), generally in the center of the town. The public square, located upon the square eminence (C), and the rotunda or great winter council-house, situated upon the mound (B), 9 or 10 feet high, standing at the two opposite corners. It is generally very extensive, especially in the large old towns, is exactly level, and sunk two and some-

times three feet below the banks or terraces (b b b b) surrounding it, which are sometimes two, one above and behind the other, and are formed of earth taken out of the area at the time of its formation. These banks and terraces serve the purpose of seats for the spectators. In the center of the yard there is a low circular mound or eminence (A) in the center of which stands erect the chunky-pole, which is a high obelisk or four-square pillar, inclining upwards to an obtuse point. Near each corner of the lower and further end of the yard stands erect a less pillar or pole (d d), about twelve feet high: these are called the slave-posts, because to them are bound the captives, condemned to be burnt, and these posts are usually decorated with the scalps of their slain enemies. * * Thus it appears, evidently enough, that this area is designed as a public place for exhibition of shows or games, and formerly some of the scenes were of the most barbarous and tragical nature, as torturing the miserable captives with fire, in various ways, as causing or forcing them to run the gauntlet, naked, chunked and beat almost to death with chunks and fire-brands, and at last burned to ashes."



Chunky-Yard.

Mr. C. C. Jones, from whose volume we quote these words,* says the physical traces of these chunky-yards are still extant in many various portions of the state of Georgia. The forms of the tumuli or mounds and enclosed areas, with the outline of the general settlement, are, in some instances, quite observable. There are also spaces, parallelogrammic in shape, elevated from two to four feet above the surface of the ground, uniformly level and free from irregularities, which apparently were designed as play-grounds. Mr. Jones also refers to mounds of observation, recognized by their peculiar situations. These were conical earth-mounds, erected upon commanding points, or elevated river bluffs. Fires kindled upon their summits could be readily recognized at a distance. The signals thus made were repeated from the top of kindred mounds within convenient distances, and so an entire tribe could be put upon the alert. Striking examples of this class of mounds may be seen

*See Antiquities of Southern Indians, page 179.

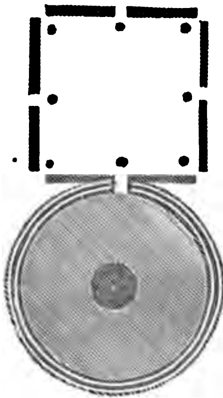
upon the Chattahoochee River. He also refers to certain earthworks which he calls 'chieftain mounds,' erected in honor of the *caciques* and chiefs. Such mounds, varying in height from five feet to twenty feet, are found in many localities, and usually occupy prominent positions in the vicinity of the spot which constituted the village site. They are, for the most part, conical in form, and contain one or two skeletons. A number of such mounds were mentioned by DeBry, 1591, and the methods of burial described by him.*

By these descriptions we may ascertain what were the essential features of village architecture, among the Mound Builders generally. We may also discover the identical sites which were occupied by them as villages. It is possible, also, that we may so compare the works in other localities as to identify the individual parts, and to say what uses each particular mound had in the village under contemplation. It is possible that we shall ascertain, by this means, what mounds were used for observatories, what for rotundas or council-houses, what for the residences of chiefs, and we may see the design or purpose of the various inclosures which are so numerous in other sections of the country.

2. We turn, then, to the form and arrangement of the Mound Builders' works. A comparison between the earthworks of the different sections will be in place. We have seen from the descriptions of the various works found in the Southern States, what forms the village architecture of that region assumed. It will, of course, be understood that these earthworks were only the foundations of houses, and that they do not present the village architecture complete, but the arrangement and plan of the ancient villages may, nevertheless, be seen in them. It is probable from what has just been said of the different mounds, that there was a great diversity in the arrangement, as well as uniformity, *i. e.*, uniformity in certain localities, and diversity as we go away from these localities. It would seem that tribal lines were marked in this way. Geographical localities were occupied by races, and the races have left monuments of themselves in these, their village sites. We ascribe this difference in the arrangement of villages to the tribal traits and customs, rather than to social grades or stages, though these also are indicated in the ancient works. There are resemblances between the villages of the various sections, and to these we would call attention. A comparison between the earth-works of the different sections will first engage attention.

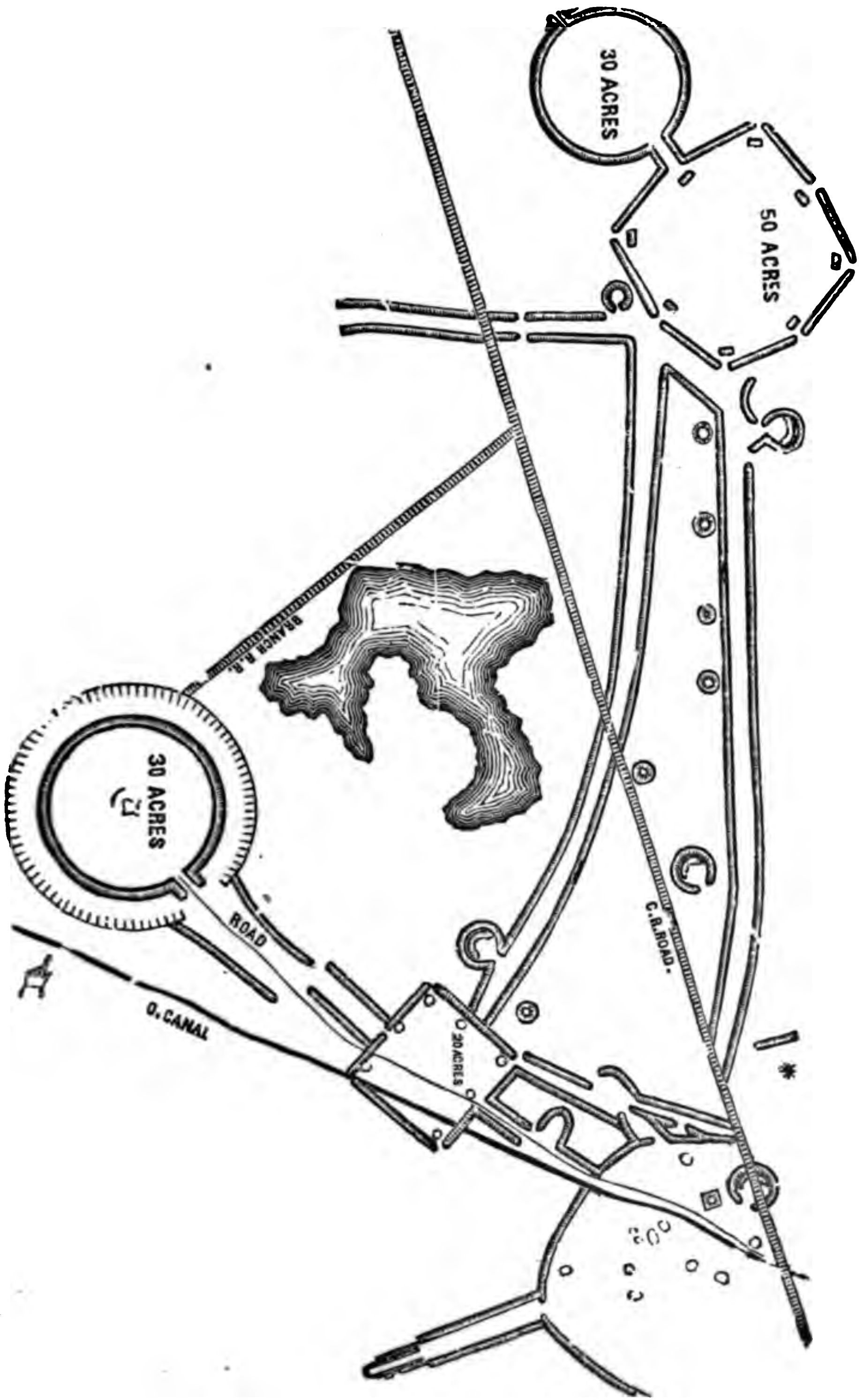
*Brevis Narratio, Plate XL.

There are many analogies between the works in the Southern States and those found elsewhere, showing that one system prevailed throughout. The works differ in some respects, as it is perfectly natural that there should be variations and diversities, but the resemblances are marked. We have heretofore mentioned the fact that the works of the Mound Builders can be divided into four or five classes. Those throughout the Southern States are so uniform as to be classed together. The works in Ohio and along the valley of the Ohio River form another class, those in Tennessee another, those in Illinois another, and the emblematic mounds in Wisconsin still another. I shall first compare the works of Ohio with those of the the Southern States, and afterwards trace the resemblances to those found in other States.

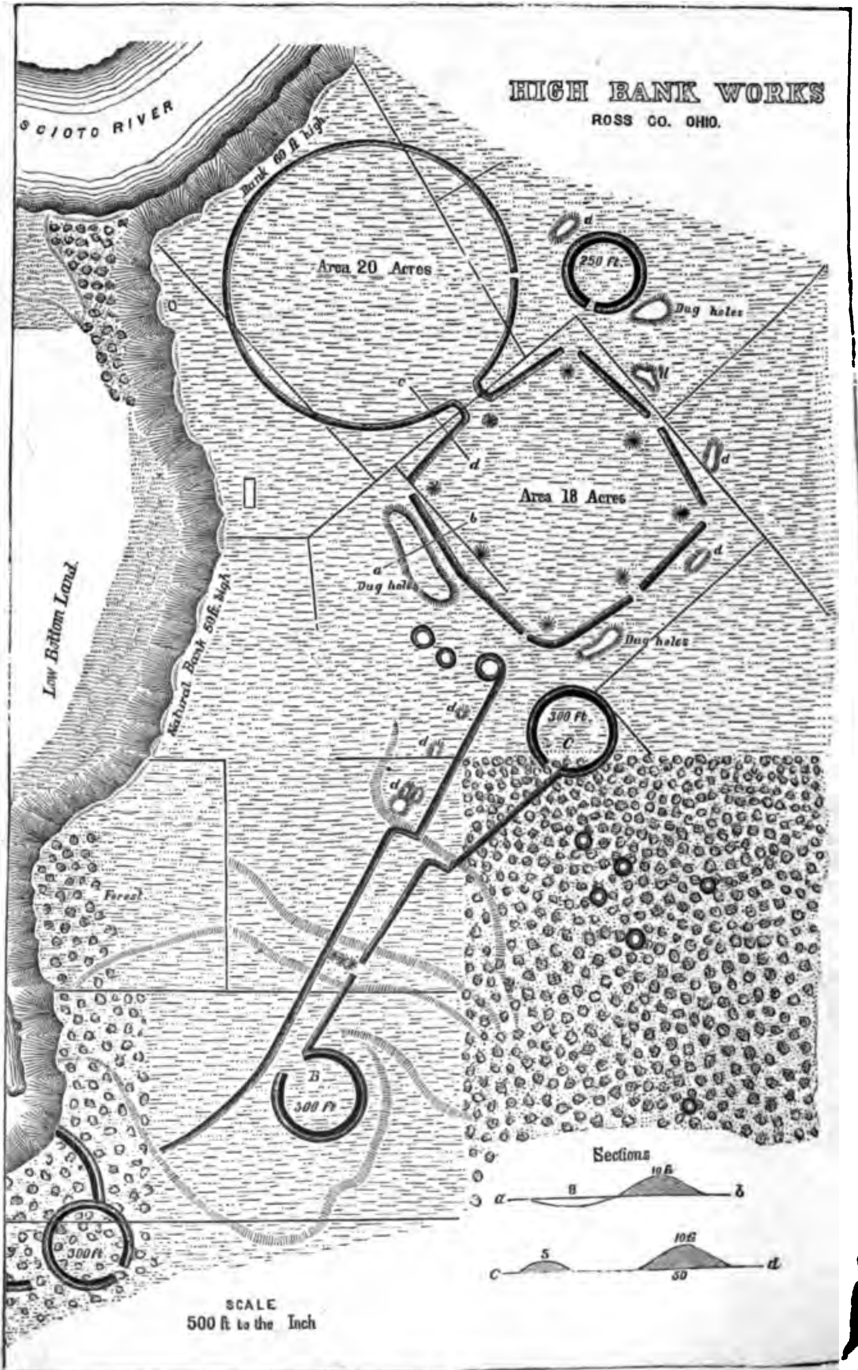

Circle and Square, at Circleville, O.

One of the peculiarities of the works in Ohio is that they present a circle and square in combination. There are no less than twenty of these figures in the valley of the Scioto alone, and it is the distinguishing feature of all the prominent works in the State, such as those at Newark, Circleville, Hopetown, and other places. This peculiar arrangement of the enclosures is noticeable, for it differs from those found in the Southern States, and from that, also, existing among the Wisconsin mounds.

If, however, we compare the square enclosure to the elevated square platform of the Southern States, and the larger circle to the chunky-yard which is so common there, we may find that there are many points of resemblance. We do not pretend to say, for a certainty, that these several works were used for the same purpose, but we throw it out as a tentative theory. As confirmatory of this opinion, we would refer to two facts, namely, that there are among the Ohio works, similar observatory mounds, and, in a few cases, similar massive burial tumuli in connection with these very circles and squares, thus furnishing the same features to village life here, as those described in connection with the villages in the South. In some cases the circle was characterized by an altar mound which fronted the single entrance, showing that sacred rites of worship were practiced in the enclosures. A mound formerly existed at Circleville, which was excavated at an early day, and two human skeletons exhumed from it. It has been supposed that the bodies were those of priests or medicine men, thus show-



Village Enclosures at Newark, O.


HIGH BANK WORKS
ROSS CO. OHIO.
SCIOTO RIVER
Bank 60 ft high
Area 20 Acres
250 ft.
Dug holes
Area 18 Acres
Dug holes
Dug holes
Low Bottom Land
Natural Bank 50 ft. high
300 ft.
C
Forest
B
300 ft
300 ft
Sections
SCALE
500 ft to the Inch

ing that the same practice prevailed here, which is described by DeBry as existing among the southern Mound Builders. This mound was enclosed in the great circle, and at one side of it was a semi-circular platform which was designed for an altar.

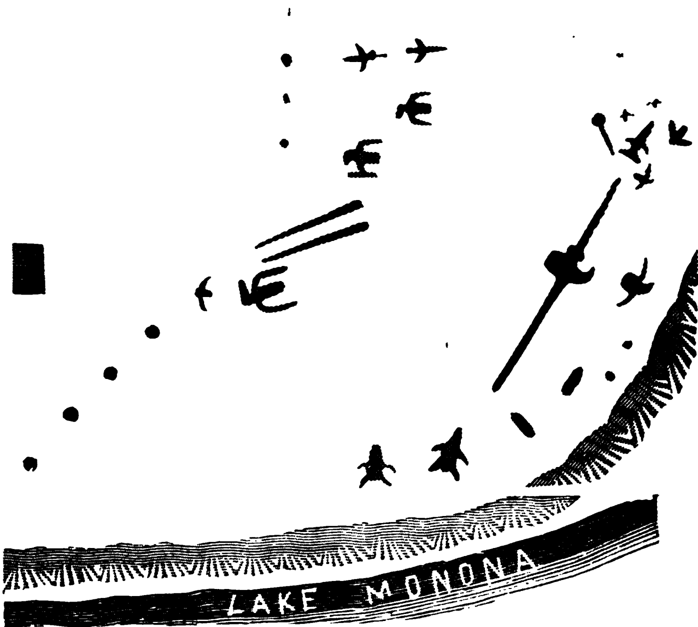
In Ohio the platforms are low, not over six or eight feet high, but there are high, conical mounds near by. This is the case in Marietta, Newark, Circleville, Hopetown, Chillicothe, and many other places. At Newark the observatory is found in the circumvallation. In one circle the gateway itself is raised to a great height, in the other the singular junction of the two walls is surmounted by a high tower or conical mound, which served the purpose of an observatory. There is a singular arrangement of gaining access to water, by the parallel walls or guarded ways in many of the works of Ohio. There are no such covered ways in the Southern States, but there was a close proximity to streams, and the moats and fish-ponds, which were very numerous, and which generally surrounded the village sites, took away the necessity for these guarded road-ways. The provisions made for water in all these cases are indications, however, that they were village sites. The same provisions do not appear in the fortifications.

Passing away from these regions, and entering upon the scenes of the emblematic mounds, we find villages resembling those in Ohio.

Village sites in Wisconsin are characterized by one feature which is not found elsewhere, and that is the entire absence of circumvallation. With thc single exception of the ancient city at Aztalan, there are no enclosures as such, but instead we discover a peculiar arrangement of the emblematic mounds. The effigies are so arranged as to form a quasi enclosure. As the natural forms of the effigies do not often furnish a barrier or wall, the various parts of the effigies are prolonged to an unnatural length; and so the villages are virtually surrounded by a wall; the wall being the effigies in close succession, and connected. The form or shape of the village enclosure was generally triangular, in this respect differing from those in the Southern states and in Ohio, where circles and squares seem to have been the usual form.

We give herewith a cut of one such village enclosure, which will illustrate these points. It is a picture of an ancient village discovered by the author on the banks of Lake Monona, near Madison. It will be noticed that the situation of these works and the arrangement of the works, taken together with the entrances, give the idea that it was designed for a village enclosure. If we consider the peculiar ideas which the natives

had as to the power of their totems to protect their homes and villages, we shall conclude that the effigies around this enclosure were also totems or representations of divinities designed to protect the village, and, to this people, served the same or even a better purpose than a circumvallative or connected wall. A similar village site has also been discovered on the bank of Lake Koshkonong, and in that case the very mounds which served for the foundations of houses of chiefs, and for altars for burial places, have been identified.



A Village of the Emblematic Mound Builders.

A comparison between the works of the same locality will next engage our attention. There is a remarkable similarity between the village enclosures of the same geographical district, which is even more striking than the analogies which we have discovered between the works of the different districts. We would illustrate this by referring, first, to the works in Ohio, where the villages were always marked by a double enclosure. These enclosures were frequently of exactly the same form and dimensions, and where they present different forms, they still exhibit the same general plan. Sometimes the enclosures for a village are doubled, making two villages. This same fact, that village enclosures are placed in close proximity, has been noticed by the writer in several cases among the emblematic mounds of Wisconsin.

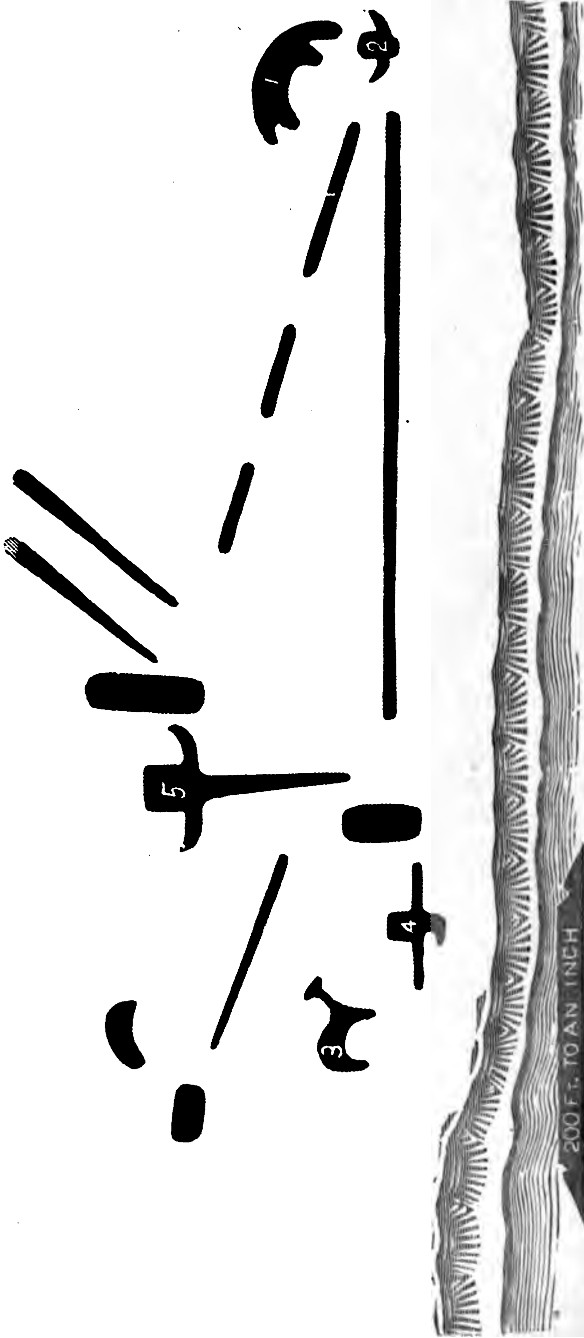
Attention is called, then, to the cuts which represent the different village enclosures in both localities. By comparing the works at High Bank and at Newark, and the works at Lake Monona with those on Lake Waubesa, we shall see that the villages in the same locality were built on the same plan. In the former, the shape is of a square and circle, in the latter, a triangle.

If we take the two enclosures at Marietta, with the covered way, and then double them and connect them by parallel walls, we should have the works at Newark.

If, on the other hand, we take the works on the Scioto and its branches, we shall find that the resemblances throughout are very striking. The circle and square at Circleville, in Seal township, at Newark, at New Milford, in Clermont county, Hopetown, High Bank, and several other places, are almost exactly the same. The connecting walls, and some of the works surrounding, are different, but both the shapes and areas are very similar. These belong to one river system. A modification of the form throughout the Scioto valley, and especially at Paint Creek, is made by the addition of a third enclosure in the shape of a circle. But this feature may be partially seen in the works at Newark, though disconnected and at a distance. And it will be noticed, wherever there are long parallel lines, there are not only the two enclosures, the circle and the square, connected together, but the third at the end of the covered way, showing that in some of the villages the inhabitants preferred the banks of the stream for their amusements, dances and feasts. As to the use of the two circles referred to, we do not pretend to decide.

At Circleville and at Newark, there was a mound in the center of the circle, which gave indications of having been used as an altar, an effigy of a bird being found at the latter place.

The areas of these enclosures are so similar as to be worthy of notice. In the valley of the Paint Creek four of the squares contained exactly twenty-seven acres each; a square at Liberty Township contained twenty-seven acres; one at Cedar Bank contained twenty-eight acres; the south square at Marietta contained twenty-seven, but that at Hope-town and the square at Newark contain only twenty. When the larger enclosures are found in addition, these generally contain forty or fifty acres. Now this uniformity in shape and size of the circles and squares is certainly significant. There are other analogies also between the works of the same locality. We refer now to the parallel walls, or so-called covered ways, which in Ohio often connect the enclosures, either with one



Emblematic Mound Builders' Village Site, on Second Lake, Wis.

another or with the valleys of the streams. We give herewith two cuts to show the resemblance which exists between the works of the locality. See the works at Newark, and at High Bank. See cuts on pages 55 and 56.

3. We would call attention to the location of the works. If we are to trace out the village sites, their location must be considered as a prominent factor, for these sites would be naturally chosen with a view to the advantages of soil, situation, and other circumstances. Proximity to streams, where there would be the presence of game and abundance of fish, natural barriers, such as high bluffs, or a morass, or river, or anything which would serve for defense, a central location as regards the surrounding country would all be looked for in selecting a site for an ancient village. Such, in fact, proves to have been the case with the Mound-Builders; their villages were all favorably located. This may be recognized in the descriptions given by travelers, it may be seen in those works which have been identified as village sites, and may be also seen in others which are supposed to have been village enclosures. The location, in fact, is the main source of identification. This is the case in all parts of the country.

The location of the works and the villages correspond. We might mention here the specific earthworks which present points of resemblance in these respects. It is remarkable that the most prominent works in Ohio, such as those at Newark, Chillicothe, Marietta, and other places, correspond so closely, and present in them so many advantages for village sites.

We give here a cut to illustrate this point.* It will be noticed that the situation of these works is just such as would have been chosen for the location of the village. The valley would serve for agricultural purposes, the walls would serve for defense, the water of the river would furnish subsistence, and the whole scenery surrounding would make an attractive spot. It will be seen, also, that a close connection was held between the villages. If we consult Squier and Davis' volumes, we shall find that these villages on Paint Creek were closely connected also with others on the Scioto River, about Chillicothe, and that a complete system of works may be followed throughout the valley of the latter river, from Portsmouth, at its mouth, to the head waters.

The same is true of the valley of the Muskingum. Villages are scattered along its banks, at Marietta, at Zanesville, at Newark, at Fredericktown, and many other places.

Now, as a matter of fact, when we come to study the earthworks, we find that many of them correspond in these respects

*See cut on page 62.

to the demands of village life. We find them generally located on the banks of streams, in rich valleys, either surrounded by high hills which would serve as defense to them, or else located on tongues of land where the precipitous sides would cut off access from either way. Frequently the junction of two streams was chosen for the location of these works, and so we have the same provision for water.

. There are, to be sure, very few artificial moats or canals in the Northern States, such as have been described as common farther south; yet the rivers and smaller streams answered the same purpose. Mr. Jones says: "Seldom are earth-mounds found at a considerable remove from water-courses. Water and game were the chief attraction in the choice of a settlement; rich alluvial lands, whose fertility would make amends for the rude cultivation bestowed upon them, were often selected as the sites of their villages. In those early days the rivers abounded with fish, and the deep swamps were replete with terrapins, alligators, deer and other game." The same fact is made known by the descriptions of Garcilasso de la Vega and other early explorers.

A study of the topography will generally reveal for what purpose the parallel ways were erected. They evidently connected the enclosures with the streams. In the absence of a third circle or enclosure they also form a covered way to an open air place of rendezvous near the stream, and thus make the works all the more uniform. Now, if we take the ground that these were village sites, we shall find an explanation both of the location and of the arrangement.

The situation of the works found in Ohio at the present day would prove that village life was very common there. Squier and Davis mention that there are 1500 enclosures belonging to the Mound Builders in this State alone. In the valley of Paint Creek there are five inclosures in six miles. In the valley of the Miami there are seven enclosures in the same distance. These enclosures are all alike in their situation, and in form and character, and it is probable, from the location alone, that they were the enclosures which contained the villages of the Mound Builders. The situation of Newark is remarkable in this respect. Surrounded by an amphitheatre of hills, which of themselves furnish a natural defense, and in the midst of an extensive, rich, and level plain, where the soil was susceptible of easy cultivation, with two streams flowing around their works, and an extensive pond of water in the midst of the enclosure, they show that the spot was chosen for its advantages to village life. In the opinion of Mr. Atwater, who was familiar with them when they were undisturbed, they mark the

site of an ancient village. The larger works were used as military defenses, and the parallel walls were intended for the double purpose of protecting persons in times of danger while passing from one work to another, and of fences with a very few gates, to fence in and enclose their fields. Watch-towers were placed at the ends of the parallel walls and along the line. Judging from the character of the works, we should say that it was a double village, two villages united in one, the parallel walls giving communication between them, and between each one and the river. Mr. Atwater is of the opinion that the parallel wall which extends to the west connected them with other villages, thirty miles away, across to the Hockhocking, in the vicinity of Lancaster.

We would also refer to the mounds and moats which have been described by Mr. C. C. Jones as situated upon the Etowah river, the Savannah river, Ocmulgee river, and the Chattahoochee river. Mr. Jones says: "There is not a considerable stream within the limits of Georgia in whose valleys tumuli of this sort are not to be found. They appear in Florida, and are very frequent in Alabama, where truncated pyramids are even more abundant. Tennessee, South Carolina, Mississippi and Louisiana, are dotted with interesting monuments of this class. It is in fertile valleys and upon the alluvial flats, whose soil afforded ample scope for agricultural pursuits, that these tumuli are mainly seen. Forming permanent settlements, they erected temples, fortified localities, worshipped the sun, possessed idols, wrought largely in stone, fashioned ornaments of foreign shells, used copper implements, and were not entirely improvident of the future.

The location of the mounds on streams and near bodies of water has been observed by the author in Wisconsin also, and has led to the identifying of sites of villages.

The emblematic Mound Builders seem to have erected their earth-works on a different plan from others, as they had no enclosures, but seemed to depend upon the nature of the effigies for defense, yet the location of the effigy mounds sometimes indicate where the villages were placed. There are mounds, for instance, on the banks of the Four Lakes, which can be explained in no other way. One group is situated on Lake Monona, two miles east of Madison, another on Lake Wingra, about two miles west of the capital, another on the Second Lake, five miles south, others on Lake Mendota, three miles north. There are various mounds scattered on the hills and lake-bluffs in other directions, but such seem to have been used for other purposes. The first group is located on a swell of ground around which is a narrow morass or swamp, form-

ing, with the banks of the lake, a partial defense. The situation, is a delightful one for a village. The beauty of the scenery, the abundance of game and fish, and the extensive growth of wild rice near by, and the easy communication with other villages at a distance, all combined to make it an attractive and favorable place. The inhabitants of the village erected their emblematic mounds along the brow of the bluff, and so arranged them as to form a partial defense on either side, and yet left to themselves free access to the waters of the lake, and a passage way to the interior, across high and dry land.

The form of the enclosure, like that of all the enclosures observed in this State, is triangular, but the location of the mounds is decisive as to the object of it. The cut will illustrate this, and will, at the same time, give an idea as to the form in which the village enclosure was constructed. The same features will be seen, also, in the group of works on the Second Lake, and the same general characteristics may be found in the surroundings.

We conclude this article on Village Architecture by referring to the fact that if our explanation of the enclosures which are so common among the Mound Builders' works, is not the correct one, we do not know what explanation will be given. The village architecture of the Pueblo tribes, and of the civilized races of Central America, have been omitted, but the analogies between them and the Mound Builders' villages are apparent.

DESCRIPTION OF AN ANCIENT AZTEC TOWN IN NEW MEXICO.

MADE FROM PERSONAL OBSERVATION BY

WM. H. A. READ, TOLEDO, OHIO.

New Mexico and Arizona contain the sites of many ancient towns and cities of great interest, but none more so than those situated near the Pecos River, in Raton Pass. in the northern part of the former territory. The pueblo is known by the name of Pecos, and is in a fair state of preservation for a ruin. Not only is it of interest to the scientific student, but it is an object of veneration to the native people. It is at this pueblo tradition places the birth place of Montezuma,* and to which he is claimed to have returned after dying in the hands of Cortez from the wound of the arrow shot by

*The later traditions have doubtless substituted Montezuma for Aquetzacoatl, one of the primitive deities of all the Nahua and Maya tribes.

his own countryman, and where he then told his people to watch for his return, and commanded them to keep the sacred fires burning on the estufas until that time. It was here that the few faithful still watched and looked for their expected chief, when all other estufas of the once powerful Aztec had been abandoned and their fires long expired. Only in the early part of the present century, was this, the last estufa, the sole representative of the huge altars of the City of Mexico, where the pomp of the Aztec religion with its terrible human sacrifices was celebrated in all its heathen glories, was abandoned and its flames allowed to expire, then the small band of but five survivors departed to other and more powerful pueblos, where they would find protection from the Comanche Indians, their inveterate foes.† But the belief that Montezuma will return is still held by a majority of the Pueblo Indians; and I found in my talks with and about them that, though ostensibly under the complete control of the Jesuit priests, who rule the entire country with an iron hand, they all secretly cherish the religion of their forefathers. Invariably in passing a house in the morning the entire family is seen on the housetop looking with folded arms at the rising sun for Montezuma's return, he having promised to come in that manner. When the sun is fairly up they silently turn with bowed heads and enter the house, always from the roof, as there are no side entrances or windows to their habitations. They use a ladder to reach the top of the house, and drawing it up use it to descend on the inside.

The pass in which Pecos is situated is several miles in width, and has a number of hills located within its boundaries. On one of the largest, if not in height certainly in size, the town is situated. It is surrounded by a stone wall, in places five feet high, even now, which encloses about thirty acres, Inside of this, in some mounds, a few houses have been constructed and the sides stoned up, and in some instances the roofs braced with timbers. These were separate from the main town, and have the appearance, I imagined, of being used as quarters for slaves, or for some such purpose, not being comparable in location or structure with the other houses. I did not make an examination of the inside of these, save what could be made from the entrances, not being willing to risk the danger of squeezing in at the small openings between crumbling walls. The main town is situated on the highest point within the enclosure, which overtops and commands a view of the country for miles. One side of this hill ends abruptly with a perpendicular wall of solid rock

†Kit Carson found this pueblo inhabited in 1826.

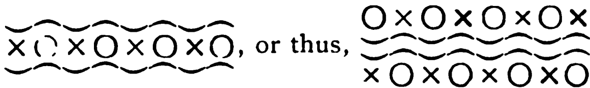
thirty feet high, without a break or crack large enough to put a foot in scaling. There is a fissure about one and a half feet wide in the face which has evidently been used as a pass to the town above. It has a gradual slant to the top, coming under the wall built on the cliff and opening directly into the town. At this opening were a number of large stones which could be placed over the entrance completely closing it and rendering the town, I should say, perfectly impregnable, for on all other sides of the top of the hill was built a wall of rock now five feet high and as many wide. This wall follows the shape of the hill, and on each side is built up at the point where the hill is the steepest, so that after a scaling party had entered the outer wall and reached the foot of the hill on which the town was situated, they would be compelled to climb a steep bank only to find arising out of the steepness itself a stone wall that must have been much higher than their heads, from which stones and other missiles could be hurled, while on all sides, the banks were so steep that an attacking party could not use their arms, but would have all they could do to climb in the face of a defending force. As this wall entirely surrounds the town with no break or gateway, the only legitimate way of entrance was by the pass in the rocky face, which could be so easily closed and was so narrow that only one at a time could enter, and if killed his body would choke up the way, and on account of two abrupt turns in the fissure it would be a difficult matter to remove it. This pass is so narrow that a "big horned" sheep in attempting to go up had been fastened by his horns and lay there dead. The houses were built of stone in the same manner as the walls, only a better class of material was chosen and more care used in construction. They were arranged with a square or plaza in the center, with all entrances opening in, so that being adjacent to one another they formed a solid wall around the plaza, thus making a third wall more difficult to scale than either of the others, and impregnable to anything at that day known, unless possibly a battering ram, which, in the narrow space between the wall and row of houses, it would be impossible to operate. These houses were, some of them, at least two stories high, but I think the rule was one. On only one was I certain of the second story. This house was the best preserved of all, and the only one that had a roof or ceiling or the walls complete, most of them being filled with the stone that composed them when intact, and were now mere heaps of building material. This house was nearly covered with fallen *debris*, but I determined to enter. After two hours spent in digging and removing stone I was rewarded by effecting an

opening through which I crawled, and found myself where probably no white man had been since the days of the Span- iards in New Mexico. The room was about 12 x 12, and six feet high. The stone ceiling was supported by sapling tim- bers that will soon let the roof in to fill up the house. By scraping up the dirt floor I uncovered ashes and charcoal. There were two stones about one and a half feet square, with trimmed sides and angles, in the room, which may have been used as seats; at least I used one as such, and resting from my work tried to imagine an Aztec on the other, and how he would answer the many questions I would ask, could I cause him to speak. Many of the stones in both walls and houses were of large size; some weighing hundreds of pounds, with trimmed and squared sides, were lying inside and outside of the town. They had been cemented together with no poor cement, for several times I found two large squared rocks which had evidently fallen or rolled some distance still firmly fastened together. In the plaza, which was nearly an acre in size, were three large cistern-like holes; one evidently for stor- ing grain, the banks of its mouth being slightly raised and slanting away from the hole (thus, ˜ ⌃) to prevent the water from entering. The natural dampness of the ground was not to be feared, for from the nature of the soil and the abrupt- ness of the hill there would be none. In the bottom of this I found a mill for rubbing grain, but, as it weighed about one hundred pounds, left it. It was the same utensil that is in common use among the native population to-day, and by them called *metate*. It consists of a stone about two and a half feet long by one and a half wide, in which is worn a groove or hollow within which the grain is rubbed to a pow- der with a stone pestle, while the mortar, if it may be so called, rests on the ground. The miller is always one of the women of the family. She sits on the ground with a leg on either side of the mill, and by swaying her body back and forth, holding her arms stiff and both hands on the pestle, crushes the grain to a comparatively fine flour. This she mixes with water to the proper consistency, and bakes the famous *tortilla* on a flat stone, though the Dutch oven is rap- idly being introduced. The *tortilla* has the appearance of a large griddle cake, and is one of the principal articles of food of the natives.

Another of these cisterns in the plaza was used as a reser- voir for water, having the banks of its mouth slanting in (thus, ⌄), so as to drain water into it. Many of these reservoirs are in use now in the modern Indian towns, some of them of large size. Their sides are plastered with clay.

and water is carried from the creeks and springs to fill them. They hold water well; at least I never saw one that was not filled, or nearly so. The third hole may have been used as a storehouse for ore, etc. In it I found quantities of silver bearing ore. Outside of the houses, but inside the second wall, are two others of these holes, and between the two walls still another, Pecos, with its fortifications and its granaries and cisterns well filled, could withstand a siege of long duration, even if its inhabitants were compelled to remain within the town itself.

Outside the outer wall, on the northeast of the town, still stands the ruins of a church built by the Jesuits about the year 1580. There was sufficient room and several good sites within the walls for the structure, but for some reason it was constructed outside with no connection whatever. Unlike the houses, it was built of large adobés (sun-dried brick, made with straw). This is the common building material of the country, used alike by whites and natives. Portions of the walls of the church are still standing twenty to twenty-five feet high, five feet thick, and will stand for many years to come. There are adobé houses in the territory which are known to have stood at least three hundred years, and are good for as many more, and look as substantial as those of modern construction. The church is built in the form of a cross 118 x 50 feet. The chancel forms the short end of the cross, and is 18 x 14 feet. It is ornamented with an arch of wood, which material forms the trimmings of various other portions of the building. This wood work is roughly carved with crosses and rings surrounded with sinuous lines, thus,



and is still in good preservation. There were windows in both sides of the building, but none in the chancel. Mica was used for glazing, and some fine specimens of it were found. The remains of a gallery exist on two sides, which may have been connected on the end opposite the chancel, but the walls of that end are entirely down. Under the chancel had been buried the remains of a man, probably a priest, whose bones, mingled with the fragments of his coffin, now lie on the ground near the hole from which some treasure-hunter, searching for the gold that is currently believed to have been hidden by the priests in every old church in the country, has sacrilegiously dragged them. He was buried in a white silk robe, portions of which, still in good preservation,

were found clinging to his bones. His skull has been captured by a saloon-keeper, and ornaments a bar in a neighboring town. Between the outer and inner walls of the town were the workshops, where pottery, arrow-heads, etc., were manufactured; and from the flint chips and quantity of broken pottery they were no small establishments, large mounds of the fragments being found. The arrow-heads found were of small size, and made of various kinds of flint, jasper and moss agate. I was fortunate enough to find a small lancet, about two inches in length, made of muscle shell, which is still sharp enough to bleed with; also a number of soap-stone implements, the use of which I could not imagine. Many small beads of soap-stone, shell and bone were found. The pottery* was of various kinds, variously ornamented, and portions of large vessels showed the action of fire. The bones of several kinds of animals were found, all of which had been split to extract the marrow. At the foot of the hill to the east of the outer wall is a dry water-course, about fifty feet wide, that bears evidence of once having a deep and swift current. A smaller stream once ran on the west side of the town. South, about five hundred yards from the ruin, is a point of special veneration, held sacred by the native population. Here, with toes pointing to the northwest, are the impressions, in solid rock, of a pair of human feet of large size. It is pointed out as the spot where Montezuma stood when he gave his instructions to his people and promised to return to them again.

*The fragments of pottery collected at this ruin exhibit some characteristics of especial interest. In ornamentation it was much like that obtained from other similar localities, the colors, black, white, yellow, red and brown, being well preserved. The material was a fine clay, which had been well worked, and contained many minute flakes of mica. A fragment of a plate-shaped dish was as perfectly formed as it could be on a potter's wheel, both surfaces very smooth, the material compacted as firmly as if molded in a press, and the bottom only one-eighth of an inch thick. A single fragment was perfectly glazed over a part of both surfaces, and shows how the art of glazing might be learned through efforts at ornamentation. The coloring matter, put on in scallops along both surfaces of the rim of the vessel, was thoroughly melted in burning, and so incorporated with the clay as to result in a perfect glazing of the surface. Most of these fragments were burned to a cherry red, though some retained their original blue color at the center. A flat fragment carefully ground to a circular disk the size of a silver dollar was picked up, in all respects similar to disks of pottery and cannel coal picked up on the site of ancient potteries in Tennessee, and which, formed of various materials, have been gathered in all parts of the Mississippi Valley.

The pottery gathered from modern pueblos in this neighborhood was much coarser, of darker color, not so perfectly worked or burned, and ornamented only by scratches and indentations on the surface of the vessels made before burning.

SPECIMEN OF THE CHÚMĔTO LANGUAGE.

BY ALBERT S. GATSCHET, WASHINGTON, D. C.

I.

The Chúmĕto language is a dialect of the Mutsun linguistic family of California, belonging to its eastern or Míwok subdivision. It is spoken by the small tribe of the Chumtéya Indians, living on the middle course of Merced River, a watercourse which drains the celebrated valley of the Yosemite.

This family of dialects has received its name somewhat arbitrarily from a populous tribe which the early missionaries found in the vicinity of San Juan Bautista, about thirty miles east of the Bay of Monterey: the Mutsunes, Motsunes or Moçones. Of all the cognate dialects, this one was the first to be extensively studied, viz. by the Padre F. Arroyo de la Cuesta, who resided among these Indians since 1810, and died in 1842. His Mutsun Grammar and Collection of Sentences were published in New York (1861), by J. G. Shea. The name of this tribe was then given to the whole stock, which includes over ten dialects, differing considerably among themselves, and extending from the Sierra Nevada across Central California to the Pacific Ocean. I have deemed appropriate to divide this family into three subdivisions, one south of San Francisco Bay, the second north of it, and the third or Míwok subdivision, east of the San Joaquin, south of the Kósumnes and north of the Fresno River.

The investigator of the latter division, Mr. Stephen Powers, includes in it the following tribes, existing there about the year 1872 (*Overland Monthly*, April, 1873, pages 323–333; *Contrib. to N. Amer. Ethnology*, vol. iii, pages 346–368, inluding Yosemite Indians):

"On the south bank of the Middle Cósumnes are the Kâ'ni; on Sutter Creek, the Yulóni; in Yosemite, the Awáni; on the South Fork of the Merced, the Nŭ'tchu; on the Stanislaus and Tuólumne River, the extensive tribe of the Wálli; on the Middle Merced, the Chŭmtéya; on the Upper Chowchilla River, the Hethtóyą; on the Middle Chowchilla, the Chowchilla; on the north bank of the Fresno, the Póhonichi."

Before enumerating these tribes in the order given, Mr. Powers states that the Míwok north of the Stanislaus River designate tribes principally by the point of the compass. Thus, the Túmun, Túmidok, Tamoléka, are the "northerners" (túmun, *north*); the Chúmuch, Chúmwit, Chúmidok or Chímidok, Chumtéya are the "southerners" (tchúmutch, *south*);

the O'lowit, Olówidok, Olowíya, the "westerners" (ólowit, *west*); the mountain tribes calling Olówidok all the tribes on the plains as far west as Stockton and the San Joaquin River.

As for the ethnography of these tribes, readers may be referred to the interesting sketches given by our authority in the articles above mentioned. In the "*Contributions*" these statements are accompanied by illustrations, and what is still more useful, a linguistic map of the State of California is added to the volume.

Limiting myself to the investigation of the Chúmĕto (or "*southern*") dialect, I shall only try to elucidate the above proper names by the few following remarks: Chumtéya is the plural form of Chúmĕto, Chúmedok. Wálli is the word wállim, "*down below;*" Kósumnes River is named after the *salmon* (kóssumi); Yosemite Valley after the *grizzly bear* (osóamit, in Chumĕto: uhúmati); Mokélumne River after wakálumi *river;* Míwok, miwa, miwie is their term for *man*, *Indian*, *people*.

The following ethnographic text I obtained, with other linguistic information, from a Chúmĕto Indian, Charles Manning, twenty-two years old, whom I met in New York City in 1877. He had quitted California many years before, and left his father, Pasássi Ohóma, or the White Bear, at home; his uncle, E-uti Híka or Young Deer, had been killed previously in a contest with other Indians. Manning stated that his tribe called Yosemite Valley Héhum, the Sacramento River Supémtchie*; that the Hethtóya tribe, mentioned in his text, spoke a dialect which was partially intelligible to him; the same he said of the Tómole Indians in Tuólumne County, who are the Tamoléka mentioned above. The Snake Indians were called by him Hépeye, plur. Hepeyíta; they are probably the Pai-Uta of the mountains of south-eastern California; a *snake* is to them higgáya. When my informant left his home, the name of the tribal chief of the Chumtéya Indians was Wáltchista.

MANNERS AND CUSTOMS OF THE CHUMTÉYA INDIANS.

Tchumtéya û'dshûpû aiyĕto haléyat; weyä'nu maisei,
Tne Chumtéya live on a flat in the mountains; they plant maize,

kén weyä'nu pápasi; hálggi ú-opo, hunéma; néok náttû
not plant potatoes; by hunting they feed, by fishing; they with accuracy

túggo. Iyok waká varaíko-oni.
shoot. They cows sheep have.

3 Ú'tû hísok tû'huhhi hûggûtóhu; huntoyáhi tû'-uhhi,
Thick hairs black (pl.) on their heads; the eyes dark (pl.),

nitóhu tchinnipítki oyáni, húpĕtoho tchinnepítki, lá-ut
nose small (and) broad, their neck short, skin

*So named after its numerous bends: supä'no, *elbow*.

6 yutótchi. Ŭp'ha Tchumtéya wakálmatot; ohháya ŭ'p'ha,
brown. Swim the Chumtéya in the river; women swim,

esélete aítu. Kíngĕ onádshù huáto, kíngĕ hápka lamá-i.
children all. Some fast run, some climb trees.

Néok ken sû'ku háwat, ken sû'ku lá-utüi. Ŭtu poχá-u
They not paint on rocks, not paint skin-dress. Many they wear

9 hassánui; kéngi kû'tchötch humnáho, kéngi kû'msol, uláto
avlone-beads; some of bone have beads, some shells, long

húmna, uláto tissö'no. Sù'ku örk̄itáho tróχot sĕkĕ-áhu
beads, as long as the finger. They tattoo on their chin three ?

awúha kúlla. Evúya nawassú'hu vû'. Aítu páma káhui.
needle with coal. Without dresses (they) go. All smoke wild tobacco.

12 Kánni huíngema míwi, ken kótan udshúyu, tóllem aítu
I have seen Indians, not distant they lived, on the ground all

túyenu, o-íssa oyáni húhhui húyut. Oyáni útchut udshúpu,
sleep, four long logs in the fire. In a large house they live,

tólles hammépu, húyu kawénim; túluma hágsi
with earth they cover (it), the fire (being) in the midst; through a hole the smoke

15 vúgsa. Kénget útchu aitu; támu lû'ppû.
escapes. In one house all; differently they speak.

MOUND JOLIET.

BY O. H. MARSHALL.

On the western bank of the Des Plaines river, about forty miles southwest from Chicago, and a short distance below Joliet, there was found, at the first exploration of the country, and still exists, a remarkable mound, which bears some evidence of artificial construction. It is situated on the river bottom, and rises in the form of a truncated cone, about sixty feet in height. Its level top measures 1,300 feet in length and 225 feet in width. Its regular sides form an angle of about 45 degrees with the horizon. The early travelers and settlers attributed its construction to the Mound Builders, but scientific examination proves, beyond question, that it is a natural formation, composed of layers of clay, sand and gravel, similar in all respects to the adjacent bluffs. It was probably an island, formed by the swollen eddies of the river when at a remote period the latter filled the broad valley as far as its upper banks on both sides, and before it had subsided into its present channel. The mound formed an object interesting to the first visitors to Illinois, breaking with its regular outline, the monotonous landscape of the prairie. Thomas Hutchins' map of

1778 is the first in which we find it laid down. It also appears on Winterbotham's atlas of 1796. In both these instances it is called "Mount Juliet." Samuel Lewis, in his map of 1795, calls it "Mount Jolie." Schoolcraft, in his travels in the Missisipi valley, passed it on his return up the Des Plaines in 1821, and called it "Mount Joliet." He says it took its name from the Sieur Joliet, who accompanied Marquette in his search for the Mississippi in 1673. He gives an engraved view of its appearance at that time, and pronounces it an alluvial formation. A few scrub oaks grew on its western side, the remainder being covered with the prairie grass.

Peck, in his Gazetteer of Illinois, published in 1834, says it was a natural elevation, and was named after Joliet by his companions, at the time of their visit in 1673.

The earliest notice of the mound which I have been able to find is contained in letters from Father Francis Buisson de Cosme to the Bishop of Quebec, giving an account of a visit made by the former to Arkansas in 1698. The party consisted, besides the writer of the letter, of Mgr. de Montigny, M. Davion, and the one-armed Italiàn, De Tonti, so well known as the trusted companion of La Salle in his American enterprises and discoveries. The whole letter is full of interest, but we have room only for a translation of that portion which relates to Chicago and their voyage from thence to Mount Joliet.

On approaching from the north, the lake became so stormy that they were obliged to land twelve miles short of Chicago and go by land to that place. They were welcomed there by Fathers Pinet and Buinateau, who had recently arrived from the Illinois, and were a little unwell.

"I know not how to express to you," says De Cosme, "the cordiality and friendly attentions with which those reverend Jesuit fathers received and embraced us, while we had the satisfaction of remaining with them. Their house is built on the banks of the small river, having the lake on one side and a fine, large prairie on the other. The Indian village of over one hundred and fifty cabins is a league up the river. There is still another village, almost as large. Both are composed of Miamis. The Rev. Father Pinet resides among them ordinarily, except in winter, when the Indians are all on the chase, he goes to pass it among the Illinois. We saw no Indians there. They had already gone on their hunt. Judging from the brief time Father Pinet has been in this mission, we can say God blesses the labors and zeal of this holy missionary.

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"On the 24th of October, the wind having abated, we brought our canoes and all our effects. We made a *cache* in the ground, and took only what was strictly necessary for our voyage, postponing sending for the rest until spring. We left them in charge of Brother Alexander, who consented to remain there with Father Pinet's man.

We left Chicagvv on the 29th, and encamped about two leagues up the little river, which above that is lost in the prairies. The next day we began the portage, which is about three leagues long when the water is low, and only a quarter of a league in the spring, when one can embark on a small lake, which discharges into a fork of the river Illinois. When the water is low a portage must be made to that fork.

"We accomplished half the portage this day, and had gone a little further when we perceived that a small boy, whom we had taken of M. de Muys, having set out alone, although told to wait, had strayed away, no one looking after him, as everybody was occupied. We were obliged to stop and look after him, everyone joining in the search. We fired our guns several times, but could not find him. It was at an unfortunate time, for the season pressed us, and the streams being very low, we clearly saw that, being obliged to carry our effects and canoe, there would be scant time for us to reach the Illinois. This decided us to separate, M. de Montigny, De Tonti and Davion continued the portage the next day, and I returned with four others to search for the little boy. On returning I met Father Pinet and Buineteau on their way with two Frenchmen and an Indian to the Illinois. We continued the search all day without success. As the next day was the festival of All Saints, I was obliged to go and lodge at Chicagvv with our people, who, having heard mass and performed their devotions early, spent the rest of the day in seeking for the little boy, without finding the least trace of him. It was very difficult to find him in the tall grass, for this country is all prairie. We were afraid to set fire to the high grass through fear of burning the lad.

"Mgr. de Montigny had told me not to remain longer than a day, because the cold weather pressed us, so I was compelled to leave, after having charged Brother Alexander to search after him, and to take some Frenchmen who were at Chicagvv.

"I left the 2d of November. In the afternoon I went over the portage and slept on the Illinois river. We descended the river to an island. At night we were surprised to see an inch of snow, and the next day the river froze in many places, so that we were compelled to break the ice and drag the canoe, through want of water. This obliged us to leave our canoe

and go to seek Mgr. de Montigny, whom we met the next day, which was the 5th of the month, at the Isle au Certs. They had already made two leagues of portage. There remained four more to Monjolly, which we accomplished in three days, and arrived there the 8th of the month. From the Isle à la Cach to Monjolly, and the space of seven leagues, we were obliged to carry our effects, there being no water in the river excep in the spring. All along the river it is very agreeable. There are prairies bordered with hillocks covered with fine woods, where there are multitudes of deer, as well as well as plenty of game of all kinds in the river, so that after having finished the portage one of our men went out and obtained enough for an abundant supper and a breakfast the next day.

"Monjolly is a mound of earth in the prairie, about thirty feet in height, on the right bank of the river in descending. The Indians say that in the time of a great flood one of their ancestors was saved, and that this little hill is his canoe, which he upset there.

"On leaving Monjolly we went about two leagues, and remained a whole day at another short portage of about a quarter of a league. As one of our men, named Charbonneau, had killed many turkeys and bustards and a deer in the morning, we profited by the circumstances to give our people some refreshment and a day's rest.

"On the 10th we made a short portage, and found water for half a league; then two men conducted the canoe, the rest walked on the bank, each with his load, and embarked for the distance of a league and a half, and encamped for the night at a short portage five or six arpens further on.

"On the 11th, after having passed the short portage, we reached the river Tealiki, which is the true river Illinois, the one we have descended being only a branch."

It would appear from the foregoing journal of Father de Cosme that the name first applied to Mount Juliet was "Monjolly," which is evidently a corruption of Montjolie. Subsequently "Joliet," the diminutive of Jolie, was substituted for the latter. Neither of the names had any reference to Joliet, the companion of Marquette, as Schoolcraft and others have supposed, but to the singular beauty of the mound as it appeared to the early explorer.

Soon after the pioneers settled in the valley of the Des Plaines, they changed the name of the adjacent village of Joliet into "Juliet," as a compliment to the daughter of one of its first proprietors. To complete the absurdity, they called another settlement near by "Romeo." The mound also came to be known by the name of "Juliet," which it bore until 1845,

when the Illinois legislature, with great good sense, restored the name of Joliet, by which both the mound and the neighboring city have since been known.

The writer visited Mount Joliet while on a tour up the valley of the Des Plaines in the spring of 1836. Few changes had then taken place since it was examined by Schoolcraft fifteen years before. The stakes then recently set by the engineers, in their survey of the Illinois and Michigan canal, could readily be traced in the prairie grass near the base of the mound, while the only other sign of the coming civilization was a rude hut on its summit, built the year before, in a grove of stinted forest, for the purpose of securing preëmption.

It is much to be regretted that the removal of large quantities of sand and gravel, in the construction of the canal, and for other purposes, have sadly marred the symmetry of this beautiful elevation, and left but little to show what was once the most striking of the three prominent landmarks of northern Illinois—Buffalo Rock, Starved Rock, and Mount Joliet.

EDITORIAL.

THE SERPENT SYMBOL IN ART AND ARCHÆOLOGY.

We give with this number two cuts, illustrating the serpent symbol as embodied in ancient art and archæology. One represents the symbol as found in America, and the other as found in Greece. It would appear that serpent-worship was common in primitive times in both countries, and that it continued prevalent late in history. It is generally associated with idols and images. We know that it was very common in Mexico, the entrances to the temples being through the jaws of monster serpents, and the stair-cases of the teocalli being guarded by their monstrous scaly forms. The serpent tradition and the serpent symbol seem everywhere to have been associated with religion, as it appears in the story of the garden of Eden, and is the most prominent object in the ancient temple architecture of this country. It is found early in Egypt, and appears in the barbaric decorations of that country and Phœnicia. Wherever native religions have had their scope, this symbol is sure to appear. It is seldom seen, however, in connection with any high state of art, the two specimens which we present being exceptions to the general rule. The frontispiece, which represents the Mexican idol, shows that art was developed, but was held subordinate to religion. The cut which we take

THE ATHENE GROUP.

from the *Century* magazine represents the discoveries at Pergamos. It appears from this that the serpent figured conspicuously in Greek art, but lost, more or less, its especial religious significance. The contrast between the two is very marked. The conception is very different. The Goddess of Death and of War contrasts with the Goddess of Wisdom, though the serpent symbol remains in both. In the Greek sculpture it became representative of physical rather than spiritual bondage. In the Mexican there is an entire supremacy of the serpent, but in the Greek there is a struggle to overcome.

Christian art has banished the serpent, almost entirely. The symbols, generally, are those of life and light, but a study of these ancient specimens may be suggestive. A description of the two works of art may be in place here.

The idol represented in the cut was brought to light in grading the Plaza Mayor, in the City of Mexico, in August, 1790. It was near the place where the great Teocalli stood, and where the principal monuments of Mexico were. They were thrown down at the time of the conquest, and buried from sight. It is an immense block of bluish-gray porphyry, about ten feet high and six feet wide and thick, sculptured on front, rear, top and bottom, into a most complicated and horrible combination of animal, human and ideal forms. It represents on one side the Aztec Goddess of Death, *Teoyaomiqui*, whose duty it was to bear the souls of dead warriors to the House of the Sun, the Mexican Elysium. The rear

view of the idol represents Huitzilopochtli, God of War, and husband of the Goddess, whose emblems are carved on the front. The bottom of the monument bears a sculptured design representing the God of the infernal regions, thus combining the fearful trinity, Goddess of Death, God of War, and God of Hell, three distinct deities in one idol.

The sculptured base, together with the side projections, prove, according to Mr. H. H. Bancroft, "pretty conclusively, that this idol, in the days when it received the worship and sacrifice of a mighty people, was raised from the ground or floor, and was supported by two pillars at the sides, or possibly by the walls of some sacred inclosure, the space left under the idol being the entrance." This idol was associated with the so-called calendar stone and the sacrificial stone, all of which were covered with the symbols of the religion of the Aztecs. Perhaps there is no specimen of art which retains the primitive serpent-symbol more perfectly developed or more intensely involved than this, for it is strictly a religious product, free from all of the artistic and adventitious designs. The contrast between the Greek art and the Mexican is perceptible here, for the artistic conception is much more prominent in the Greek sculpture than the religious.

The other picture represents the Athené group, found in the frieze at the Parthenon. The writer, in speaking of it, says: "The Laocoon group of the Vatican has some features of resemblanee to the dying giant of this Athené group. In this group, however, although physical pain is expressed, yet, like the discords in music, it seems only introduced to make more powerful the harmonies in this great symphony in marble. We are fascinated by the beauty of the giant, moved by the anguish of his mother, taken altogether captive by Athené's noble form, and Niké's swift grace, as well as by the glorious thoughts expressed in the whole."

Judged as a work of art, the sculptured figures at Pergamos are far in advance of anything found in America, but they have lost their mythological character. If Athené retains her character as the goddess of the air, of letters and of wisdom, she has lost the symbolical character, so that not even her usual symbol of the owl is preserved. Even the elementary idea of the moon, personified and worshipped, has disappeared, aud the conception is purely intellectual. Physical strength contends with the serpent form, and is overcome, but intellectual power is supreme, and hovers near to protect and rescue. The old form of the serpent as a reigning divinity, a power of darkness, belonging to death, disappeared from the Greek art, but grew strong in the American. It was an early

conception of Greek mythology, that the pipe which Athené invented was named many-headed, on account of the number of serpents whose mournful hissings had given origin to the instrument. This was about the only connection which Athené had with the serpent. The Mexican conception is more like the Scandinavian or Norse. The serpent was the emblem of darkness and death.

If there are emblems of victory over these, we have not yet discovered them. Whether there was a law of progress, which in the end would have developed such an emblem, we do not know. But we give the two illustrations by way of contrast, contrast not merely in the figures, but in the ideas back of them. A great difference in the religious conception of the two nations is manifest. The subject is suggestive, but we leave it just here.

THE LITERATURE, CHRONOLOGY AND HISTORY OF THE MAYAS. The early inhabitants of Yucatan, seem likely to be brought out with as much completeness as their archæology and architecture have been. This, the most ancient people of America, have left monuments of themselves in the celebrated palaces of Palenque, Uxmal, and Chichen-Itza, which the distinguished traveller Stephens visited and described over thirty years ago. There is, however, a great deal of mystery hanging over these ruins and the people who built them, because the hieroglyphics which were discovered at that time and later have never been deciphered, and no clue or key to their decipherment has ever been discovered. The Jesuits destroyed many valuable documents and books belonging to the people, and those which have been preserved have never been interpreted or understood. There are, however, certain records which were written by the natives after the Spanish conquest, and preserved in the various villages of Yucatan, under the name of Chilan Balam. The celebrated Dr. Berendt spent a great deal of time in collecting these records, having made four trips to the region for the purpose, and had begun to collate and interpret these for publication when he died. The MSS. have, however, with many others of a similar nature, fallen into the possession of Dr. D. G. Brinton, of Media, Pa., and he has begun a series of publications designed to give these records exactly as they are, but accompanied with translations and comments which make their meaning plain. The first of the series has already appeared, and proves to be quite a readable book. It must not be understood that these chronicles are at

all attractive in a literary point of view, for they are of the nature of dry tables and lists of names and dates, resembling in this respect some of the inscriptions on the obelisks and monuments of Egypt and Assyria, yet they are of great value, as they reveal many things concerning the past migrations of this people, and help us to understand something about the dates and occupancy of the ruins to which we have referred.

It is possible that the thought and the history of the people will sometime be disclosed, for it is supposed that many books and records lie buried with the priests and chief men of this ancient people, and need only to be exhumed to furnish much information concerning their religious system and their symbology, and other things now unknown, but for the present these are the main dependence, and therefore the effort of Dr. Brinton will be welcomed by all antiquarian students, for they are not only original contributions, but are also presented in a readable and interesting manner.

RECENT INTELLIGENCE.*

DURING the deep excavations at Messrs. Drummond's banking house, at Charing Cross, London, some extremely interesting fossils were discovered. These have been identified and put together, and form about one hundred specimens of the ponderous animals which mark the pleistocene times, cöeval with the earliest appearance of man. They include bones of the cave-bear, tusks of the mammoth, tusks and bones of extinct elephants, remains of extinct Irish deer, rhinoceros, and of extinct oxen, from the pleistocene gravels; also bones of the horse, the sheep and the celtic short-horn from recent deposits.

DR. SCHLIEMANN resides in a stately marble palace in Athens. Over its doors is a golden inscription, "The Hall of Ilium." Every room in the house commemorates in some way the researches which have invested the name of Schliemann with a halo of romance. The walls are covered with objects, or pictures of objects, found at Mycenæ and Troy, with Pompeiian frescoes, and with mottoes from Homer. The "Hall of Ilium" is of imposing dimensions, for its reception rooms are said to hold 300 guests. In these salons, every alternate Thursday during the winter, Dr. Schliemann entertains a large assembly of statesmen, journalists and professors.

A RELIC has been recently discovered in Cedar county, Mo., supposed to have been a Mound Builders' idol. It is four feet

*Many of these notes were furnished by Dr. J. A. Butler.

long, in the shape of a lizard, carved from slate, of artistic workmanship. Upon close examination, the idol is found to be made up of part of a dozen creatures—amphibia, carnivora, insects, reptiles and fowls. The top of the head has the semblance of a flat bone plate, and is shaped like that of an eagle, with a long, sharp beak. Near the middle of the beak is a horn, like that of a rhinoceros, of a light yellow color.

A VERY INTERESTING DISCOVERY has been made in Germany on the River Maine. It is that of the sanctuary of Mithras, a shrine which shows that the worship of the Sun-God, Mithras, was introduced into the Roman empire from Persia at an early date. An altar of Jupiter has also been discovered. Both of these were in connection with Roman antiquities.

THE OCCURRENCE of cromlechs (circles of stones) in the Electorate of Hesse, has led to the discussion of whether the northern limit of such monuments is to be found there.

THE RESTORATION of the feudal castle of Heidelberg is being agitated in some parts of Europe.

DEEP EXCAVATIONS in the Chalk in Kent, England, have recently been explored with great interest. A large number of chambers, 18 feet in height, and from 40 to 70 feet in length, with double trefoil arches, have been traced. The floors are covered by a black humus, supposed to have been produced by the decay of corn, grain and wood. These underground works are connected with ancient camps, huts, circles, ancient roads and boundaries, and give the appearance of having been the site of ancient villages.

A BRONZE AGE FIND has been made in Northay, in England. A barrow disclosed, when excavated, a bronze dagger, a quantity of pottery, bones and ashes in one of the pots, and a quantity of bone earth. Some of the bones had been burned and put in a pot, but those of slaves and hostages had been collected and burned, but not potted.

CAPT. CONDER, of the English Palestine exploration company, having finished Western Palestine, has been engaged in Eastern Palestine. Many cromlechs and rude stone monuments have been discovered. Baal Peor, Zophim, and other biblical places have been identified. This whole part of Moab is shown to have been the center of a peculiar form of religious worship, of which the tokens are still preserved in the monuments.

AN ANCIENT DRUIDICAL ALTAR has been discovered in Kingston, England. Its sacrificial form, and the sacredness with which it was regarded by the Britons, had led the Sax-

ons to use it as a crowning stone. It has stood in the court-yard at Kingston, but its history is supposed to be a remarkable one.

AN EXTENSIVE FIND OF COPPER IMPLEMENTS near the Sault Ste. Marie has recently been made. It contained twenty-three pieces consisting of six awls, the largest one about six inches in length, the smallest, three inches, five knives of various sizes, and thirteen pieces composed of axes, hammers and chisels. They were found lying piled together, straight and close, encircled by a little pile of stones, and are supposed to be the treasure of some ancient miner, as some of them show marks of very considerable age.

NUMISMATIC.—Eton College has a series of Roman coins, duplicates from the British museum. They are used in classical instruction, bringing pupils into actual contact with the objects of learning.

A. S. GATSCHET has published a list of geographical names in southern United States, with etymologies from the speech of the former Indian inhabitants.

ANCIENT COFFINS.—Two coffins hollowed out of the trunks of oaks, and so resembling canoes, have just been unearthed near an old church in the English parish of Grimsby. Something of bark still clings to the wood, and the lids had been fastened on with wooden pins. These relics were found in a bed of solid clay. Two similar coffins discovered a generation ago in Aberdeenshire were considered by Scotch antiquaries to be as old as the year 400 A. D.

OF THE TWENTY PHARAONIC MUMMIES so strangely discovered last year in a pit at Dayr-el-Baharee, several were garlanded with flowers. The greatest wonder is that these flowers, though plucked three thousand years ago, may now be seen in the Boolak museum, in a suburb of Cairo, in as perfect preservation as others beside them which were gathered and dried only a few months ago.

ETHNOGRAPHIC MASKS and busts were modeled in plaster by the Schlagenweit brothers from living specimens in India, Thibet, Central Asia, Morocco and North America. They have been reproduced, and are sold in Leipzig at one dollar apiece in plaster, and at three dollars in zinc. The numbers are: Asiatic, 275; American, 9; Moorish, 29. The execution is so perfect that the slightest roughness in the original skin is shown.

THE DISCOVERY OF A POMPEII in central France, near Poitiers, is announced by M. Lisch, French inspector of historic

monuments. A temple, baths, hotels, a theatre, and more than fourteen acres of houses are mentioned among the findings.

DR. PAULI'S "TUSCAN RESEARCHES" show an advance in the decipherment of Etruscan inscriptions. He is thought to have proved that language neither Italic nor Indo-European. The difficulty of interpreting Etruscan words arises from the fact that its written remains are so scanty that no basis is afforded for ascertaining the *usus loquendi*. Accordingly a leaden plate just discovered at Magliano, in Tuscany, bearing a dozen Etruscan lines, is considered about the most important ever made. It records an eighty years' lease of land, and closes with a curse on the violator of the contract.

LEONARDO DA VINCI'S writings, gathered from many European libraries, by Richter, with 220 original drawings and 450 fac simile illustrations, are just coming out in London. The two imperial octavos are sold for eight guineas.

THE PARISIAN SCHOOL OF FINE ARTS (*Beaux Arts*) has opened with [illegible] students, namely, [illegible] architects; 285 painters, and 184 sculptors.

AUSTRALIAN VICTORIA has just voted £[illegible] to enlarge the Public Library and School of Art.

THE SANSKRIT MSS. in the palace of Tanjore, set down in the catalogue drawn up by the late Dr. Burnell, number [illegible]. This collection is probably without a rival, as the Bodleian and the Berlin libraries contain each about 1,500, the Deccan College [illegible] and the India office about 3,000.

[illegible]—the [illegible] French government [illegible] $[illegible] has been set aside [illegible] the fire-[illegible] and a third [illegible] For the support of [illegible] and Athens, the [illegible] $[illegible] The Paris [illegible] specimens.

[illegible] the judgment [illegible] characters.

[illegible] caught while digging [illegible]

[illegible] archæological [illegible] more than 200 [illegible] about thirty in Greece [illegible] pottery, and at [illegible] closely resembling [illegible]

AT A RECENT ARCHÆOLOGICAL MEETING IN ROME, an antique lately found there, and of special interest, was exhibited. It was full half of a round marble shield, inscribed *Theodorus, sculptor of Athens. Shield of Achilles, according to Homer.* On its border seventy-five lines from the eighteenth Iliad, descriptive of the shield, are distinctly legible. The carvings are supposed to be copied from paintings described by Pliny (Natural History, book xxxv, 40, 40, as executed by Theodorus on the *Porticus Philippi* at Rome, for illustrating the Iliad. Pliny's words are: *Theodorus bellum Iliacum pluribus tabulis pinxit quod est Romæ in Philippi porticibus.* Five other paintings at Rome by the same artist are mentioned in Pliny. The Homeric lines cut in this marble being more ancient than any manuscript extant, it is pleasant to know that their variations from the accepted text are extremely few. But the great charm of this find is that it shows a classical chisel illustrating a classical author in all the scenes of many-colored life. If the missing half of the marble shield should be excavated at Rome, the discovery would be in keeping with those which have been often made. At all events the portion already rescued from Roman rubbish will never cease to be compared with the Shield of Achilles by Flaxman, which in his own eyes was his masterpiece. Photographs of both the antique and the modern handiwork will soon be set down side by side. Flaxman's design, executed in silver gilt, cost two thousand guineas, and was one of the most fascinating decorations in the palaces of George IV and the king of Hanover. It is held by art-critics for the noblest achievement in its line of the British school.

LINGUISTIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

MÜLLERS "OUTLINES."—The racial division of mankind after the growth of the hair, proposed by Ernst Haeckel, Oscar Peschel and others, has been followed by Prof. Müller in composing his "*Outlines of Linguistic Science,*" a German publication of which we have made previous mention in this quarterly, vol. I, page 83. The two great orders into which humanity is thus divided by means of this classificatory principle are the woolly-haired and the sleek-haired races, and further subdivisions are made after the following scheme (*Outlines I, page 73*):

I. Wooly-haired or Ulotriches.
  (*a*) Tuft-haired, Lophocomi: Koi-khoin, Papúas.
  (*b*) Fleece-haired, Eriocomi: Negroes, Kaffirs.
II. Sleek-haired or Lissotriches.
  (*a*) Straight-haired, Euthycomi: Australians, Hyperboreans, Americans, Malays, Mongolians.
  (*b*) Curly-haired, Euplocami: Dravidians, Nubas, Mediterraneans.

The American race is now classed by the majority of ethnologists as a subdivision or offshoot of the Mongolian race. This is done also with the Arctic or Hyperborean race. Prof. Müller treats of the languages of these two races in the second volume of the "*Outlines*," but does not state the peculiarities by which the American languages differ from those of the Hyperboreans. In sketching a language, Müller does not aim at minutious and unimportant things observed in their structure or lexicon, but satisfies himself with giving the main characteristics in phonology and morphology. The quality, number and grouping of sounds, vocalic as well as consonantic, are the points to be given in phonology. In morphology it has to be decided whether the verb is a real verb or a noun-verb only, and if the latter, whether it is in fact a *nomen actoris*, or a *nômen actionis*, or shows forms of both or of something else besides. Does the noun show real grammatic cases or not? and is the *formal* part of grammar kept strictly distinct from admixture of a purely *material* significance? Dialects pertaining to about thirty-six American linguistic families are treated in the descriptive portion of the work (II, part I, pages 184-428), and among these we find several, of which the materials are either new or of a very difficult access. There is, for instance, a sketch of the language of the Koloshians or Thlinkit in Southern Alaska, of the Bribri in Costa Rica, investigated by Dr. W. M. Gabb; of the Yarura and Betoi on the Orinoco R., of the Chimu in Northern Perú, and of the Tehuelhet or Tsoneca in Patagonia. The languages of the Ural-Altaic stock close up the second volume, and the third will deal with the languages of the white race.

PROF. MAX MÜLLER lately wrote on American languages to a correspondent in this country: "It has long been a puzzle to me why the most tempting and promising field of philological research has been allowed to lie almost fallow in America, as if these languages could not tell us quite as much of the growth of the human mind as Chinese or Hebrew or Sanscrit. But the study must be taken up in a scholar-like spirit. It requires not less but more accuracy than Greek or Latin. I wish I had a young array of scholars about me, and could order them about to explore where I know that treasures are to be found, though I am too old to dig for them." This is an excellent reminder and also a severe criticism on the indifference of the American people in regard to these studies. Why more accuracy is required in studying Indian languages than Greek or Latin we fail to understand; but we assure Prof. Müller that the U. S. Bureau of Ethnology is hard at work in preparing publications on Indian languages, which, after they are published, may turn the attention of the public at large upon these much neglected linguistic organisms. Encouragement from private persons is unfortunately lacking, for when a rich man makes his testament, he will a thousand times sooner donate his millions to some religious institution than to efficiently promote the welfare of mankind by encouraging the study of the historico-philosophical sciences. Prof. M. Müller, in one of his numerous works, tells us that at one time he lodged in his house two students of the Mohawk tribe, and that he was delighted with the study of their ingenious, regular, well-formed and sonorous language. Why does he not tender a specimen of his mode of treating Indian languages by giving publicity to his studies in Mohawk?

INFLECTION OF THE COMANCHE NOUN. The Indian languages east of the Rocky Mountains do not generally possess nominal inflection by case. They are using postpositions instead, or indicate case-relations by the affixes appended to the base or stem of the *verb* of the sentence. In many languages of the Pacific slope we observe the same peculiarity, while others possess a fully-developed case-inflection of the noun and an inflection by case-postpositions besides; the Sahaptin dialects, Shasti, Klamath of Oregon, Mutsun, and the various dialects of the Shoshoni or Numa stock. In South America the Molutche of Chili, the Yunca or Chimu of Peru, and the Kechua with Aimara, possess a well-developed array of cases formed by suffixes, whilst in many other South American tongues the case-relation is expressed by the position of the words in the sentence. The sentences given below are taken from the Comanche language, which belongs to the Shoshoni or Numa (Ni-ama, Ne-um, or Nemue) family. Numa, with its dialectic forms or variations, means *people, men, Indians*. The diversity of cases is very clearly and prominently expressed in these sentences, although, from ignorance of the language, we cannot distinguish as yet between true case-suffixes and mere case-postpositions, the latter being words which can also be used independently for themselves. The difference between singular and plural is set forth by the plural ending -nō, -nnō, -nnā.

hûpi, hû-upi, *tree.*
kehétsa hû'hpi, *no tree.*
páte hûpi, *a tall tree.*
pá-itüχtchi hûpi, *a low tree.*
hû-upinnō, *trees.*
hü'-i'htsüχtsi hu-u'hpinnō, *a few trees.*
itĕ hūpinnō, *each tree.*
óyit hûpinnă, *all trees.*
nü'ĕ sohóro-in hū'm, *I climb a tree.*
parûku sóhoro-in hū'm, *the racoon climbs a tree.*
wa-áwa hûpin mató-i, *the cat climbs the tree.*
hû'htsu hū'm aká'ht, *the bird sits on the tree.*
nü'e hû-upi'ht vuχká-an, *I cut down a tree.*
nü'e hupó-ai tsassíboan, *I peel a tree.*
páruku pítsuwēn húmet, *the racoon climbs down frow the tree.*
hû'htsu hū'mit yĕ'tsünkwa, *the bird flies off from the tree.*
pia-hû'htsu hûpa-aek yĕ'tsünkwă, *the eagle flies over the tree.*

The suffix -pi of the subjective case in the singular number is converted into -m in the objective case, and this -m also composes the "secessive" case: *down, down from, away from,* in -met, -mit. Suffix -p often occurs in the subjective case of Comanche nouns, for instance, in píap, *large, great;* it occurs in the apocopated form in pia-hû'htsu, *eagle,* viz., "large bird."

A few case-forms observed in Gaitchim, a California coast dialect of the Numa family, will be found in Lieut. Geo. M. Wheeler's Geographical and Geological Survey Reports, Vol. VII (Archæology), page 474 in the linguistic appendix.

J. A. Cuoq, *Lexique de la Langue* Iroquoise. Montreal, *Chapleau et Fils* (1882) 8vo; 9 and 215 pages.

The Rev. Cuoq has been, during many years, the spiritual adviser of the Indians around Montreal, and has, in 1866, published, under the pseudonym of N. O., his "Etudes Philologiques," a volume containing a grammatical essay on the Algonkin language spoken in the Indian settlement at Oka, or Lac des Deux Montagnes, forty miles west of Montreal, Canada, and another on the Iroquois language of the Caughnawaga Indians, settled ten miles southwest of that city. The present "lexique" is a dictionary of the Caughnawaga dialect, which differs but little from the Mohawk, at present spoken at Brantford, Ontario. Rev. Cuoq is decidedly polemic in all the writings we have seen of him; but, in view of the great ignorance manifested by many others on all subjects concerning Indians, this attitude is very pardonable. The first part of the "lexique" gives a series of Iroquois roots (page 1-59, with supplement, 60-73); follow from page 75 to 151 their derivatives and compounds, and from 153 to 215, an array of highly instructive notes bearing on grammar, ethnology, history and local nomenclature. Cuoq is a partisan of the method of arranging dictionaries in etymological order, which was inaugurated by Bruyas and followed by Rasle, Giorda, and other Roman Catholic linguists. It is evident that only those who possess a certain familiarity with the language can find themselves at home in a dictionary not disposed in alphabetic order.

The Revue de Linguistique, published in Paris, and edited by Messrs. G. de Rialle and Prof. J. Vinson, contains in its fifteenth volume (1882) many treatises of decided merit. In discussing the relations existing between linguistic science and the doctrine of evolution, Lucien Adam arrives at the result that linguistics do not sustain the hypothesis of the variability of species, but that they establish distinct primitive stocks, specific modes of human speech, which cannot be possibly deduced from an original language common to all. In the animal and vegetable world transformation could possibly take place, but in linguistics polygenism alone explains the present state, in which we find the languages of the globe. Jean Kirste discusses the so-called cerebral sounds, especially those of East-India. Other articles are: on Agglutination, by J. Vinson; a treatise on the Afghan language, by V. Henry, Professor in Lille; on the Gascon dialect of French in the thirteenth and fourteenth century, by Ducéré; Studies on the part of India colonized by the French, by J. Vinson; on the Yagnôbi language, spoken near the head waters of the Indus river, by de Ujfalvy; on geographic names in the Gulf States, by A. S. Gatschet; on the Lifu language, Loyalty Islands, Polynesia, by Rev. P. A. C.; on Georgian dialects spoken in the Caucasus, by T. A. Gatteyrias. This "Revue"

is a quarterly, and figures among those linguistic periodicals, which take a prominent interest in promoting the studies of American linguistics and ethnography.

H. DE CHARENCEY. The names given by various nations of the globe to the cardinal points of the horizon, and to the winds blowing from these parts, form the subject of a pamphlet published in 1882 by the Count Hyacinthe de Charencey: "Recherches sur les noms des points de l'espace;" Caen, 86 pages. In the oriental languages many interesting deductions are suggested to the reader; thus the Arabian name for the west, *magreb*, originally meant mixture (confusion); the Greek name for the south, *notos*, moisture. The collection of African and American terms is not so full as we might wish for. Other recent articles of the same author treat of the "numeral system in the Maya dialects" (Louvain, 8 pages); on Basque etymologies (ibid, 18 pages); Chronology of the ages or "suns," according to Mexican mythology (Caen, 1878, 31 pages); Researches on the Aïno flora (Aïno terminology of plants); and on Aïno ethnography (Paris). On colors considered as symbols of the cardinal points of the compass among American nations; Paris, 1877, 64 pages. Researches on the dialects of Tasmania (vocabularies), Alençon, 1880, 56 pages. Decipherment of the calculiform or Maya characters, and on signs of numeration in Maya; Alençon, 1879 and 1881. Several of these publications have appeared in the "Actes de la Societé Philologique," of Paris, an association which displays much activity in investigating the languages of both hemispheres.

THE LOCAL NAMES of Southern Germany and Switzerland have been thoroughly studied from the mediæval charts and chronicles by a citizen of Ehingen, in Wurtemberg, Dr. Med. Buck. From his alphabetic digest, which has appeared in Stuttgart (1880) under the title of "Oberdeutsches Flurnamenbuch," he has excluded many names of cities, towns and villages, his main purpose being the interpretation of the field and forest names. Historians, topographers and tourists can derive a great deal of information from manuals of this character, but there are few which can rival this one in fullness and thoroughness of information.

G. VON DER GABELENTZ UND ADOLF B. MEYER. *Beiträge zur Kenntniss der Melanesischen, Mikronesischen und Papuanischen Sprachen.* Leipzig, Hirzel. 1882. Lexicon-Octavo. This interesting record forms the fourth part of Transactions Royal Saxon Society of Sciences, philologic-historical section, vol. VIII, pages 373–542. The two editors have undertaken the immense labor of entering each word of the numerous manuscript and printed Oceanic vocabularies which came to hand, under various subject-headings, and of giving an alphabetical register of these, so as to render the volume handy for use. The "Beiträge" form the second continuation to a work on the Melanesian languages, published in 1860 by Prof. H. Conon von der Gabelentz, the father of one of the editors. The "Introduction" to the present Oceanic polyglot collection hints at the possibility that the Mafoor language of New Guinea might prove to be allied to the Malayo-Polynesian languages, in the views of future investigators, while at the same time the Papúa race, who speaks it, differs entirely from the Malayo-Polynesian race. DR. GEO. V. DE. GABELENTZ, who is Professor of Oriental languages at the University of Leipzig, has lately (1881) published a new grammar of the Chinese language.

A DUTCH-CHINESE DICTIONARY, to appear within the next five years, is announced by E. J. Brill, in Leyden. To the Chinese words a transcription will be added by the author, Dr. G. Schlegel, Professor of the Chinese language and literature at the University of Leyden, Holland. The three hundred thousand Chinese inhabiting the Dutch colonial possessions of the Indies speak the Chang-Chow (Tsiang-tsiu) dialect; and, since the dictionary is especially compiled for the use of the interpreters of these people, it will embody this dialect only to the exclusion of others. The first volume has just left the press.

ETHNOGRAPHIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

HERO-MYTHS.—A class of heroes, who appear in the belief of many primitive nations as civilizers, lawgivers, originators of the calendar, teachers of the useful arts of agriculture and metallurgy, canalizers of rivers, monster-killers, etc., often hold a very prominent place in religious systems. Some of them seem to be perfectly historical, while others bear too many signs of the mythical for not to be recognized at once by the comparative mythologist for what they really are. Dr. Dan. G. Brinton has just examined in his "*American Hero-Myths*" (Philadelphia, Watts & Co., 1882, 8vo., 251 pages), a considerable number of these American culture heroes, analogous in many particulars to Heracles, and has discovered in them euhemerized representations of the powers of nature. Sometimes the force of poetic imagination, which has made a brilliant hero and warrior, or a grey-bearded king out of the dawn of day, the clouds, lightning, rainbow, sun and moon, is truly wonderful, and adds to the admiration which every one of us feels in reading the mythic poetry and folklore of the American Indian, when presented to us in its original aspect, undefiled by the misapprehensions and ignorant admixtures of a foreign race.

PAWNEE INDIANS.—Prof. John B. Dunbar has just completed a series of important articles on the ethnic position and peculiarities of the Pawnee or Pani Indians, which are contained in the *Magazine of American History*, of New York, April, 1880, pages 241–281; November, pages 321–345, and 1882, November, pages 734–756. These articles, entitled "The Pawnee Indians," also include biographic notices and *portraits* of some of their head men and chiefs, and the dates given in these elaborate sketches do not refer only to the present reduced status of the tribe, but also to the condition in which they were forty years ago. Prof. Dunbar was the first to trace their affinity to the Caddos, Witchitas and Wacos; by an extended comparison of their vocabularies this ethnic affinity has been fully established since, and by thus unifying these southern tribes we have gained a large Indian family in the southern parts of the Mississippi plains, which perhaps has once occupied as much territory as the Dakota family does now in the northern portions of the same plains. The Algonkin term Pawnee, Páni, is unknown to the tribe itself; they call themselves Tsaríktsi tsárikts, "*the men of men*," or the "*real men;*" this term corresponds to Lenni lenape of the Delawares, and O'nkue hónwe of the Iroquois. The study of the Pawnee language ought to be undertaken at an early day by some competent scholar, who possesses an Indian ear phonetically trained, and the results published in book form.

DR. C. MEHLIS has just published an important memoir on the earliest historical records of the *Bavarian* nation. Like other Germanic nations, they followed the common impulse manifested by the Northern barbarians during the time of the Roman empire, of emigrating towards more fertile countries. To this they were forced by a constant increase of population. The Bavarians obtained their present Celtic name from having once lived in Bojohemum or Bohemia, and were first known to the Romans there as Marcomanni or "border-men." They settled on the headwaters of the Main, and subsequently, under Ariovistus, invaded the territory of the Gauls, but were repulsed by Julius Cæsar. Since then their principal seats were in Bohemia, but from the middle of the third century of the Christian era they spread over Rhœtia and Vindelicia. Later, they occupied also what is now the province of Tyrol, Upper Bavaria, and portions of Styria, where they met a Slavonic population. This memoir is published in the "Beiträge zur Anthropologie und Urgeschichte Bayerns," vol. v, No. 1 (Munich, 1882, 4to), pages 25–51, with map. The same periodical contains an article by Dr. L. Steub, entitled: The Germanization of the Tyrol, going through several numbers.

DR. FLIGIER ON THE PELASGIANS.—The ethnographic position of the *Pelasgians* has been discussed for the last one hundred years by the most learned antiquarians, but the arguments were not such as to arrive at a result acceptable to the majority of scientists. Aug. Boeckh paid much attention to this question; he thought this people were the racial ancestors of the later Greeks, and their name

was but another form of the term [illegible] *ancient*. Dr. Fligier thinks that the purely philological method of research must be abandoned in inquiring after the origin of the Pelasgians. In his recent article published in the "*Archiv f. Anthropologie*," vol. 13, No. 4 (1881), entitled *Die* [illegible] *Hellas und Italien*, 50 pages, and he rests his argumentation [illegible] merely [illegible] the statements transmitted to us by antiquity, but also on those furnished by modern linguistic, ethnographic and anthropologic research. The Pelasgians had scattered over the whole of Hellas and the Peloponnesus, over eight of the Egean Islands, through Thessaly, the coasts of Macedonia, Thracia and Asia Minor. They spoke a language which was not Greek, but the people afterwards became hellenized in several districts. Fligier thinks they were Illyrians, or the ancestors of the present Albanians. The people of Epirus were Pelasgic also, and the ancient [illegible] in southern Italy, for instance, the [illegible], [illegible], Messapians, [illegible] as well. They held the whole of what is now Greece, and must [illegible] as the aborigines. But early [illegible] immigrants from the [illegible] and Carians reduced their territory. Thracians and [illegible] the four divisions of the Hellenes [illegible] their independence by the [illegible] and fell into a condition of bondage. The Italian [illegible] population similar to that of Greece. [illegible] by the identity of local names in both countries.

An [illegible] assemblage of temples, known as [illegible] in Java, has been thoroughly investigated by officers of the Dutch [illegible] and the results of the historic investigation, the [illegible] an atlas of enormous size, a copy of which has been sent [illegible] the Smithsonian Institution, and by it was deposited [illegible]. It has the following title: "[illegible] van F. C. W[illegible] geschreven en gedrukte [illegible] bescheiden, bewerkt en uitgegeven [illegible]" [illegible] not less than 400 plates of the largest size. [illegible] preservation, and has received its name [illegible] from a ruined village in the vicinity, in the K[illegible] an adequate idea of these structures [illegible] conception, elaborate [illegible] who visit them on the [illegible] the plates of the above atlas.

NOTES FROM ORIENTAL PERIODICALS.

[illegible]

[illegible]

[illegible] Dr. [illegible] on Sinhalese Grammar. Though the [illegible] interest, we note a few points. The writer [illegible] ancestors came from the Kingdom [illegible] be of Aryan stock, and [illegible] affinity in the Magadhi, must have [illegible] B. C. Hence, any family [illegible] light on the Indian vernaculars [illegible] Sinhalese with the Māgadhi and other [illegible] from the earliest times to the [illegible] earlier than the fourth century, and [illegible] the fourteenth century, when [illegible] literary remains dating from the [illegible] papers are: An Abu inscription [illegible] 1208-9 A. D.), by W[illegible] from Baghdad, by Dr. West, [illegible] by Mrs. Steele and Lieut. Temple.

[illegible] Dr. [illegible] text and translation of a grant made by King [illegible] A. D., [illegible] interesting, chiefly from being dated [illegible] Hindu and Muhammadan language, customs, &c. [illegible] presents a collection of extracts from

Jaina manuscripts elucidating the obscure annals of that sect. Mrs. Steel adds another chapter of Folklore from Kashmire. Dr. Bühler makes some valuable observations on the origin of the Indian alphabets and numerals, which have a special interest in connection with the recent discovery by Prof. Sayce.

Journal Asiatic Society of Bengal. Vol. XLIX. Part I. Extra number, 1880.

This number, of which the printing has been greatly delayed, has come to hand since our last issue. It contains a grammar of the Maithili, or speech of more than four and a half millions of people living in that part of the Bengal Presidency, which is bounded on the north by the Himâlayas, on the south by the Ganges, and on the east and west by the Kosi and the Gandak rivers respectively. The name is derived from the ancient city Mithili, now Tirhut. The compiler of the grammar, Mr. G. A. Grierson, claims for the Maithili the dignity of a distinct language, though it has generally been accounted one of the many dialects of Hindi. It is bounded on the north and east by the Nepali and Bengali, and exhibits many of the features of those languages. It is rich in word-forms and vocabulary, though possessing almost no literature. A chrestomathy aud vocabulary are to follow the grammar.

Vol. L, Part I, No. 2 This number also comes late, the first copies having been lost at sea. Major W. F. Prideaux contributes a brief paper on the coins of Charibael, King of the Homerites and Sabæans, two contiguous tribes of Southern Arabia. This sovereign is believed to be identical with the Kariba-el, mentioned in the Periplus of the Erythræan Sea, and to have reigned about 75 A. D. His dominions probably corresponded approximately with the region known as El-Yemen. Mr. H. G. Keene and Mr. Edward Thomas each write on the Revenues of the Mughal Empire. Mr. C. J. Lyall translates some old Arabic poetry in the metre of the original.

Vol. LL, Part I, No. 1. We have a continuation of the paper by Babu S. C. Dâs on the religion, political history, &c., of Thibet. Translating from native authorities, the writer gives an account of: First, the rise and growth of Buddhism in Thibet from the period of its introduction to modern times; second, the lives of the Teshu Lamas, or spiritual heads of the Buddhist Church; third, the life and legend of Tsoñ Khapa, the great Buddhist reformer, who lived in the last part of the fourteenth century, and whose attempts to reclaim the national religion from the corruptions into which it had fallen, led to a schism into two parties known as Red Caps and Yellow Caps; fourth, the rise and progress of Buddhism in Mongolia.

The Calcutta Review. July.

We mention the following papers as coming within the scope of our Notes: The Aryan Germ, by H. G. Keene, a study of the earliest Aryan civilization known to us in any detail, that of the Vedic Indians, for a description of which the writer chiefly depends upon Heinrich Zimmer's recent work, *Altindisches Leben;* Hindi, Hindustani, and the Behar dialects, by Babu S. Ganguli, who attempts to correctly define the much-disputed meaning of the terms Hindi, Urdu, and Hindustani, and comments unfavorably upon Mr. Grierson's proposal that one of the local dialects of Behar should be adopted instead of Hindustani as the literary language of that province; Modern Researches into the Origin and Early Phases of Civilization, by R. C. Dutt, a survey of the present condition of human society, especially in its lower forms, and a discussion of the physical and social influences which have been chiefly concerned in developing the varied civilization of to-day.

OCTOBER.—Mr. Dutt treats of the aboriginal element in the population of Bengal. This is doubtless large, since the approach of Aryan invasion from the west naturally concentrated the primitive settlers on the eastern side of India; but centuries of peaceful intercourse have tended to produce a single people out of markedly different stocks. In some quarters the obliteration of race differences has gone so far that the priests of the aboriginal religion have dared to assume the functions of and claim descent from the pure Brahmans. The number of Hinduized aborigines cannot be stated, but the number of aborigines in Bengal proper is estimated at 387,000. Rev. T. J. Scott describes Vedantism the school of pantheistic philosophy, which, more than any other system, has been accepted in India as furnishing the true explanation of the relation of the phenomenal universe to God. Other papers are: Legends current about Murree, the English sanitarium in the Western Himalayas, by Lieut. Temple, and the Language Question in the Panjab, by Babu Ganguli. This is one in many instanees which, in a population made up of several elements, each using a speech different from all the rest, it is perplexing to decide which language or dialect shall be used as the medium of public instruction.

Selections from Calcutta Review (reprint).

The following are titles of articles in Nos. 19 and 20: Broome's History of the Bengal Army; The Country between Bamian and Khiva; Chaitanya and the Vaishnavas of Bengal; The Second Sikh War; Bengali Games and Amusements; Indo-Bactrian Numismatics and Greek Connection with the East; Results of Missionary Labor in India. These papers date from Dec., 1850, to July. 1851.

Jour. Royal Asiatic Society (London).

Prof. Monier Williams writes on the Vaishnava Religion, with special reference to the reformatory movement led by Suāmi-Nārāyana. This man was born near Lucknow about the year 1780. An enthusiastic worshipper of Vishnu, he deplored the corruptions into which his co-religionists had fallen, and resolved to attempt a reform. He renounced a secular life, and traveled through the cities and villages of western India, preaching his austere doctrines. His simple life, eloquence and fascinating manners drew about him a crowd of disciples, and after his death, which occurred at forty-nine years of age, he was deified as an incarnation of Vishnu. His followers now exceed 200,000, and are still increasing. The Buddhist caves of Afghanistan are described by William Simpson. Hundreds of small, natural and artificial caves are found along the valley of the Kabul river, which appears to have been one of the hermitages of the Buddhist ascetics. It is now impossible to determine their date, since they have long been used as temporary shelter by wandering pastoral tribes, who have destroyed all but fragments of the paintings with which they are adorned. Sir E. Cline Bayley, in a paper on the Genealogy of Modern Numerals, points out the coincidence between our so-called Arabic figures and those used in India. Seeking for the origin of the latter, he traces them to an earlier, more complicated system, which was itself derived from several foreign sources—Egyptian, Phœnician, Assyrian, &c. In this part Prof. Sayce begins an important paper on the Decipherment and Translations of the Cuneiform Inscriptions at Van. It is prefaced with an account of the labors of his predecessors in the same field, and a description of the geography, history and theology of the Vannic people, so far as they can be recovered from the inscriptions of their kings.

PART IV.—This issue is chiefly filled with the annual report of the society and sketch of the progress of Oriental studies for the year ending May, 1882, and with the concluding part of Prof. Sayce's paper. Other articles are: The Sanskrit text and translation of the Manual of Instructions of the Suami-Narayana sect, referred to above, by Prof. Williams; The Successors of the Seljuks in Asia Minor, by Stanley Lane-Poole; The Oldest Book of the Chinese and its Authors, by Terrien de la Couperie. This last is the Yh-King of which Dr. Legge says that not a single character is older than the twelfth century, B. C. The writer not only claims to prove that parts of this work are the oldest Chinese literature extant, but announces the discovery that the ancient Chinese characters are derived from the pre-cuneiform writing of Southwestern Asia. All this is important, if true."

Jour. Anthropological Institute (London). Vol. XII, No. 1.

Mr. E. H. Man continues his account of the Andamanese, begun in the February number. The writer had the advantage of a thirteen years' residence among these savages, four of which were spent in charge of the homes established for the purpose of elevating them. Probably no other European has enjoyed equal facilities for becoming acquainted with this people. His paper is a systematic and minute account of their physical and mental characteristics and mode of life. We note two or three facts. So little did the Andamanese know of people outside the circle of their islands that navigators who chanced to touch there were regarded as the spirits of departed ancestors. Their languages or dialects, which are many, are of the agglutinative type. They employ prefixes and suffixes, and postpositions instead of prepositions. All numbers above "one" and "two" are roughly indicated by an ascending series of vague terms like "several," "many," "very many," "innumerable."

No. II. NOVEMBER.—Mr. Man continues the above paper, describing religious beliefs, marital relations, and other customs. On the whole, we get a better opinion of this people than would be justified by earlier accounts.

Mr. S. C. Wake, writing on the Papüans and Polynesians, supports the theory that the Eastern Archipelago was at a very early period settled by a branch of the so-called Caucasian race, best represented in modern times by the Australians, that from this race are descended the Papüans, Micronesians, Tasmanians, and Polynesians, the darker shades among these peoples resulting from admixture with Negrito

blood, and the lighter shades indicating union with Asiatic races. This is in opposition to the view of Mr. A. H. Keene, outlined in an earlier number, who assumes three types: First, the Negritos, Papüans, Australians, and perhaps Tasmanians; Second, Eastern Polynesians, of Caucassian affinity; Third, Malayan peoples, of Mongolian race.

Jour. German Orient. Society. Vol. XXXVI. Part II.

We note the titles of the following papers: Contribution to the Jewish-Apocalyptic Literature, by Karl Wieseler; Treatise on Light, by Ibnal Haitam, an Arabic physicist of the tenth century, edited and translated by J. Baarmann; The Arabic Dialect of Mosul and Mardin, by A. Socin; Contributions to the Explanations of the Kitab-al-Fihrist, by Ig. Goldziher; The Right of Possession according to Moslem Law, by Baron von Tornann; The Persian Fractional Numbers in Beladhori by M. J. de Goeje; some Arabic manuscripts discovered in Grenada, by R. Dozy; On the Trilingual Zebed-Inscription, by Ed. Sachau; The Eagle and the Soma, an exegesis of Rig-Veda 4.27, by R. Roth; Contributions to the Knowledge of Indian Poets, by Theodor Aufrecht.

Journal Asiatique. VII Series. Vol. 20. No. 1. July.

This number is filled with matters connected with the sixtieth annual meeting of the French Oriental Society, and with the usual Report on the Progress of the Oriental Studies in France for the year 1881-2, by M. Renan.

AUG.-SEPT.—M. Senart continues his studies on the inscriptions of Pigadasi (Asoka). The longest paper in this number gives the results of an examination by MM. Bergaine. Barth, and Senart, of some Sanskrit inscriptions found by M. Aymonier, in Camboje, Farther India. The remaining paper is a translation in Assyrian of a non-semitic inscription of Hammourabi, by M. Arthur Amiand.

The Sixth International Congress of Orientalists will meet at Leyden, Sept. 10, 1883. Prof. Dozy is President, Prof. Künen, Vice-President, and Profs. De Goeje and Thiele, Secretaries.

NEW PUBLICATIONS.

NASH, WALLIS: Two Years in Oregon. New York: Appleton & Co., 1882. 12mo., 311 pages. Illustrated by landscapes. This book was written by a British traveller for the guidance of immigrants, but contains also some ethnological information on the coast Indians of Oregon, about whom so little reliable knowledge can be obtained.

NOGUEIRA, B. C. d'A. Apontamentos sobre o Abañeěnga, tambem chamado Guarani ou Tupi ou Lingua Geral dos Brasis. Rio de Janeiro, 1876. 8vo, 77 pages. This is the first number of a larger work intended by the author; it treats of the ethnography of the Guarani tribe, the phonetics of the jargon, called Lingua Geral, and of the alteration of sounds observed in it.

F. F. HILDER. Notes on the Archæology of Missouri. Publication No. 6 of the Missouri Historical Society. St. Louis, 1882. 8vo, 17 pages. One of the illustrations represents a bottle-shaped vase, 8½ inches high, from a mound in southeastern Missouri, the round ornaments of which the author thinks, with a great show of probability, give evidences of early sun-worship.

AD. F. BANDELIER. KIN 'AND CLAN. Lecture delivered April 28, 1882, under the auspices of the Historical Society of N. Mexico, at Santa Fé. Reprinted from the Santa Fé *New Mexican*, April 29, 1882. 8vo, 8 pages.

DALL, W. H. On the so-called Chukchi and Namollo People of Eastern Siberia. Read before the American Association for the Advancement of Science, Cincinnati, 1881, and printed in the *American Naturalist*, November, 1881, pages 857-868.

POWELL, J. W. The Philosophic Bearings of Darwinism. Address delivered before the Biological Society of Washington, May 12, 1882. Washington, D. C., 1882. 8vo, 13 pages.

BENI, CARLÒ. Notizie sopra gli indigeni di Mexico. In Mantegazza's Archivio per l'antropologia e la etnologia, Firenze, 8vo, vol. xii, No. 1, pages 1-17 (1882).

PETROFF, IVAN. Map of Alaska and adjoining regions. Scale: 1 to 3,500,000. Published by the U. S. Census Office, 1882. This map is the result of personal observations, as well as of compilations from various Russian, French,

British and American official documents, maps, and descriptions. As far as Indian names of localities are concerned, it is the fullest map of Alaska we ever saw, especially in the region between Kadiak Island and Kotzebue Sound.

HENRY, V. Esquisses morphologiques. Considérations générales sur la nature et l'origine de la flexion Indo-Européenne. Lille, 1882. 8vo, 31 pages.

BOOK REVIEWS.

Memorial and Biographical Sketches. By James Freeman Clarke. Boston: Houghton, Osgood & Co., 1882.

Cæsar. A Sketch, by James Anthony Froude, M. A. New York: Charles Scribner's Sons.

Viking Tales of the North, The Sagas of Thorstein, Viking's Son, and Fridthjofs the Bold. Translated from the Icelandic, by Rasmus B. Anderson, A. M. Chicago: S. C. Griggs & Co., 1882.

The Younger Edda, also called Snorre's Edda, or the Prose Edda, Introductory Notes, &c. By Rasmus B. Anderson. Chicago: S. C. Griggs & Co., 1880.

Pebbles, Pearls and Gems from the Orient, gathered and arranged by Charles D. B. Mills. Boston: Geo. H. Ellis, 1882.

These memorial and biographical sketches include such persons as J. A. Andrew, the great war Governor, of Charles Sumner, of Theodore Parker, of William Ellery Channing and Walter Channing, of George Keats, a brother of the poet, Robt. J. Breckenridge, Geo. D. Prentice, all of them Americans. Shakespeare and Rousseau come in to supplement the gallery. With the exception of the last two, these celebrities belong to the generation which has just passed away. It is a portrait gallery, the work of a master mind, and is worthy a place in every family.

This picture of American life and character has, however, its counterpart, in the volume on Cæsar. It is most remarkable that we should find so true a representation of American society in the Roman Empire, at the time of its greatest magnificence, but the sketch which Froude has given shows how parallel or how similar the two eras or nations are. The same rough energy and incessant activity, the same aggression of commerce and the same spread of country, prevailed both in the Roman Empire and the American Republic. Some degree of literary taste and culture characterized both nations, but even in the independency of thought on religious snbjects, and in the supremacy of the commercial spirit, the two eras resemble one another.

We seem to be reading American history with Roman names. A few quotations will show this: "The conquest of Greece brought to Rome a taste for knowledge and culture, but the culture seldom passed below the surface. Money! The cry was still money! Money was the one thought from the highest senator to the poorest wretch. There was no aristocracy of birth, still less of virtue; but the door of promotion was open to all who had the golden key. It is easy to persuade the masses that the good things of this world are unjustly divided!" It does one good to see the portrait drawn so faithfully, and then to realize that that portrait is only the reflection of our own image—the dust of ages gathered on the back of the glass of Time, making it not a window, but a mirror. The author preaches to us without knowing it.

Next to these beauties from the classic lands come the Sagas from Iceland, sparkling with icicles, the works of the Bifrost, gathered in the snow-lands. The literature of Iceland may be divided into three periods, viz: 1. That which is preserved by the Runic alphabet; 2. That which is mythical and historic mingled together; 3. That which is fictitious, its fables, however, representing facts. The Sagas of Thorstein and of Fridthjof, the bold, belong to the last class, and dates from the fourteenth century. They are fictitious tales, full of Viking's exploits, and abounding with deeds of violence, but reminding us of many of the strange myths which abound among the natives of this continent, where, amid warlike exploits, there are transformations of beasts into men, and men into beasts, and where the weird and wild are mingled with the real and the historical. One hardly is equipped with mythological literature without this volume, although it is not mythology, for both Scandinavian and Icelandic mythology preceded the class to

which this belongs. Snorre Sturlason was born in 1178, and to him, with Olaf Kvitaskald, is the compilation of the younger Edda ascribed. The translation from the Norse has been accomplished before, but never so completely.

The younger Edda contains the theogony and cosmogony of the Norsemen; the elder Edda presents the Odinic faith. One is in prose and the other is in poetry, and together they constitute the Odinic Bible. The mythologies of the Norsemen are contained in these two books. These mythologies would have been destroyed through the zeal in propagating Christianity, had not Iceland furnished a retreat for them. To this remote corner of the world the Teutonic spirit fled, and the ancestral religion found a refuge. The Nibelung story and the Odinic religion were preserved in Iceland. From here went forth Vikings, who discovered Greenland and Vinland. It is possible that the mythologies of the American aborigines have been tinged by the very myths which are preserved in the Eddas; not that the Odinic faith existed here, but fragments or waifs from the mythology may have been scattered among the native tribes. The tree, Ygdrasil, and the serpent, Nidhogg, we think, have their counterparts among the myths of America. It is, perhaps, for this reason, viz: because the early history of the Northmen and the discovery of the continent are combined with the translation of the Edda, that we prefer the older book, Mallett's Northern Antiquities, but Anderson's translation is now the common one, and will probably be accepted.

Next to these come Pebbles, Pearls and Gems from the Orient. The title indicates the origin, and the selections prove that the author is a true lover of the Orient. The beauties of literature, culled from so far away, contrast somewhat to the clear. intellectual style of modern writers, but they furnish the brilliant colors for the literary bouquet.

Remnants of Early Latin, selected and explained for the use of students. By Frederick W. Allen, Ph. D., Professor in Yale College. Boston: Ginn, Heath & Co., 1880.

The Three Pronunciations of Latin. By M. M. Fisher, Professor of Latin in Columbia (Mo.) University. Second edition. New England Publishing Co., Boston, Mass., 1879.

By early Latin is meant the language spoken down to about the Ciceronian period, B. C. 82. The inscriptions afford a knowledge of the language in its earliest stages. The oldest of them dates from 400, B. C. They are taken from coins, cups, mirrors, epitaphs, dedications, decrees on bronze plates, altars, mile-stones, boundary stones, etc.

"Wordsworth's Fragments of Early Latin" is the only work which has hitherto presented these inscriptions, but this work is inaccessible to most. Prof. Allen has given these fragments, and along with them many valuable notes on the sources from which the fragments were derived. His notes are based on Momsen's Commentary on the Corpus Inscriptionum. Many descriptions of Roman antiquities are contained among them.

Prof. Fisher has presented a readable little volume on the pronunciation of Latin. There are three methods—the English, the Continental and the Roman. The newest and latest to be advocated is the Roman pronunciation. Professors Twining, of New Haven, and Gildersleeve, of Baltimore, have followed this method, and it is now practised in Harvard, Princeton and many other colleges. The Continental method is followed by nearly all the Catholic colleges, by Exeter Academy, Williams and Amherst College, and many others. Prof. Fisher argues for the English. It is not an easy matter to decide how Cicero and Cæsar pronounced Latin. There were three eras of pronunciation, even in Rome, and, were we to adopt the Roman method, it would be a question which of them we should copy after. The advocates of the Roman method have something to cope with in meeting the objections offered from various sources.

The Sinai and Comparative New Testament, the authorized English version, with introduction and the various readings from the three most celebrated manuscripts of the original Greek, by Constantine Tischendorf, with various readings, &c., inserted in the text. By Edwin Leigh. New York: Ivison & Blakeman, 1881.

This little volume is a refutation to the baseless assertion about the authenticity or antiquity of the Bible. Among the books that have come down to us from the earliest period, none have a more direct and authentic line than the Greek Testa-

ment. There are more direct sources of great antiquity for this than for all the works of Greek literature put together. The manuscripts which contained the classics do not date earlier than one thousand years ago, but those which transmit the New Testament are (some of them) nearly 1,500 years old. There are three manuscripts which are especially ancient, namely the Vatican Codex, the Alexandrian Codex and the Sinaitic. The first was discovered at Rome, in 1475, the second at Alexandria, in 1628, and the last by Tauchnitz, at Mount Sinai, in 1844. The first place is held by the Sinaitic, as it is supposed to have been one of fifty, prepared under the direction of Constantine, by Eusebius, of Cesarea. It corresponds closely to the Syriac and Italic versions made in the second century, and to the Coptic version made in the third century.

The quotations from the New Testament, found in the oldest of the fathers, such as Irenæus, Tertullian, Clement, and Origen, are followed closely. The Sinaitic version, or rather a translation, of it, has been followed, and the variations from it, such as are found in the other two manuscripts, are marked by a reprint of the works in a different type. We are thus brought face to face with the different forms, as much as English words can give them, in which the New Testament was found in the third century, each of the manuscripts belonging to this period. The Greek of the three versions is given in the fly-leaf, showing the different forms in which even the Greek was written at that time, the letters partaking of the nationality of the people among whom the book was transcribed.

The Book of Enoch, translated from the Ethiopic, with introductory notes. By Rev. George H. Schodde, Ph. D., Professor in Capitol University, Columbus, Ohio. Andover, Mass.: W. F. Draper, 1882.

Another view of the early days of Christianity is given to us by a little volume entitled "The Book of Enoch." This is an apochryphal book, known to the early fathers, and ranking with the Epistle of Barnabas, but not received in the Canon. It was lost about the time of Augustine's death, but copies of it were preserved by the Coptic or Ethioptic Church. Three copies were found by the celebrated traveler, Bruce, and one of them placed in the Bodleian Library, one in the Royal Library of France, and one of them kept by Bruce himself. The original was in Greek, and dates from A. D. 160. A translation into Ethiopic was made by Abyssinian theologians, and the Greek original has not been recovered, though fragments of it are quoted by Syncellus. The book is a psuedo-prophecy, and was written from the Jewish standpoint. Enoch is represented as prophesying the events which occurred during the time of Christ. At the same time the book is Apocalyptic, looking forward to a future. The translation into English from the Ethiopic has been accomplished by Prof. Geo. S. Schodde, of Columbus, O., and the book is published by W. F. Draper, of Andover. It is a curiosity of literature, as well as a picture of Gospel times, but is worth studying even in this respect.

Kings Mountain and Its Heroes. History of the Battle of Kings Mountain, Oct. 7th, 1780, and the events which led to it. By Lyman C. Draper. With steel portraits, maps and plans. Cincinnati: Peters & Thompson, 1881. (Agents wanted.)

The friends of Dr. Draper have long been waiting for him to issue a volume which should give the results of his ripe scholarship, and have at last received it in the form of a royal octavo of nearly 600 pages. The subject is the Battle of Kings Mountain, and the scene of the entire narrative is in North and South Carolina. The volume shows great familiarity with the period, and reveals the advantage which comes from collecting everything that can be had on a subject, before writing about it. The merit of the book is in the judicious selection of the facts, and presenting them so that they shall furnish a picture of the event, and the times in which it occurred. This the author has successfully done.

The first chapter reviews the events of the Revolutionary war, referring, among other things, to the remarkable expedition of George Rogers Clarke. The second refers to the siege of Charleston, and the third brings in the prominent character of the book, Col. Patrick Ferguson. During the successive chapters other characters are also introduced, and many interesting incidents are charmingly told, mingling scenes of domestic life, piety of the aged, and beauty of female character, with the sturdy and harsh events of war. One is inclined to weep over the grave of Mary Musgrove, and the next moment laugh at the idea of Paddy Clowney "surrounding" seven tories and taking them captive. The book also

brings out clearly the contest between the Whigs and Tories, which continued so long and so bitterly, especially in that part of the country. The dress of the country is also shown by a brief description of one Mrs. Lytle, and at the same time the acts of heroism are dwelt upon with interest. The mountain scenery and the weather come in for a share of the description.

As to the battle itself, and its importance, it should be said that no event, perhaps, had more effect in closing the war. Col. Ferguson had long been over-running the country, encouraging tories and hunting rebels, while Lord Cornwallis was planning also to concentrate his army and subdue, by all means in his power, the very last remnants of rebellion. Civil war, of the bitterest kind, prevailed through the Carolinas. At last the mountain men, "back water men," as they were called, rallied, and under Cols. Campbell, Shelby, Williams, Lacy, Sevier, and Cleveland, attacked the British troops upon the very summit of Kings Mountain. The description of the battle is exceedingly graphic. It would seem as if the wrongs which the outlying men, *i. e.*, the men who were compelled to lodge away from their houses, in forests and swamps, for fear of violence from the tories, were to be avenged. The intensity of the battle was caused by long-suppressed wrath, so that when the troops ascended the heights to attack the British and the tories together, there was no quarter given.

Dr. Draper's descriptive powers are excellent, and this part of the book will be read with great interest. It is to be hoped that the author will continue to publish, as it is well known that he has a large amount of material nearly ready. The field which he has long explored is one with which very few are familiar, viz., that period which elapsed between the Revolutionary War and 1812, the very period in which Western history has its foundations. What makes it more difficult is that one party in the history has left no record, and has removed from the scene. We refer to the Indian tribes, who were then possessors of the soil, but whose history is written in the sand, no traces of it left which we can read. Such fragments as such a diligent scholar as Dr. Draper has collected should not be lost to the world.

History of the English Settlement in Edwards County, Illinois, founded in 1817, by Morris Birkbeck and George Flower. By George Flower, with preface by E. B. Washburne. Chicago: Fergus Printing Co., 1882.

The Chicago Historical Society has done itself honor by placing its imprint on a very beautiful book which has been published by the Fergus Printing Company. It is a local history, but, as a description of pioneer scenes and the hardships and trials of early settlement, is admirable.

American Hero-Myths. A Study in the Native Religions of the Western Continent. By Daniel G. Brinton, M. D. Philadelphia: H. C. Watts & Co., 1882.

It has long been known that culture-heroes were common in America as well as in the older Asiatic countries. These culture-heroes all have points of resemblance: Cadmus, among the Phœnicians; Mercury, or Hermes, among the Greeks; Thoth, among the Egyptians; Menu, among the Hindus; Fo-hi, among the Chinese, and Quelcatlcoatl, among the Mexicans; Viracocha, among the Peruvians, Michabo, among the Algonquins. These heroes were all of them the inventors of letters, the founders of the nations, and the great divinities of the peoples. The work of creation was ascribed to many of them, and in several cases the giving of laws and the founding of religion, also was accomplished by them. The story of the great flood is connected with the name of some of these heroes, and the work of creation associated with them as survivors from the flood, being a reconstruction rather than a new creation. This universality of a first great man was formerly supposed to argue the unity of the race, and a common descent from one great ancestor. Traditions of the flood and of creation so resemble one another that it was supposed they all sprang from one source, having survived from that early time when Noah and his family were saved in the ark. A school has arisen, however, which gives an entirely different interpretation to all these myths, and this school has continued carrying out its explanations farther and farther, until it would seem as though there were no particular events connected with these early heroes, which are not ascribed to one cause, and that is the solar worship which has prevailed. This solar worship has prevailed through different nations, especially at certain stages, and it has been supposed that, as soon as the people have reached a stage where literature comes in, the rage for personification has seized upon the people, and that these

culture-heroes are only the heavenly bodies—the sun, moon. light and darkness personified. Thus, everything about their character and history has been seized upon, and at once traced to the material semblance. The white face and long beard of the Aztec divinity means the Light, his advent from the east, and his mysterious departures under the personifications, refer to the rising and setting of the sun. And so the contest between him and his adversary is the contest between Light and Darkness. The interpretation is carried into all complicated history and mythology, until we come to think that there was no history in it. These characters were entirely mythical.

This work of Dr. Brinton's is only one out of many which follow the same line. It is an application of the theory to American myths. First, the myth of the giant Rabbit, prevalent among the Algonquins; next, the Light God and the Four Winds, among the Aztecs; then the Lord of the Winds and Rains among the Mayas, and the Hero-God among the Kuichuas, all representing the same thing. Dr. Brinton does not believe that there was any such race as the Toltecs. They are only mythical, also. The invention of the calendar, among the Mexicans, and the color of the stone, bluish-green, are referred to the God of Light and to the Blue Sky. The magic mirror is also derived from the sun-myth. The ball-play, prevalent among the Aztecs, is associated with the sun-worship. The cross symbol referred to, and the Four Winds, the symbol of the Serpent, associates the sun-worship with the Phallic symbol; the God of Reproduction being represented in both ways.

Quelcatlcoatl, the Aztec divinity, means the Light. His white face and long beard refers to this. His advent from the east, and his mysterious departure, are intended to signify the rising and setting of the sun. Montezuma, also, is a sun-divinity, and the Seven Caves of tradition are ascribed to the same myth. It is, of course, useless to trace history or to identify places, or lines of migration from the myths of any of the American tribes, since they are as shadowy as the Pot of Gold that was supposed to be at the foot of the rainbow, and the search for the reality would be about as useless. Osiris and Balder have as much historical reality, and are as likely to return as Montezuma or the White God of the Aztecs. There is a plausibility about this view which makes it attractive. The great objection to it is, it cuts off historical research. This presentation of the myths in a volume, by an author as learned and capable as Dr. Brinton, is valuable, whatever our opinion may be as to the interpretation of them.

Humboldt Library. J. G. Fitzgerald & Co., New York. Nos. 35, 36, 37 and 38. Price, 15 cents each.

The titles of these numbers are as follows: Oriental Religions, by John Caird, S. T. D.; Lecture on Evolution, by Thos. H. Huxley; Six Lectures on Light, by Prof. John Tyndall, F. R. S.; Geological Sketches, at Home and Abroad, by Archibald Geike, LL. D., F. R. S. The essay by Dr. Caird is especially valuable. It seems to be, in a manner, an answer to Max Müller's views. It is refreshing to get away from the theory about sun-worship, and the naturalistic interpretations of native religions, which have been worn threadbare, and so find that there is some other manner of interpretation.

Our readers cannot do better than to purchase these reprints.

Jewish Nature Worship. The Worship of Reciprocal Principles of Nature among the Ancient Hebrews. By Rev. J. P. MacLean. Cincinnati: Robt. Clarke & Co., 1882.

Rev. Mr. MacLean has given his attention to this occult and difficult subject, and has issued privately a limited edition of this pamphlet. Research into Phallic worship is not likely to prove satisfactory. We have never seen any work which was not more or less speculative when an author analyzes the Hebrew names for the Divinity, so as to make them expressive of the male and female, or reciprocal elements. We conclude that the speculative largely predominates. We have always maintained that Phallic worship was a late introduction growing out of corrupt propensities, and this pamphlet does not change our opinion. A private notice has come to us concerning Cyprian Mysteries. This only confirms the opinion. Bacchic rites prevailed in Rome at the time of its highest advancement. The sacred groves in Assyria were also a late growth, and the Phallic symbols discovered in this country are always associated with an advanced state of architecture. We do not say that they are of historic origin, but we do maintain that they have no part in the primitive conceptions of divinity. We throw down the gauntlet on that point.

AN IDOL AT COPAN, WITH PORTRAITS AND SYMBOLS OF AN UNKNOWN DIVINITY.

THE
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THE HILL TRIBES OF INDIA.

I.

TRIBES OF THE NORTHEASTERN BORDER.

BY PROF. JOHN AVERY.

It is well known that besides the civilized population of India, which has during the historic period covered the greater part of the country, there are numerous tribes, more or less differing from it in features, languages, and customs, and in general, occupying a very low social level. They are usually called Aboriginal or Hill tribes, though neither designation is strictly accurate; since, on the one hand, some of them have come into their present locations in recent times, and so do not represent an original population, and, on the other, they are not always found in the mountainous districts, but not infrequently live side by side with the people of the lowlands, and have so completely adopted their usages as to be hardly distinguishable from them. We have chosen the latter name as on the whole representing their position, and as allowing us in some cases to waive the insoluble problem of the relative period of their imigration. These tribes are not found congregated in a single locality, but are scattered here and there where the mountains or jungles afford a convenient retreat. Their low grade of culture presents an interesting study in primitive manners and customs, which from appearances will not long be afforded, since they are gradually yielding to the civilizing influences which surround them. Their present condition and prospects are so aptly described by a writer on the ethnology of India, that we quote his words: "The Aboriginal tribes now remaining are but like scattered remnants of a substance floating here and there in a mass of water, into which they have been all but melted, and in which they are on the point of disappearing. By far the greater part of their substance

has already commingled in the fluid around them, the remainder is saturated with it, and it is only in the very kernel and center of the largest lumps that something like the pure original substance is to be found."* It is only within a few years that we have come to have a tolerably complete knowledge of the location and numbers of the hill tribes, and much is yet to be learned regarding their languages, religions, and social organizations. No adequate treatment of the whole subject has yet been published in a single work. The great and costly volume of Col. Dalton's *Descriptive Ethnology of Bengal* (Bombay and London, 1872), is very valuable, but covers only a part of the field. This is in some degree supplemented by Rev. M. A. Sherring's important work, *Hindu Tribes and Castes*, of which the third volume was published in 1881. Mr. Brien Hodgson has published valuable essays and vocabularies relating mostly to the tribes of the northern border. There are also a few books devoted to particular tribes, such as Marshall's *A Phrenologist among the Todas*, and Campbell's *Thirteen Years amongst the Khonds*. But for much of detail that one would like to know, he is dependent upon the reports of government officers, travellers, and missionaries, in gazetteers, journals of learned societies, and other periodical literature. We purpose in this and following articles, to give a brief account of these tribes, so far as information concerning them is accessible. We shall notice only such tribes as still preserve a distinct identity, not attempting, as a rule, to follow others that have so completely given up their primitive customs as to become practically one with the Hindu community. We begin with the tribes found on the borders of the northeastern province of India. Our most trustworthy guide will be Col. Dalton's work, mentioned above.

The province of Assam, in the older and more correct sense, is the valley of the Brahmaputra and its tributaries. It is about 450 miles long and 50 miles wide, and is shut in on all sides but the western by high ranges of mountains. On the north are the Himalayas; at right angles to these a range known as the Mishmi and Singpho Hills forms the eastern boundary, from which a long spur projects in a southwesterly direction, and under various names divides Assam from Burmah. This extreme eastern portion of British India is as remarkable for the diversity of its races as for the variety of its natural products. Here are found in close proximiy remnants of tribes that were in very remote times driven out of the Ganges valley by advancing Aryans; or came from the highlands of Central Asia, following down the course of the Brahmaputra

* Campbell, Jour. Asiat. Soc. of Bengal, Vol. xxxv. Part II, 1866, p. 20.

and its tributaries; or in more recent times have found their way across the border from the neighboring province of Burmah. Though many original differences are obliterated, it is still possible to observe that the tribes toward the eastern border resemble those farther east, while those on the west show a closer affinity with rude communities in other parts of India.

In the early part of the 13th century, a portion of the Shan race, of which the Siamese are the most important representatives, invaded upper Assam and established a kingdom, which existed for nearly five centuries, and at one time extended its sovereignty over nearly the whole valley. One of the Shan kings assumed the title Aham, a corruption of the Sanskrit word *asama*, "peerless," which was afterwards extended to all this people, and from which by the restoration of a single letter, comes the present name of the province, (Assam).* The Ahams at first ruled the country with vigor and wisdom, but having become corrupt were finally conquered by the Muhammadans in the west and the Burmese in the east. They gradually adopted Hindu speech and customs, and are now reckoned as one of the inferior castes. These Shans came from the powerful kingdom of Pong, which extended eastward from Assam as far as the Chinese province of Yunan. The final breaking up of this kingdom by the Burmese in the middle of the last century led to a scattering of the population, and several clans, among them the Khamtis, migrated to the hills of eastern Assam. Their early home was on the sources of the Irawadi in a district called Bar-khamti, which was visited by Wilcox in 1826. Their present settlements are in the vicinity of Sadiya. According to the census of 1872, the Khamtis in the settled districts numbered about 1,600 souls. Physically, they have strongly-marked Mongolian peculiarities, and their complexion is darker and features coarser than those of the other Shans. Though among the most civilized of the hill tribes, they have retained their language and primitive customs. They are able to provide neat clothes and comfortable houses. The latter are usually very long in proportion to the width, with floors raised several feet above the ground and a thatched roof coming down to the level of the floor. They support themselves by agriculture, the women doing the greater part of the work. The instrument most used by the Khamtis, and everywhere by the hill tribes, is the *dao*. It is a sort of heavy knife about two feet in length, straight among the eastern tribes and curved elsewhere, which the hillman always carries with him and uses for a variety of purposes. It serves to clear the jungle and dig the ground, to skin and divide the flesh of animals,

*This is the Hindu account of the word. Probably the more correct theory is that Aham is an original Shan word, from which Asam comes by the substitution of s for h.

and is a formidable weapon in battle. Polygamy is practiced by the Khamtis, but the number of wives has not been observed to exceed two. The seclusion of women which prevails among the Hindus is not in vogue here. In religion they are Buddhists, and have temples and a regular priesthood, which is supported by alms. The priests, besides their religious duties, employ themselves in carving wood, ivory, or bone, in which they have great skill. The women also employ their leisure in embroidery. The Khamtis preserve the burial places of the dead with care, and erect over the graves conical mounds of earth. Their language belongs to that division of speech called Tai, of which the Siamese is the best specimen. Since the Ahams have adopted Hindu speech, the Khamtis and two or three kindred tribes are quite isolated from other members of the family.

Of the hill tribes in the eastern district of Assam, the Singphos come next to the Khamtis in situation and civilization. They are found either commingled with them or among the hills on the border. The Singphos also entered Assam near the close of the last century, coming from the eastern branches of the Irawadi. They soon acquired authority over the scattered Aryan population, among which they had settled, and reduced large numbers to slavery. They are a fine, athletic people, above the medium height, but have the oblique eyes, high cheek bones, and square jaws of the Mongolian family. Their complexion varies from yellowish to dark brown. Formerly the Singphos were the terror of the country around, on account of their marauding expeditions for plunder and slaves; these were with some difficulty suppressed by the British government, and they have now settled down as peaceful agriculturists. They live in large villages of sixty or more houses, preferring as sites defensible positions. The houses, like those of the Khamtis, are very long, sometimes 100 x 20 feet, with raised floors and balconies at either end, where the women like to sit and work. They know how to smelt iron, and produce an excellent quality of steel. Their clothing is woven and dyed in neat patterns by themselves. The Singphos practice polygamy, and the number of wives is in proportion to the wealth of the husband. They dispose of the dead by burial, but in case of important personages the body is sometimes unburied for several years; it is removed from the village until decomposed, when it is brought back and lies in state decked out with the ornaments used in life.

Their religion consists chiefly in the propitiation of evil spirits, called Nhats, of which three have special recognition. One lives above, another below, and the third in the house.

They are gratified by offerings of pigs, fowls, and dogs. There is no clear notion of a Supreme Being. Though they have no regular priesthood, there are some of their members who are skilled in divination; the Buddhist priests of the Khamtis are also held in esteem. The Singphos can give no better account of their origin than the tradition that they were created on a plateau two months' journey from Sadiya, and washed by a river flowing southward into the Irawadi. This may be a faint recollection of the ancient migration of this and kindred tribes from the highlands of Mongolia. Their language is of the Thibeto-Burman type of speech, and they are said to bear a marked physical resemblance to the Karens. In their earlier eastern home, they were called Ka-Khyen, and assumed the name Singpho, which means "man," after settling in Assam.

Proceeding in a northeasterly direction from the Singphos and Khamtis, along the rugged border land, we come to the settlements of the Tain or Digaru Mishmis. Their villages have been found as far south as the Namlang, a branch of the Irawadi, and they extend north and west to the Digaru, a northern tributary of the Brahmaputra. Their limits are approximately 96° to 97° 30′ east longitude, and 27° 40′ to 28° 40′ north latitude. The Mishmis farthest east trade exclusively with Thibet, while those on the west visit Assam. Both the ruggedness of the country and the savage character of the people have made any intimate acquaintance with them impossible. In 1827, Capt. Wilcox, in 1836, Dr. Griffiiths, and in 1845, Col. Rowlett visited a few villages. In 1851 Monsieur Krick, a French missionary, passed through their country to Thibet, and returned in safety, but was killed on a second journey in 1854. In the following year, Lieut. Eden headed an expedition which successfully avenged the murder. It is from the accounts of these persons that most of our knowledge of the Mishmis is derived. Physically, they are described as short and thick-set, but muscular, with a complexion fairer and features more Aryan than the tribes just described. Their houses, which are very long, as is the case among all these hill tribes, sometimes shelter 100 inmates each, and the whole village may consist of only one such dwelling. The Mishmis derive their support in part only from tillage. They have large flocks and herds, which they occasionally use for meat, but never for milk or agriculture. They are very fond of trading, in which they are exceedingly sharp, and much of their time is spent in trafficking journeys to Assam and Thibet or among the other hill tribes. The most important articles which they bring to the plains are the Aconite root, the Coptis

or Mishmi *teeta*, a valuable febrifuge, and the musk-bag of the musk deer. They are polygamists, and have as many wives as they can afford. They usually burn their dead. Their religion is of the usual pagan type, a worship of demons, who are the authors of all their misfortunes. It is said that they have no conception of a Supreme Being, and no regular priesthood. Priests are, however, sometimes brought from a distance for special services.

Crossing the Digaru, we come to a kindred people, called by themselves Midhi, but by the Assamese, Chalikata, or crop-haired Mishmis, so named on account of their combing the front hair over the forehead and clipping it straight across from ear to ear, much after the ugly fashion in vogue among our own ladies. They are a wild and treacherous people, and little known except as they come into the plains for plunder or barter. Their settlements extend from the Digaru to the western bank of the Dibang, in its hill course. In 1856, Col. Dalton visited some of their villages overlooking the latter river. Their complexion varies from dark brown to European brunette, and their features have a more decided Mongolian cast than those of the Tain Mishmis. They seem to be more skilled in necessary arts than their neighbors on either side, knowing how to manufacture the fiber of a specie of nettle into a very stiff and strong cloth, which serves as a sort of armor. They also weave a variety of other fabrics, which, with the natural products of the forests, they bring down to Assam and exchange mostly for salt. It is on real or pretended expeditions of this kind that they are dreaded by the people of the valley, for it is their wont to come into unprotected hamlets, and seizing the women and children, swiftly retreat with them to their rocky hills. They are armed with straight Thibetan swords, bows and crossbows with poisoned arrows, shields of buffalo hide, and quivers of poisoned *pangis*. These last are pieces of wood carefully sharpened at both ends, which are stuck into the ground along the line of their retreat, or about their stronghold, to wound and impede assailants. The Midhi have hereditary chiefs, though their authority seems to extend no farther than their personal influence; for they have no power over the persons or property of their subjects, and cannot punish offenses. If a person is injured by a member of another clan, it is the duty of his own clan to avenge him, but if the harm comes from one of his own party it is his own private affair to get satisfaction. They bury their dead in the forests away from the villages, placing in the grave the clothing and arrows of the deceased. This would seem to be evidence of belief in a future life, but the Midhi insist that it is only a

mark of affection. Col. Dalton was unable to discover more than the scantiest religious conceptions. They declare that the spirits whom they worship are mortal like themselves, and that if there was once a Creator of the world, he cannot now be living.

Pursuing our course westward from the Dibang, we come to a series of tribes occupying the hills overlooking the valley as far west as Bhutan, and thought to be more closely related to the Thibetans than are the tribes farther east. In their order from east to west, they are the Abars, Hill Miris, Daphlas, and Akas. The first named are so called by the Assamese, the word signifying "independent," but they call themselves Padam. Their villages extend from the Dibang to the Dirjmo, a confluent of the Brahmaputra north of Dibrugarh. Some of these were visited by Wilcox in 1828, and by Col. Dalton in 1855. Physically, the Abars are taller than the Mishmis but not so athletic. They have an olive complexion and more decidedly Mongolian features. Their houses are about 50 feet long by 20 wide, and are designed as the home of a single family, there being no partitions within. The floor is constructed of bamboos and raised about four feet from the ground; the walls and doors are made of planks and the roof of grass or the dried leaves of the plantain. Here the parents and unmarried daughters sleep at night, while the lads and bachelors occupy the town-house or *morang*, and act as watchmen for the village. The *morang*, which is the largest structure in the village and situated in a central position, is the place where all affairs of state are transacted. Here the elders convene daily, and discuss, over large potations of rice-beer furnished at the public expense, matters of interest to the community, and regulate the day's work. Their decisions are proclaimed through the village by boy criers. The government seems to be a sort of oligarchy, the leading men becoming such by personal ability and not being recognized as chiefs. Their mode of punishing crime is singular. When an offense has been committed, the elders after discussion decide that it shall be atoned for by the sacrifice of some kind of animal, a pig or fowl. They then proceed to seize and kill the first specimen that comes to hand, for which the *owner* can recover from the culprit any price that he chooses. The sentence of death can be passed only on slaves. The Abars subsist chiefly by agriculture, which they carry on upon the plains at the foot of their hills. Though their tools are of the rudest description, consisting of the *dao*, a crooked bamboo for scratching the ground, and a sharp stick to make a hole for the seed, they contrive to raise good crops of rice, cotton, maize, tobacco,

ginger, sugar-cane, and a variety of vegetables. They are able to weave cloth, but less skilfully than the Midhi. Their weapons are bows and arrows, spears, daggers, and straight swords. The position of their women is better than among most rude tribes; they are treated kindly, and relieved by the men of a part of the out-door work. Marriage is a matter of inclination, arranged between the parties concerned, and a feast seems to be the only ceremony required to ratify the contract. Polygamy is not practiced except in rare cases. Their religion consists chiefly in the worship of spirits residing in the trees. These spirits are the cause of all diseases, hence the only rational means of cure in sickness is a sacrifice. The Abars believe in a Supreme Being and a future state of rewards and punishments, but as they have evidently learned something of Hindu beliefs, it is hard to tell how much of their religion has not been imported. They have priests whose duty it is to interpret the omens from the entrails of victims. Pig's liver they have found to be most trustworthy in prophetic indications. The Abars are unable to give any account of their origin or race-affinities beyond a legend which is substantially as follows: The human race descended from one mother, who had two sons, the elder of whom was a hunter and the younger an artizan. She loved the latter better, and migrated with him to the west, taking along all the household utensils and implements which his ingenuity had devised, so that the knowledge of their construction was lost in the primitive home. She, however, left with the older son a quantity of blue and white beads, and taught him to forge *daos*, and to make musical instruments out of the gourd. From the elder son are descended the Abars, and from the younger the people of the west, among them the English.

West of the Dirjmo is the tribe called by the Assamese, Parbatia, or Hill Miris. They extend westward as far as the Subansiri, an important tributary of the Brahmaputra. They are divided into clans bearing special names, as the Ghy-ghasi, Sarak, Panibotia, and Tarbatia Miris. Having formerly in some way acquired the right to levy blackmail on the Assam villages, they now receive in lieu of it a small annuity from the British government. Though allied to the Abars, their customs are not altogether the same. Each village, consisting of ten or twelve houses, has its hereditary chief; sometimes a chief of unusual vigor acquires an influence over several villages. There is no town-hall, council of elders, or village police. The chief is bound to look after the public safety as best he may. Immunity from raids is secured more by their isolation and habit of secreting valuables than by watchfulness. Some

of the clans are dwarfish and scantily clad, but others are well formed and neatly dressed. Polygamy is practiced by the men who can afford the expense, while polyandry is occasionally found among the poorer people. A man who cannot afford to buy a wife invites his brother to contribute to the expense, and shares the woman with him. The only ceremony necessary to unite the parties is the payment of the stipulated sum for the bride, followed by a feast given first by her parents and then by the bridegroom or his father. The men are occupied in trading expeditions to the plains or in tracking animals, of which they eat every kind. Tiger's flesh is in great request on account of the supposed transfer of the animal's qualities to the eater. For the same reason it is not thought suitable food for the women. The Miris raise a variety of crops, but are not so successful in agriculture as the Abars. They live much upon dried meat and fish, which they obtain and cure on the plains. They have little skill in mechanical arts, and depend upon barter for cloth and other manufactured articles. The Miris worship the spirits of the forests by offerings of fowls or other animals. The entrails of the victims are carefully inspected for prophetic signs. The mode of burying the dead indicates some contact with Hindu ideas. The body is fully dressed, and furnished with arms, travelling-pouch, food and cooking utensils, and then laid in a deep grave protected by timbers so that the earth may not crush it. All this is to prepare the deceased for his journey to the world of Jam-Raja—evidently the Hindu Yama. The only account that the Miris can give of their origin is that they came from regions farther north guided by the flight of birds.

Beyond the Subansiri, we come to the Daphlas, of whom little is known in detail, but it is probable that their customs are not very dissimilar to those of their neighbors. Their marriage practices are the same as those just described. It is said that they have priests who divine from eggs and the entrails of chickens. Like the Miris they formerly made raids upon the villages in the plains, and the British government found it expedient to pay them a small amount yearly on condition of good conduct. The sum of 2543 rupees ($1271.50) is annually divided anong 238 chiefs. This has generally had the effect to keep them quiet.

Next to the Daphlas are the Akas, or Hrusso, as they call themselves. This tribe is in bad odor with the Assamese, who call the two clans into which they are divided, Hazarikowas, "eaters of a thousand hearths," and Kapachor, "the thieves that lurk in the cotton fields." This reputation was once well deserved, but they have since been brought to good behavior in the same way as the tribes before mentioned.

Their ancient religion was a worship of the spirits of the mountains and forests. They had priests and images of their gods. In 1829, the marauding chief of the Kapachors was arrested and confined in an Assam jail for several years. Here he became acquainted with the Hindu religion, and after his release introduced the worship of Hari among his people. All the tribes that we have described maintain a more or less direct intercourse with Thibet, as is proved by the numerous articles of Thibetan manufacture which they possess.

We have now reached Bhutan in our survey, and as yet have made but half the circuit of Assam. There still remain the better-known and more interesting tribes along the southern border. In order, however, not to unduly prolong this article we will reserve for another time an account of these tribes, to which will be added a brief sketch of the primitive peoples that have by a residence on the plains become more or less identified with the Hindu population.

INDIAN MIGRATIONS, AS EVIDENCED BY LANGUAGE.

BY HORATIO HALE.

Part II. The Dakota Stock.—The Algonkins.—The Chahta-Muskoki Stock.—The Moundbuilders.—The Iberians.

Another important linguistic stock is that which is known as the Dakotan family, from the native name of the group or confederacy called by the French missionaries and travellers the Sioux. This family occupies a vast extent of country between the Mississippi and the Rocky Mountains, and comprises many distinct communities, speaking allied though sometimes widely different languages. Among them are the proper Dakotas (including the Assiniboins), the Omahas, Osages, Kansas, Otos, Missouris, Iowas, Mandans, Hidatsas or Minnetarees, and several others. A single tribe, the Winnebagoes, speaking a peculiarly harsh and difficult language, dwelt east of the Mississippi, along the western shore of Lake Michigan; but they were commonly regarded by ethnologists as an offshoot of the prairie tribes, and as intruders into the territory of the Algonkins. Recent investigations, however, have disclosed the remarkable fact that tribes belonging to this family lived in early times east of the Alleghanies, and were found by the first explorers not far from the Atlantic coast. The travellers who met with them, incurious in such matters, did not take the trouble to record the language spoken by these tribes; and until recently they have been ranked by writers on Indian

ethnology among the southern members of the Huron-Iroquois family. In 1870 the last survivor of one of these tribes was still living, at a great age, on the Reserve of the Six Nations, near Brantford. His people, the Tuteloes, who, with several allied tribes, had formerly dwelt in southern Virginia and eastern North Carolina, had been driven from those regions early in the eighteenth century by the white settlers. Like their neighbors, the Tuscaroras, they had fled for refuge to the Iroquois, whom they accompanied in their subsequent flight into Canada. A vocabulary which I took down from his lips showed beyond question that his people belonged to the Dakotan stock. From him, and after his death from some intelligent Indians of mixed race—who, as children of Iroquois fathers by Tutelo mothers, still rank as Tuteloes, and speak the language fluently,—I obtained a sufficient knowledge of this speech to enable me to compare it, not merely in its phonology and its vocabulary, but also in its grammatical structure, with the Dakotan languages spoken west of the Mississippi, so far as these are known, and more particularly with the language of the proper Dakotas (or Sioux) and the Hidatsa, or Minnetarees. These two languages have been carefully studied by able and philosophic investigators, the Rev. Stephen R. Riggs and Dr. Washington Matthews, whose works are models of clear and thorough exposition. The result of this comparison has been a conviction that the Tutelo language is undoubtedly the oldest form of speech thus far known in this family, and that, so far as a judgment can be deduced from this evidence, the course of emigration must be considered to have been from east to west. The fact that the western members of this linguistic family were by far the most numerous counts for nothing in such an inquiry. If mere numbers and extent of territory are to be deemed of any value in questions of this nature, we should have to derive the Polynesians from New Zealand, the Portuguese from Brazil, and the English from North America.

The following list of words will show how the Tutelo vocables become contracted and distorted in the western Dakota speech:

	TUTELO.	DAKOTA.
Blood	*wáyi*	*we*
Knife	*masáñi*	*isañ*
Day	*niháñpi*	*añpetu*
Water	*máni*	*mini*
Land	*amáñi*	*maka*
Winter	*wanéñi*	*wani*
Autumn	*táñi*	*ptañ*
White	*asáñi*	*sañ*
Black	*asépi*	*sapa*

	TUTELO.	DAKOTA.
Cold	*sáni*	*sni*
One	*nóñsa*	*wantsha*
Three	*láni*	*yamni*
Five	*kisaháñi*	*zaptañ*
Six	*akáspe*	*shakpe*
Seven	*ságomiñk*	*shakowiñ*

The clearest evidence, however, is to be found in a comparison of the grammatical characteristics. It is an established law in the science of linguistics that, in any family of languages, those which are of the oldest formation,—or, in other words, which approach nearest to the mother speech,—are the most highly inflected. The derivative or more recent tongues are distinguished by the comparative fewness of the grammatical changes. The difference in this respect between the Tutelo and the western branches of this stock is so great that they seem to belong to different categories, or genera, in the classification of languages. The Tutelo may fairly be ranked among inflected tongues, while the Dakota, the Hidatsa, and apparently all the other western dialects of the stock, must rather be classed with agglutinated languages,—the variations of person, number, mood and tense being chiefly denoted by affixed or inserted particles. This statement applies more particularly to the Hidatsa. In the Dakota some remnants of the inflected forms still remain.

Thus, in the Hidatsa there is no difference, in the present tense, between the singular and the plural of the verb. In this language, also, there is no mark of any kind, even by affixed particles, to distinguish the present tense from the past, nor even, in the third person, to distinguish the future from the other tenses. *Kidĕçi* may signify "he loves," "he loved," and "he will love." The Dakota is a little better furnished in this way. The plural is distinguished from the singular by the addition of the particle *pi*, and in the first person by prefixing the pronoun *uñ*, they, in lieu of *wa* or *we*, I. Thus, *kaçká*, he binds, becomes *kaçkápi*, they bind; *wakáçka*, I bind, becomes *uñkáçkapi*, we bind. No distinction is made between the present and the past tense. *Kaçká* is both "he binds" and "he bound." The particle *kta*, which is not printed, and apparently not pronounced, as an affix, indicates the future. All other distinctions of number and tense are expressed in these two languages by adverbs, or by the general context of the sentence.

In lieu of these scant and imperfect modes of expression, the Tutelo gives us a surprising wealth of verbal forms. The distinction of singular and plural is clearly shown in all the persons, thus:

opéwa, he goes	*opehéhla*, they go
oyapéwa, thou goest	*oyapepūa*, ye go
owapéwa, I go	*maopéwa*, we go

Of tenses there are many forms. The termination in *ewa* appears to be of an aorist or rather of an indefinite meaning. *Opéwa* (from *opa*, to go), may signify both "he goes," and "he went." A distinctive present is indicated by the termination *ōma*, a distinctive past by *ōka*, and a future by *ta* or *ēta*. Thus from *kte*, to kill, we have *waktēwa*, I kill him, or I killed him, *waktēōma*, I am killing him, and *waktēta*, I shall kill him. So *ohūta*, he sees it, becomes *ohatiōka*, he saw it formerly, and *ohatēta*, he will see it. The inflections for person and number in the distinctively present tense, ending with *oma*, are shown in the following example:

waginōma, he is sick	*waginóñhna*, they are sick
wayinginōma, thou art sick	*wayinginōmpo*, ye are sick
wameginōma, I am sick	*mañgwaginōma*, we are sick

Besides these inflections for person, number and tense, the Tutelo has also other forms or moods of the verb, negative, interrogative, desiderative, and the like. *Waktēwa*, I killed him, becomes in the negative form *kiwaktēna*, I did not kill him. *Yaktēwa*, thou killedst him, makes in the interrogative form *yaktēwo*, didst thou kill him? *Owapēwa*, I go, shows the combined negative and desiderative forms in *kowapēbina*, I do not wish to go. None of these forms are found in the Dakota or Hidatsa verbs.

In like manner the possessive pronouns, when combined with the noun, show a much greater fulness, and, so to speak, completeness, in the Tutelo than in the Dakota, as is seen in the following example:

	TUTELO.	DAKOTA.
Head	*pasūi*	*pa*
My head	*mimpasūi*	*mapa*
Thy head	*yiñpasūi*	*nipa*
His head	*epasūi*	*pa*
Our heads	*emañkpasūi*	*uñpapi*
Your heads	*eyiñkpasūpui*	*nipapi*
Their heads	*epasūi-lei*	*papi*

The linguistic evidence is to a certain extent supplemented by other testimony. It would seem at least probable that some of the western Dakotas at one time had their habitations east of the Mississippi, and have been gradually withdrawing to the westward. The French missionary Gravier, in his "Relation" of the year 1700, affirms that the Ohio River was called by the Illinois and the Miamis the Akansea River, because the Akanseas formerly dwelt along it. The Akanseas

were the Dakota tribe who have given their name to the River and State of Arkansas. Catlin found reason for believing that the Mandans, another tribe of the southern Dakota stock, formerly resided in the valley of the Ohio. The peculiar traces in the soil which marked the foundations of their dwellings and the position of their villages were evident, he affirms, at various points along that river.*

Another very widely extended Indian stock is the Algonkin family, which possessed the Atlantic coast from Labrador to South Carolina, and extended westward to the Mississippi, and even, in the far north, to the Rocky Mountains, where some of the Satsika or Blackfoot tribes speak a corrupt dialect of this stock. Gallatin, who had studied their languages with special care, expresses the opinion (in his "Synopsis of the Indian Tribes," p. 29), that the northern Algonkins were probably the original stock of this family. In this northern division he includes the tribes dwelling north of the Great Lakes, from the Gulf of St. Lawrence to the vicinity of the northern Dakotas and Blackfoot Indians. They comprise the numerous and widely scattered Montagnais (or Mountaineers), the Algonquins proper, the Ottawas, Chippeways, and Crees or Knistenaux. Whether they were really the elder branch, and whether the Micmacs of Nova Scotia, the Abenakis of Maine, the New England Indians, the Delawares, the Shawanoes, the Miamis, and the other southern and western Algonkins spoke derived or secondary languages, is a question which can only be decided by a careful comparison of words and grammatical forms. Mr. Trumbull, who has made this department of American linguistics peculiarly his own, would be better able than any one else to prosecute this line of research, and decide how far the opinion of Gallatin is sustained by the evidence of language. I may merely remark that in his valuable paper "On Algonkin Versions of the Lord's Prayer," in the Transactions

*After this paper was composed, I had the satisfaction of learning, at the meeting of the American Association in Montreal, from my friend the Rev. J. Owen Dorsey, of the Smithsonian Institution (who has spent several years among the western Dakota tribes in missionary labors, and in investigating their languages and social systems), that all the southern tribes of that stock—the Omahas, Otoes, Kansas, Iowas, Missouris, &c.—have a distinct tradition that their ancestors formerly dwelt east of the Mississippi. Miss Alice C. Fletcher, who had resided for a year among the Omahas, acquiring a knowledge of their customs and traditions, had heard the same history. Whether the northern Dakotas have a similar tradition is not known. The former tribes all speak of the Winnebago (or Hotchangara) tribe as their uncle, and declare that their own tribes were originally offshoots from the Winnebagoes. A comparison of the letter-changes between the Winnebago and the western dialects (as shown in an interesting paper on the subject read by Mr. Dorsey before the Association), left no doubt of this derivation. The Winnebagoes evidently hold the same relation to the western tribes of this stock that the Mohawks bear to the western Iroquois nations, while the Tuteloes are to the Winnebagoes what the Hurons are to the Mohawks. That the emigration of the Dakota tribes from the east, which was inferred by me (after the discovery of the Tutelo language), from purely linguistic evidence, should be thus confirmed, must be regarded as a striking proof of the value of such evidence in ethnological science. It is gratifying to know that through the well-directed efforts of Major Powell and his able collaborators, the students of this science, in its American department, will soon have a large mass of valuable evidence at their command, in the publications of the Smithsonian Bureau of Ethnology.

of the American Philological Association for 1872, Mr. Trumbull notices specially the soft and musical character of the languages spoken by the western Algonkins, the Illinois and Miami tribes,—a softness arising from the fact that "the proportion of consonants to vowels in the written language is very small. Some words (he continues) are framed entirely of vowels, e. g., *uaiua*, 'he goes astray;' *uaui*, or, with imperfect diphthongs, *ua-ui*, 'an egg;' *uiuua*, 'he is married;' in many others there is only a single semi-vowel or consonant proper in half-a-dozen syllables, e. g., *aïuaakiui*, 'there is yet room;' *aïapia*, 'a buck.' In *acueuateue*, 'it leans, is not upright,' we have but two consonants."

This paucity of consonants is a well-known mark of that phonetic decay which distinguishes derivative languages. The Hawaiian is one of the youngest of the Polynesian dialects. The "Vocabulary" of this language, compiled by the Rev. Lorrin Andrews, shows many hundred words composed either of vowels alone, or of vowels with but a single consonant. *Aoaao*, the sea-breeze, *oiaio*, truth, *uiio*, to question, *kooieie*, proud, *maauauwa*, to trade, *uiuiki*, to glimmer, are words which may be compared with those quoted by Mr. Trumbull. Examples might also be drawn from our own speech, in which the German *auge* becomes *eye*, the German *legen* becomes *lay*, the German *machtig* becomes *mighty*, and so on, in numerous instances too well known to need recital. That the Algonkin languages of the Atlantic coast, which, if not harsh, are certainly hard and firm, abounding in consonants, should prove to be of more recent origin than the soft vocalic dialects of the west, is extremely improbable.

The traditions of the northern Algonkins do not, according to the native historians, Peter Jones and George Copway, trace their origin further back than to a comparatively late period, when their ancestors possessed the country which they still hold north of Lakes Huron and Superior. The Crees, from time immemorial, have wandered over the wide region extending between these lakes and Hudson's Bay, and stretching eastward to the coast of southern Labrador. It is only in recent times, as the Rev. Father Lacombe, the author of an excellent dictionary and grammar of their language, [illegible] us, that they have foun[illegible] of the Red [illegible] have expelled th[illegible] Blackfoot [illegible] por-tion of th[illegible] that riv[illegible] Mountai[illegible] [illegible]
what se[illegible]
m[illegible]

The southern region of the United States, extending from the eastern coast of Georgia to the Mississippi River, was occupied chiefly by a fourth linguistic stock, the Chahta-Muskoki family, comprising the Creeks or Muskhogees, the Chickasas, the Choctaws, and some minor tribes. The language of the easternmost of these, the Creeks, differs so widely from those of the western tribes, the Choctaws and Chickasas, that Gallatin, though noticing resemblances sufficient to incline him to believe in their common origin, felt obliged to classify them as belonging to separate stocks. Later investigations leave no doubt of their affinity. The differences, however, are much greater than those which exist between the different languages of the Algonkin family, or between those of the Huron-Iroquois group. They may rather be compared with the differences which are found between the Cherokee and the Iroquois languages. There is an evident grammatical resemblance, along with a marked unlikeness in a considerable portion of the vocabulary. The natural inference, as in the case of the Cherokee, is that many of the words of these differing languages have been derived from some foreign source. This is the opinion expressed by Dr. D. G. Brinton, than whom no higher authority on this point can be adduced, in his interesting paper "On the National Legend of the Chahta-Muskokee Indians," published in the Historical Magazine for February, 1870. It has seemed to me not unlikely that these languages and the Cherokee owed the foreign element of their vocabulary to the same source, and that this source was the language of the people who formerly occupied the central region of the United States, and who have been the object of so much painstaking investigation, under the name of "The Moundbuilders."

The mystery which so long enveloped the character and fate of this vanished people is gradually disappearing before the persistent inquiries of archæologists. The late lamented President of our Association, the Hon. L. H. Morgan, in his work on the "Houses and House-Life of the American Aborigines," has shown the evidences of resemblance in the mode of life and social condition of the Moundbuilders to those of the "Village Indians" of New Mexico and Arizona. From various indications, however, it would seem probable that their political system had been further developed than that of these Village Indians, and that, as in the Mexican Valley and in Peru, the greater portion of the population was combined under one central authority. Dr. Brinton, in a well-reasoned essay on "The Probable Nationality of the Moundbuilders," printed in the AMERICAN ANTIQUARIAN for October, 1881, has pointed

out the fact that the tribes of the Chahta-Muskoki family were mound-builders in recent times, and that their structures were but little inferior in size to those of the extinct population of the Ohio Valley. He sees reason for concluding that "the Moundbuilders of the Ohio were in part the progenitors of the Chahta tribes." Dr. Brinton's extensive research and his caution in deciding give great weight to his conclusions, to which I would only venture to suggest some modifications drawn from the evidences of tradition and language.

Mr. Morgan remarks that "from the absence of all traditionary knowledge of the Moundbuilders among the tribes found east of the Mississippi, an inference arises that the period of their occupation was ancient." For the same reason he thinks it probable that their withdrawal was gradual and voluntary; for "if their expulsion had been the result of protracted warfare, all remembrance of so remarkable an event would scarcely have been lost among the tribes by whom they were displaced." Mr. Morgan's profound studies in sociology left him apparently little time to devote to the languages and traditions of the Indians; otherwise he could not have failed to notice that the memories retained by them of the overthrow and expulsion of their semi civilized predecessors are remarkably full and distinct. We have these traditions recorded by two native authorities, the one Iroquois, the other Algonkin, each ignorant of the other's existence, and yet each confirming the other with singular exactness.

The remarkable historical work of the Tuscarora Cusick, owing to its confused and childish style, and its absurd chronology, has received far less attention than its intrinsic value deserves. Whenever his statements can be submitted to the test of language, they are invariably confirmed. He tells us that in ancient times, before the Iroquois separated from the Hurons, "the northern nations formed a confederacy, and seated a great council-fire on the River St. Lawrence." This confederacy appointed a high chief ("a prince," as Cusick calls him), as ambassador, who "immediately repaired to the south, and visited the great emperor, who resided at the Golden City, a capital of the vast empire." The mention of the Golden City has probably induced many readers of Cusick's book to relegate this story to the cloudland of mythology. But it must be remembered that to the Indians of North America one metal was as remarkable and as precious as another. Copper was, in fact, their gold. Among the Moundbuilders, copper held the precise place which gold held in ancient Peru. Of hammered copper they made ornaments for their persons and their dresses, and wrought their most valued implements. In one

grave-mound in Athens county, Ohio, Professor E. B. Andrews found about five hundred copper beads, forming a line around the space which had once held the body of the former owner. "When we remember (he writes) that the copper of the Moundbuilders was obtained from the veins of native copper near Lake Superior (a long way off from southern Ohio), where it was quarried in the most laborious manner; that it was hammered into thin sheets, and divided into narrow strips, by no better smith's tools, so far as we know, than such as could be made of stone, and then rolled into beads, it is evident that the aggregate amount of labor involved in the fabrication of the beads in this mound would give them an immense value."*

Cusick's "Golden City" was probably a city abounding in the precious red metal of the Lake Superior mines. "After a time," he proceeds, "the emperor built many forts throughout his dominions, and almost penetrated to Lake Erie. This produced an excitement. The people of the north felt that they would soon be deprived of the country on the south side of the Great Lakes. They determined to defend their country against the infringement of foreign people. Long, bloody wars ensued, which, perhaps, lasted about one hundred years. The people of the north were too skilful in the use of bows and arrows, and could endure hardships which proved fatal to a foreign people. At last the northern people gained the conquest, and all the towns and forts were totally destroyed, and left in a heap of ruins."

This tells the whole story, in the plainest language. There is not the slightest reason for supposing that this narrative is a fabrication. If it were, it would be the only discoverable invention in the book. But Cusick's work bears throughout the stamp of perfect sincerity. There is nothing in it drawn from books, or, so far as can be discovered, from any other source than native tradition. His story, moreover, receives confirmation, as has been said, from an independent and even hostile quarter. The Delaware Indians, who styled themselves Lenni Lenape, had a tradition closely agreeing with that of the Iroquois. This, too, has been overlooked or undervalued, through a manifest geographical error in those who first received and attempted to interpret it,—the error of supposing that only one river could bear among the Indians the very common name of the "great river."

The well-known missionary author, Heckewelder, commences his "History of the Indian Nations," with the account which the Lenni Lenape give of the migrations that brought

*Report of the Peabody Museum of American Archæology and Ethnology for 1880, p. 61.

them to the region on the banks of the Delaware River, where they were found by the white colonists. The story, as he relates it, is entirely credible, and corresponds with the Iroquois traditions, except in one respect. The Lenape and the Iroquois are represented as coming not from the north, but from the far west, crossing "the Mississippi" together, and falling with their united forces on the people whom they found in the Ohio valley. These were a numerous people, called the Allighewi or Tallegwi, who dwelt in great fortified towns. After a long and destructive war, in which no quarter was given, the Allighewi were utterly defeated, and fled "down the Mississippi." The conquerors then divided the country between them, the Iroquois choosing the region along the Great Lakes, while the Lenape took possession of the country further north. The tradition is recorded at much greater length, and with many additional particulars, in a paper on the "Historical and Mythological Traditions of the Algonquins," by the late distinguished archæologist, E. G. Squier, read before the Historical Society of New York, in June, 1848, and republished lately by Mr. Beach in his "Indian Miscellany." This paper comprises a translation of the *Walum-Olum*, or "bark-record" of the Lenni Lenape, a genuine Indian composition, in the Delaware language. It is evidently a late compilation, in which Indian traditions are mingled with notions drawn from missionary teachings. The purely historical part has, like Cusick's narrative, an authentic air, and corrects some errors in the minor details of Heckewelder's summary. The country from which the Lenape migrated was *Shinaki*, the "land of fir-trees," not in the west, but in the far north,—evidently the woody region north of Lake Superior. The people who joined them in the war against the Allighewi (or Tallegwi, as they are called in this record), were the Talamatan, a name meaning "not of themselves," whom Mr. Squier identifies with the Hurons, and no doubt correctly, if we understand by this name the Huron-Iroquois people, as they existed before their separation. The river which they crossed was the Messusipu, the "Great River," beyond which the Tallegwi were found, "possessing the east." That this river was not our Mississippi is evident from the fact that the works of the Moundbuilders extended far to the westward of the latter river, and would have been encountered by the invading nations, if they had approached it from the west, long before they arrived at its banks. The "Great River" was apparently the upper St. Lawrence, and most probably that portion of it which flows from Lake Huron to Lake Erie, and which is commonly known as the Detroit River. Near this river, according to Heckewelder, at a point west of Lake St.

Clair, and also at another place just south of Lake Erie, some desperate conflicts took place. Hundreds of the slain Tallegwi, as he was told, were buried under mounds in that vicinity. This precisely accords with Cusick's statement that the people of the great southern empire had "almost penetrated to Lake Erie" at the time when the war began. Of course, in coming to the Detroit River from the region north of Lake Superior, the Algonkins would be advancing from the west to the east. It is quite conceivable that, after many generations and many wanderings, they may themselves have forgotten which was the true Messusipu, or Great River, of their traditionary tales.

The passage already quoted from Cusick's narrative informs us that the contest lasted "perhaps one hundred years." In close agreement with this statement, the Delaware record makes it endure during the terms of four head-chiefs, who in succession presided in the Lenape councils. From what we know historically of Indian customs, the average tenure of such chiefs may be computed at about twenty-five years. The following extract from the record gives their names and probably the fullest account of the conflict which we shall ever possess:

> "Some went to the east, and the Tallegwi killed a portion;
> Then all of one mind exclaimed, War! War!
> The Talamatan (not-of-themselves) and the Nitilowan, [allied north-people], go united (to the war.)
> Kinnepehend (Sharp-looking) was the leader, and they went over the river,
> And they took all that was there, and despoiled and slew the Tallegwi.
> Pimokhasuwi (Stirring-about) was next chief, and then the Tallegwi were much too strong.
> Tenchekensit (Open-path) followed, and many towns were given up to him.
> Paganchihilla was chief, and the Tallegwi all went southward.
> South of the Lakes they (the Lenape) settled their council-fire, and north of the Lakes were their friends the Talamatan (Hurons?)

There can be no reasonable doubt that the Allighewi or Tallegwi, who have given their name to the Alleghany River and Mountains, were the Moundbuilders. It is also evident that in their overthrow the incidents of the fall of the Roman Empire were in a rude way repeated. The destiny which ultimately befell the Moundbuilders can be inferred from what we know of the fate of the Hurons themselves in their final war with the Iroquois. The lamentable story recorded in the Jesuit "Relations," and in the vivid narrative of Parkman, is well known. The greater portion of the Huron people were exterminated, and their towns reduced to ashes. Of the survivors many were received and adopted among the conquerors. A few fled to the east and sought protection from the French, while a larger remnant retired to the northwest, and took shelter among the friendly Ojibways. The fate of the Tallegwi was

doubtless similar to that which thus overtook the descendants of their Huron conquerors. So long as the conflict continued, it was a war of extermination. All the conquered were massacred, and all that was perishable in their towns was destroyed. When they finally yielded, many of the captives would be spared to recruit the thinned ranks of their conquerors. This, at least, would occur among that division of the conquering allies which belonged to the Huron-Iroquois race; for such adoption of defeated enemies is one of the ancient and cardinal principles of their well-devised political system. It is by no means unlikely that a portion of the Moundbuilders may, during the conflict, have separated from the rest and deliberately united their destiny with those of the conquering race, as the Tlascalans joined the Spaniards in their war against the Aztecs. Either in such an alliance or in the adoption of captive enemies, we may discern the origin of the great Cherokee nation, a people who were found occupying the southeastern district of the Moundbuilders' country, having their chief council-house on the summit of a vast mound which they themselves ascribed to a people who preceded them,* and speaking a language which shows evident traces of its mixed origin,—in grammar mainly Huron-Iroquois, and in vocabulary largely recruited from some foreign source.

Another portion of the defeated race, fleeing southward "down the Mississippi," would come directly to the country of the Chahta, or Choctaws, themselves (as Dr. Brinton reminds us) a mound-building people, inferior probably in civilization to the Allighewi, but superior, it may be, in warlike energy. With these the northern conquerers would have no quarrel, and the remnant of the Allighewi would be allowed to remain in peace among their protectors, and, becoming incorporated with them, would cause that change in their language which makes the speech of the Choctaws differ as much from that of their eastern kindred, the Creeks or Muskhogees, as the speech of the Cherokees differs from that of their northern congeners, the Iroquois.

If this theory is correct, we might expect to find some similar words in the languages of the Cherokees and the Choctaws. These languages, so far as their grammar is concerned, belong to entirely different stocks. The difference is as complete as that which exists between the Persian and Turkish languages. It is well known that these last-named languages, though utterly unlike in grammar, have a common element in the Arabic words which each has adopted from a neighboring race. We are naturally led to inquire whether similar traces

* Bartram's Travels, p. 367. Reports of the Peabody Museum, vol. 2, p. 76.

exist in the Cherokee and the Choctaw of a common element derived from some alien source. The comparative vocabularies given in Gallatin's work comprise chiefly those primitive and essential words which are rarely borrowed by any language, such as the ordinary terms of relationship, the names of the parts of the human body and the most common natural objects, the numerals, and similar terms. There are, however, some words, such as the terms for some articles of attire, the names of certain animals, and a few others, which in most languages are occasionally taken from a foreign source. Thus the Saxon-English has borrowed from the Norman-French element the words for boot and coat, for cattle and squirrel, for prisoner and metal. It is, therefore, interesting to find that the vocabularies of the Cherokee and the Choctaw, differing in all the more common words, show an evident similarity in the following list:

	CHEROKEE	CHOCTAW and CHICASA
Shoes	*lasulo*	*shulush*
Buffalo	*yanasa*	*hŭnnŭsh, yennush*
Fox	*tsula*	*chula*
Prisoner	*ayuñki*	*yuka*
Metal	*atelun*	*tŭlle, toli*

These resemblances, occurring only in words of this peculiar class, can hardly be mere coincidences. A more extensive and minute comparison will be needed to establish beyond question the existence of this foreign element common to the two languages, and the extent to which each has been modified by it; but the indications thus shown seem to confirm the conclusions derived from the clear and positive traditions of the northern Indians. Every known fact favors the view that during a period which may be roughly estimated at between one and two thousand years ago, the Ohio valley was occupied by an industrious population of some Indian stock, which had attained a grade of civilization similar to that now held by the Village Indians of New Mexico and Arizona; that this population was assailed from the north by less civilized and more warlike tribes of Algonkins and Hurons, acting in a temporary league, similar to those alliances which Pontiac and Tecumseh afterwards rallied against the white colonists; that after a long and wasting war the assailants were victorious; the conquered people were in great part exterminated; the survivors were either incorporated with the conquering tribes or fled southward and found a refuge among the nations which possessed the region lying between the Ohio valley and the Gulf of

Mexico; and that this mixture of races has largely modified the language, character, and usages of the Cherokee and Choctaw nations.*

It will be noticed that the evidence of language, and to some extent that of tradition, leads to the conclusion that the course of migration of the Indian tribes has been from the Atlantic coast westward and southward. The Huron-Iroquois tribes had their pristine seat on the lower St. Lawrence. The traditions of the Algonkins seem to point to Hudson's Bay and the coast of Labrador. The Dakota stock had its oldest branch east of the Alleghanies, and possibly (if the Catawba nation shall be proved to be of that stock), on the Carolina coast. Philologists are well aware that there is nothing in the language of the American Indians to favor the conjecture (for it is nothing else), which derives the race from eastern Asia. But in western Europe one community is known to exist, speaking a language which in its general structure manifests a near likeness to the Indian tongues. Alone of all the races of the old continent the Basques or Euskarians of northern Spain and southwestern France have a speech of that highly complex and polysynthetic character which distinguishes the American languages. There is not, indeed, any such positive similarity in words or grammar as would prove a direct affiliation. The likeness is merely in the general cast and mould of speech; but this likeness is so marked as to have awakened much attention. If the scholars who have noticed it had been aware of the facts now adduced with regard to the course of migration on this continent, they would probably have been led to the conclusion that this similarity in the type of speech was an evidence of the unity of race. There seems reason to believe that Europe,—at least in its southern and western portions,—was occupied in early times by a race having many of the characteristics, physical and mental, of the American aborigines. The evidences which lead to this conclusion are well set forth in Dr. Dawson's recent work on "Fossil Man." Of this early European people, by some called the Iberian race, who were ultimately overwhelmed by the Aryan emigrants from central Asia, the Basques are the only survivors thåt have

* I am gratified to find that the views here set forth with regard to the character and fate of the Moundbuilders are almost identical with those expressed by Mr M. E. Force, in his excellent paper, entitled '*To what Race did the Moundbuilders belong?*" read before the *Congrès International des Américanistes*, at Luxembourg in 1877. The fact that so judicious and experienced an inquirer as Judge Force, after a personal examination of the earthworks, has arrived, on purely archæological grounds, at the same conclusions to which I have been brought by the independent evidence of tradition and language, must be regarded as affording strong confirmation of the correctness of these conclusions. Mr. J. P. MacLean, in his valuable work on "the Moundbuilders," shows (p. 144) that the strong and skillfully planned line of fortesses raised by the ancient residents of Ohio was plainly erected against an enemy coming from the north, and that the warfare was evidently a long protracted struggle, ending suddenly in the complete overthrow and destruction or expulsion of the defenders. These facts coincide exactly with the tradition recorded by Cusick.

retained their original language; but all the nations of southern Europe, commencing with the Greeks, show in their physical and mental traits a large intermixture of this aboriginal race. As we advance westward, the evidence of this infusion becomes stronger, until in the Celts of France and of the British Islands, it gives the predominant cast to the character of the people.*

If the early population of Europe were really similar to that of America, then we may infer that it was composed of many tribes, scattered in loose bands over the country, and speaking languages widely and sometimes radically different, but all of a polysynthetic structure. They were a bold, proud, adventurous people, good hunters and good sailors. In the latter respect they were wholly unlike the primitive Aryans, who, as was natural in a pastoral people of inland origin, have always had in the east a terror of the ocean, and in Europe were, within historic times, the clumsiest and least venturous of navigators. If communities resembling the Iroquois and the Caribs once inhabited the British islands and the western coasts of the adjacent continent, we may be sure that their fleets of large canoes, such as have been exhumed from the peat-deposits and ancient river-beds of Ireland, Scotland, and France, swarmed along all the shores and estuaries of that region. Accident or adventure may easily have carried some of them across the Atlantic, not merely once, but in many successive emigrations from different parts of western Europe. The distance is less than that which the canoes of the Polynesians were accustomed to traverse. The derivation of the American population from this source presents no serious improbability whatever.†

On the theory, which seems thus rendered probable, that the early Europeans were of the same race as the Indians of America, we are able to account for certain characteristics of the modern nations of Europe, which would otherwise present to the student of anthropology a perplexing problem. The

*"The Basque may then be the sole surviving relic and witness of an aboriginal western European population, dispossessed by the intrusive Indo-European tribes. It stands entirely alone, no kindred having yet been found for it in any part of the world. It is of an exaggeratedly agglutinative type, incorporating into its verb a variety of relations which are almost everywhere else expressed by an independent word." — "The Basque forms a suitable stepping-stone from which to enter the peculiar linguistic domain of the New World, since there is no other dialect of the Old World which so much resembles in structure the American languages."—Professor Whitney, in "*The Life and Growth of Language*," p. 258.

†The distance from Ireland to Newfoundland is only sixteen hundred miles. The distance from the Sandwich Islands to Tahiti (whence the natives of the former group affirm that their ancestors came), is twenty-two hundred miles. The distance from the former islands to the Marquesas group, the nearest inhabited land, is seventeen hundred miles. The canoes of the Sandwich Islands (as we are assured by Ellis, in his "Polynesian Researches"), "seldom exceed fifty feet in length." In the river-beds of France, ancient canoes have been found exceeding forty feet in length. One was more than forty-five feet long, and nearly four feet deep. See the particulars in Figuier's "Primitive Man," Appleton's edit., p. 177.

Aryans of Asia, ancient and modern, as we know them in the Hindoos, the Persians, and the Armenians, with the evidence afforded by their history, their literature, and their present condition, have always been utterly devoid of the sentiment of political rights. The love of freedom is a feeling of which they seem incapable. To humble themselves before some superior power,—deity, king, or brahmin,—seems to be with them a natural and overpowering inclination. Next to this feeling is the love of contemplation and of abstract reasoning. A dreamy life of worship and thought is the highest felicity of the Asiatic Aryan. On the other hand, if the ancient Europeans were what the Basques and the American Indians are now, they were a people imbued with the strongest possible sense of personal independence, and, resulting from that, a passion for political freedom. They were also a shrewd, practical, observant people, with little taste for abstract reasoning.

It is easy to see that from a mingling of two races of such opposite dispositions, a people of mixed character would be formed, very similar to that which has existed in Europe since the advent of the Aryan emigrants. In eastern Europe, among the Greeks and Sclavonians, where the Iberian element would be weakest, the Aryan characteristics of reverence and contemplation would be most apparent. As we advance westward, among the Latin and Teutonic populations, the sense of political rights, the taste for adventure, and the observing, practical tendency, would be more and more manifest; until at length, among the western Celts, as among the American Indians, the love of freedom would become exalted to an almost morbid distrust of all governing authority.

If this theory is correct, the nations of modern Europe have derived those traits of character and those institutions which have given them their present headship of power and civilization among the peoples of the globe, not from their Aryan forefathers, but mainly from this other portion of their ancestry, belonging to the earlier population which the Aryans overcame and absorbed. That this primitive population was tolerably numerous is evident from the fact that the Aryans, particularly of the Latin, Teutonic, and Celtic nations, lost in absorbing it many vocal elements and many grammatical inflections of their speech. They gained, at the same time, the self-respect, the love of liberty, and the capacity for self-government, which were unknown to them in their Asiatic home. Knowing that these characteristics have always marked the American race, we need not be surprised when modern researches demonstrate the fact that many of our Indian communities have possessed political systems embodying some of

the most valuable principles of popular government. We shall no longer feel inclined to question the truth of the conclusion which has been announced by Carli, Draper, and other philosophic investigators, who affirm that the Spaniards, in their conquest of Mexico, Yucatan, and Peru, destroyed a better form of society than that which they established in its place. The intellectual but servile Aryans will cease to attract the undue admiration which they have received for qualities not their own; and we shall look with a new interest on the remnant of the Indian race, as possibly representing this nobler type of man, whose inextinguishable love of freedom has evoked the idea of political rights, and has created those institutions of regulated self-government by which genuine civilization and progress are assured to the world.

NATIVE RACES OF COLOMBIA, S. A.

BY E. G. BARNEY,*

(Fourth Paper.)

THE CHIBCHA NATION.

In that part of the States of Boyac'a and Cundiuamarca, known as the Altaplanicias of Tunja and Bogota, and including also some valleys and plains adjacent, dwelt the Chibcha, sometimes erroneously styled Muysca, Muiscas, or Moscas. In the Chibcha language the word Muisca was a noun of multitude and signified people, and was used in the same way as we say American people, English people, French people, etc. The national name of these people was derived from their God, Chibchacum, who will be treated of in his turn.

The extent of territory occupied by the Chibcha at the time of their conquest. (about 1540), was nearly 165 miles in length by 35 to 55 miles in width, or a little more than 6,000 square miles, upon which were crowded about 1,200,000 inhabitants, or an average of 200 souls to each square mile. Their country generally had an elevation of more than 7,000 feet above the sea. The soil was very fertile, as all the Altaplanicie had at some remote period been the bed of an immense lake, surrounded on all sides by mountains of from 9 to 12,000 feet above sea level. The climate was cool and invigorating and the inhabitants were industrious and frugal, as indeed they must of necessity have been, since from the absence of domes-

* Copyrighted, 1882,

tic animals, the products of the soil were their only resource for food and raiment. Their origin and history is hidden beneath an impenetrable covering of doubtful tradition, superstition and fable, some portions of which bear so close resemblance to those of Mexico, that one is led to suspect invention and collusion among historians or their informers, and yet it is very difficult to see how such could have been, or what object was to be gained by the deception.

The "*culture hero*" who, according to one of their traditions, was the originator and organizer of their religion and laws, was generally designated by two names, Nemterequeteba (Name-tay-eay-kay-tay-bah), or "the sent from God," and Xue-Chimzapaque, which had a similar signification. The tradition has it that he came from the East; had a long beard and had his hair bound up by a band. He wore a tunic, without collar, for vestment, to which was added a mantle whose points were knotted at the shoulder, a form of dress used by all the Chibcha at the time of the conquest, as the poncho and ruana are of Mexican or Peruvian origin, having been introduced by the soldiers of of Belalcazer. At the period of the advent of Nemterequeteba, the Chibcha were in the lowest state of barbarism, wearing crude cotton, tied together with bark strings, to protect themselves from the cold and to answer the slight demands of modesty among a savage people. They had no idea of government nor of society, neither had they any known religious belief.

The Civilizer began his preaching in Boza, where the Spaniards found a* rib of some large animal which the natives venerated as having pertained to an animal brought by Nemterequeteba.

From Boza he passed to Muequeta, Fontibon, and soon after to Cota. At the latter place the concourse of people who came to listen to his teachings, was so great that he was compelled to have a ditch dug around the foot of a small hill to separate the crowd from him, so that he could have space from which to address them.

He taught the people not only to spin and weave but to color their cloths *red* and *blue*, yellow and brown, etc., that they should not forget his teachings.

He also instructed them in government and a system of religious faith, which bears much resemblance to the doctrines of Christ, notwithstanding the many perversions which crept in during the lapse of the ages after his departure.

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* By some this rib is believed to have belonged to a camel brought by the missionary: and by others it is claimed to have been of the Mastodon, the bones of which have been found in the alluvion of a neighboring river.

Among other laws attributed to him, which the Spaniards found in force, was the following: In the event of the death of the legitimate wife of a chief before her husband, the latter was forbidden all access to other women for a period of five years after her demise. In this manner, securing good treatment to the weaker sex, and not being able to abolish polygamy, he invented this method of curbing it.

Whether this law was the cause or not, historians agree that the Chibcha women were almost universally well treated and respected, and their infirm and aged people were well cared for. After many years spent in establishing a government and a religion of unobjectionable, if not exceptional purity, which he also exemplified in his life, this missionary left by way of the north, and at Suamoz, now Sogomosa, he disappeared, leaving behind him a successor to continue his teachings.

*So great was the veneration of the people for him, that to facilitate his return, they constructed and paved a road that he might ascend again to the plain with ease. He was not worshiped by the Chibcha as a God, but was greatly venerated as a man of great purity of life and of great usefulness.

To this culture hero, whoever he may have been, is attributed the great influence of the priesthood and the unquestioning obedience of the people to their sovereign.

The early priests of the catholic faith, seem to have believed that this culture hero could have been none other than San Bartolemo or San Tomas, and the arguments of their historians of the priestly order upon the subject, are curious, as evidencing the easy faith of some and the more cautious views of others of their order.

That part of the history of the Chibcha which may be classed as reasonably reliable, dates from about A. D. 1470–80, from which dates we obtain a pretty clear and satisfactory account from the oral statements given by men of intelligence among the Chibcha, who after the conquest of their country, embraced the Catholic faith, learned to read and write and were known to many of the earlier Spanish settlers, who gave pretty full credence to their statements. It was from this class of persons that the tradition already recounted was obtained, as also those which will be hereafter given.

Up to about A. D. 1470, the Chibcha nation was ruled by one independent, absolute monarch, who governed by his own will, unobstructed and unopposed by any, but greatly influenced by the high priest of *Iraca*, which was the most holy of the seven holy cities of the Chibcha. On the west of the

* Remains of this road existed for 200 years after the conquest.

Chibcha were unquiet neighbors, a sort of "highlanders," whose frequent raids upon the Chibcha made a standing army necessary to repel their assaults. One of these unquiet tribes, the Pauche, (who flattened their heads like the Choctaws of Mississippi), had made a raid upon the Chibcha, and the Zaque, or monarch, commanded his general-in-chief with an army of 20,000 men to castigate the Pauche by carrying the war into their own country. The chief of Bacata, now known as Bogota, was the then commander-in-chief of the army of the Chibchas, and he obeyed the orders from his sovereign so well and vigorously that within a few weeks the Pauche were not only castigated, but for the time being subdued. The victorious forces returned to Bacata laden with booty and the general, after sending forward to the Zaque a large amount of the spoils, remained with his army at his residence to celebrate the victory achieved.

It was the custom of this, as with the surrounding nations, to celebrate successes and failures by drinking large quantities of corn beer called chicha, and in this instance the indulgence in the custom led to momentous results to the Zaque and the Chibcha nation.

One evening during these rejoicings, one of the army officers, being heated with drink, proclaimed, amid the acclamations of others, that their commanding officer was not only the greatest living general, but the rightful sovereign of the Chibcha. This treasonable speech was soon made known to the Zaque, who sent messengers to the general-in-chief, commanding him to appear at court without delay. The messengers were cajoled by fair words and promises, and when they returned, reported that the general would present himself at court within three days. The general forwarded his entire army of 40,000 men by different but converging routes towards the capital, with instructions to advance by night as rapidly as he advanced by day.

Taking with him a numerous retinue and a large force of Indian carriers to convey presents to the Zaque, he advanced leisurely to allow his army time to occupy the desired positions each night.

This resulted in bringing on the contest he desired. The Zaque, impatient of his subject's delay and fearful of some sinister design, levied an army, and aided by a neighboring, friendly chief, marched out to meet the rebellious officer, but although superior in numbers, this newly levied force was far inferior in discipline to the army of the general-in-chief, and the result was a most terrible defeat of the forces of the Zaque, and thenceforward there were two sovereigns, two nations of

one people, and frequent wars between them, in which the new sovereign, called the Zipa, was most generally successful, as at the time of the appearance of the Spaniards the Zipa was the more powerful monarch. Several generations had risen after the first division of the nation, and each new Zipa had not only subdued several tribes, which lay to the south and west of him, but he had gradually advanced his territories northward, sometimes at the expense of independent tribes and at other times at the expense of the Zaque. The history gives the names of the different reigning sovereigns during the 70 years previous to 1540, and their more important exploits, by which it may be discovered that armies of forty to sixty thousand men fought on either side, and that the high priest of Iraca was often the peacemaker, being reverenced by sovereigns, officials and people, for his sacredness of character, as the successor of Nemterequeteba, and for his own purity and wisdom.

Only a very short time before the arrival of the Spaniards, the two armies of these contending sovereigns were about to join battle, when the high priest passed between them and convening the sovereigns, he arranged a truce for twenty moons, during which one of their religious ceremonies, which occurred but once in twenty years, was to be celebrated.

How far the enmity between the divided peoples influenced the conquest of the entire country by only 168 Spanish infantry and cavalry, must be judged of by the student of history, and just how far other circumstances combined to aid the results, must be determined in the same way. Certain it is that 168 men, 50 of whom were cavalry and the balance infantry, conquered and enslaved this nation of warriors in the short space of a few months, besides fighting the Pauche, Maso, and other neighboring tribes or nations. What appears most strange is the apathy or stupor with which both Zaque and Zipa looked upon the coming of invaders of their country.

While there is great obscurity and doubt thrown over both the so-called history and the traditions of this people, the accounts of their mythology and customs seem to be better based. But even here it will be found that the idiosyncrasies of some of the clerical authors seem to have colored facts so as to produce effects corresponding with their own peculiar views. Still among the great multitude of writers, the patient investigator can arrive at a very satisfactory conclusion, and as Col. Joaquin Acosta, seems to have been not only a patient, but an industrious student of the various writings or histories of this people, I do not hesitate in adopting his conclusions, as being those sustained by the burden of proof.

Acosta says of their history: "The Zaque or king of Himsa, (now Sunja), was, doubtless, at first, as generally admitted and believed, the ruler of all the Chibcha nation, but to avoid intestine wars, the high priest of Iraca, venerated by all, named Hunsahua for superior sovereign, to whom succeeded his descendants, until Thomagata, a great wizard, known as Cacique Rabon, (*tail*), which he was supposed to keep concealed beneath his garments, and was supposed to have power to convert men into animals. This "*lusus natura*" left no children and was succeeded by his brother Tutasua. Little by little the successors of the latter were losing their territory, until at the time of the coming of the Spaniard, they saw themselves menaced with extinction, or vassalage to the Zipa of Bogota."

Acosta says farther of the priesthood: "Iraca or Sugamuxi, (the disappearance), was the most holy of the holy cities of the Chibcha, and was located at the extreme northern limit of the Chibcha nation, as the place where Nemterequeteba disappeared. The chief of this holy city was also high priest, and was elected alternately from among the natives of the towns of Tobagá and Tiribitoba, by the four neighboring chiefs of Ganreza, Busbanzá, Pésca, and Toca, being thus politically established by Nemterequeteba or the *Idacauza* (*the instructor*), of the Chibcha, at his death, which he probably hid, only to leave to his teachings a religious sanction, as in effect they were preserved and venerated for centuries. On one occasion, when an audacious chief of Tiribitoba desired to usurp the priestly office, he was abandoned by his own people, and perished miserably, without securing his object, the election and constitutional law of Idacauza remaining intact."

Of the mythology, Acosta says: "The heaven of the Chibcha and their traditions were thus stated: In the beginning of the world, the light was enclosed in a thing grand in its proportions, which we cannot describe, but which was called Chiminigagua, or the Creator. The first, which went forth, were some black birds, which in flying over the world, launched from their beaks a resplendent air which illuminated the earth.

"After the Creator, the things most venerated were the sun and the moon, as his companion."

"The world was peopled as follows:" A little after the first day, there rose from the lake Iguaqua, (E-gwá-kay), situated about fifteen miles from Tunja, (Toon-hah), a beautiful woman called Bachue, (Bah-choo-ay) or Fuzachoqua, (good woman), with a boy child three years old. These went down to the plain, where they lived until the child became a man,

married his mother, and in these began the human race, which propagated with extraordinary rapidity. After many years, seeing the earth peopled, they returned to the same lake, and converting themselves into serpents disappeared in its waters.

The Chibcha venerated Bachue, and she was often represented in small statues of gold and wood which embraced both mother and child, the latter at different ages.

They believe that the souls of the dead, on leaving the body, went down to the centre of the earth by certain roads and cañons of yellow and black earth, passing at first a great river, upon a balsa (raft) made of cloths of spiders' webs, for which reason it was not permitted to kill spiders. In the other world, each province and tribe had its boundaries fixed, and the fields of labor were designated to each on arrival. Freedom from labor did not enter into their ideas of future happiness. They adored Bochica as the God of good, and Chibchacum as the divinity especially charged with the care of the Chibcha nation, whose especial duty it was to aid the laborers, merchants, plate workers in gold and silver ornaments, etc., because Bochica was also the God of the Ubsaque, their chiefs and families.

Nemcatacoa was the God of the printers of mantles, and of weavers, and presided at their convivial feasts, as also over the slides used in conveying timber down the mountains. The latter deity was represented in the form of a bear covered with a mantle, but having a long tail which dragged along the ground behind him. No offerings were made to this deity, as he was believed to be satisfied with Chibcha.

This Chibcha Bacchus was also the God of rudeness and unchastity, not having the slightest consideration for decency or good morals, and the natives said that he both danced and sang with them.

The deity who had charge of the boundaries of their cultivated fields and of their religious processions and feasts, was called Chaquen, to whom they offered the plumes and diadems, with which they adorned themselves in their combats and feasts.

The goddess Bachue, the mother of the human race, also had charge of the growing crops in gardens and fields, and in her honor they burned moque and other odorous gums, as incense. They also adored the rainbow, under the name of Cuchavira, which also was the curer of those sick with fever. Women in labor also invoked this divinity. The offerings made to the rainbow were small emeralds, gold of low grade and different colored beads obtained from the sea coast, in their exchanges.

The following tradition, in regard to Chibchacum, was found by the Spaniards to be very generally credited by all classes of the Chibcha nation.

Chibchacum, being indignant at the excesses of the natives of the plains of Bogota, resolved to punish them, and to this end, he changed the courses of the rivers, Sopo and Tibito, principal affluents of the Funza which formerly had flowed to other regions, which transformed the plains into a vast lake.

The Chibcha took refuge in the heights, and when about to perish of hunger they directed their prayers to Bochica, who appeared one evening at about sunset, seated upon the arc or crown of the rainbow. He convoked the people and offered to remedy their evils, not by changing the course of the rivers, which would be useful in irrigating the soil, but by opening a passage for the waters through the Cordillera.

This he did by throwing his baton of gold which he held in his hand, and thus opened a breach in the rocks of Tequendama, from whence were precipitated the waters, leaving the plain dry and fertilized by the deposits during the flood. Nor did Bochica stop here, but to castigate Chibchacum* for having afflicted mankind, he obliged him to carry the earth which, until then, had rested firmly upon strong posts of Guayacan.

Unfortunately, this punishment has brought some inconveniences, since from that time earthquakes have been unpleasantly frequent and sometimes severe, which the people explain by saying that the God, fatigued by his heavy load, shifts it from one shoulder to the other, and the greater or less care he takes in making the change is indicated in the greater or less shock experienced by the inhabitants. Should any one doubt the truth of this tradition, the falls of Tequendama, the rich plain of Bogota, the rivers and the earthquakes are here to prove its basis of fact.

Many things concur to cause the belief that the eastern Cordillera was one of the last protuberances formed on our planet, and in such traditions are to be found the indications of the occurrence of just such cataclasms as are here indicated.

*It is quite probable that the popularity of St. Christopher among the Chibcha after their conversion was owing to the fact that he is represented as carrying the earth, a circumstance very naturally reminding them of their God, Chibchacum.

THE SOMME IMPLEMENTS AND SOME OTHERS.

BY S. F. WALKER.

The interest in the so-called paleolithic implements of the Somme and other European rivers is being revived, just now, by similar discoveries in the diluvial beds of the Delaware by Dr. Abbot. The latter relics are described as very rude. They resemble the Somme implements, but are rougher and of different material; are argillite—a stiff, hard, clay-rock. Dr. Abbot's first description is as follows: "It represents a specimen of the rude implements which, unlike the so-called "turtle-back celts," is distinctly chipped upon both sides, and has but a slight amount of secondary chipping. The cutting edges are, however, comparatively straight. Another specimen, a so-called spear-head, was found in a shallow stratum of coarse pebbles, and clearly showed by its surroundings, that it had not got its position where found, subsequently to the deposition of the containing layer of pebbles."

Mr. Gratacap, in Vol. IV, No. 3, of the ANTIQUARIAN, says that "the appearance of the implements is, in some instances, strikingly primitive and rude, scarcely evincing more care in their formation than frost-riven and transported splinters of rock might display." He proceeds to argue in favor of their human origin, but gives away his case by admitting that they "present a general resemblance;" that "they may be referred, from their similar appearance, to an identical process of manufacture;" that "when they have undergone attrition, their character, as artificial implements, has entirely disappeared;" that "design is manifest to a degree *seldom* simulated by nature;" that "they are found connected with pebbles split by the accidents of nature;" and that they "are limited to a vertical horizon." He next proceeds to prove their great antiquity by stating that they were found in undisturbed beds with which they were contemporaneous, and that these beds were formed when a great glacier invaded New Jersey. He thinks this conclusion startling, but it is not. It is just what one should expect after having found so many "pebbles split by the accidents of nature," and after having found so many of those "useful though coarse implements." He thus inadvertently accounts for the origin of the "split pebbles," "accompanying flakes," and the "strikingly primitive and awkward objects" called "turtle-back celts," &c. He also, possibly, accounts for their "slight amount of secondary chipping" by his allusion to "bowlders that rolled off ice-rafts."

These statements of Mr. Gratacap certainly throw light upon the question of the origin of the so-called implements of the world-famous Somme. His admission that "these paleolithic flakes are limited to a vertical horizon," is enough in itself to prove that the agency which produced them was of limited continuance, and long ago passed away; but man has not passed away, and his relics are not restricted to that particular horizon. Mr. Lyell makes the same admission concerning the flints of Abbeville and Amiens—that they were buried in the lower diluvium; and the statement is fatal to his learned and elaborately wrought theory of their human origin. It will be seen by what follows that the conditions of the Delaware discoveries are a repetition of those of the Somme, the Seine, the Thames, the Oise, the Ouse, the Dasent and the Loek. The flints of the Somme were found in the lower diluvium, of ten, twenty or thirty feet from the surface, and nearly in contact with the subjacent chalk. Those of Amiens and Abbeville had the same geological position—the *lower* beds of coarse flint gravel. The principal wonder expressed by Mr. Lyell concerning them is their "wonderful number." He obtained seventy fresh ones at a single flying visit. Many of them were, like Hamlet's ghost, of "questionable shape;" and all of them "rude," "antique," and (excepting the flakes), absolutely unlike anything called implements, known to any savage or barbarian of any land or any age. Mr. Lyell says they were used to take game, grub roots, cut ice, scoop canoes, &c. But they were not fit for any of these uses, and these pursuits are themselves an improbable combination. Mr. Lyell's *Antiquity of Man* contains pictures of the two prevailing types, and they do not answer to the names he gives them; yet these are picked specimens. He says: "Between the spear head (shapes) and oval shapes are various intermediate gradations, and there are also a variety of very rude implements which have been rejected as failures, and others struck off as chips can only be recognized by an experienced eye as bearing marks of human workmanship." Surely the best place to find flints is near the "subjacent chalk-beds that contain the original nodules." The best place to look for broken flints is where the ice-mountains have been pushed over the groaning earth. Pressure applied to a bowlder of flint will certainly produce sharp-edged splinters or flakes (and the wild tribes practice this method). When the process has been repeated until no more scales fly off, it is probable that the bowlder will itself, by that time, have sharp edges, and, possibly, a sharp end. Whether it would be profitable to savages to pack about with them such "spades" and "hatchets" as Lyell has figured out, no one can tell. There is

no proof that any savage was ever subject to such necessity. The cases cited for proof are the implements of certain Australian tribes; but the proof fails, for the spades and hatchets of the Australians are smooth where the hand grasps them, and are sharpened only at one end; and that by friction. Australia is a distant place to go to seek a parallel, and the question of climatic difference is involved.

The limited variety of the Somme flints is noticeable. The nomenclature is knives, hatchets, spades; and the latter are indistinguishable from each other, and might have been called hawks and hand-saws. The scantiness of the list—knives, hatchets and spades—appears when comparing it with an inventory of the possessions of the most ancient troglodyte; the latter would include saws, awls, scrapers, spear-heads, harpoons, hammers, knives and mortars. The Moustier cave is the oldest one known, and in it was found the Moustier lance-heads, and the broad-backed chopper, used for splitting marrow-bones.

Whenever we come to a veritable list of human implements, of any age, we find it reasonably extended. The so-called Pliocene implements of California, for instance, consist of mortars, plates, pestles, spear and arrow heads. This is evolution backwards. It was a hard fate for the man of the Somme to be confined to a universe of ice, "to follow up the retreating glaciers," and withal to have to lay hold, with bare hands, of these rude, unsubdued flints, without handles or hand-holds, and cut and dig for food that must have been exceedingly scarce. There ought not to be any sentimentalism in science, but Mr. Darwin was considerate enough to locate our common ancestral apes in the warm regions of Africa.

The vast lateral or geographical distribution of the flints in contrast with their vertical horizon is incompatible with the theory of their human origin. They are found over a vast extent of Europe, yet they have only been sought for there in places where modern improvements made it necessary to dig deep gravel pits or railroad cuts; but the finding of them in America shows that there is no longitudinal limit to their distribution, and the mind is shocked at the thought that so many millions of human beings were confined to the use of two or three rude implements, and all passed away so long ago, and so suddenly, that their relics are confined to the "lower diluvium," "the drift," "the lower level gravel" and the "higher level alluvium" (see *Antiquity of Man*, pages 104, 113 and 132). The flints are "all post-glacial," but confined to the first deposits made after the melting of the glaciers. Mr. Lyell says (A. M., 165): "After this denudation, which may have accom-

panied the emergence of the land, the country was inhabited by the primitive people who fashioned the flint tools." It is unfortunate, too, for this theory, that the flint tools are confined to a particular latitude, and that just south of where the glacier action ceased, on both continents.

The French have found flints of the Miocene age, and think man lived in that age. Prof. Dawkins does not question the genuineness of the Miocene implements, and attributes their origin to the skill of extinct monkeys. All this is for the sake of consistency. The implements were made before any mammalian species now living, were in existence, therefore their manufacture had to be attributed to an extinct species; the extinct species are lower in the scale of development than man; therefore, monkeys made the implements. This is logical demonstration, and must pass for science; but, considering the character of many so-called palæolithic implements, it must be said to be an indignity upon the monkeys. The case is somewhat ludicrous, but science never laughs. The scientific tone is eminently placid.

THE POTLATCHES OF PUGET SOUND.

BY REV. M. EELLS, SKOKOMISH, WASHINGTON TER.

The greatest festival among the Indians of Puget Sound, in Washington Territory, has received the name of potlatch. It comes from the same word in the Chinook Jargon language, which means to give; and is bestowed on this festival because the central idea of it is a distribution of gifts of money and other articles by a few persons to the many invited guests.

Extent. They extend much farther to the north than the limits of the United States, being common in British Columbia and in Alaska. To the south I do not know of the Indians of Oregon having them, nor do they seem to be observed farther east than the Cascade mountains to any great amount, if at all. The cause of this, I think, is that they are peculiarly adapted to a region where the travel is largely in canoes, as in no other way can the large amount of food and other articles needed be easily carried.

Origin. This is enveloped in mystery, since it runs farther back than the memory of the oldest inhabitant. It is certain that the giving of one makes the giver a great man among the other Indians, and from this I infer that one or the other or both of the following reasons may have been the cause of them.

It may have been that the chiefs, in order to gain and keep the good will of the people, gathered them together and made presents to them. Gradually other tribes were invited, on account of relationship or friendship, and the compliment was returned. Other persons, not chiefs, but who wished to become such, or at least to become prominent persons, followed the example, until it has grown to its present size, so that often nearly all the surrounding tribes are invited, and almost every person of any prominence, both of the men and women, feel bound to have a share in giving one, at least once in a lifetime. They have grown so large, however, that seldom does even the richest person feel able alone to give one, hence they combine together, sometimes twenty or thirty being concerned in the same one.

Or, it may have been that the common small feasts, which often take place among them, have occasionally grown larger, until they have become a potlatch. In fact, there is hardly a dividing line between the two: the small feast at times being quite large, and having connected with it the distribution of presents, and the potlatch being at times quite small, only a few from the nearer villages, and of the same tribe being invited.

Frequency. They are not at all regular in their occurrence, but the same region usually has one every year or two. The same person is not often engaged in giving one more than once in fifteen or twenty years, and perhaps only once during life. Sometimes, however, there are exceptions to this. Persons will sometimes save everything they can get for years, living in the poorest way and being clothed very scantily, while they have trunks filled with goods, and a large amount of money stored away. When the potlatch is over, the same person will sometimes begin to save again in like manner for the same purpose. The Twana or Skokomish Indians have given three potlatches within fifteen years, different members of the tribe being engaged in the different ones, and during eight years a part or all of the tribe have been invited to eight others, given by four of the neighboring tribes, and some or all of them attended all these, except one. They do not often go more than a hundred miles to attend them. They last from about a week to three weeks, and are usually held in the fall or winter, as several hundred Indians can hardly afford to spend that amount of time, and a week or so more, needed in getting ready, going and returning home, during the summer when work can be had, and the money which comes with it.

At present their glory is departing in this region. Many of the younger people, who have been in contact with the whites for the past twenty-five years, have become ashamed to go

through many of the practices, which were formerly the most savage and the most interesting; they have invented nothing new to take their places, so that the last one which I attended was called very dry by the chief. They are likewise slowly learning that their money can be of more use to them in some other way than to give it away. Probably to the north, where their civilization is less rapid, they will last sometime longer.

In the distribution, all the invited ones do not receive equal amounts, but special friends, the young and strong, and those who expect soon to make a potlatch, generally receive the most, in order that their favor may be gained, so that when they shall make one, they will be liberal to those making the present one, but the old, and those not expected to make one do not receive very much, as, according to their ideas, it would be a poor investment to give to such persons. Sometimes, indeed, instead of calling it a gift, they call it a paying back for money once received. This has been especially the case when they have been urged to cease the practice; they have replied, that as they have received money at such times, it would be much like stealing it were they not to make a potlatch and return it.

It has been my fortune to be present a good share of the time at four of these festivals, in order to watch over the Indians, prevent drunkenness, and see that they did nothing improper, according to their ideas of impropriety. One of these was on the Skokomish reservation in the fall of 1876. It was the largest and longest of any, about twelve hundred persons being present, and it lasted three weeks. The next was at Jamestown, in Clallam county, in February, 1878; the next at Skokomish in the fall of the same year, and the last at Squaksin Island, in the fall of 1880. The distribution of gifts is about the last thing done, the previous time being spent in religious ceremonies and social intercourse, including feasting, while as side shows are the procuring of wives, and gambling, the latter being very prominent.

Description. I have quite full notes of all these, but as there is much of sameness in them, I have selected the second one at Jamestown for description, as it was more savage than any of the others and was evidently more like their ancient ceremonies, occasionally adding notes from the others where they are of interest.

This place is about ninety miles from the Skokomish reservation, but the Indians there are under the agent at Skokomish, and I was well acquainted with them. I was requested both by the Indians there, the Indians from Skokomish who went, and the Indian agent, to go there and watch over the whole affair.

This gave me a good opportunity to observe everything, as I had nothing else to do but to see it.

The Invitation. As I was not at Jamestown when this was first begun, I will speak of it as I have seen it elsewhere. Those making the potlatch meet together and consult about whom they wish to invite. The tickets are made out in the shape of small sticks, about the size of a pencil, and three inches long. The runners are next sent out two or three weeks before the show is to begin, who carry these tickets to the invited ones, and generally issue them, not by handing them to their friends, but by standing a short distance off and throwing the sticks at them. Some persons receive only one of these tickets, and some receive several, each one, as I understand, coming from different persons who make the potlatch. At the same time, they are told about when the affair is to begin, and other necessary information is given, though the runners seldom stay much longer than is needful. They immediately go back or to other people whom they wish to invite, while those invited soon begin to make preparation for going. Occasionally, however, they do not go, the distance or the weather being the chief preventives. The invitation in the above instance was received by the Twana or Shokomish Indians, on the 26th or 27th of January, 1878, and on the 30th they started. We traveled in canoes all the way, and reached our destination on the 2d of February, in the afternoon. As the next day was the Sabbath, they landed that evening, but had it been any other day they said they would have camped two or three miles away, as it was not their custom to land in the evening.

The Landing. This is generally quite formal, unless there are only a very few persons, or those coming live very near so that they are considered a part of the neighborhood. When we were a mile or two away a canoe came to meet us, those in it drumming and singing a song, which was replied to by the Twanas. There were about seventy-five of the latter in eight canoes. When this canoe reached us there was a little conference in regard to the landing, and then this canoe returned, and I went with it, as the Twanas preferred that I should not be with them during their landing ceremonies.

After I landed, singing began in good earnest, the Twanas pounding on their canoes, beating their drums, and singing loudly, with faces painted red for a time; and then the Clallams on the beach replied in a somewhat similar way. The Twanas stood up in their canoes, which were held together abreast. This was kept up for a half hour or an hour, when they came to shore, and the Twanas made some presents to their hosts,

generally to some of their especial friends, or to the givers of the potlatch, in order to get their good will, so as to receive much from them when they should give their presents. These first presents usually consist of food, as biscuit, flour, and fish, or blankets, and a little money. I have known such a landing to occupy three hours, a speech being made by one of those coming and making this preliminary present, and a reply being made by the one receiving it. I have seen twenty canoes thus come in abreast, and it is quite a pretty sight. After this ceremony was over the guests were sent to various places where they were to stop.

The House. In this case it was built for a large dwelling, the potlatch, however, being in contemplation, and was about thirty-two by eighty-four feet. It was in a village of fifteen or twenty houses, and as the potlatch house was by no means large enough to hold all who came, many of them went to the other houses. All around the house on the inside was a platform about two feet high and four or five feet wide for sitting and sleeping on, while overhead were shelves extending across the house—one at each end—for storing the various articles belonging to the guests, and one across the middle, where the boxes of sea biscuit brought by the visitors, and presented to their host, were stored—there being about sixty such boxes. Across one corner of the house a blanket was stretched for a dressing room, or for some of their secret performances. The house has since been used for a dwelling. At the three other potlatches which I have attended the house was built specially for the purpose, at intervals during the previous year or two, and generally some distance from dwelling houses, the people all staying in it or camping on the outside, each tribe being assigned to a special part in the house. The one on the Skokomish reservation was forty feet by two hundred, was used solely for the two potlatches, and has since been crushed by snow. An old one, used about fourteen years ago, was fifty by three hundred feet, and the one at Squaksin was fifty by a hundred and eighty-five feet. In these the bed platform was the same as at Jamestown, but the shelf overhead extended all around the house over this platform, instead of being across the house. In the one at Skokomish the posts which supported the ridge-pole were carved and painted in various ways, and were said to be sacred. The unveiling of one of these posts, with drumming, dancing, and singing, was an important ceremony, and one evening was devoted to it. The fires were all built near the middle of the house, and when about thirty of them were lit, the house filled with smoke, and the Indians dancing around during the evening, the scene was

weird enough. There was only one painting in the house at Squaksin. It was on a post at the side of the house, somewhat in the shape of a heart, and was said by the owner to be what really did the giving: *i. e.*, it contained the spirit of the guardian angel, which did this, as I understood it.

Number Present. The morning of the day that we arrived, ten canoes of Sook Indians came from British Columbia, containing about a hundred and twenty-five persons—twenty-five from Port Townsend, Washington Territory, twenty-five from Port Discovery, and forty from Sequim—while about sixty from Port Gamble arrived the day before. Two days later nearly a hundred more came from Port Angelos, Elkwa, and Clallam Bay. These were received with considerable ceremony. The heads and clothes of many of them were covered with down and birds' feathers. All present were clothed in civilized garments, but during the landing some had blankets over their clothes and long feathers in their hats. In making presents to those giving the invitation, one person gave a bundle of eight or ten sticks, about three feet long, a promise that he would, after reaching the house, give his friend $150. All had then arrived—about five hundred and fifty in number. This was not a great number, though sometimes I have known only about a hundred and fifty to be present. I have never seen more than about twelve hundred. But formerly, when Indians were much more numerous, some thousands were present, and at Sitka, in Alaska, a year before this one, there were four thousand Indians, and a United States revenue cutter was detailed to keep the peace.

Ceremonies. The first evening after our arrival was given to the Twana Indians, who danced and sang with blackened faces. Most of the dancing was simply jumping up and down in the same place, or bending the knees while clapping the hands, some of the persons at the same time beating drums. From this time, Saturday evening, until the next Thursday, the faces of nearly all were blacked in some manner—men, women, and many of the children. The patterns were of every conceivable shape—a single spot, many spots, a single stripe about the width of a finger, or several stripes of various lengths, straight or crooked, or a face completely black. This was a sign of the black ta-máh-no-us, which is a secret society, and whose ceremonies are often quite savage. It is now nearly dead, and this was the only place and time I have seen the ceremonies to any extent during eight and a half years among them.

The next day was the Sabbath, and the forenoon was given up to some services, but after dinner they began their cere-

monies again. In one house a large number of women were gathered, where they sat down and sang, at the same time pounding on sticks and beating one drum. In the center of the circle two women and four girls stood and danced, the youngest being about eight years old, the next a little larger, and so on, thus | | | | | | Their shawls were pinned behind their backs, their hands extended about a foot and a half in front of them and the same distance from each other, but under their shawls, and they danced around a circle eight or ten feet in diameter.

That evening was given to the Sook Indians, from British Columbia. For a time they danced in one end of the potlatch house, but with much more jumping than the Twanas. Their singing was more varied and wavy than that of the Twanas or Clallams. After a time, two of the Sook Indians, stripped to the waist, with pantaloons off and with drawers rolled up to the knees, came running from them the length of the house, striking at everything and everybody within their reach, their arms continually swinging all around them. Sometimes one of them was down on all fours, sniffing at the ground. A rope was tied around the waist of each, and, extending back six or eight feet, was held by a friend, who continually jerked him, sometimes throwing him to the ground. A third one had a hideous mask on his face and a blanket on his shoulders. His actions were not so fierce as were those of the others. He often sat down. While running around thus they were followed by the other Sook Indians, with drums, rattles, and singing.

Monday forenoon was spent in a feast in one of the houses near the potlatch house. Beef and potatoes were placed on stones previously heated, covered with dry bushes and mats, until cooked. The Indians sat on the bed platform around the inside of the house. The food was placed in long plates or troughs. Some of these were made trough-fashion, about ten feet long, of three six-inch boards nailed together. Some were their old-fashioned plates, five or six feet long, a foot wide, and dug out to the depth of two or three inches. A rough one of this latter kind was twenty-four feet long. These plates were filled with food and placed before them on the platform. Whatever was over they carried away, and crackers were given them on purpose to carry off. For napkins they used cedar bark beaten up fine, about two feet long. This was a feast of the men. Immediately at the close of this, I was requested to leave, as there was to be a performance by the medicine men, and no others were allowed to stay. I could not learn its nature.

About 1 o'clock, as I returned from my dinner, I found the masked Indian, the same one, I believe, described in the cere-

monies of the evening before, and three others like the two then described, dancing or running on the beach in front of the house for a distance of about a hundred yards, in about the same way as they did the previous evening. This was kept up for near an hour, when they danced off into the woods, followed by about fifty of their friends, with drums, rattles, and singing. They took a large circle, and returned after three hours at the opposite end of the beach, and soon I saw three, at least, of the dancers wrapped in blankets, and each one was carried into the house on the shoulders of about six men. One walked in. Some of those who had accompanied them seemed by this time to be almost seized with a frenzy of an evil spirit.

While they were gone the women assembled and sang as on the day before; and when I asked why they did so, I received the reply, that they were performing incantations in order to get strong minds toward the men.

Toward evening the Clallam Indians, from Elkwa, Pisht, and Clallam Bay, arrived, and were received with much ceremony, as already described. By this time all had arrived who came. Others about Victoria had been invited, but did not come, probably on account of heavy winds.

That evening was given to these Elkwa Indians, who danced for a time, but there was nothing very different from the dances already described.

On Tuesday, official duties called me away most of the time, but I was told that little occurred except gambling and the giving away of a little calico by some women to others of their own sex. This was a small affair, but it was the beginning of the real potlatch, or gifts.

The next morning an Indian named Joe Johnson, who had the least to give among the men, distributed his gifts. It amounted to a hundred dollars in money, and thirty-eight dollars in other articles. In the afternoon, there was a dance by four girls, like a row of kettles, thus | | | |, led by two old men; and some handkerchiefs and other articles were burned in memory of Joe Johnson's wife, recently deceased.

In the evening, one of the prettiest dances which I saw took place. There were about twenty-five dancers, who were mostly men, though a few were women. They were dressed in citizens' clothes, without shoes, and over them were thrown parti-colored shawls and blankets. One man carried an open umbrella. Their heads were bound with bands of cedar bark, beaten, and kerchiefs, in which were long feathers, generally red-tipped, and much feathery down was on them. They had hawk's and eagle's tails and wings in their hands, and

their faces were blacked in various ways. They jumped around in a space about twenty-five feet in diameter, singly, throwing their arms wildly about, jumping up and down, with movements quick as a cat, in the midst of hot fires, for an hour or so. This was said by some to be an imitation of a Makah dance, and, by others, to be a war-dance; and both statements were confirmed to me. Perhaps both were true. The usual accompaniments of singing, drumming, and rattles, were carried on at the same time.

Thursday morning, Chubby made his presents in his own house to his friends. They amounted to a hundred and seventy dollars in money, and sixty more in blankets, and a canoe. I saw, about that time, two rows of men, each row being twenty-five feet long, facing each other, and *sitting down* while pounding sticks, performing incantations, and singing, a very unusual form for men, as they almost always stood, though it was a common form for the women.

About 11 o'clock the finale of the black ta-máh-no-us began. First, five men came out of the potlatch house to an open space, a short distance in front of it; they were stripped to the waist, with the exception of a shawl over their shoulders, and with their drawers rolled up above their knees. Their head-dresses consisted of a band to which was fastened a large number of strips of red cloth, with a few of other colors, about an inch wide, and near eighteen inches long. These hung down all around so thickly that it was impossible for me to catch a glimpse of their faces, although I stood very near. Feathers and down were also on their heads. Their legs were painted red, and wet with water, to imitate blood, and there may have been a little blood on them. They danced around for a few minutes, jumping in various ways, in the air, down on the ground, running and so on, accompanied with rattles, singing, holloaing and drums, and then they ran back to the potlatch house. Next, about as many others came out much as the previous Monday, with ropes around their waists, held by others. They had cut a little under their tongues, and under their chins, so that the blood ran down their arms and breasts. Their faces were so black that it was impossible to recognize them, although I was well acquainted with some. They jumped around much as the previous set had done, and ran back to the house. Then the first set came again, and soon after them the second, some of whom were not now held by the ropes around their waists, though some were. This was kept up for near an hour, when they all ran up the beach two or three hundred yards, accompanied by many others, both men and women. I judged from appearances that I was not wanted there, so I went

to dinner. They remained there about two hours, and wer
it was said, all washed by their friends. Then they slow
came back. Each set was by itself, surrounded by other
running, jumping, dancing on the beach, backwards and fo
wards, so that they really advanced quite slowly. Three
the women had by this time become so much excited that th
acted like these dancers, though not especially dressed for t
occasion. A third company followed, with a single young ma
He had on a head band, with a very long feather standing
in it, and he walked slowly into the water about knee dee
bowed his head until he dipped the end of the feather in t
water, when he walked slowly out again, for a rod or two, a
returned to the water. He kept this up for a long time, slow
coming nearer to the potlatch house each time. It was said
represent a crane, and was called the Crane ta-máh-no-u
When each company came near the potlatch house, each of t
dancers was seized by two friends and hurried off to the hou
half running and half carried. When, two or three times
asked some of the communicative ones what it all meant
could only get the reply: "It is their ta-máh-no-us, or inca
tations." When they were in the house they separated, so th
one company was in each end of the house dancing, and the
was a kind of strife as to which should conquer.

A new dance was now performed. A number of men to
hold of each others' hands and ran rapidly around a post in
circle. Another circle was formed outside of it, which ran th
other way, and a third was outside of them which ran in th
same way as the inner one. There was no confusion, and the
kept time to the usual accompaniments of singing, drumming
and the like. After this was over, the people in each end o
the house came together and engaged in a great good nature
push, for about two minutes, trying to see which company
could out-push the other. This ended the scene for the afternoon.

In the evening a large fire was built in one end of the potlatch house, and all the dancing took place around it. Under
the bed-platform I saw four of the tasseled heads of the day,
(first set) lying down, face downwards, each one held down
by another person. Each one, however, kept his head moving
constantly from one side to the other, one groaned most of the
time, and there were struggles to arise. During the evening
one did get up, and it required two or three men to put him
back again.

The dancing was in this wise. One man of the company
took a rattle, walked around the fire, said a few words, and
generally made a motion toward the tasselled ones; after going

around the fire once or twice he shook the rattle towards one of the company, whereupon ten or fifteen men jumped up, ran around singly, throwing the arms wildly about, or getting down on the ground; then two or three would grasp hold of each other and up and down they would go together, or one or two would grab hold of the one with the rattle, and try to throw him down apparently with great strength, but I think it was only apparent, as only once did I see him brought to the ground, and he seemed to make but little effort to stand. This would occupy about five minutes, when all would take their seats, and the leader would lay down the rattle. Then another would take it up, and the same performance would be repeated. This was kept up for more than an hour. All this was done very good naturedly.

This being over, two nearly naked ones arose, danced the whole length of the house and back again, held with ropes, accompanied by others, when they were taken out doors, and with a great shout, let go. A half a dozen men next went and took one of the tasseled ones, carried him out and he was let go with a whoop. The three others were taken out in a similar way, and that ended the black ta-máh-no-us scene. The next day the black paint was washed from nearly every face, nor was it put on again.

Some of these persons, were, I believe, being initiated into the blaek ta-máh-no-us society. I hardly think all were, as some were so old that they must have been initiatcd before. It was said that one half-breed boy, about 16 years old, was told beforehand that he would be obliged to go through the performance. He said that he did not want to, and that he would run away before the potlatch and remain away. But the Port Discovery Indians came beforehand, seized him and shut him up. He cried to be let go, but it was of no avail. It was also said that he and another boy, a little older, were starved a considerable part or all of the time. Formerly, I am told, they were so starved as to tear in pieces a living dog, given them, and to eat it raw, but it was not done at this time. The whole affair was carried on with perfect soberness, except the push, as much as we would show in our religious ceremonies. Some days there were about twenty-five whites present, nor did the Indians care, as long as they did not laugh. It is said that formerly two slaves laughed at these performances, whereupon they were immediately torn to pieces by the other Indians.

Friday forenoon was occupied by Dick Locks and his father in distributing their gifts, three hundred and twenty dollars in money and over sixty in other articles, chiefly blankets. In the afternoon John Fish gave about twenty-five sea-biscuit to each

man. In the evening a company of about twenty Clallam young men came dancing into the house where I was sitting. For a time they stood in a row and danced backwards and forwards the length of the house, but at last stood in one end of the house and danced, accompanied with the usual noise, except the black ta-máh-no-us rattle. One, however, put on a shawl, took a new form of rattle made to imitate a bird's tail, by the Clyquot Indians of British Columbia, and danced before the rest, jumping up and down, and around, and squatting, shaking his rattle. While this was going on, a small company of Twana young men were dancing in the door way, and just outside, and there was evidently some rivalry between the two companies. There was considerable merriment in these proceedings.

The next forenoon John Fish made his potlatch, three hundred and eighty dollars in money and fifty in blankets. The men were arranged around the house on the bed-platform. With a half-dozen friends he counted his money. About a dozen women came in and sat down near it. Four girls, arranged in the kettle fashion | | | | faces painted red all over, hair covered with down, and dressed as on previous days, danced the whole length of the house a few times and back again, the tallest going first, led by one old man, and the youngest was followed by another very old man. The dozen women sang with them, accompanied by a drum. This occupied about fifteen minutes, after which the potlatch began. The giver told one Indian who acted as a crier, the person to whom the money or blanket was to be given, who then took it, in a loud voice told the person's name and amount, and handed it to him, and so on to the end. First, however, there were certain amounts, probably from twenty to fifty dollars, tied up and given to certain parties, which I was told was to pay them for some articles which they had brought. Sometimes instead of arranging the men around the house, they sit down on mats in the middle of the house, in two long rows, facing each other, and receive the gifts. That afternoon Old Slaze gave away about twenty-five sea-biscuit to each man. The next forenoon he, and his wife, distributed their presents. It being the Sabbath, I was not in the potlatch house much, but was told that the ceremonies were very similar to those just described, except that there were six girls who danced instead of four. They gave away about four hundred and twenty dollars in money, and forty in blankets.

This ended the affair, and nearly all left as soon after this as possible, without any ceremony. Often their things are all loaded into their canoes while the last gifts are being distributed, so that

they push off as soon as they receive the last dollar. Even if it is almost night they will go, if it is only two or three miles, as they do not wish to stay in the potlatch house after the affair is over. But I have sometimes known some, who could not get away, to remain one night longer.

Thus a total of $1,390 in money was distributed, and $252 in other articles, as near as I could learn.. The men present received variously in the region of ten dollars, from one to two dollars from each giver, but prominent men, and those who expected to make a potlatch soon after, received from twenty to forty dollars. Besides this, seventeen women gave calico to other women at different times, from Monday till Friday. Each piece contained usually about five yards, but some contained eight, and at other places I have known them to contain ten or eleven. Occasionally they mingle with these dresses and shawls. The women, when they receive these things, sit on mats in two rows, and with but little singing or dancing, or formality, one piece is given to each woman. A very rough estimate of mine made the amount given away at this time to be about five thousand yards. At another potlatch, where I was present, thirty women gave away, I suppose, ten or twelve thousand yards. Usually the women give only to women something of this kind, and the men to the men. I have never known the men give anything to the women, but at one time I knew a prominent woman to give away eight hundred dollars in money, a large share of which went to the men. At another potlatch, at Port Gamble, in 1875, it was said that five men gave, each, about two thousand dollars, making ten thousand in all.

MYTHOLOGY OF THE DAKOTAS.

BY REV. S. R. RIGGS, LL.D.

Mythology, next to language, affords the most reliable evidence as to the origin or relationship of a people; for peoples have been slow to change their gods. Much of that published in books concerning the mythology of the aborigines is utterly worthless. The writers had no knowledge of the Indian language, and got their information from half-breed interpreters, who, having been taught by their Catholic fathers to detest whatever related to the religion of their mothers, knew next to nothing about it. Not willing to acknowledge themselves ignorant, or to seek information from those who alone could give it, their lively fancy supplied the place of knowledge, and de-

vised a scheme which seems plausible to persons as ignorant of the subject as themselves, and this scheme, which has no foundation in truth, is trusted and received as true.

The mythology of the Dakotas was obtained by my associates in the mission, directly from the Dakotas themselves, partly by direct inquiry of those most capable of giving the information sought. They were much more willing to give such information to us, who were careful not to speak disrespectfully of what they held to be sacred, than to their relatives of mixed blood who generally did so. Our chief and most reliable knowledge of Dakota mythology is, however, from their traditions and tales. When learning the language we always listened to these tales, and wrote out many of them in full, the study of which was very helpful to us in ascertaining the structure or syntax of it. The views they give us of gods and spiritual beings do as truly though not so fully show what the Dakotas believed two hundred years ago, as Homer's Iliad and Odyssey show what the Greeks of his time believed concerning such things. It is probable that the mythology of the Dakotas is nearer to that of the nations of western and northern Europe than to that of the Greeks and Latins, but in the comparison I use the latter because I am more familiar with it. The following account of the Dakota mythology shows a striking resemblance between it and that of the Latins.

1. The Dakotas viewed every object known to them as having a spirit capable of helping or hurting them, and consequently a proper object of worship. Some may doubt as to the Latins worshipping artificial objects, but the writings of Ovid and Horace leave no reason to doubt it. Their principal gods are:

1. Wakingau (Thunder), corresponding to Jupiter.

2. Unktehi (Dreadful Being), the water god, corresponding to Neptune, supposed to have a body much greater than that of any land animal now living, and to whom the bones of the mastodon and other large bones are supposed by the Dakotas to belong.

3. The War God, corresponding to Mars. He is called Inyän and Tukän, both of which mean stone, and is said by some of the Dakotas to be the greatest of their gods. He is supposed to exist in the numerous boulders scattered over the prairies, and is more worshipped than any of the other Dakota gods.

4. Heyoka, the god of deceit or contrarieties, corresponding with Mercury.

5 and 6. Winyannonpa. Two females, corresponding to Venus and Minerva.

Besides these, they pray to the sun, the earth, the moon, lakes, rivers, trees, plants, snakes, and all kinds of animals and vegetables—many of them say to everything, for they pray to their guns, arrows—to any object, artificial as well as natural, for they suppose every object, artificial as well as natural, has a spirit which may hurt or help, and so is a proper object of worship. This seems to have also been the case with the ancient Greeks and Romans, Gauls and Germans. They also pray to the spirits of their deceased relatives, and believe in transformation, such as are described by Ovid, and think that many of the stars are men and women translated to the heavens. Not only do many of them believe in transmigration of souls, but many of their medicine men profess to tell things which occurred in the bodies previously inhabited for at least half a dozen generations back, and tell of advice given them by their ancestors before white men came among them. It is very difficult to account for such striking similarity between the mythology of the Dakotas, the Hindoos, and the peoples of Europe before the Christian era, without supposing they had a common origin.

There are two other gods not directly connected with their mythology, some mention of which is necessary to a proper understanding of this subject.

7. Taku Wäkan—a god; the ruler of the world, rewarding the good and punishing the wicked. They usually swore by this god, but never offered sacrifices to him, and seldom worshipped him. This idea of *a god*, the final judge, not connected with mythology and not worshipped, seems to be common to the Dakotas and to our ancestors, but not peculiar to them. Traces of such an idea are probably found among all people, and having an origin in an accusing or excusing conscience.

8. Wäkäntänkä—*great god*. This word is usually incorrectly translated great spirit. Wäkän, in Dakota, as an adjective means incomprehensible, mysterious; as a noun, god, never spirit. This is, according to their understanding, the name of the God of civilized men. Some of them have told me that they learned this expression from white men, and never spoke of Wäkäntänkä till white men came among them. Others have told me that they never pray to Wäkäntänkä except on some special occasion, and then only once for the whole expedition.

In conclusion we would say that tradition, similarity of race, and mythology, shows a very strong case in favor of the Dakotas coming from Europe.

VILLAGE HABITATIONS.

BY STEPHEN D. PEET.

Village life and Village Architecture engaged our attention in our last article. In this the title is modified, and the subject will be brought before us in a somewhat different shape. We have already treated of two classes, Indiân and Mound Builder, and now design to treat of the Pueblo. For this class the term village habitation is very suitable, for while it involves all the peculiarities of village life, it presents them to us in one particular form, viz., the shape of an habitation. Before proceeding with our subject, however, we would call attention to a few points which will be explanatory of what has already been said, and will enable us to better understand what may be said. The tribal condition, as we have shown, furnishes a key to us of many problems connected with archæology. This may help us to understand the architecture, as well as other tokens of prehistoric life. In it we may find an explanation of many of those things connected with village architecture which we would not otherwise understand. As the tribal state was universal, and prevailed throughout all grades of culture, we shall find in it the clúe to the architecture, not only of the later Indians, but also the unknown races of the Mississippi Valley, and the ancient races which inhabited the Pueblos, and if we choose to consider them, a clue also to the civilized people of Mexico and Central America. There are five methods according to which we may study prehistoric life, viz., tribal organism, social cultus, physical environment, hereditary descent, and ethnical peculiarities, but of these the tribal organism is the most important.

As to the village life and architecture there are three points which the tribal state clears up. First, it gives us the reason for the existence of villages, and explains why village life was so common; second, it explains the different parts of village architecture, gives us a reason for them, and shows the object or use of the separate structures; third, the tribal state accounts for the resemblances which exist between village life and architecture in all parts of the country, and at the same time helps us better to understand the differences. Unity amid diversity is the order of growth, and it is seen as much in the organic growth of society on this continent as anywhere.

The organism may be found in the village architecture, but the life may be discovered in the tribal state. The tribal state produces the unity, but other causes produce the diversity.

I. The connection of village life with the tribal state. One thing is remarkable about prehistoric society everywhere, and that is that the tribal state and village life were so associated. This prevalence of both conditions gives rise to the idea that the two were co-ordinated, and that the growth of society was through the tribal organism, and the outward expression of it in the village community. We have already alluded to the fact that the tribal state was universal among the American races, and that through it we could find the clue to all prehistoric works. The prevalence of village life gives rise to the idea that this was the peculiar and specific form in which the tribal organism became embodied. This would, of course, be expected, for if the tribe is the organism, the village may be supposed to be the environment.

These two organisms, the village and the tribe, are everywhere correlated. Prof. John Avery has given us a picture of the "Hill Tribes of India," and from his account we may judge that village life prevailed there. Other authors have described the tribes of Africa as dwelling mainly in villages, often resembling those which we have described as peculiar to the tribes common in America. The village life described by Mr. Maine as peculiar to the early historic times, and as especially prevalent among the Aryan races, may be regarded also as an outgrowth of the tribal state. The fact that the tribal state and village life continued throughout different stages proves also how tenacious the life was of its organism, and how difficult it was for the two to be separated. It would seem that society could pass through all changes from the lowest stage of savage life to the highest stage of barbarism, and, in fact, pass from the uncivilized into the civilized, and yet never lose its organism, the law of its growth being manifest throughout. Though in modern days this law has become obscured under the accumulation of artificial inventions, the natural having given place to the adventitious, yet wherever we see man in his native state, there we find these two associated. We may regard the distinction between the *societas* and the *civitas*, between the "phulæ" and the "deme," which appeared so early in Greek society, as the distinction which marks the turning point between the organic and the artificial condition, and between the line of descent and the line of property. Society from that time ceased to be held together according to tribal organisms, and became dependent upon land tenure, blood relationship being no longer the tie, but the proximity of estate; the boundary lines becoming geographical rather than tribal, political divisions appearing where before were only tribal divisions. Unity of language and a common government

became the bonds which held society together, and parentage or relationship became more or less obscured. The city (*Πολις*) was an aggregation of several pre-existing villages.*

On the American continent the tribal state and village life were associated or correlated throughout all stages of development. They were correlated in the savage tribes on the Atlantic coast, and among the civilized races of the south-west, and also among the rude tribes of Brazil, and the civilized tribes of Peru. The rude villages which existed among the tribes on the north-west coast, were the outgrowth of the tribal state, and the magnificent palaces and extensive cities, discovered in Mexico and Central America were equally correlated to the same state.

In this respect there is a great difference between the historic and prehistoric races. The village life which abounded on this continent during the prehistoric age, must be ascribed to very different causes from that which has appeared since the historic period. In modern days we know that villages spring up as a result of adventitious circumstances. Their locations are frequently forced by some ulterior design, without regard to natural advantages, and their growth is an artificial product. Society in prehistoric times had no such artificial or forced movement. Every village was the outgrowth of the tribal organization, and its location was according to natural advantages. The character of the village was conditioned upon other elements, the mode of life of the people, the character of the country in which it was situated, the social cultus and the ethnic tastes. These interacted, for the mode of life was often determined by the nature of the habitat, and the choice of territory or habitat was determined also by the mode of life. It will be noticed in the descriptions already given, that the village life of the later Indians differed from that of the Moundbuilders in two respects. In the first place, in the choice of location, and in the second, in the character of their works. The hunting life prevailed among the former, and, associated with it, a partial agricultural condition. With the latter, the Moundbuilders, the agricultural state was predominant, and hunting incidental. It will be noticed also that the Pueblos of the west differ from the villages of the savage tribes.

In the northern climate, the villages of the Moundbuilders are found located on the banks of streams, where the abundance of wild rice in the swamps and fish in the lakes and rivers, would support the people while in a sedentary condition, and so permanent villages were common. The difference between the Moundbuilders' works throughout the country indicate that

*Grote's History of Greece, Vol. II., p. 259.

different stages of cultus prevailed, rather than different modes of life, the tribal organism prevailing throughout. The character of the works partook of this cultus, being much ruder in the north and much more complicated in the south, emblematic mounds presenting much less elaborate architecture than those found upon the Ohio River, and these less elaborate than those found in the Gulf states.

The differences which may be seen in the village architecture of these various sections may be traced also to the same causes. Tribal customs may, to be sure, have also varied, and the differences in architecture may be ascribed to ethnic causes. The traits and customs and religious systems of one tribe or race may have differed so much from others, that the architecture would also differ. For instance, the village enclosure of the Emblematic Moundbuilders, being the result of animal worship, would naturally differ from that of others where sun-worship prevailed. The various architectures also of the southern Moundbuilders would also differ from that of the northern, for the same reason, the village customs and tribal notions differing from them. Whatever the objects of village architecture were, whether for burial or for worship, for amusement or for defense, we would expect that the structures would differ according to the tribal customs and social cultus, the structures among the different tribes and in different sections of the country being on this account different. The temple platforms, burial mounds and village enclosures of the Gulf states differed from those in the Ohio valley, not so much on account of the topography as of the social cultus and the ethnic tastes. This diversity of the village architectures, with great unity of village life, proves to us that there was a variety of social cultus, but a unity of tribal organism among the Moundbuilders. On the other hand, the unity which prevailed in their architecture shows to us a contrast between them and the later Indians, as great resemblances can be traced between the structures of the Moundbuilders, while between them and the works of the later Indians there are very few resemblances. Whatever the race was which built the mounds, their works certainly differed very much from those we call Indians.

II. This leads us to consider a second point. An explanation of the use of the various structures in village architecture may be learned from the tribal customs. There are many structures which have come down from prehistoric times, the objects of which are unknown. But, by looking to the tribal state, we may find an explanation of them. The two classes

of village architecture to which we have already referred, viz. that existing among the later Indians, and the fragmentary structures of the Moundbuilders, may be thus explained. There are other structures, however, beside these, for which we would seek an explanation.

The village architecture of the Pueblos is probably better known than any other, and yet the component parts of this need explanation. So, too, the works of the Cliff Dwellers have been objects of great curiosity, but an air of mystery is thrown about them still, and we need an explanation of these. We turn to the study of the tribal condition for the key. There are certain things for which provision would necessarily be made in all native society, but the manner in which this would be made might differ. Where there was such uniformity as the tribal condition implies, we might expect that there would be great similarity in the modes of iife, in all social habits, in the ways of building, and with everything connected with society. The peculiarities of the tribal condition, then, and the tribal customs, become clues to the architectures.

Let us consider what native society would first seek for. We are indebted to Mr. L. H. Morgan for hints upon this subject. He mentions subsistence, government, language, the family, religion, house-life and property. Out of this list we select some and add others and make the following list of wants: 1st, subsistence; 2d, defense; 3d, house-life, or residence; 4th, amusement; 5th, property; 6th, government; 7th, religion.

These seven wants of native society would appear naturally in the native architecture. They would become concentrated and intensified in village life, and we would expect that provision would be made for them. All of these may be recognized either in the architecture or in the surroundings of every village. Subsistence might be provided for without any architectural effort. The location of the village in the place where subsistence could be gained would be sufficient. Defense might also sometimes be secured without any artificial structure, the barriers of nature being sufficient. Property, also, might be provided for in such temporary structures as would hardly be worthy of study in an architectural point of view, the caches and other hiding places being of the rudest kind. But government and religion were especially exorbitant. Theirs are invisible wants, but it is remarkable that they have made themselves more visible in architecture than any other. Residence and family life were satisfied with a temporary structure, while government and religion required elaborate structures. War among the primitive races was not so exorbitant

as either of these. It was destructive but not constructive. The initiation of warriors might take place in the council-house or in the sacred tent, but this ceremony seldom required a separate place. The preservation of prisoners and the trial of captives might take place in the central square or public ground around which the residences were placed, but this would not always require any architectural work further than a simple inclosure or surrounding wall to guard them. If the ceremony of running the gauntlet ever embodied itself in any permanent shape, this would also be in the open air, and would consist of simple walls, running parallel with one another. Amusements would also find place for themselves in the open air, and the provision made for them would be more or less temporary. Circles enclosing level areas, or, as in the case of the Pueblos, the open ground, enclosed by the walls of the Pueblo buildings, would be sufficient. But when we come to consider these two elements of society, government and religion, we find that they are seldom satisfied with any such temporary structure. Next to residence or house life, these require for themselves a home, and, in fact, a more elaborate and expensive home than the family or the individual. The burial of the dead was one part of the religious observance. This might take place without so elaborate a structure as the living would require for themselves, yet often burial has left the most permanent structures. The public council and the religious assembly were the two organizations of society which required permanent places, and for which the most extensive provision would be made.

In examining, then, the works of unknown races, we take these different keys to unlock the mystery which gathers about them. It is a matter of experiment which key will fit. We have referred to the villages of the Indians and of the Moundbuilders, and have endeavored to show the analogies between them. These analogies consist in the arrangement of the houses about the public squares but in close proximity, in the surrounding of the village with a wall of defence, either a stockade or an earth-wall, in the prominence which the houses of the chiefs and the council-houses had in the village, in the presence of the central place of assembly, such as the publie square, chunky-yard, and open circle, and in the uniform provision made for religious observances. Without identifying each several part, we have endeavored to show the resemblances between the works of the Moundbuilders and of the Indians, on one side, and between the different classes of works among the Moundbuilders. But we advance beyond these to consider the Pueblos also. The resemblances

between these and the villages of the Moundbuilders and of the Indians are also to be explained in the same way.

The wants of society impressed themselves upon architecture more and more as the social cultus advanced. The defenses became more elaborate, the residences more substantial, the means of living more reliable, the settlements more permanent, the burial places more marked, the council-houses more massive, the temples or sacred places more prominent, the arrangements for feasts, dances and other social customs more decided, and so everything connected with village life would become more visible.

For this reason the works of the Moundbuilders are left, while those of the savage tribes have perished, and for the same reason the works of the Pueblos are preserved in great perfection, while those of the Moundbuilders are fragmentary. The same customs, institutions and habits may have existed among all the prehistoric races, and the social cultus accounts for the difference in the architecture. We may take, then, the descriptions of Indian life, and go to the Moundbuilders' works, and find an explanation of the different structures in the Indian village life. The burial mounds, temple mounds, look-out mounds, defensive enclosûres, sacred enclosures, covered ways, circles and squares, and all other works having counterparts in the temporary, unsubstantial structures and conveniences which the Indians devised for themselves, as well as in the different parts of the Pueblos.

III. This, then, leads us to the third point. The differences in architecture may be traced to the different grades of social cultus which existed under the tribal state. Village architecture, as we have seen, consists in part, in the situation of the structures, as well as in their form. The location of a village was always adapted to the surroundings, and this sometimes furnishes an indication of the state or mode of life of the people. The location of a village, for instance, in a rich plain, surrounded by advantages for agriculture, would indicate that its inhabitants were following the agricultural mode of life. On the other hand, the location of villages upon eminences which were natural defenses, would indicate that its inhabitants were in a military condition, so the location by lake-side or by sea-side would indicate that the inhabitants depended in part upon fishing for a living.

There are kitchen-middens or shell-heaps on the coast of Maine and of Florida, and on various parts of the Pacific coast, which show that village life prevailed in these localities. The villages also must have been very prominent, for the shell-

heaps are sometimes immense. Mr. Schumacher* has described many such shell-heaps, consisting of kitchen-refuse, with the bones of elk and deer, averaging about eight feet in depth. The houses were square, about 6 x 10 feet, and extended to a depth of four feet. Extensive remains of their villages were found, and in one case, about fifty depressions of former houses. Mr. S. J. Walker† mentions shell-heaps in Florida 15 or 20 feet deep, and some 560 or 600 feet long. These shell-heaps contain many depressions, which were formerly the sites of houses or lodges. He says, "The immense mounds strike the mind of the beholder with amazement." It is possible that the so-called fire-beds in the Ohio River were also sites of former villages.

There were three grades of village life east of the Mississippi River, the first marked by these remains of camps and rude traces of habitations; the second, that state of architecture which prevailed among the Indian tribes known to history, such as the Delawares, Iroquois, Tuscaroras, and others; the third, the villages of the Moundbuilders. As to the grades of village architecture which existed west of that region embraced between the mountains, beyond the mountains, and along the Pacific coast, we have not space to specify all; suffice it to say that the village architecture here also varied altogether according to the social status. Mr. Stephen Powers has mentioned five different classes of lodges which he discovered among the California Indians. Many other forms of lodges have been described. We have not space to dwell on this. These lodges may constitute one grade. In the second we might class the famous Cliff-Dwellers, and in the third, the Pueblos.

IV. We come, then, to the fourth inquiry, viz., What was the community embraced in the village? According to the native organization of society, every tribe was divided into phratries, and the phratries into clans or gentes. The gens, again, could be resolved into families. Now we do not pretend to say which was the unit for the house, the family or the gens, nor which was the unit for the village, the gens or the phratries. It would seem very reasonable, however, that the gens chose the entire site for their residence, and that there were, included within the enclosure, houses similar to the joint tenement houses of the Iroquois, families making their residence in the houses.

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*Bulletin U. S. Geol. Survey. Vol. III., Art. 2.
†Smithsonian Report, 1879, page 413.

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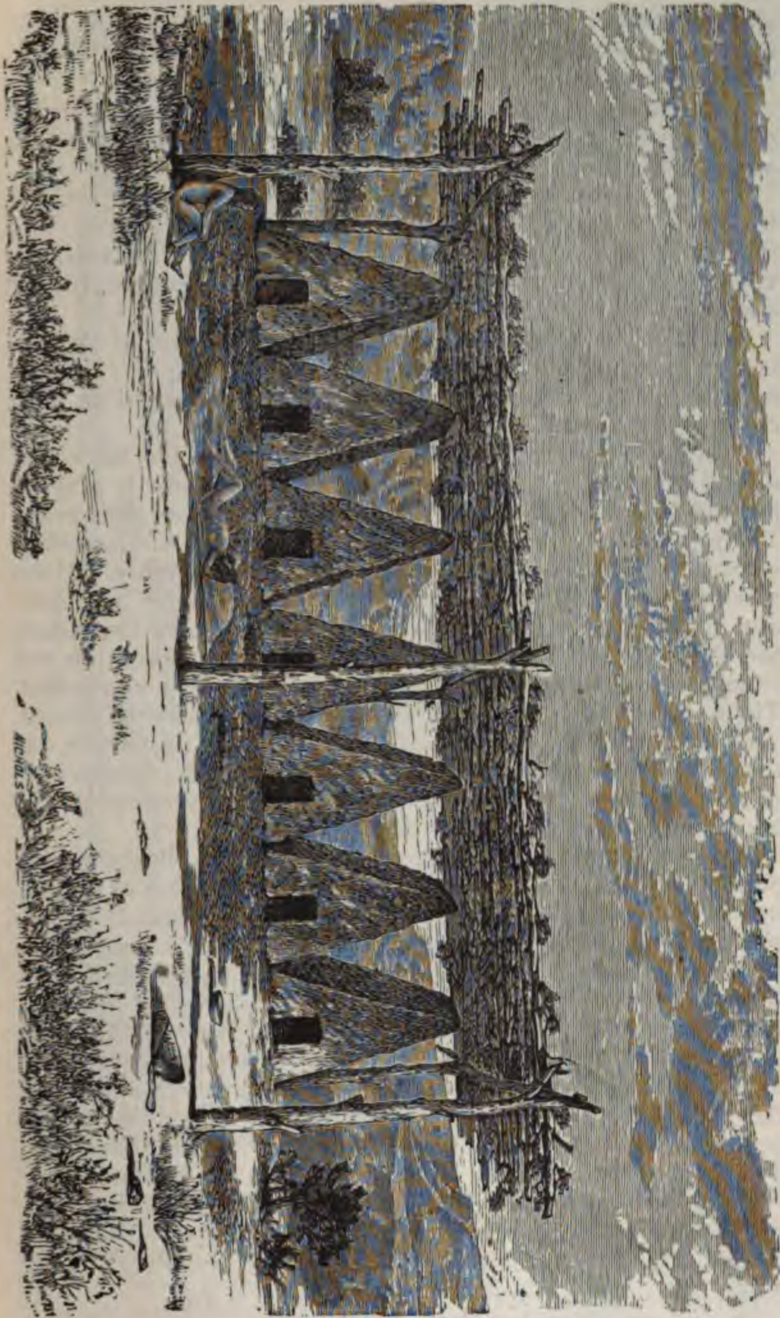
bond being that of consanguinity, but as to the character of the herd, whether a gens or a phratry or a tribe, we acknowledge our ignorance. There were so many villages crowded into small territorial limits, and the enclosures for each village were so small, that we should be inclined to take the village as the home of the gens, rather than any larger class. In that case, we should conclude that the houses of all the members of the gens, including the sachems and chiefs, the medicine-men or priests, the heads of houses, and the people were all in one inclosure. Other villages near by would include other gentes, and so the tribe would spread out through the whole length of a river valley. Possibly those who were situated in the same region in other valleys, belonged to the same tribe, or at least to a confederacy. Judging from the confederacy which existed in the state of New York, we should say that the villages of Ohio belonged to a confederacy, rather than to a tribe. The confederacy of the Southern Indians was marked by similar residences, and a common mode of life, and an uniform cultus. As to the village itself, resting on the bond of kin as its cohesive principle, the gens would afford to each individual member that protection which no other existing power could give. The peculiarity of the gens was that it had a common burial place, common religious rites, reciprocal obligations of help, defense and redress, mutual rites of inheritánce of property, the right of electing its sachems and chiefs and a common council. If the village included the gens, we can see what peculiar structures would belong to it. The structures, then, would be the habitations of the sachems and chiefs, the council house, a burial place or dead-house, a common treasury or store-house, all of which would be in a manner public, but the houses of the people, according to the communistic idea, would include a number of families, instead of one, the household embracing the near relatives, the house itself being a joint tenement with one roof over all, but the families separated by partitions.

Our conclusion is, then, that the village embraced the gens. This position is confirmed by the study of the works of the Moundbuilders. By looking at the cut* in our previous article, it will be seen that there were five enclosures within six miles, on Paint creek. Three of these were probably villages. By looking at Squier and Davis' volume, it will be noticed that seven others were situated in the Scioto valley, about Chillicothe and above it. Now, if we take certain valleys to be the habitat of the phratries, and the particular enclosures the habitat of the gentes, we shall find that the system of residence

*See Vol. V. No. 1, page 62.



Yokuts Village.

and the system of gentile organization correspond. The same is true of the works in the vicinity of Newark and of Circleville, and also the system in the Great Miami valley.*

The same fact is shown by the Pueblos, although in this case the villages are much more densely populated than among the Moundbuilders.†

The Pueblos are situated so near together as to give rise to the idea that they were the residences of gentes, and that the tribes occupied the whole valley of the streams, the villages having separate chiefs and being independent, but all connected by one tribal organization.

We have presented in a former number a picture of the village of Pomeiock, which formerly existed in Virginia. It will be noticed that in this village the houses are arranged in lines close to one another.

Many other descriptions of Indian villages have been furnished by travellers and historians, and from these it may be learned that the habitations were generally in close proximity. The peculiarity of village life, also, among the African tribes is that the habitations are all of them close together. Even when these tribes become advanced, their villages are more and more concentrated. It would seem that notwithstanding the abundance of room, yet that as far as their habitation was concerned, the rude tribes became very closely connected. Their villages were compact, and their homes closely joined. This was one result, perhaps, of the tribal state; protection was thus secured with less trouble, and comforts and conveniences of society being shared in common, the proximity of the houses might prove an advantage.

We give here a cut of a Yokuts Village to illustrate this point. It appears that these villages were made up of a number of lodges or wigwams, conical or wedge-shaped, generally made of *tule*, all in perfect alignment, and a continuous awning of brushwood stretching in front. In one end wigwam lives the village captain, in the other the Shaman. Every large division of territory, such as a river valley, from the snow line down to the plains, or from the foot-hills down to the lake, forms the domain of one tribe and one chief. In this domain, every village has a captain, who stands to the central chief in the relation of a Governor to the President. The chief is distinguished from his subjects by his long hair. A notable characteristic of the Yokuts is the great influence and extensive journeyings of the Rain-Makers. In ancient times the Yokuts had immense herds of elk and deer. Thus

*See Ancient Monuments, Pl. II., Pl. III., Pl. XXI., Pl. XV., Pl. VIII.
†See Ancient Monuments, Pl. XXXVII.

we have a picture of village life in California, differing from that of the Indians on the Atlantic coast in some points, but resembling it in others.

Venturas Lodge.

Among the Venturas a village consisted of a single house. This wigwam was the shape of a capital letter L, made up of slats leaned up to a ridge-pole and heavily thatched. Along the middle of it different families had their fires. The chief, Ventura by name, was both chief and patriarch. The tribe

in this case had become so reduced as to include only one house, and so the house became a viliage.

With these remarks, however, we leave this part of the subject, and proceed to consider the village habitations.

1. One of the first questions which arises, is in reference to the location of the houses in a village. There are systems of works in Ohio, where are covered ways, leading to the water, and extensive enclosures with various platforms inside of them, and observatories outside; showing that every part of the structure partook of the nature of a village, and that the water and the fields were depended upon for sustenance.

Such villages we have described already, and many others might be mentioned. In the Southern States there are other conveniences for village life apparent. Extensive ponds of water stretched around the different sides of these villages, some of them formed by artificial trenches, and others by natural streams. These ponds of water were used, both for defense, presenting barriers to the approach of an enemy, and as fish preserves, for the convenience of the people. A double purpose is sometimes apparent in their platform pyramids. They served as the foundations of temples, or lofty sites for the residences of their *caciques*, and at the same time were useful as observatories. It is, however, sometimes difficult to decide, from the works of the Moundbuilders, where the habitations were placed. The enclosures may have been designed for the protection of the habitations, or they may have been used for religious ceremonies, the public works being marked by these massive walls, while the private residences were scattered about, either inside or outside of the enclosures, in the fields surrounding. Thus the enclosures might be, as it was in many cases in the Gulf States, a mere chunky-yard or public common, situated in the midst of the habitations of the people; or it might be an extensive wall surrounding the village, and furnishing a defense for the habitations, such as the circles in the Ohio valley present.

A village might be situated in a military enclosure on an eminence, with the habitations of the people inside of the enclosure, or it might be situated on the low ground, with the houses both inside and outside, but the existence of the enclosure would be a proof of the village. There might be, on the other hand, a chunky-yard, with mounds at either end, but no such enclosure, save the remains of a ditch or pond, but the chunky-yard would be the evidence, also, of the village. Wherever we find an enclosure, then, we conclude that it is the site of an ancient village.

We conclude this in reference to the rude circles which were found in the state of New York, and throughout the northern states, for it is more than probable that they are the remains of ancient stockades, and that they once included within themselves Indian lodges. We conclude this, also, concerning the majority of enclosures in the state of Ohio, though more uncertainty has arisen about them than any other. Whether they were defenses within which the habitations were placed, or, like the chunky-yards, were mere places of assembly enclosed in the midst of the habitations of the people is uncertain, but the evidences are too numerous for us to doubt their connection with village life, and the probability is that they enclosed the habitations. Their number, their location, their relative situation, the fact that they are connected by covered ways with one another, and with streams, all indicate that within them was the residence of the people.

But the point which we make has reference more to the habitations than to the public grounds or village surroundings. It is a remarkable fact that the habitations of a large proportion of prehistoric people are totally unknown. No trace of them has ever been found, except the earth-works about which they were erected.

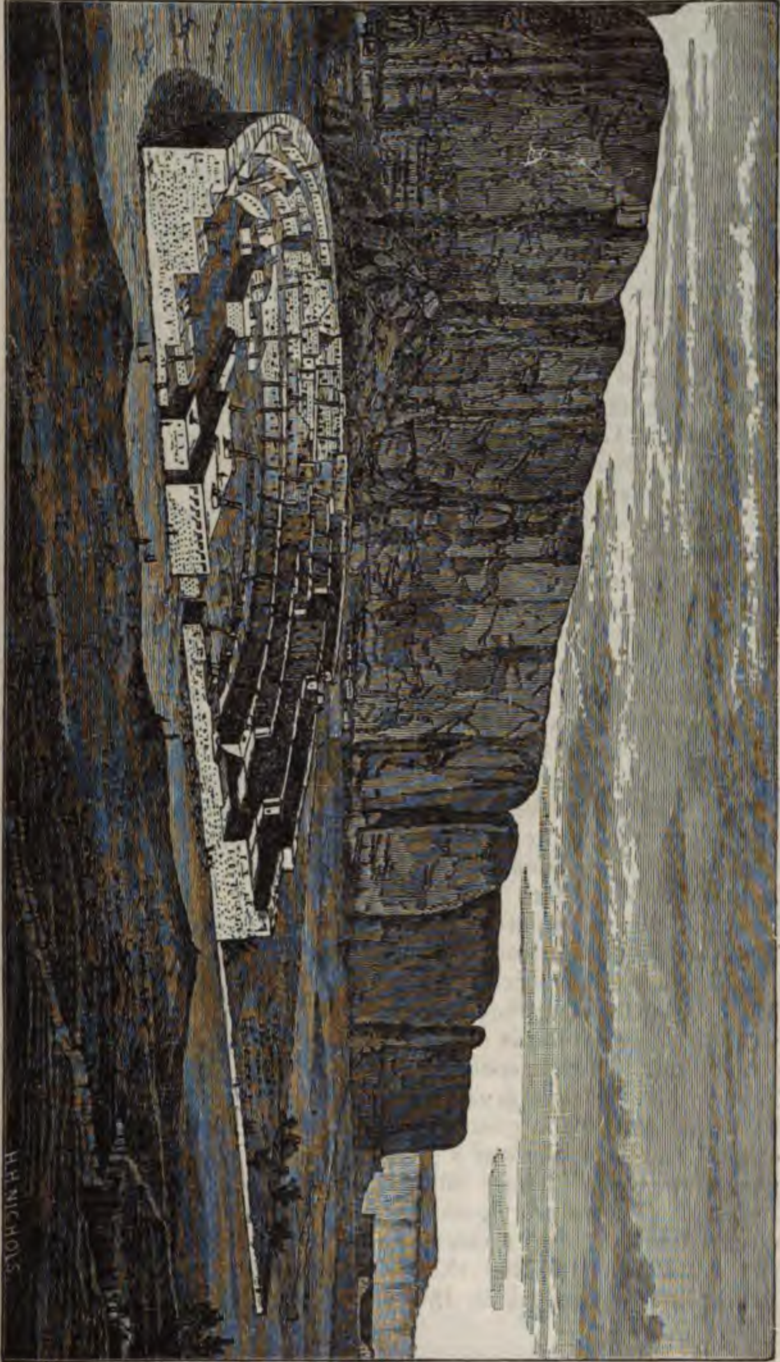
These earthworks are generally ascribed, not to the later Indians, but to the Moundbuilders. There are enclosures, however, which are supposed to be remains of Indian stockades, and as to the habitations formerly enclosed within these, we are not ignorant. There are, also, so-called earth-lodges, mere rings in the ground, which are supposed to be the remains of huts which had formerly existed. The conjecture is that these lodges, having been covered with earth, fell and left rings on the surface.

Among all that class of works which have been ascribed to the Moundbuilders, there are very few traces of habitations. The theory has been advanced by Mr. Lewis H. Morgan, in his celebrated paper read at Washington, and published in the *North American Review*, that the habitations were placed on top of the walls, the walls themselves being only foundations. This theory, however, is subject to many objections. We mention a few: 1st. The habitations would be inconvenient, and difficult of access. 2d. They would be defenseless. 3d. They would be out of all proportion. 4th. They would be of many unequal lengths. 5th. There are a few cases where the wall is sufficiently level, on top, to furnish a foundation for a long, narrow building; they are exceptions, and 6th, where such walls do exist, they would furnish a poor site for a builder. A building eight feet wide, from one hundred and fifty to eight

hundred feet long, perched high up in the air, without an approach to it from any side, would certainly be very inconvenient.

The communistic idea may be one which will account for the style of residences which prevailed among the prehistoric races, but it does not require any such forced and inconvenient location for these residences. As to defense, we find that the later Indians resorted to no such method. They placed their habitations on the ground and surrounded them with stockades. The Moundbuilders had the same opportunity of erecting their defenses, and there is no reason to suppose that they resorted to so strange and anomalous a method of defense as the one indicated. The erection of a house on an elevated wall, with no ditch on either side of it to protect, and no stockade surrounding the wall, but the whole surface exposed to direct attack, would certainly be a strange method of defending a house. The Cliff-Dwellers, to be sure, erected their houses high up in the cliffs, but the cliffs themselves were the defense. The inconvenience of access was endured by the people for the sake of the protection. There were places where the Moundbuilders could have erected their houses, and been defended by the barriers of nature, but, locating their villages on the level ground, it does not seem probable that they substituted these low earth-walls for high precipices. We give them credit for more military skill and intelligence. The main argument for this method of erecting buildings, is drawn from the communistic system. We acknowledge that this system prevailed among the later Indians, and it is likely that it prevailed also among the Moundbuilders. The Iroquois built their houses in long tenements, into which several families were crowded. Each house practiced communism in living. But this joint tenement house of the Iroquois was a very different thing from a structure erected upon a wall varying in length from 100 to 800 feet, and having a width of only eight or ten feet, with an elevation above the surface of from ten to twenty feet, for there were some conveniences about the first, but the latter would be as inconvenient as possible.

2. A second inquiry which we make concerning village habitations is, what was the arrangement and general use. We follow the inquiry by instituting a study of the Pueblos. Enough is known of this class of village residence, to give us a clue to the whole. The Pueblo dwellings of the west present a phase of village architecture which is not found anywhere else. This type of village is exclusively American. It is based upon the communistic system, but presents that system in a different form. It consists in a building erected somewhat after the modern French flat, having for its object



Pueblo Bonito. (See page 166.)

a combination of tenants under one roof, with common protecting walls, and the whole building arranged in terraces, with the separate stories rising one above another, but receding as they rise. How the idea originated is a question. There were villages among the Moundbuilders in which the habitations were crowded together in a small enclosure, while the chiefs and religious men, and public assembly places were upon the elevated platforms, the open ground being in the midst of all. Such a village does not differ in its plan from the Pueblo. All that is needed is to build a tenement with united walls, to unite them with the circumvallation, and to extend the platforms on which were the residences of the chiefs, and we have the Pueblo idea. We present here a cut of the Pueblo Bonito (see page 165). It is a good illustration of a village habitation. Descriptions have been given of these Pueblos by Lieut. Simpson, by W. H. Holmes, by Stevenson, L. H. Morgan, and many others. The explanation by L. H. Morgan is, perhaps, as valuable as any. He compares them to the so-called palaces of Montezuma, which, like this, were constructed on three sides of a court, which opened on a street or causeway, and were in a terraced form. He considers that the structure throws great light upon the architecture of the Aztecs, and maintains that the famous palaces of Mexico were not the residences of grand potentates, but they were great communal houses of the American model.

Society among village Indians proves that the great house in which the chief lived was occupied on equal terms by other families. Mr. Morgan says also: "The finest structures of the village Indians were found unoccupied and in ruins. The regions in which they are situated, are roamed over by wild tribes of the Apaches and Utes. They are, however, similar in plan and style to the present occupied Pueblos in New Mexico, but as superior in construction as stone to adobé. This fact gives additional interest to the ruins."

There are many such Pueblos in Arizona, California, New Mexico, and throughout the great plateau of the interior. It was the common mode of building, and one well adapted to the region. With respect to the manner of constructing these houses, Mr. Morgan says: "It was probably done from time to time, and from generation to generation, like a feudal castle. Each house was a growth of additions, made as exigences required. These Pueblos were the abode of sedentary Indians. They were generally placed in the valley of some stream, such as the Anamas, the San Juan, the Rio Chaco, the La Plata, the Rio Dolores, the Hovenweep, the Pine River, and sometimes in the midst of deep cañons, such as

McElmo, and Mancos. A few, however, were placed on the mesas, distant from streams, and without any advantages of soil or surroundings for the support of population. Testimony of those who have visited them is that the region in which they were placed was, in general, incapable of supporting a population, but in the valleys the soil was quick and fertile, and by proper irrigation, would yield ample returns to those cultivating it. There was that also in the region which would naturally favor this concentrated mode of life—the very grandeur and loneliness of the scenery would drive the people together like herds. The protection which they sought from enemies must, in the cañons, be furnished to them by their houses, for in such a country there would be more danger from surprise at night than from any other form of attack. Their house must be their castle. Village defense and village habitation were contained in the same building. It is probable that protection from floods was also an object, for in the cañons and river valleys of a mountain region like this, there would be great danger of inundation.

As to the method of erecting these houses. A description of one will give us an idea of all. Lieut. Ives describes one of the Moqui Pueblos as follows: Each Pueblo is built around a rectangular court, in which are the springs which furnish the supply to the reservoirs. The exterior walls, which are of stone, have no openings, and would have to be scaled or battered down before access could be gained to the interior. The successive stories are set back, one behind the other; the lower rooms are reached through trap-doors from the first landing. The houses are three rooms deep, and open upon the interior court. The arrangement is as strong and compact as could well be devised, but as the court is common, and the landings are separated by no partitions, it involves a certain community of residence. One theory of the construction is that one row of the main building on the court side, was completed one story high and covered with a flat roof. The second row was carried up two stories, the third three, and the fourth four. The wings were commenced and completed in the same manner. The walls between the rooms were many of them solid, and the communication was from above. As to what constituted the family residence, it is uncertain, some maintaining that the apartments connected up and down, others that those apartments which went through from front to back, belonged to separate families.

The novelty of the plan is found in the remoteness or inaccessibility of some of the rooms. The external wall rose 40 or 50 feet high, where the structure was five stories, and 10

Earth-Lodges in the Sacramento Valley.

feet on the inside. There was no entrance to the ground story. After getting admission within the court, they ascended to the roof of the first row of apartments by means of ladders, and the same way by ladders to each successive story. The apartments were entered through trap-doors in the roof of each story, the descent being by ladders inside.

This method of entering their abodes seems to us very novel, but it was somewhat common among the aboriginal

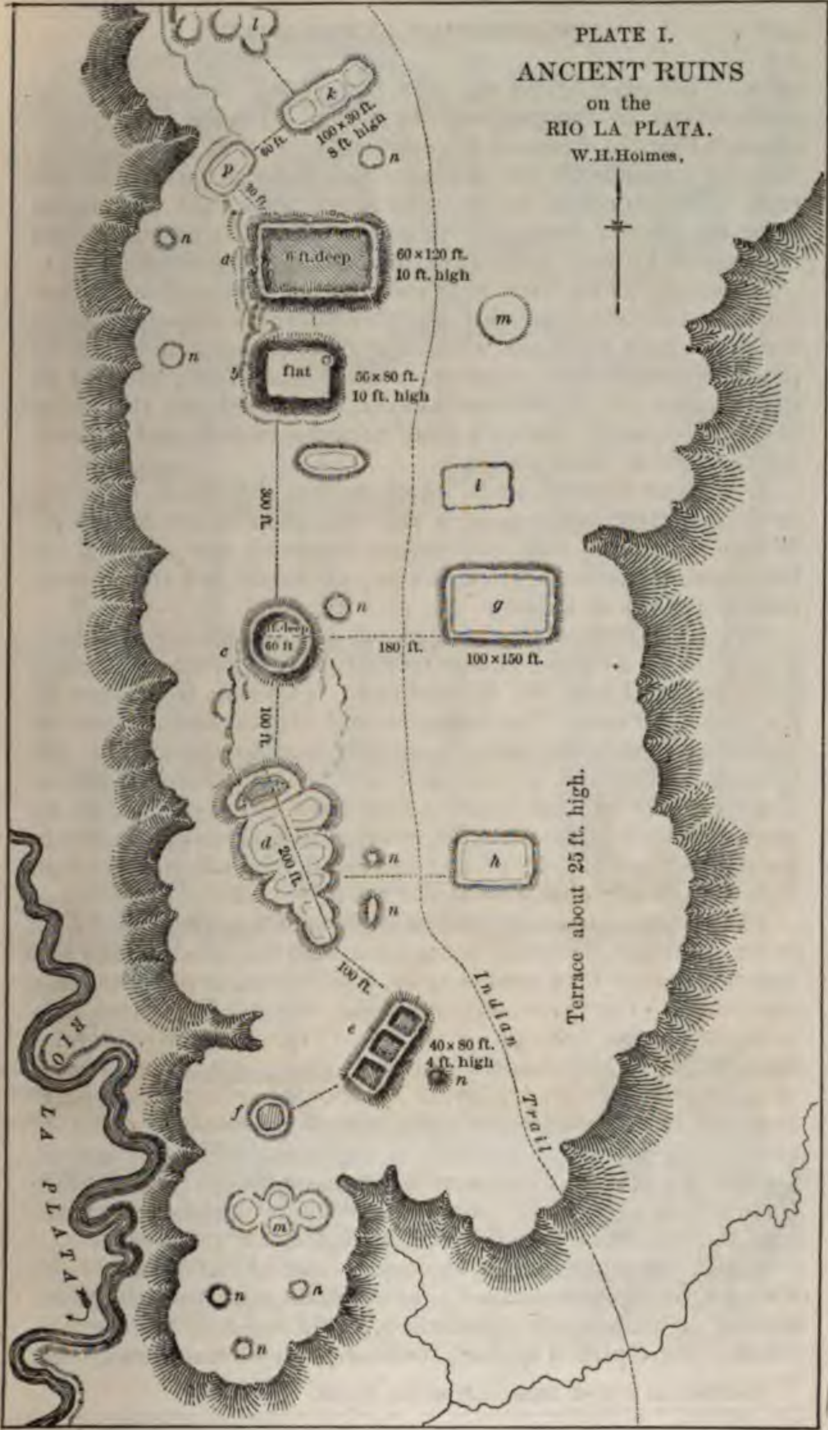


PLATE I.
ANCIENT RUINS
on the
RIO LA PLATA.
W.H.Holmes.
100 x 30 ft.
8 ft. high
6 ft. deep
60 x 120 ft.
10 ft. high
flat
56 x 80 ft.
10 ft. high
300 ft.
180 ft.
100 x 150 ft.
100 ft.
200 ft.
40 x 80 ft.
4 ft. high
Indian Trail
Terrace about 25 ft. high.
RIO LA PLATA

races. We give here a cut (see page 168), representing the earth-lodges in the Sacramento valley. In these lodges it appears that the entrance is very similar to that in the Puebloes, by a ladder on the outside, and through a hole in the roof. The object of this method is unknown, but we refer to it for the sake of analogy. A description of it may be found in Stephen Powers' account of the tribes of California.*

Although, as we have indicated, we are involved in obscurity as to the origin of this style of village habitation, there are yet certain analogies which are at least suggestive, and to these we would call attention. We have already alluded to the villages of the Moundbuilders, as embodying the tribal or gentile system, and as having habitations arranged according to certain fixed plans.

3. A third enquiry, then, which we would make in reference to village habitations, is as to the analogies or resemblances. Without claiming any connection between the ethnical or historical, evolutional or otherwise, we would call attention to certain points of analogy.

1st. In reference to the general ground plan. We here give a cut of a ruined village (see page 169), which has been described by Lieut. W. H. Holmes. This ruin is situated on the Rio La Plata. The octagon and circles and clusters of apartments certainly have a resemblance to the circles and squares which are so common among the Moundbuilders. The truncated mound, 9 or 10 feet high, 80 feet wide by 80 long, the flat top, and height, give, as Mr. Holmes says, more the appearance of one of the sacrificial mounds of the Ohio valley, than any observed at the west.

The rectangular enclosure, 60 x 40, with a rounded hall four to six in height, taken in connection with the other circles and squares, though on a smaller scale, also remind us of those same structures. The ground plan of the village of McElmo also presents similar analogies (see page 171). This, Mr. Holmes says, seems to have been a compact village consisting of two circular buildings and a great number of rectangular apartments. The triple walled structure is especially worthy of attention. The circle *a* within is supposed to be the estufa, but having the peculiarity of being surrounded by a double-walled tower. A tower, *b*, also, is placed at a point overlooking the gulch, evidently designed for an look-out.

2d. In reference to the elevation. The habitations of the Pueblos were concentrated into a small compass, being embraced in a single large building, while those of the Moundbuilders were placed in enclosures of most liberal dimensions,

*Contributions to North American Ethnology, No. III.

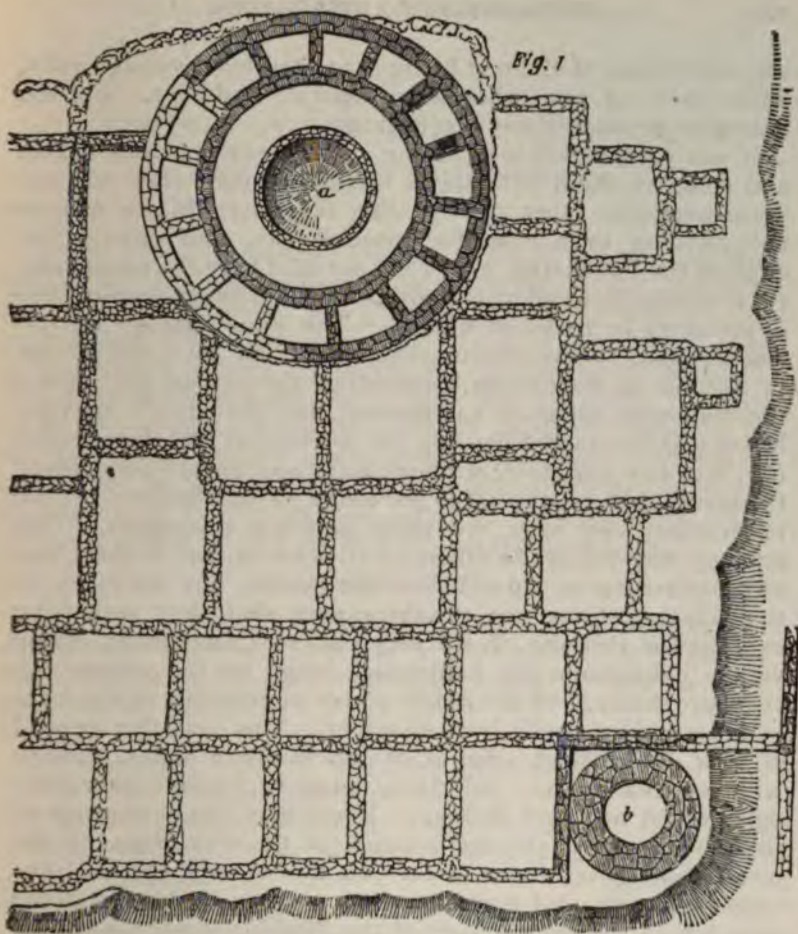


Fig. 1

Fig 2.

the apartments of the one being separated by dividing walls, while those of the other were separate buildings. But the analogies between them are striking.

If our readers will look at the cuts in our previous article and compare them with those in this number, they will see these analogies more clearly. To illustrate: If we remove the dividing lines from the ground plan, and enlarge the circle in the Pueblo (fig. 1, p. 171), we shall have the square and circle of the Ohio valley, the tower on the point resembling the observatory or look-out mound. The same analogy can be traced, also, to the Indian villages. If we take the village of Secotan as a specimen, concentrate the ground plot, make the buildings separate apartments, put the chief's burying house (A), the sacred fire (B), the totem-post and dance circle (C), into one structure, with separate apartments resembling the estufa, and then imagine the lodge in the field to be the observatory, we have the plans perfectly analogous. This analogy may not strike others as it does us, but if there was any uniformity in the communistic system, any similarity in the tribal customs, we should expect that they would be exhibited in this way, in the very plan of arrangement of the village habitations, the habitations being on the ground, in close proximity, and the public places of assembly in the form of a circle, by itself, but adjoining. This was the ground plan of the ancient villages of the southern states, though with some variations. 3d. Here, however, we find other analogies which are very striking. If we take the description of the earthworks as to the location of the residences of the priests and government officers on the summit of the truncated pyramids, and compare them to the residences of the caciques, in the upper story of the Pueblo; if we take, also, the round mound or rotunda of the Moundbuilders and compare it with the estufa of the Pueblo, and place these around the central open square, comparing the chunky-yard to the Plaza of the Pueblo, and then consider the habitations of the common people as the lower stories, with the wall of the enclosure forming the rear wall of the Pueblo, the whole concentrated into one great building, we shall have the village habitations very much alike, the tenements of the Pueblos being separated only by walls, the residences of the chiefs being elevated on the upper story, and the sacred place of assembly or estufa, being hidden away underneath, but those of the Moundbuilders being disconnected houses, the residences of the chiefs being on the pyramids, and the estufas on instead of within the rotundas.

SPECIMEN OF THE CHÚMĔTO LANGUAGE.

BY ALBERT S. GATSCHET, WASHINGTON, D. C.

II.

Before entering upon the commentation of the short ethnologic text contained in the previous number of this quarterly (pp. 72–73), I present a few grammatic notes on this Californian dialect, containing almost all that I, in my present state of knowledge, consider to be certain concerning its structure. The utterance of the natives is vague and indistinct; in spite of its vocalic and apparently sonorous character, Chúmĕto is, like the other Central Californian languages, rather difficult to pronounce for English- or Spanish-speaking people. This is mainly owing to the pectoral mode of pronunciation. The dialect contains a good number of Spanish terms.

GRAMMATIC NOTES.

Phonetics. Words and syllables generally end in vowels or diphthongs; wherever they end in consonants, the primitive form of the word has been altered by elision or other phonetic processes of removal.

The vocalic system is as follows:

Vowels: u, o, a, e, i, and their long sounds.

Softened vowels (Umlaute): ü, ö, ä.

Vowels pronounced dumb: û, â, ĕ, î.

Diphthongs: ai (ay), ei (ey), au (aw), oi (oy), ui (wi, uy), uo (wo).

Nasalized vowels: ûⁿ, aⁿ, iⁿ.

The consonants are as follows:

	NOT ASPIRATED.		ASPIRATED.	SPIRANTS.	NASALS.	TRILLS.
Gutturals,	k	g	χ	h	ng, nk	
Palatals,	tch	dsh		y		
Linguals,	k̲	tr		sh		r, l
Dentals,	t	d	th	s	n	
Labials,	p	b		v, w	m	

The r of this language is not our rolling r, but the softer, more vocalic trill heard in *bittern*, *carman*, and alternates with l, but not with d, which like b occurs but rarely, both being surd-sonant mutes. The sounds v and sh are scarce also; f and dh (the th in: *other*) are not in the alphabet. A sound represented by me as tr has to be considered as a linguo-dental, and occurs in trókot, t'róχot, *three*, and other words. Th alternates here with ss, and the alternation of the conso-

nantic and vocalic sounds uttered by the same organs of the vocal tube is as generally observed as it is in the other languages of America. Cf. my "Phonetics of the Káyowē Language," AM. ANTIQ., IV., pp. 280–285 (1882). Readers will, however, notice that of the sonant explosives none is frequent save dsh (Eng. j). Gemination is frequent, but a tendency towards nasalization and cumulation of vowels or consonants is not observable.

The number of sounds is not very considerable, for if we omit the long, dumb and nasalized vowels, as well as the diphthongs, they amount to thirty-two.

For rhetoric reasons the word-accent often shifts, but generally rests on the penultima, or when it has receded from there, it usually occupies the radical syllable.

Verbal inflection. The few hours which I could spare to visit Manning did not suffice for obtaining a full paradigm of the verb, which is the most important part of speech in every language. Verbal and pronominal inflections are not easy to obtain from untrained natives.

Chúmĕto has at least three forms to express tense, if not more; there is also a personal inflection by means of suffixes, although the personal pronoun is often added, as it is done constantly in French and German.

The forms of the *present tense* are as follows:

kánni tépoma, *I saw, I am sawing.*
mi tépuni, *thou art sawing.*
i-ok tépu, tépo, *he, she is sawing.*
mahi (*or:* me) tépumahi, *we are sawing.*
míko tépu (?) *ye are sawing.*
iniko tépupu, tépu, *they* (m. and fem.), *are sawing.*

The inflection of the *past* and *preterit* tense is marked by — suffixed to the base or stem:

kánni téptuma, *I sawed, have sawed.*
mi téptuni, *thou hast sawed.*
i-ok téptu; téptu ak, *he, she has sawed.*
mahi téptumahi, téptume, *we have sawed.*
miko téptu (?), *ye have sawed.*
íniko téptupu, téptu, *they have sawed.*

A *future* tense is formed by the suffixation of -eku, -iku to the verbal base; it occurs in the following terms noted by me:

awíkoma, *I shall play* (a game); awikomahi, *we shall play.*
hunemiékute, *about to fish, going to fish.*
huingékupu, *they will see, they go to see;* from húing, hú-i, húyi, *to see.*

The transitive verbs of Chúmĕto possess a form in -tí, -te, indicating that the action extends over a *plurality* of objects

acted upon, while the simple form refers to one object only, or to an object expressed by a collective term. The same suffix appears in a part of the nominal plurals.

tépu, *to saw*, pl. of obj. téputi, tépute.
ú-a, *to eat*, ú-ati.
úhha, *to drink*, uhhúti.
lúako, *to speak*, luakiti, *to speak much.*
úmtĕ, *to sing*, úmtĕti.

Further investigation will show whether this is a real plural or a distributive form.

In some intransitive verbs we meet the same suffix -ti, to point out plurality of the verbal subject:

huáte, u-áte, *to run*, pl. of subj. huátĕti.
waháyu, *to remove, migrate*, waháyuti.
túyeko, *to sleep*, tuyekóti.

The passive form is identical with the active: yóhu, *to kill*, and *to be killed.*

The reflective form: hékako *to wash*, hékatko *to wash oneself.*

A substantive verb does not seem to exist, for in the sentences below the adjective includes the copula, being used predicatively:

nánga tallúlhi né-ok, *this man is strong.*
kä'ngi míwa tuhúhhiti, *some Indians are dark.*
púgsuma rico, *the trader is rich.*

The personal pronoun. When standing by itself or before a verb, this pronoun mostly shows dissyllabic forms, and as far as my syntactic examples go, its subjective case does not differ from the direct and indirect objective case. No distinction is made to discriminate between the sexes. The suffix -ko is often inverted to -ok.

Sing. 1. kánni, kónni, *I.* kánni tíwama tólli, *I buy a blanket;* kánni ken helépumu? *dost thou not believe me?* kánni kaváyo ámmu^{n}te, *he left the horse to me.* Cf. line 12 of text.

Sing. 2. mi, *thou;* mi tépuni, *thou art sawing;* tíwama mi tólli, *I buy a blanket from thee.*

Sing. 3. i, í-ok, and né-ok, né-o, *he, she, it,* also demonstr. pron.: íyok útui tólli, *he has many blankets;* né-o kóleme, *he is coughing.* kánni ámkunak í-ok, *I beat him;* i utchotóho, *he lives in a house,* lit., "he in his house."

Plur. 1. mahi, contr. or abbr. me, *we;* mahí ken luágsemahi Americano, *we do not speak English;* otíme (for otíko máhi) *we two;* hoyĕ'nunt otíme hunemiékute, *to-morrow we two will go fishing;* otíkome tépomahi húhui, *we two saw wood.*

Plur. 2. míko, *ye;* vû' mikó, *go ye! begone!*

Plur. 3. inikua, iniko, né-ok, néko, *they,* m. and fem.; né-ok ken he-aúne tauhalnaíhu, *they do not like* (or *want*) *to work.*

The possessive pronoun differs from the personal pronoun, with the only exception of the first person of the plural; it is *suffixed* to the substantive, the personal pronoun being sometimes added:

Sing. 1. -nti, *my, mine.* kévunti, *my back;* amánti, *my grandmother;* tíssunti, *my hand;* oyáhinti, kánni oyáhinti, *my name.*

Sing. 2. -no, -nu, *thy, thine;* wákanò, *thy cow;* wakayáno, *thy cattle;* hoténa kótoga, *thy leg is broken;* oyahénu, *thy name;* vuχkitónu, *into thy heart.*

Sing. 3. -ha, -hu, *his, her, its; his, hers, its;* kévuihu, *his back,* kevutóho, *on his back;* utchóhu, *his, her house,* utchotóhu, *in his, her house;* oyahéhu *or* inihu uyahéhu, *his, her, its name.*

Plur. 1. -mahi, *our, ours;* kapt'nu^{n}mahi, *our chief;* utchutumahí, *in our houses.*

Plur. 2. ?

Plur. 3. -ho, -hu, *their, theirs* (same as sing. 3); humnáho, *their beads* (l. 9 of text); nawassúhu, *their garments,* l. 11; örkitáho, *on their chin,* l. 10; nitóhu, *their nose,* l. 4; huggutóhu, *upon their heads,* 10.

No distinction is made in the possessive pronoun between alienable and inalienable property, as in some Dakota dialects and in Kalapúya (Oregon). The repetition of the personal pronoun before or after the noun provided with the possessive affix finds its analogies in the Chúmĕto finite verb and in the plurals of the noun.

Other pronouns found in the language are:

Demonstrative pronouns. (1) ne, nä, nä-i, nä'-iko, né-ok néko, né-o, *this,* pl. *these,* pointing to an object near by; nä óhha, *this woman;* ná-u púgsuma, *to this trader;* netiní, *right here.* Occurs also in tina? *what?* mana? *who?* né-ok vuréko yóhu vulép'ho, *these sheep were killed by lightning.* (2) i, ini, íniko, i-ok, íyo, íkok, *that,* pl. *those;* ini kéngiti, *that one alone;* inít, *at that place.* Cf. pron. pers.

Interrogative pronouns: ma? *who?* in: mana né-ok? *who is he?* mi in: mini, minne? *where?* mítako? *how many?* mítako kaptánù itíha? *how many brothers has the chief?* mítaχo kódshi kulláltkit? *how many hogs are in the pen?*

Indefinite pronouns: aitu, *all, all of;* úto, *many, much,* obj. case uto-i, útei; úto sílpat, úto toáko, *much marrow, much tobacco.*

Numerals. The numerals of the Mutsun family are formed after the decimal system, but those of Chúmĕto are unintelligible to the Mutsun Indians of the Pacific coast, an agreement being perceptible only in the numeral *two*. Manning could not count further than ten. Ordinals being of rare occurrence in American languages, I cannot state whether the ones given below are real ordinal numerals or only vicariously employed as such.

1 kénge, kä'nge; in the plural *some*, like Span. *unos*.
2 otíko, utígo, — second, otkipáho
3 trókot, t'róχot — third, trokopáhu
4 oyíssa, o-íssa, oítha — fourth, o-issipáhu
5 mahóko, mahógga — fifth, mahokipáhu
6 tĕ'moka, temókka — etc.
7 káwinta; cf. kawénim, middle.
8 titáwa
9 ellíwa, élyiwa
10 nádsha

In the closely related Kawéya dialect, spoken near Four Creeks, California, *ten* is nia-útcha, niátcha, and composes the decads; niátcha oyissunem, *forty;* niátcha niátcha, *one hundred.* In the same dialect sukána composes the "teens" from 11 to 17; oyik sukána, *fourteen.*

Nominal inflection. The Chúmĕto noun inflects for number as well as for case.

There are two *numbers* only, a singular and a plural, which is formed from the singular by the addition of a simple or compound suffix. The most frequent of the simple suffixes are -ti and -ya. A full array of over 120 plural forms will be found in *Contrib. to N. Amer. Ethnology*, III., pp. 538–549.

The plural suffix -ti is met with in all the adjectives and in a large number of substantives, among which we mention:

eséleke, *child, babe*, pl. eséleti
tággat, *forehead*, pl. taggátĕti
útcho, *house, lodge*, pl. útchuti (from útcho *to dwell*)
nóaha, *pocket-knife* (Span. navája), pl. ñoáhĕti

The plural suffix -ya is found in the large majority of the substantives, of which the following may be quoted:

hála, *wing*, pl. halúya
hóhho, *wood, stick, log*, pl. huhhóya
kä'la, *snow*, pl. käláya
kíllĕma, *ice*, pl. kĕlumúya
láma, *tree*, pl. lamáya, *trees, forest*
tchúka, *dog*, pl. tchukúya

There are also a few instances of plurals formed in -mĕ, -mi, and of others in -hi. All plurals can add to themselves

the word úto, pl. úte-i, útehi (from: utéya), *many, much*, if the context of the sentence makes the addition desirable.

There are many nouns which combine both plural suffixes above-mentioned in the ending -yati, -yate:

híka, *deer*, pl. hikáyati
saltúnu, *morning*, pl. saltúyati (for saltunúyatí)
yü'tta, *evening*, pl. yutúyati
lóka, *summer*, pl. lokáyati
tchaláto, *star*, pl. tchaltéyate

Other plurals show the terminal -táya, -tíya, -túya, instead of the simple -ya, this probably resulting from the plural suffix -ti standing before -ya:

nánga, *man, male*, pl. nangtáya
óhha, *woman*, pl. o'htáya
míwa, *person, Indian*, pl. mi-utíya

There are some terms possessed of two forms for the plural:

óhha, *woman*, pl. ohháya, o'htáya
ángot, *grasshopper*, pl. ángotuti, angtúya
tíssono, *finger, hand*, pl. tíssoti, tissóya
míwa, *person, Indian*, pl. miwa, mi-utíya

Many terms, especially collective and generic, form no plural or exhibit no change when used in a plural sense: kíko, *water, waters*. They then connect themselves with úto, *many, much*.

When *two* persons or things are spoken of, otíko, *two*, is added to the plural form in -ti or -ya, or its compounds, or to the singular form, if this does not assume any suffix, when used in the sense of plurality:

mússu, *female breast;* otígo mússu
hóngu, *egg;* otígo hónguti
hála, *feather;* otígo háluti
tchaláto, *star;* tchaltéya otígo

No distinct dual ending is traceable even in those parts of the animal body which exist in pairs, as eye, ear, nostril, and therefore this language possesses no dual.

A distinction between animate beings and inanimate things, or objects of the "noble" and "ignoble" class could not be traced in the various terminals for the plural, and in the declension for case both form the objective in -i.

The plural ending -ti, -uti, is derived from úte-i, úti, *many, much*, the plural form of úto,* and through a gradual agglutination lost the u- in the majority of cases, but retained it in ángotuti and a few other nouns ending in a consonant. When -ti is compounded with -ya it commonly stands after it: -yati, but there are instances also where it precedes the -ya: míwa,

*úto is also used as adverb: *much, very, intensely*.

Indian, pl. mi-utíya. From the fact that -ti is used in forming transitive verbal forms referring to plurality of the object, and from its constant use in adjectives we can infer that the nouns using it are of verbal origin also. Collective and generic terms show both -ti and -ya with equal frequency.

Inflection by case, or declension of the noun is perceptible in all the explored dialects of Mutsun, and Chúmĕto is very rich in cases, though some of them may be formed by postpositions only. Of the plural I am unable to give a full paradigm. The objective case comprehends the direct as well as the indirect object.

SING.	Subjective case:	tólle, *ground, earth, dirt*
	Objective case:	tólle-i
	Possessive case:	tóllûng, tólle^{n}, *of the earth*
	Superessive case:	tóllema, tóllem, *on the earth*
	Inessive case:	tóllemu, *in the earth*
	Locative case:	tólleto, tóllet, *in, on, upon the* [*earth*
	Instrumental case:	tólles, *by means of earth*
PLUR.	Subjective case:	tolléya, *grounds*
	Locative case:	tolléyat, *in, on, upon the grounds*

The locative case in -to, apocopated: -t, occurs in the following terms:

áyĕto haléyat, *on a flat in the mountains*, l. 1, (from áyi, *plain*, hála, *mountain*), útchut, *in the house;* húyut, *in the fire*, 13; wakálmatot, *in the river*, 6; hálhalto, *on a flower;* hoyĕ'nunt (used temporally), *tomorrow*.

A case in -mu, "above, upon," appears from líllemu, *on, in the hills*.

Another function of -ma appears from the following: káto huléta lámama, *the cat jumped down from the tree;* líllema, *at the mountain, behind the mountain;* túluma, *through a hole*.

The idea of property is expressed without a verb by the objective case, probably to be considered as an accusative:

púgsuma útui tólli, tólle-i, *the trader has many blankets;* or by a possessive pronoun:

otíko ohháhu, oyíssa eselĕtéhu, *he had two wives and four children*, lit., "two wives his, four children his."

Diminutive nouns are formed by the ending -tki, -tke:

ohhátke, *girl*, from óhha, *woman*
kä'latki, *flake of snow*, from kä'la, *snow*

This suffix also occurs in the adj. tchinnepítki, *small, little*.

Of *syllabic reduplication* used as a means of inflection no instance has occurred to me, but in the derivation of words it occurs not unfrequently: púshpushe *to stink;* páspas *kidney;* hálhal *flower;* wátwat *mallard duck*.

NOTES TO THE TEXT:

"MANNERS AND CUSTOMS OF THE CHUMTÉYA INDIANS."

Line 1. ŭ'dshŭ'pu, *they live*, from útchu, *to live, dwell, exist, stay;* Cf. udshúyu, 12, udshúpu, l. 13; as a substantive, útchu means *house, lodge;* útchut, l. 13, *in a house.*

1. aiyēto, *in a plain, flat;* locative case of áyi, pl. aíhia, which is substantive and adjective at the same time: vóksati áyito, *to walk in the field.*

1. maisei, *Indian corn, maize;* the final -i is the mark of the objective case, as in lá-ūtui 8, hassánui, from hássan *avlone* 9, káhui 11, húhhui 13, etc.

2. hunéma, *to fish*, from a radix hu-, u- forming derivatives of running, flying, etc., f. i.: ú, vú, *to go away, go, travel*; huléta (1) *to jump*, (2) *to fly* (birds); huáto, wáto, *to run*, 7, vúgsa, *to travel*.

2. ú-opo, ú-opu, *they feed upon*, from ú-a, *to eat*.

3. Iyok waká varaíko-oni stands for i-ok waká-i varaiko-oⁿ i, the idea of possession being here expressed by the objective case in -i, without the addition of a verb. vaká is the Spanish *vaca;* varaiko is also pronounced vuarégo, vŭréko, vurá'ko. For the wild sheep another term exists.

4. tuhúhhi, *black*. ends in -i, like all the other color adjectives, and forms its plural in -ti: tuhúhhiti. Adjectives connected with substantives are considered to form one word only; therefore, if one has the plural suffix, or a case suffix, the other need not necessarily have it also; thus we find hisok tuhúhhi instead of hisok (pl. of hiso, *hair*) tuhúhhiti; o-issa oyáni húhhui, l. 13, for o-issa-i oyáni-i húhhui; kénget útchu, l. 15, for kénget útchut; oyáni útchut, l. 14, for oyánit útchut.

5. húpētoho, *their neck*, from sing. húpētono, *neck*, pl. huptuyáno. Several terms for parts of the human and animal body end in -no, -nu, as hóměchuno, *beard*, tissóno, *hand, finger*, tapanáno, *calf of leg*, also in -na: hópuněna, *knee;* músuna, *nipple* (from mússu, *breast*), potolúna, *posteriors*, lotótna, *navel*, nonatúna, *mucus*.

7. esele, pl. eselete, *child* and *babe*, from eséle, esä'ra, *to bear, give birth to;* tchúko oyissa tchúkati esä'ra, *the bitch gave birth to four pups.*

8–10. Súku refers to painting in colors as well as to tattooing or painting by incisions, puncturing; sékē- in sēké-ahu must mean: *lines, marks*, for it contains the same base as súku. These Indians rub coal into the lines of tattooing, which after a while assumes a blue color.

9. hássan, hássěn, is the round, large avlone or haliotis shell, and the beads or ornaments made from the mother-of-pearl contained in it.

9. kŭ'msol, a species of *small shells;* is also pronounced húmsol.

11. awúha, *needle*, is from the Spanish aguja; pápasi, *potatoes*, 2, from Sp. papa.

11. páma, pame, *to smoke tobacco*, is a word borrowed from some Numa or Shoshoni tribe settled in the vicinity of the eastern division of the Mutsun. Pá-uma, pl. pamúya, *tobacco-pipe*, in Chúmĕto.

12–15. The contents of these lines refer to the Hethtoya tribe, visited on the Upper Chowchilla River by Manning in his early youth.

14. hammépu, from hámme (1) *to cover*, (2) *to bury*.
húyu kawenim; a word like *is, was*, or *being* is not here, because the language has no substantive verb.

15. vúgsa, a derivative of vú, *to go away, travel*. The same derivative suffix -gs, -ks, can be traced in hágsi, *smoke*, púgsúma, *trader, shopkeeper*, luákso, *to speak*.

15. lŭ'ppu, lúpu, *they speak*. Luágsēma, *I speak*, luáksēso, luaksasi, *thou speakest*, luákso, lĕwakso, *he orders*, luágsēmahi, *we speak*, lúako, *to speak*, luáko! *tell! say!* liwágso, *language*. From these forms it may be inferred that lúppu is an ellipsis, from luákpu or luágspu, *they speak;* contractions and elisions being very frequent in this dialect, as shown by a number of instances, especially in the formation of verbal and nominal plurals.

Although the wording of the text is substantially correct, it is open to criticism concerning the position of the words in the sentence. In historic and descriptive texts like these, the verb ought to stand at the end of the sentence, or should at least, if transitive, come after its object.

INDIAN RELICS AND ENCAMPMENTS IN MAINE.

BY CHARLES B. WILSON.

Just at the junction of the Sebasticook and Kennebec rivers is a long, low hill of clay and sand, which has figured largely in the early history of the state. Locally known as "Sand Hill," it has been the scene of many a conflict between the native races and the white intruder. Here stood the two redoubts of Fort Halifax, the largest fortress in Maine during the eighteenth century, while the fort proper stood on lower ground nearer the Sebasticook. These redoubts were erected by the Plymouth Company in 1756, but as early as 1654 Mr. Hammond, a Pilgrim trader, had erected here a block-house which served as a sort of advance post for his larger trading establishment on Arrowsic Island in the Kennebec 23 miles below. There was also another block-house on the opposite side of the Sebasticook, somewhere within the present village of Winslow. Hammond, however, was foolish enough to rob the Indians of their furs, and in consequence of this his trading house on Arrowsic was attacked and destroyed by the Indians, and he himself was murdered. This occurred in 1676, and history does not enlighten us as to what became of the two block-houses in Winslow. From this time for more than fifty years there was continual war, during which, in 1691, "Major Church ascended the Kennebec on his third expedition, and had a skirmish with the Indians, some of whom he drove to the woods, while others fled to *their* (*i. e.*, the Indians') fort at Ticonic," as the point was then called. Finding the Major in hot pursuit, they burned their huts and fled. Upon his arrival what was not already on fire was speedily committed to the flames, and among other things several cribs of corn. The evidence of this border warfare is abundant all around the point and along the banks of the two rivers. Nearly every opening where the soil is removed reveals numerous skeletons and human bones, attesting the heavy death rate of the early inhabitants, both white and Indian. These skeletons are almost universally single, never more than two or three in a place, and, though careful search has been made again and again, no relics have been found with them, save rarely a gun-flint, a single button or an arrow-head. Then, too, they are quite near the surface, and seem to indicate that the warrior, slain in some skirmish, had been stripped and scalped, and his body rolled into a shallow

hole scooped out of the sandy soil, and meagerly covere over with a few handfulls of earth.

Relics are by no means wanting, however, for this hill seems to have been a chosen camping-place, and domestic utensils are found all along its brow. Knives, chisels, gouges, axes, pestles, arrow and spear heads, have been obtained in large numbers, more particularly at the time of the construction of the Maine Central Railroad, which cuts through the hill at one point. I have myself obtained as many as 60 specimens from various points in the vicinity, and never go there even now without picking up something worth bringing home. Fragments of pottery are particularly abundant, and from their profusion it would seem that the Indians had thus early learned the value of a place noted to-day for the excellence of its brick-yards. Much of the pottery shows no sign of use, but seems rather to be the remains of vessels spoiled in baking.

Quite recently a more important discovery has been made on the edge of a sand pit at the extreme northern crest of the hill. There is at this place a surface layer of loam about one foot thick. Below this is a stratum of sand 20 feet thick, and then a layer of blue clay which has been bored to a depth of 60 feet without striking a ledge. In the stratum of sand and some three feet below the surface I had my attention arrested by an outcrop of loam which the rains of spring had left standing in bold relief. As soon as the frost would permit I commenced investigations, and upon digging into the bank I found that here had evidently been a circular hole dug down from the surface, about eight feet in diameter and three feet deep, which had afterward been filled in with the surface loam. This latter, however, seemed rather to have caved and been blown in, as it was more or less mingled with sand. Near the center of the hole were the remains of an old fire, consisting of ashes, cinders, and about half a bushel of charcoal. Imperfect stratification of these materials indicated that there had been successive fires on the same spot. Close to the fire was a small heap of human bones, five or six teeth, six vertebræ, and a part of a thigh bone, and one of the ear bones, all badly calcined. Over and around these were found several strings of copper beads, some on leathern thongs and others on hemp cords. These were formed by rolling sheet copper into tubes ranging from ¼ of an inch to 2½ inches in length, and from ⅛ to ⅓ of an inch in diameter. There were 400 of them in all.

Near these beads was a vessel of pottery entirely broken up, but as the pieces were lying together, I was enabled to

restore nearly half of it. It had a flaring brim 9 inches in diameter, and was globular below. It was also furnished with three stout legs nearly an inch in diameter and of the same height, and was ornamented all over the outside with impressions made with a square pointed instrument.

Scattered over the bottom of the opening were numerous flakes, and among them six arrow and spear heads, and two rough almond-shaped implements. These were grouped round a large stone which seemed to have served for a chipping stone.

At a little distance from the bones mentioned were found eleven teeth from the under-jaw, arranged in their natural position, but not a vestige of the jaw could be found, and as the teeth themselves were very badly calcined, so that they fell to pieces on being touched, it is probable that the jaw was destroyed in the same way.

Here, then, we have, presumably, the remains of one of the huts burned by Major Church in 1691, and some luckless Indian was either already dead within it or was caught in the conflagration, and so mingled his remains with those of his dwelling. It is well known that the Kennebec Indians were accustomed to dig down in the interior of their huts, thereby making them deeper and warmer, and getting a better floor. This "Ticonic" was a spot that touched the Indian at his most vital point—the stomach, for the salmon of the Kennebec and the herring of the Sebasticook were hard to beat, and to see the white man with his superior implements and reckless wastefulness usurping rights which had been held for centuries, was enough to stir the feeling of resentment in any human breast, and when supplemented by robbery it is no wonder that the unwary settler paid for his fish with his life.*

*The historical facts and dates are taken from North's "History of Augusta."

EDITORIAL.

IDOLS AND PORTRAITS.

Mr. E. S. Holden, of Washington, has given considerable study to the idols of Central America. He thinks he recognizes in some of them the Mexican rain-god, Tlaloc, also the sun-divinity, Quetzalcoatl, and the god of death, Huitzilopochtli. This last divinity we gave in the last number. Our readers will notice in it the serpent's heads and rattles below, and the serpent's fangs and forked tongue above, with the skull in the centre, the hands above the skull.

This whole statue contained a trinity, *i. e.*, the god of death, the god of war, and the god of hell. The attributes of these divinities are pictured in the symbols. Mr. Holden thinks he has found the Yucatec equivalent in a certain figure which was discovered about 90 miles from Copan, and which is described by Dr. Leemens.* We fail to see the resemblance, but will call attention to the peculiarities which may be recognized. I. The shape is that of the cross. II. Each have four hands. III. Both have serpents as symbols. (The serpent here is the symbol of death.) IV. Claws in the feet and near the hands. V. The masks with tusks. VI. A skull in the center.

We give with this number a cut of an idol of an unknown Maya Divinity. This idol was first described by Mr. Stephens in his "Travels in Yucatan." It has been referred to by other authors, Mr. H. H. Bancroft among the number. It has been represented in the first Report of the Ethnological Bureau, and is there made a study for the purpose of deciphering the hieroglyphic inscriptions. The portraits and symbols in this idol have been traced in the hieroglyphics on the side, and so the key to the latter is sought from it.

We, however, use the cut to illustrate the value of a wider comparison. We call attention, 1st, to the general study of symbols; 2d, to the comparison of faces of all idols and images; 3d, to the study of totems, and of the evidences of the totem system in the idols.

I. Mr. Holden has recognized at least one repetition of the idol given in the frontispiece (see cut on page 184). This would indicate that this also was a well-known divinity. He thinks that the symbols surrounding the faces are symbols representing the attributes of the divinity, and that the hieroglyphics on the sides of the standing stone contained the names

*See Stephens' Incidents of Travel, Vol. I., p. 151, Plates preceding. Congrès des Américanistes, Compte Rendu de la seconde session, de Luxembourg, Vol. II., p. [illegible] [illegible] Annual Report of the Ethnological Bureau, p. 228. See Frontispiece of Vol. V., No. [illegible]

and legend of the divinity, and that these have all been repeated in two separate places. It is probable that one of the gods of the Mayas may be recognized in these two different idols. In that case we should say that the idol presented with this number was to be contrasted with the idol given in the last number. What divinity is represented by it is unknown. Possibly this may be ascertained by a system of experimenting.

In the first place, the traditions and mythology of the Mayas may furnish a description of some divinity which will correspond to this portrait. It is a very mild divinity, and cannot be confounded with the god of war or death, or the rain-god or the sun-god. Mr. H. H. Bancroft has given the Maya traditions in his third volume.* In seeking for it we should look for a goddess. Sahagun speaks of a goddess who was a sister of the Tlalocs, or rain-gods, who had power over the water. Also the Aztec Venus is described by the same author and by Boturini. These are, to be sure, traditions of the Mexican goddesses rather than of the Mayas. But if there was a correspondence between the male divinities of the Mayas and Aztecs, there may also have been among the female.

In the second place the hieroglyphics may ultimately disclose the name of the god or goddess.

Third. The comparison of the symbols in these idols with the symbols in other idols may show what divinity is intended, or at least to what this divinity is most closely related. Both idols were found near the foot of the stair-case of the temple at Copan,† attended with altars a few feet away. We give a cut of the equivalent, and invite the comparisón between the symbols in each. The symbols most noticeable are: 1st. The solid ovals with the hatch work below the dress. These ovals resemble the serpents' heads in the God of Death,‡ Huitzilopochtli. 2d. The three faces resembling each other below the belt above the ovals. 3d. The earrings on the side of the face. 4th. The bracelets on the arms (*a*) a forked serpent's tongue for the right arm, and (*b*), an ornament on the left arm. 5th. The crosses with beads in the hands of each. 6th. The elliptic ornaments above each wrist. 7th. The serpent mask above the face. 8th. The crotalus jaw in the mask. 9th. The knot above the mask. 10th. The chiffres above the knot. 11th. The tiger's skull on the bead necklace below the face.

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*Native Races of the Pacific Coast, p. 368.
†See Stephens' Travels in Central America, Vol. I., p. 158.
‡See AMERICAN ANTIQUARIAN, Vol. V., No. 1.

I. Another point to which we desire to call attention is the ly of faces in the idols. We find faces inscribed on m-posts. These totem-posts, in a rude shape, existed

ng the Algonquins.* They existed in more elaborate pe among the Thlinkeets of the north-west coast.† Por-

*See the cut Vol V., No. 1. †See cut in *West Shore*, for May, 1882.

traits are also found in great numbers among the mounds. These are in the shape of nodules of iron or rude boulders and small stones, but no two of them are alike.* Portraits of human faces are also seen among the idols of Nicaragua. They are seen also on the idols of Copan, on the tablets and sculptured panels at Palenque, and in various shapes in Mexico. We furnish a cut here which illustrates the resemblance between the faces of particular divinities. It is a cut of the tablet at Palenque, just referred to, which is supposed to contain the face or portrait of two of the chief divinities known both to the Aztecs and the Yucatecs or Mayas, namely, the sun-god, Quetzalcoatl, and the god of rain, Tlaloc. We call attention to the striking resemblance found between the central figure of the tablet in the Adoratorio and the central face in the solstitial stone of Mexico. The face with the open mouth and protruding tongue will especially be recognized in both. This same face will be seen on the engraved or carved tomb in New Zealand (see cut page 189), showing that the sun-god was thus commonly represented. A striking resemblance can also be seen between the figures on the outside of the Adoratorio and those on the tablet inside. The god Tlaloc is seen standing on the outer panel, and in a bent attitude on the inner tablet. The repetition of this figure in some of the idols at Copan† shows also that the divinity was known and worshipped in both places, namely, at Copan and Palenque, so that we have two divinities which were common, namely, the sun-god, and the rain-god.

A third case of resemblances in faces can also be seen by comparing that on the left of the Adoratorio outside with that on the right of the tablet inside, and both these again with the face on the right of the tablet of the cross at Palenque.

These resemblances would suggest that still another Divinity might be identified. In reference to portraits generally, however, we would present the following enquiries:

1. Do the portraits give us any idea as to the people who made them? Do we find uniformity enough to show any ethnic features? The portrait of the female in the cut certainly differs from the retreating forehead of the figure in the tablet of the cross. Negro resemblances have also been discovered in other idols and images. Do these resemblances prove anything?

2. Do these portraits represent the attributes or traits of the divinities, so that we may recognize them in the idols?

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*See correspondence of Col. C. Whittlesey, AMERICAN ANTIQUARIAN, Vol. III., No. 4.

†See E. G. Squier's Nicaragua and Its People, Vol. I., pp. 302-318; Vol. II., pp. 23, 36, 54, 60, 58, 62, 63, 64.

3. Were these portraits personifications of nature powers, or elemental divinities, like the sun, or were they portraits of ancestors, or of historical personages?

4. Do they give us any clue to any historic or mythologic interpretation of the hieroglyphics?

III. We now come to the evidence of the totem system in the idols. In order to show this we would call attention to three peculiarities of the idols: First, to the presence of animal figures; second, to the three-storied arrangement of the faces, and third, to the presence of human semblances mingled with animal forms and nature symbols. If the progress

were from the animal worship up through nature worship to the anthropomorphic state, we should expect this.

1. The animal symbols.

We find the thunder-bird among all the tribes, from the Dakotas, the Algonquins, the Thlinkeets. We also find a bird* on the tablet of the cross, and elsewhere in Yucatan. The tiger (jaguar) the lion or (puma) also figure conspicuously as idols in New Mexico, Mexico, at Uxmal and in Nicaragua. The figure of the tiger covers the back and head of the idols described by Mr. E. G. Squier. While they form the throne for idols at Uxmal, in New Mexico they are by themselves, unaccompanied by idols.

2. The three-storied form of the idols is also very singular. The totem-posts of the Thlinkeets are three-storied; those of New Zealand seem to have been also the same.† The idols presented in the cuts have the same peculiarity. The position of these idols around a square show that they may have been also totems, although the proximity of altars to them show that sacrifices were also offered. The question arises, do they not give evidence of ancestral worship as much as of sun-worship or animal worship. It is easy to run one idea, *e. g.*, that of the solar symbol, to death, and exclude everything else. We suggest that the idols are significant of history, and that the different forms of religion,. ancestral worship, nature worship, animal worship, are shown by the idols. Personification was only one element, perhaps the last, and not the least, but still only one element in the mythology and religion of the native races.

3. The anthropomorphic semblances are especially worthy of attention. These are seen more abundantly at Copan than elsewhere. But this is what we should expect. Here the highest state of sculpture and art is found. Here the personification of the divinities reached its greatest perfection, and the nature symbols attained to the highest ideal state.

We leave the subject by saying that the study of hieroglyphics of idols—of symbols—of totems—of traditions and of portraits, should all go together.

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*See cut on page 189. For Tablet of the Cross see Stephens' Travels in Yucatan, Vol. II., page 344, also Annual Report of Ethnological Bureau. For Animal Idols see Nicaragua and Its People, Vol. I, 320, also Ancient America, by Baldwin, page 133. For Idol Faces among the Mounds see Short's North Americans of Antiquity, page 188. The fifth volume of Bancroft's Native Races contains representations of all three classes—Idol Faces, Animal Figures, and Tablets.

†See cut on page 189.

LINGUISTIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

COUNT H. DE CHARENCEY has just republished in one volume his former writings on the subject of the Central American languages: "Mélanges de Philologie et de Paléographie Américaines;" Paris, Leroux, 1883. 8vo., 197 pages. There is scarcely any known language spoken in Mexico and Guatemala which he does not discuss; we find even a vocabulary of Chiapanek left by Abbé Brasseur, and the dialects most exhaustively treated are those of the Maya stock. The volume contains articles on the following topics: On some languages of Mexico; of the Pirinda-Otomi stock; of the Tapijulapane-Mixe stock; of languages of New Spain; on phonetics, the personal pronoun and the numeral system of the Maya family; on the interpretation of a Maya prophecy attributed to Napuctum; on the decipherment of the Maya or calculiform characters. Another recent publication of the same author: "The Dog-Men," treats of an ethnographic subject; it gives an account of all the nations of the globe deriving their mythic origin from dogs and wolves, and also gives an abstract of the myths themselves. One of the American tribes falling under this category is that of the Dogrib Indians in British America.

THE CALIFORNIAN VOCABULARIES of Alexander S. Taylor have recently been republished by Mr. P. de Lucy-Fossarieu, one of the managers of the Ethnographic Institution at Paris (Paris, 1881, 55 pages, large 8vo.) It forms a portion of the "Stenographic Report of the International Ethnographic Congress," held in Paris July 15–17, 1878, and is, for the largest part, a republication of the vocabularies published in the *California Farmer* during the years 1860–1863, at San Francisco. Alex. S. Taylor was a great enthusiast concerning ethnologic research among the decimated Californian aborigines, but his education was not quite on a level with his good intentions, and therefore his statements must be received with the utmost circumspection. He died about 1878, at La Patera, near Santa Barbara, Cal., and his writings on these Indians now command a high price on account of their scarcity. Mr. de Lucy-Fossarieu has premised to his publication an ethnographic sketch on these tribes, which is very readable, but forgets to mention the great merits of Mr. Stephen Powers concerning the investigation of the same natives. Moreover he does not classify the twenty-two vocabularies into lin-

guistic families, and includes among the Californians the tribe of Tutatamys, who are *Oregonians*, and belong, like the Húpa, to the Tinné stock.

BLACKFOOT LANGUAGE.—The Blackfoot Indians of Montana speak an Algonkin language, of which only very scanty materials had been published heretofore. The sketch given of that dialect in Prof. F. V. Hayden's *Missouri Tribes* (Phila., 1862), states three tenses in the verb, while C. M. Lanning, in his recent "Grammar and Vocabulary of the Blackfoot Language" (Fort Benton, Montana, 1882, 16mo.), gives a conjugation containing five tenses. That little publication contains a great deal of new material, many proper names of tribes and localities, as well as conversational sentences. It would be still more useful if in a prospective second edition a scientific alphabet was used, the words not syllabicated, and the vocabulary put in alphabetic order.

A FULL DICTIONARY of local etymology would be a very desirable manual for geographers and historians, but considering the uncounted millions of local names, past and present, to be found on our planet, an enterprise of this kind is simply an impossibility, to say nothing of the great difficulty presented by the analysis of certain names. But nobody ever brought together a larger array of interpretations of local names than Dr. J. J. EGLI, in his "*Etymologisch-Geographischen Lexikon*," of which the lexical portion was republished in 1880 (Leipzig, Fr. Brandstetter, 8vo.; 644 pages). This work contains not less than 17,000 local names from all parts of the world, and the following may give a faint idea of the high value of the collection: Leipzig, "linden-forest," from the sorbic *lipa*, linden-tree; Uz, east of Palestine, "rich in trees;" Utica, a Tyrian colony, "stopping-place, inn," same as Atak, in the tribe of Juda; Carthage, "new city, Newtown"; Magalia, a portion of Carthage, "the rounded one"; Spain, "rabbit country," a Phœnician term; Alcantara, "bridge," from the Arabian; Malaga, "fish-drying, fish-curing place," like Tarichaea on Lake Gennezareth, Palestine. Daulis, near Delphi, Greece, "scrubby, overgrown with bushes"; Memphis, "dwelling of Phtah"; Pelusium, and its Egyptian name Feromi, "muddy place, morass-town"; Thebae, in Greece, "hill, hills"; Karpathen, "ridge of mountains"; Pernambuco, "lagoon within the bar," from the Tupi *paraná*, river, *mbûk*, branch; Perú, from a small brook on the Peruvian coast, called Pirú, Birú; Athapasca, "muddy lowlands," explained by others "place of dry grass, hay"; Tlascala, "country of abundance." The general title of Egli's work is "Nomina Geo-

graphica." The first portion, which is also sold separately, contains a systematic account of the formation and distribution of local names.

THE THREE BOOKS ON MUSIC written in Greek by ARISTIDES QUINTILIANUS have been re-edited for the first time since 1652 by Dr. Albert Jahn, Secretary of the Interior Department at Berne, Switzerland, in an octavo, illustrated by numerous musical diagrams (Berlin, Calvary & Co., 1882, 72 and 97 pages), after a careful collation of manuscripts not used heretofore. Aristides lived after Cicero, whose writings are mentioned by him; but the exact dates of his life remain unknown.

ETHNOLOGIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

A. BASTIAN'S OCEANIC RESEARCHES.—A profusion of ethnologic material, for the larger part entirely new, and describing the manners, customs and religions of several *Polynesian tribes*, is presented in a new German publication by Dr. Adolf Bastian: *Island Groups in Oceania*. Field sketches and results of travel. Illustrated. Berlin, 1883. 8vo., 282 pages. Dr. Bastian, director of the ethnographic section of the Royal Museum in Berlin, has repeatedly visited these parts, and is now busy in giving to the world the summary as well as the details of his explorations, all of which he illustrates by giving a large number of parallels from all nations and historic periods accessible. The volume before us is preeminently mythological, but since mythogeny and legendary tradition cannot be treated and understood without ethnography, the ethnography and psychology of the tribes form the basis of the publication. In the polity of ruder nations the sociologic factor of the family is more potent and prominent than among civilized nations, but even this factor is limited in its influence among the so-called exogamous tribes, which in Australia, at least, seem more numerous than the endogamous ones, and has an effect upon the social standing of the offspring. In the social organization of these tribes the physical inferiority of the female sex is also a strongly expressed feature, and the book gives numerous illustrations of this influence, which manifests itself, f. i., in the customs connected with menstruation. Bastian's publication subdivides itself into the following chapters: Tahiti and vicinity; Tonga; Samoa; Fiji, etc.; Australia; New Zealand; Hawaii. On the same and related subjects Dr. Bastian has lately issued a series of other publications, of which we mention: Vorge-

schichte der Ethnologie, 1881. Der Völkergedanke im Aufbau einer Wissenschaft vom Menschen, 1881. Die heilige Sage der Polynesier, Kosmogonie and Theogonie, 1881. Der Buddhismus in seiner Psychologie, 1882. Völkerstämme am Brahmaputra und Nachbarn, 1883.

THE AUSLAND, published in Stuttgart, Germany, has just entered upon its fifty-sixth year, and still keeps up its solid reputation for thoroughness in ethnography, geography, statistics, political economy and cognate sciences. The editors have at their command a select corps of correspondents in all parts of the world, and a number of the best specialists living in Europe. The publishers have always placed this popular review in charge of ethnologists of note, like Bacmeister, Peschel, Hellwald, the present incumbent being Dr. Fr. Ratzel. Among the recent articles of general interest which have appeared since Jan. 1, 1883, we mention the following: Germany's colonial policy. Migrations of the Batta (Sumátra). Fate of the Crévaux Expedition. Ethnography of the Ba'ntu. Travels of Pogge-Wissmann through the Congo basin. The footprints of Carson, Nevada. Six months in Oran. Literature of the Neapolitan dialect. On polar explorations. Variations of the sea level. Prussian colonization in Costa Rica. On Panslavism, etc.

ARCHÆOLOGIC NOTES.

IN THE PARIS JOURNAL *Le Temps* of 25 and 26 October, 1882, M. F. Delaunay gives a brief account of the newly-discovered Gallo-Roman ruins near the village of Sanxay, in the Gatinais, on the borders of the Departments Deux-Sevres and Vienne, on the banks of the little river Vonne. The principal remains consist of the basement of an extensive temple, of considerable baths, of lodging houses, and of an amphitheatre. The dimensions of these buildings show that they were intended to accommodate a large population. The temple is remarkable for its cruciform ground plan; it was surrounded by colonnades and vestibules supported by large columns. The inscriptions found are unhappily restricted to a few letters, and the cut stone was utilized for burning lime at a very early date. The architecture is mixed, marking two epochs, in the latter of which the building was considerably enlarged. The baths, which lie between the temple and the river, occupy an area of 114 mêtres by 62, and present like marks of twofold construction; an earlier one, and one of enlargement. The piscines, of which the largest measures 26 mêtres by 4.80, were heated from below, and are constructed in groups of

three, holding water of different temperatures; a hall for dances and other rooms were attached, while along the river front ran a large common hall. The lodging houses to the south of the temple, occupied an area of six hectares, and would shelter about 1,500 persons. The circus stands on the other side of the river, and is mostly cut out of the solid rock of the hill-side, but with the ends of the half-circle completed by masonry. The acoustic properties are admirable, and the voice can be distinctly heard from the stage to the farthest seats.

The artistic objects hitherto found are neither of great merit nor of great intrinsic value. The chief are: two intaglios in agate, representing, the one, Minerva, holding a winged Victory; the other, a woman wearing a "*petasus;*" a hare in bronze; a seated statuette of a god, with Phrygian cap; a series of Gallic coins, and of Roman ones, from Augustus to Constantine, with vases and pottery. But there is nothing to give a "*raison d'être*" for the presence of temple, baths, and circus, so far from any large town, and on a spot unmentioned in the Itineraries, or by any classical or post-classical author. The destruction must date from the early barbaric invasions of the fourth or fifth centuries. The problems suggested will doubtless give employment to French archæologists for some time, ere they are finally solved.

THE LAST "Bulletin de la Société de Borda de Dax" gives a brief account of the partial opening of a rather remarkable terraced tumulus in a plateau called Jouarbe (*Iovis arva?*) in the Commune of Ste. Colombe, near Hagetman, in the Landes. The tumulus consists of three elevations, surmounted by terrace paths; the first is 9 metres high, the second 4½, and the third 3½. A trench has been cut through the two higher terraces; but the remains found consist only of pottery, flint and charcoal. It is proposed to make a more thorough examination next spring.

THE REMAINS of what appear to have been a considerable Roman station, or city, have lately been discovered in the solitary plains of Arronez, near Dicastello, in south-western Navarre. A quantity of Roman pottery has been found, but all broken; some instruments of iron and bronze; bones and horn, with a few Roman and other coins; but the most important find is that of a fine Mosaic with figures and landscape, which has been only partially uncovered. The nearest Roman station mentioned by Hübner, Corpus Inscrip., vol. II., is some distance off, and separated from that of Arronez by the lofty mountains of the Amazcoas.

WENTWORTH WEBSTER.

NOTES AND QUERIES.

RUMORS of finds have come to us at various times, which we mention with the suggestion that they be followed up and confirmed. A find of pottery at Charlestown, Mo., consisting of a statuette of a woman in kneeling attitude, and a bowl made to represent a large frog. A large number of pits, five feet deep, forty feet across, with ring around them, formed by the dirt being thrown out, the bottom having a level floor of baked clay, and containing relics. The locality, Great Miami River. Continuous lines of pavements, or rows of burned stone, forty or fifty yards long, on the banks of the Ohio River, twenty inches to five feet, below the top of the bank. The same pavements, called macadamized roads, have been noticed on the banks of the Allegheny River. These are probably the fire-beds. Has any one any evidence to the contrary? A prehistoric canal, connecting two rivers in Illinois; also, several pieces of masonry, exposed in a sand-bank after a storm, and covered up again.

THE last number of the *Antiquary* (England) has an interesting article by Llewellyn Jewitt, F. S. A., on the mace. One mace figured in it resembles a Mound Builder's in shape, but belongs to the time of Henry III, and was a Bishop's mace.

The same number contains a second article by Barclay V. Head, on Greek coins, with several cuts, and also a notice of a work on Ancient Lake-Dwellings in Scotland, and an article on Ulster superstitions.

We glean the following from the notes of this journal, acknowledging our repeated indebtedness to the same source:

In the pile-dwellings of Robenhausen a hatchet made of pure copper has been discovered.

A collection of coins and other curiosities from Babylon, belonging to the time of Alexander the Great, has been recently placed in the British Museum.

The Yorkshire (England) Philosophical Society has received a collection of Celtic antiquities, consisting of 355 stone implements and about 100 articles of bronze and iron. Among them are a bronze trumpet thirty-two inches long, and two cauldrons of hammered bronze eighteen inches high, diameter, thirteen inches, and a number of swords and celts.

London, like other Old-Country cities, is a city on a city; at present, the highest stratum of several cities.

A British stone axe, perforated, has been recently found at Norton, in the clay.

THE *Popular Science Monthly*, for February, 1883, has an interesting article on a prehistoric cemetery at Madisonville, Ohio, by Jos. F. James. Illustrated.

THE Kansas City *Review*, for January-February, has the following articles of archæological interest: The Stone Graves at Brentwood, Tenn., by Prof. F. W. Putnam; The Ancient Cemetery at Madisonville, and its Peculiar Ash-Pits; and The Stone Age in Oregon. According to the last article, there have been found in Oregon mortars and pestles made from granite, net sinkers, balls, and shuttle-shaped stones. A curiosity is mentioned, also, which, if genuine, is of considerable interest. A bowl, carved with a human face which bears strong Assyrian resemblances, wide, curving eyebrows, low brow, Grecian nose, a protuberance behind and above the ear, like the fold in the Egyptian statues; chin and lower jaw broad; mouth alone resembling Indian, and whole head, about life-size, carved with skill, and material reddish-gray granite. A claw-like arm extends from the edge of the bowl to the side of the throat, the claws being nearly under the chin.

SOME REMARKABLE RELICS FOUND IN NEW MEXICO.—The statues of two mountain lions, carved from a volcanic rock, in situ, forms the cap of the summit of the great mountain, Potrero de Las Vacas. The images are inclosed in a rude and almost circular stone wall, in a space fifty feet in circumference, three feet in height, with an entrance projected eighteen feet toward the southeast, three feet wide. The lions face directly toward the east, are separated by a space of twelve inches, and are each six feet in length, and represent a puma, or mountain lion, in the act of crouching for a spring. The heads of these statues are almost wholly destroyed, showing plainly the marks of the pious hammer that sought their overthrow. The

legs, body, and tails of the animals are better preserved, and constitute the remains of the most remarkable stone images set up for pagan worship in the territory of the United States. To these gods the Cochita Indians of the present day pay worship.

A POT has been found at the Silver Mountain, at Wollin, Germany, containing silver coins of the tenth and eleventh centuries, as follows: Coins belonging to Cologne, Utrecht, Worms, Regensburg, Bohemia, Hungary (Stephen I), England (Ethelred II, and Canute the Great), and many other German cities. The pot and contents have been placed in the Markische Museum, at Berlin. From "Fortschritt Der Zeit."

ANTIQUE COIN SYMBOLS.– Three old coins obtained at Pæstum, in 1860, are described by Dr. J. P. Lundy, in the last report of the Numismatic and Antiquarian Society of Philadelphia. The first is of Sybarite origin, belongs to 600 B. C., contains on the obverse a nude figure, probably Venus; reverse, serpent circled around the edge, enclosing a dolphin and his rider. Second, a coin, copper, 800 B. C., obverse, dolphin among rocks; legend *Æquina*, in old Greek, on the reverse. The third is a rude, thick copper coin. It bears the device of an ass-headed man, probably Midas of Phrygia. It marks a transition between the animal and the purely human devices. This man-ass or Mammon-worship has been traced back to India. The same report speaks of a couple of ring-marked granite boulders, at Humewood Castle, Ireland, and of ancient Chinese coins in the cairns of Vancouver's Island, British Columbia, which have been pronounced to be very ancient—2,000 years old.

PROF. CHAS. RAU is collecting material for an elaborate work on Prehistoric Fishing in Europe and North America.

PROFESSOR PALMER, the noted traveller north of the Desert of the Exodus, was killed by the Bedouins in the very desert about which he has written so much. This is one of the results of the Egyptian war. Prof. Palmer was a young man of great promise. His death is to be deplored.

KORAH, DATHAN, AND ABIRAM.—An interesting item from the study of "Hours with the Bible," which the students of American ethnology will appreciate: The tribal state involved a priest for every clan, as well as a chief and a tribal council-house. These three branches of government, religious, military and civil, when the Jews became a nation, were taken from the tribes and clans, the religious given to the Levites, the military to the Benjaminites, and the civil to Judah. The revolt against Moses was that of the tribal priests, who were determined to bring back the old system, and who assumed the right of offering sacrifice. It was destructive of the new government, revolt and treason, and was suddenly punished. The Mosaic origin of the Pentateuch may be inferred from the intrinsic evidence given by this allusion to primitive society.

DISCOVERIES IN ASSYRIA.—The discoveries of M. de Sarzec, in southern Babylonia, are very interesting. Statues, bas-reliefs, and tablets of stone or clay, bearing inscriptions in the pre-Semitic language. Oppert thinks that they prove an intercourse between Chaldea and Egypt, and from them something may be learned as to the affinity of Akkado-Sumerians. They certainly add to our knowledge of the art and language of that early time.

ARCHÆOLOGICAL FRAUDS.—1. An idol, four feet long, carved from slate, discovered in Cedar county, Missouri, in the shape of a lizard, beak of an eagle, horn of a rhinoceros, and other nondescript shapes. 2. A collection of relics from Haywood county, North Carolina, one-half in pottery, the bulk in steatite and soapstone. Human figures, clothed in a close-fitting, well-made garment, some seated in arm-chairs, some riding nondescript animals, figures resembling bears and bisons, two-humped camels, hippopotamuses, rhinoceros, household utensils, cups, mugs, basins and dishes, pipes, numerous and elegant in shape, carved pieces representing children at play, incidents of the chase, sculptured images. These relics are in the hands of M. S. Valentine, by whom they have been put on exhibition before the Anthropological Society of London. Dr. John Evans recognizes the traces of European influence and metal tools on them. Prof. M. C. Read considers them to be the work of soldiers in the army during the war of the Rebellion.

A VERY REMARKABLE CARVING on a nodule of iron ore has been discovered in Hancock county, Ohio, representing a turbaned head, with a face resembling an Irish face, as much as anything. Mr. William Taylor, of Findlay, O., has it in his possession.

MR. W. P. CLARK, of Milton, Wis., has a most remarkable skull which he took out from a mound near Lake Koshkonong. It resembles the pictures sometimes seen of Darwin's ape-man, very closely; protruding eyebrows, retreating forehead, thick sutures—everything about it animal-like.

PROF. WHITFORD, Milton College, has visited the Zunis. He asserts that the Zunis worship the water. The water-spider is their great divinity.

THE 150TH ANNIVERSARY of the settlement of Georgia was observed the 12th and 13th of February. The Savannah *News* of those dates contains full accounts and many reminiscences.

AN HISTORICAL SOCIETY has been organized in Ottawa, Ont., Feb. 26th. J. T. Bulmer, Esq., of Nova Scotia, was present. A large number of distinguished citizens of Ottawa joined the association.

HISTORICAL SOCIETIES.—We take from the address of Marshall P. Wilder, Pres. of N. E. Genealogical Society, the following items: Massachusetts Historical Society was formed in 1790; New York in 1804; American Antiquarian Society in 1812; Maine and Rhode Island, 1822; New Hampshire, 1823; Conn. and Penn., 1825; Mich., 1828; Virginia, 1832; Vt. and Ky., 1838; Ga., 1839; Md., 1843; N. J., 1845; N. E. Hist'l and Genea'l, 1845; since then, Ala., S. C., Wis., Iowa, Minn., and Kansas, in the above order.

THE Proceedings of the Society of Biblical Archæology for February, 1883, is at hand, and contains the following items: A paper on Babylonian tablets relating to householding, by Theo. G. Pinches, also upon the name Ben Hadad. There are some points of interest in the last, as will be seen from the following: The God Rimmon was known by about forty-one different names or words. He was the air-god of the Akkadians, the thunder-god of the Syrians and Assyrians. In the Akkadian his name was Mer—wind, and it was written in the cuneiform in the form of a cross—Mer-Mer—repeated four times and crosswise. Another interesting fact is brought out by Mr. Bertin. The orientation of the Assyrians was not according to the points of the compass, as with the Egyptians, but their square turned from the north to the west—the north side being cornerwise, or, in fact, north-west, and the other sides corresponding—that is, the points of the Assyrian square were north and south, and not the sides.

Mr. Samuel Birch, the President, also referred to the early Egyptian notion that a spirit corresponding to the spirit of the dead, was supposed to reside in the statues which were deposited in the sepulchres, especially those of the IV. and V. Dynasty.

MR. J. O. DORSEY has returned from an exploring tour to Indian Territory. He states that he has found among the Osages a secret order of seven degrees, each gens, or clan, having a special ritual. The degrees are full of symbolism. Parts of the chart are tattooed on the necks and breasts of the male members. The tree of life, the river with its branches, and the dove, occupy important places.

NOTES FROM ORIENTAL PERIODICALS.

BY PROF. JOHN AVERY.

[The following are the principal foreign publications from which our Notes will be drawn: *Indian Antiquary* (Bombay); *Calcutta Review; Selections from Calcutta Review* (reprint); *Journal of the Anthropological Institute* (London); *Journal Asiatique; Indian Evangelical Review* (Calcutta); *Pandit* (Benares); *Journal of the Royal Asiatic Society* (London); *Journals of the Asiatic Societies* of Bengal, Bombay, Ceylon, the Straits, and North China; Kuhn's Zeitschrift, &c.; Bezzenberger's Beiträge, &c.; *Journal of the German Oriental Society.*]

The Indian Antiquary.

OCTOBER.—This part is filled chiefly with miscellaneous book notices and extracts from foreign periodicals. The principal articles are: A transcription and translation of an inscription found at Siddâpur, which bears date A. D. 1157, and records a grant made by surrounding villages for temple uses, by K. B. Pâthak; the 17th of Mr. Howorth's papers on Chinghiz Khan and his Ancestors; Folklore from Kashmîr, by Mrs. Steel.

NOVEMBER.—Dr. Bühler opens with the fac simile of a grant made by the Valabhî king Sîlâditya, dated *Samavat* 352. This inscription is important on account of the variety of alphabetic characters which it contains. Some of the letters have the stiff, antiquated forms used on monuments, while others have the more cursive shapes found in literary productions of the period 400–600 A. D. This goes to show that in early times a variety of alphabets were in use at the same time among the different orders of the population, a fact which increases the difficulty of determining the date of a composition from the alphabetic characters used. Dr. E. H. Hultzsch, of Vienna, offers some criticisms on Gen. Cunningham's method of publishing Sanscrit inscriptions, and shows by an examination of two transcripts how difficult it is for the most experienced copyist to avoid errors, especially if he has not first mastered the sense of the writing; hence the importance of accompanying copies with photographs of the original. Dr. G. Thibaut, Principal of Benares College, reviews Gen. Cunningham's new method of fixing the initial year of the Gupta era. This method is founded on four copperplate inscriptions, each of which is dated according to the year of the Gupta era and the corresponding year of the twelve-year revolution of Jupiter. By a course of reasoning which we have not space to repeat here, Gen. Cunningham reaches the conclusion that the Gupta era began A. D. 167. Dr. Thibaut shows that the validity of this conclusion depends upon the assumption that the accurate knowledge of the movements of the planet Jupiter possessed by modern Hindu astronomers must have existed as early as the beginning of the Christian era. But that this assumption is groundless he gives good reasons for believing; and asserts that the later and more correct views of astronomy, which were partly derived from the Greeks, could not have generally prevailed in India before A. D. 400. The correct determination of the initial point of the many eras which are or have been current in India is of the utmost consequence in making use of the monumental and copperplate inscriptions, upon which we must chiefly rely in restoring the history of mediæval India.

Selections from the Calcutta Review (reprint).

The following are titles of articles in Nos. 21 and 22: Eastern Monarchism, a review of Spence Hardy's well-known work, by Dr. Duff and a friend; Bengali Festivals and Holidays, by Rev. Lal Behari Day; Bengali Poetry, by Babu H. C. Dutt; The Himalaya in Kumaon and Gurhmal, by Sir J. Strachey; Ancient Indian Ballads, by Babu G. C. Dutt; The Burmese War, by Sir Henry Durand; Calcutta in the Olden Time, by Rev. J. Long. The Rise, Principles and Tendencies of Buddhism, by Rev. E. Sturrow. These papers, though written thirty years ago, are all of present interest and value.

The Indian Evangelical Review.

The editor, Rev. K. S. Macdonald, continues a series of articles under the title: "Patna, Gaya and Benares—Buddhism, Hinduism and Christianity." They are the result of a recent visit to these celebrated places, and contain a description of the objects of antiquarian interest to be seen there, together with a sketch of the historic facts which have made them famous. The present paper is devoted to Gaya, which, or its neighborhood, is regarded by Hindus and Buddhists alike, though for different reasons, as one of the holiest spots on earth. It is a town of about 67,000 inhabitants, and is situated in the province of Behar, 57 miles south of Patna. The town is sometimes called Brahma-Gaya, to distinguish it from the place soon to be mentioned. This is the headquarters of Hindu ancestor-worship, and here are sold the little rice-balls called *pindas*, which are offered to the ghosts of deceased friends, one each day, for ten days after death, and which are supposed to assist in the growth of a sort of spiritual body for the dead. Until it is invested with this, the spirit hovers around its late abode in an uneasy or malignant mood. This custom of offering cakes to the dead is thought to have been handed down from the earliest Aryan period, and to have been carried into Europe by immigrants, where it still survives in some rural districts of England in the custom of presenting soul-cakes on the Feast of All-Souls, when children go about singing:—

Soul! Soul! for a soul-cake;
Pray, good mistress, for a soul-cake,
One for Peter, two for Paul,
Three for them who made us all.

The most sacred spot in Brahma-Gaya is the temple of Vishnupad, or foot-print of Vishnu, which is visited by not less than 100,000 pilgrims yearly.

About six miles south of this town is Buddha-Gaya, which is the Mecca of Buddhists, for it is the spot where the sage spent six years in penance and meditation on a way to escape the evils of existence. Here he received illumination, and hence he went forth to preach the glad tidings to his countrymen. How long Gaya remained in the hands of the Buddhists cannot be certainly known. The superposition of three layers of ruins indicate that they as many times rebuilt after their structures had been destroyed. When the Chinese Pilgrim, Fa Hian, visited the place in A. D. 404, it was in desolation, and when Hiouen Thsang saw it in A. D. 637, it was occupied by a Hindu village.

Journal Royal Asiatic Society.

Vol. XV., Part I. This issue contains three articles, the first of which, filling about three-fourths of the Part, is a continuation of Sir E. Cline Bayley's researches on the genealogy of modern numerals. In his first paper he pointed out the ancient Indian system of numerical signs, and in the present one he proceeds to show how the ancient system was simplified into that now used by the Hindus and the civilized world generally, which consists of nine units and a zero. The old Indian system consisted of twenty signs, each of which had a fixed value, without reference to other figures to which it might be joined. Thus the character for 15 would have the same value whether placed before or after the sign for 17. The new system was based on the discovery of the value of position, by which a few signs could be made to represent any number, however large, and by the subsequent invention of the zero. The author attempts to prove that these two discoveries, which were at least a century apart, must be credited to the Hindus, at least so far as the earliest practical use of them is concerned. The date when the value of position was first known in India cannot be precisely ascertained, but there is evidence that the principle was applied as early as the beginning of the 6th century A. D., though for official purposes the old system did not go out of use until near the middle of the 7th century. The earliest example of the use of the zero is in a grant dated 738 A. D. The Arabs became acquainted with the Indian system of notation in 773 A. D., through a book presented by the envoy of an Indian king to the Khalif Al Mansur. Its superiority to the Greek systems hitherto employed by them was at once recognized. In the concluding part of his paper the author proposes to trace the spread of these numerical signs westward, and their adoption by the Greeks and Romans.

The second paper, by Mr. Edward Thomas, is on Parthian and Indo-Sassanian Coins, which will interest those familiar with such matters. The last paper is on the early historical relations between Phrygia and Cappadocia, by W. M. Ramsay, Esq., and embodies the observations made by him in a journey from Smyrna by the Hermus valley to Sivas, in 1881. Asia Minor is chiefly a vast plateau 3,500 feet high, between which and the Ægean communication is almost forbidden, except at one or two points, by ranges of steep mountains. The easiest route is up the Mæander and Lycus valleys, into southern Phrygia. This was the route followed by Xerxes, after him by Cyrus the younger, and later still by the Romans. It is, however, a singular fact, and one that has puzzled students of history, that in the earliest times the great commercial road between the East and the Ægean was by the longer and more difficult way up the Hermus valley and through northern Phrygia and Cappadocia. Here was located the Royal Road from Susa to Ephesus. Mr. Ramsay's journey has suggested to him an explanation. The extensive ruins of cities and the numerous monuments indicating high civilization scattered along this route show that here, rather than in southern Asia Minor, was in remote times the center of population and power. Pteria, whose ruins are still seen in northern Cappadocia, and Sardis, were then great cities and commercial centers. When the power which had made these cities important decayed, the northern trade-route was abandoned for the easier one to the south. This course of events shows why the earliest Phrygian legends are connected with northern Phrygia and the Sangarius valley. The writer also gives some account of interesting rock-sculptures found in Pteria. Female figures seem to greatly preponderate in these remains, indicating the assiduous worship of the goddess Cybele. Some ancient

Phrygian inscriptions were also copied by him, of which fac similes are given. The letters are very ancient forms of the Greek alphabet, and furnish an interesting study for scholars. The author thinks that the Phrygians obtained them from the Cappadocians, who learned them from the Greeks of Sinope, who in turn brought them from the parent city Miletus; we have thus on these sculptures the Greek alphabet in the shape that it existed at Miletus in the eighth century B. C.

BOOK REVIEWS.

The Theories of Darwin, and Their Relations to Religion and Morality. By Rudolf Schmid. Translated from the German by G. A. Zimmerman. Ph. D., with an introduction by the Duke of Argyle. Jansen, McClurg, & Co., 1883.

This is one of the best statements of the Darwinian doctrine extant. It analyzes not only Darwin's books, but many of the works which have appeared in Germany, England, and America, advocating the Darwinian theory. It is well known that the doctrine of evolution has been eagerly embraced by the German scholars, and by some of them carried to great lengths. It is the opinion of Mr. Schmid that these extreme views are no longer tenable, especially those of Haeckel; but some of the positions of evolutionists are consistent with the doctrines of Revelation. The object of the work is to show this harmony, but it is also valuable as a complete digest of the different views which have been held in Germany concerning the doctrines of descent. The present state of the Darwinian theory is described clearly, and the opinions which some of its advocates hold concerning all matters are reviewed. The philosophical and metaphysical supplements to the Darwinian theory have, the most of them, risen in Germany. Hence a book written by a German must be regarded as somewhat authoritative. The charge of atheism is also reviewed by the author. This he lays not so much upon Darwin as upon some of his disciples. The agnosticism of Herbert Spencer is also considered. The book will be welcomed by all fair-minded scholars, both for the information which it contains, and for its candid and fair treatment of subjects which have been matters of conflict, and on which there are still differences of opinion. The publishers have presented it in good shape, with clear type and good paper, and it is hoped that the book will have a ready sale.

Studies in Science and Religion. By G. Frederick Wright, author of Logic of Christian Evidences. Andover: Warren F. Draper, 1882.

This book would be better without the first chapter. Metaphysics do not belong to a work on natural science. The consideration of Darwinism, which occupies the main part, is more relative to the subject, and worthy of study. The last chapter is an essay on prehistoric man. There is little unity in the volume, but a collection of essays written for a periodical, and put into a bound volume, could not be expected to have much unity. Our readers will be interested in the last essay, as it is a good *resumé* of the recent discoveries on palæolithic man. It contains brief records of all the discoveries made by Prof. Whitney in the auriferous gravels of California, and by Dr. Abbott in the terminal moraines at Trenton, and a fair description of the great moraines, which have been shown to extend from the Atlantic coast through the Mississippi Valley. If this essay could have been published by itself, with additions on the geological evidences of man in this country, it would have been very valuable as an archæological work.

Documents Relating to the Colonial History of the State of New Jersey. Edited by Wm. A. Whitehead. Vol. VI. Administration of Governor Lewis Morris, etc.

The Province of Nova Cæsarea, or New Jersey, has a history preceding that of the State. The documents concerning that part of the history embraced between the years 1738–1747, have been published in this volume. These documents relate, among other things, to the fixing of the boundary lines between New York and New Jersey. The volume also contains a brief vindication of the purchasers against the proprietors, in a Christian manner, which illustrates the religious sentiment of the day. As one of a series, the volume is valuable for

reference, and will furnish the material for history which cannot be destroyed, as the number of copies must secure the preservation of these papers, as no single library, however protected, could do.

Frontier and Army Sketches. By James W. Steele. Chicago, Jansen, McClurg & Co., 1883.

These stories are somewhat sensational. There is the usual army view of the Indian. The description of Pueblo life is good, and the book is interesting and entertaining, and is nicely gotten up. Price, $1.50.

Pioneers of the Western Reserve. By Harry Rice. Lee & Shepard, Boston, 1883.

We are glad that a sensible history of the Pioneers of the Western Reserve has been written. A few years ago the Williams Brothers, now of Cleveland, went through this section preparing county histories. They put in a picture of every man's farm, and of his face, if they could get pay, and then mixed a few sketches of pioneer life with this batch of stuff, and called the whole pioneer history. Mr. Rice has, on the other hand, taken the pioneer history and written it with care, and the publishers have given it to the public in good shape. The book is worth all that is charged for it, and should meet with a ready sale.

Whence, What, and Where? By James R. Nichols, A. M., M. D. Third edition. A. Williams & Co., Boston, 1883. Price, $1.00.

This book contains a great many interesting and curious facts. The creation of man from the dust of the earth is considered scientifically. The endowment of man with a supernatural gift, the mind, the possession of a spirit which assimilates itself to the body, and the existence of man after death, are all considered in a fresh and novel light.

Schelling's Transcendental Idealism. A Critical Exposition, by Jno. Watson, LL.D., F. R. S. C. Chicago: S. C. Griggs & Co., 1883.

This is a resumé of Schelling's Philosophy. The distinctive points are clearly stated. The volume is one of a series for which the public will be undoubtedly thankful. Griggs & Co. deserve great credit for undertaking this work.

The Religions of the Ancient World, including Egypt, Assyria, Babylonia and Persia. By George Rawlinson, M. A. Chas. Scribner's Sons, New York, 1883. Price, $1.00.

Prof. Rawlinson is a voluminous writer. His work on the Five Great Monarchies, and his History of Egypt have already given him a great reputation. This little monograph on the religions of Egypt, Assyria, India, etc., will be welcomed. These religions are considered historically, with no attempt to trace them to a prehistoric age, yet they are analyzed and considered in their historical development with great clearness. The volume is illustrated with cuts, showing the different animal divinities, and the dress of the priests. Our archæological readers will find many things of importance in it, and should have the book.

Silver Coins of the Roman Republic. By Rich. H. Lawrence.

The earliest Roman silver coins were struck for the republic at Capua, and are known as the Romano-Campana series. From B. C. 338 to 318 the legend is Romano, after B. C. 318 the legend is Roma. During the early period the types were uniformly religious. B. C. 217, Diana in a biga. The horses gave place to a deer, and Diana to Victory. The goddess Roma and on the reverse Dioscuri on horseback were also common. Mr. Lawrence, in 10 pp. 16mo., has given much valuable information.

Reminiscences and Memorials of Men of the Revolution and their Families. By A. B. Mussey. Fully illustrated. Boston: Estes & Lauriat, 1883.

Rev. A. B. Mussey, whose photograph is placed as the frontispiece to this volume, is a gentleman whose reminiscences of public men go back to that period when the men of the revolution were alive and in active political service. The Adams family, the Quincy, Monroe, Parker, Ellery and Channing families, Andrew Jackson, Lafayette, Hull and many others are included. The genealogy of these families is given, and certain incidents narrated, a few of which were not known before. A few good cuts are included in the volume, such as the Washington Elm, the Hancock House, portraits of John Hancock, Lafayette, and the Minute Man, 1775; others are poor. The volume would have had more unity if its scope had

been confined to one particular point. A few revolutionary characters figured in the War of 1812. In the mention of these the volume may be regarded as an original contribution to history. This single point, or another, viz., the literary work of these same public men, might furnish a unique field. The suggestiveness of Mr. Mussey's work should produce another on these topics.

Observations on the Cup-Shaped and Lapidarian Sculptures in the Old World and in America. By Chas. Rau. From Contributions to American Ethnology, Vol. V.

Cup-shaped cavities occur on stones in various parts of the world, in Scotland, Ireland, Switzerland, France, Denmark, Germany, Sweden and India. In these countries they are found on megalithic structures, tumuli, monuments of various kinds. In this country they are oftener discovered on scattered fragments of rock which prevail in large numbers in Ohio. Boulders in Nebraska, Georgia, Texas, California, have been found with cup-shaped depressions. Some of these depressions are the size of a hickory-nut, and some are large enough for mortars. The object of these cup-shaped cavities has never been known. The comparison of them is, therefore, attended with much interest. There are earthenware paint-cups used by the Zunis. Col. Whittlesey supposes that the cavities were spindle sockets. Prof. Nilson thinks that the cavities and circles found in Sweden were connected with Baal worship. Others consider them as indications of female lingam worship. Mr. Tate thinks that those found in Britain were Celtic, and had something to do with Druidism. That they were not altar-cavities is evident, however, from the fact that they were found on the sides of rocks. Dr. Rau does not undertake to decide as to the origin and use of these cavities. It remains a question whether they were for some simple use, such as might arise in connection with the primitive life, or whether they had a religious significance. The monograph is valuable, as it shows how wide-spread the simple marks are throughout the world.

A Study of the Manuscript Troano. By Cyrus Thomas, Ph. D., with an Introduction by D. G. Brinton, M. D. Washington, D. C., Government Printing Office, 1883.

Dr. Cyrus Thomas has been for some time engaged in the study of the Manuscript Troano. He thinks that it was intended as a calendar for religious and other feasts; that the figures are symbols and pictographs, and in many instances illustrate the habits and occupations of the people. The people were well advanced in the arts of civilized life, but were, after all, aboriginal. The cross was in use among the people. Written characters also were common, and were read in columns, from left to right. The characters are to an extent phonetic, but not alphabetic, rather syllabic. The work was written about the middle of the fourteenth century.

The volume contains several full-page plates, and is very scholarly and thorough. It is probable that it may aid in the decipherment of other hieroglyphics and pictographs, and denotes much progress in this line of study. A description of the MSS. itself may be found in this journal along with a brief sketch of other manuscripts—Chilan Balam and Troano. See Vol. IV., No. 3. We have not space further to describe Dr. Thomas' positions, and must be content with referring our readers to the volume itself.

Footprints Found at Carson State's Prison. From Proceedings of California Academy of Science, Aug. 7, 1882.

This pamphlet contains five plates of the so-called human foot-prints, full size, four pictures of the prison grounds, reduced in size, three diagrams of the foot-prints or ground plots, and essays by H. W. Harkness, M. D., Jos. LeConte, and C. D. Gibbes. The opinion is now that the foot-prints were made by a kind of sloth or milodon, and are not human foot-prints at all. This is the conclusion of Profs. LeConte, Marsh, and others.

Proceedings of the New Jersey Historical Society.

Vol. VII., No. 3, contains the Report from E. P. Smith, Indian Commissioner, on the Delaware and Munsee Indians, who in 1802 moved to New York and joined the Stockbridges. It appears that some of these, after the removal of the Stockbridges to Wisconsin, went to the Delaware reservation, in Indian Territory, and became absorbed. The Stockbridges are remnants of the Mahikkenenneks, Narragansetts, Pequot, Penobscot and Delaware tribes.

Atlantis, the Antediluvian World. By Ignatius Donnelly. Illustrated. New York: Harper & Bros., 1882.

Ragnarok, the Age of Fire and Gravel. By Ignatius Donnelly. New York: D. Appleton & Co., 1883.

These two volumes are phenomenal. The author, who has been known as one of the most prominent political men west of the Mississippi, suddenly appears before the public as a writer upon scientific subjects, and issues two volumes in quick succession, one of which reaches the seventh edition in less than nine months, and the other is in a fair way for a similar success. Mr. Donnelly has certainly been a diligent reader, and has succeeded in accumulating a vast number of facts, which must prove of great value. He has, at the same time, a happy faculty of presenting his own ideas in a readable and attractive shape, so that he may be said to have made a favorable impression. The science of archæology has generally been regarded as dry and uninteresting, but in the hands of this writer is likely to become more popular. The author has taken some novel theories as a clue to the labyrinth, but the theories themselves may be credited with the success of the books. The theory of the first book is that the fabled Atlantis was the original home of the human race; that of the second that the world has been struck by a comet. These theories are by no means proven, but the facts are interesting and valuable. The fault of the book is one expressed by the lawyer's term, *non-sequitur.* It requires very close reasoning, and a very careful sifting of facts, to establish any theory as to the beginning of the world. "The thread of induction snaps in our fingers when we try to ascertain where its beginning is."

In reference to the book entitled "Atlantis," it may be said that its merits consist in accumulating facts in reference to the analogies between the antiquities, traditions, customs, ethnic traits, and other archæological tokens of the civilized world. The author has not made himself acquainted with the uncivilized races, and so has left out a large amount of material which is familiar to archæologists. But so far as the civilized world is concerned, whether historic or prehistoric, he has given an excellent summary, and the book will be valued on this account. It is remarkable that all other works which have embodied similar attempts to trace resemblances between the tokens and traditions of the different races, have also been based on some theory. The theory of the lost tribes was advocated by Lord Kingsborough, and his magnificent work on Mexican Antiquities was carried through on great expense, for the purpose of proving that the lost tribes were to be found in this country. If the theory of Atlantis should have as great a sway as that had, we shall expect archæology to be more popular than it is, so that we are not inclined to attack the theory, but will give an analysis of the contents of the book, and leave it for others to deal with the arguments.

In presenting the evidence in reference to Atlantis having been the primitive home of mankind, the author proceeds to show what things are held in common by the two great continents or hemispheres. He first gives the ancient tradition of Atlantis, held by the Greeks, in full, Part I. He then refers to the tradition of the deluge. This completes Part II. Part III. is occupied with the comparisons of the civilizations of the Old World and New. Under this head appear the analogies between the architecture and art; between the agriculture, navigation, and manufactures; between the religious beliefs and customs of the civilized races. The comparison of the symbols of the globe, such as the symbol of the elephant, of the cross, and the owl, is also given. Faces are pictured, and the resemblance between the faces of living tribes and those of others found on monuments in America to Egyptian and African faces, are described. Next, the origin of the alphabet is considered, and the comparison is drawn between the Maya alphabet, of this continent, and the different alphabets of the Asiatic races. The tokens of the Bronze Age, in Europe, are also compared with those of the Copper Age, in this country. Thus the three parts of the book are completed. Part IV. treats of the mythologies of the Old World, compared with the New. Under this head the author undertakes to show that the Kings of Atlantis became the gods of the Greeks. The gods of the Phœnicians and the Scandinavians are also traced to the same source. The traditions of the Garden of Eden are traced. Sacred metals of Atlantis, such as gold and silver, are considered as the basis of all those adornments in gold which were peculiar to the temples in Asia and America. The Pyramid is also regarded as a sacred structure, having its origin in the Sabean worship, which began in the fabled island. The arch had its source here. The architecture and archæology of the Mound Builders were derived from the same primitive abode. There were many colonies which went out from this place, such as Egyp-

tian, Mexican, Iberian, Peruvian, African, Irish—Aryan colonies in India—and so the population of the globe is derived from this source.

The book covers a wide field, and on this account cannot be expected to be very critical or close in the examination of evidence from any one source, but is merely accumulative in its character. This is the great fault of the book. All these resemblances have been noticed, but they have not been generally regarded as close enough to base any theory upon. One might *imagine* that Buddhist priests had introduced into Mexico an early civilization, for many of the symbols, such as the cross, the double-headed tiger, the serpent, and the Greek fret, and the suastika, are very much like the Hindu, and so the elephant trunk points to the same source. Various rites of circumcision and baptism which are post-Christian, but prevalent in America would point to very late migration from the Asiatic continent. Traditions of the flood and of creation are also prevalent among the savage tribes. These, according to all known facts as to the transitory character of tradition, must have been too late in their origin to have come from this submerged district. Again, it hardly seems plausible that the rude cultus of the Mound Builders, the savage customs of the Indian tribes, and the finished architecture of Mexico, with the remarkable alphabet of Central America, should all have originated on this island, for it was just as easy for them to be developed on the continent as on the island. The migrations of the Asiatic races, according to all evidences, have not been from the west east, but from a center known to history. They have gone in all directions—east, west, north and south—and it will take closer reasoning to revolutionize the testimony of history than is found in this book. Scandinavian migration has been traced to Central Asia.

There are no lines which converge toward the Central Atlantic. Grades of civilization have been marked by degrees of latitude. We fail to see the proof of any in this work. A theory of separate development, with occasional communications at a late date, seems to us much more plausible than this theory of Atlantis. This, however, does not militate against the value of the work, for we are sure that one theory can be offset against the other.

The reasoning is somewhat fanciful, for as great resemblances might be traced in other directions. The symbol of the tiger, found in Mexico, would indicate an East Indian origin much more than an Egyptian, and many of the faces on the monuments of America might be pronounced Celtic or African, Egyptian or Jew, just according as one's fancy might lead him. The serpent symbol is undoubtedly prevalent in this country, as it is everywhere else on the globe, but this does not prove that Atlantis was the home of the symbol. There is one feature about the work which will prove acceptable to some, and that is, that it confirms the Scripture record in regard to the origin of man, and accepts the narrative as a literal fact. Evolutionists have been inclined to reject or explain away the sacred record. Yet this feature, which will be agreeable to many, does not prove the theory to be true. The book is yet to be written which will account for these remarkable resemblances in art and archæology. Every tentative theory will only prepare the way for it. Therefore, we welcome this volume, for it is pleasant and harmless, and helps us to string our beads upon another theory, as well as pleases us by its own arrangement.

The last book we pass over as not coming under the line of study to which our journal is devoted. The supposition that the earth has been struck by a comet, and that this accounts for all the phenomena of the glacial or drift period, is certainly a novel one. Geologists may find it amusing reading, but its merits or demerits we are not disposed to decide upon.

Fundamental Questions: Chiefly Relating to the Book of Genesis and the Hebrew Scriptures. By Edson L. Clark, Minister of the Congregational Church, Southampton, Mass. Member of the American Oriental Society; author of "The Arabs and Turks," and "The Races of European Turkey." New York: G. P. Putnam's Sons. Pp. 217. $1.50.

The striking features of this book are, (1) the attempt to recognize the latest results of scientific research concerning the creation period, with the "six days" narrative of the first chapter of Genesis; (2) the Theory of biblical chronology between the Creation and Abraham; (3) the causes of the Glacial age, and the human remains of that period, and of the Flood; (4) the distribution of the races; (5) and a bran-new and startling theory concerning the Hebrew language and scriptures. Mr. Clark thinks the wonderfully plain correspondence between the now universally acknowledged geologic facts and the bible narrative of the creation,

particularly that of the fifth and sixth days, is so great as to demand a profound reverence for the whole. He grapples the great difficulty of the narrative of the fourth day of the first chapter of Genesis, where the sun, moon, and stars are represented as *first appearing*, while science believes they had been in the heavens and shining for many ages. While great shrinkage cracks are formed in the crust of the second-day period as though the sun's heat must have caused them, our author says, "a loaf of bread will bake just as fast by heat from below, as by heat from above;" and shows how very much later, in the third day, or the Cambrian age, the anthracite coal was so baked. He shows how, on scientific finding, the conditions of the atmosphere were such that rays of sunlight could not have been admitted to the earth before the fourth-day period. The review of the whole creation period is made with a strong hand, and in singularly clear and terse language.

He believes the genealogies of the fifth, tenth and eleventh chapters of Genesis, "offered no data whatever for a time chronology," and marshals his reasons for his belief. He thinks, that as yet, we know nothing whatever that is reliable about that chronology, only that it is found to be immensely longer than has been commonly supposed. He thus secures all the time demanded to accomodate any scientific fact, and adapts it to the discovery of human remains in, or before, the Glacial periods of Europe. He accepts Prof. Croll's theories, and finds in the "variations in the eccentricity of the earth's orbit," an explanation of the alternations of the flora and fauna, from tropic to arctic, once in 10,678 years; and concludes *man has been on the earth at least 75,000 years!*

He "frankly admits that scientifically considered, the problem of the Flood has not yet been solved, but stands by the Christian Scriptures, which have been so wonderfully vindicated in other respects, till science more carefully inspects the region where the Deluge had its origin. Seeking, however, for some physical evidence of its cause, he believes it "was the last great throe of the Glacial period," which was "about 6,000 years ago;" and accepts the literal meaning of Gen ix. 13, believing the rainbow had never before been seen, for the reason that before, the atmosphere had never been clear enough to make a "perfect reflection of light and the forming of the bow on the cloud." "The world before the flood must have been * * dim and murky * * always enveloped in thick and misty vapors." Thus the forty day's rain was a clearing-up shower! The Flood was extensive, but not universal; and the present Turanian races escaped its doom; thus he solves the philosophical and theological problems.

He believes that under inspiration Moses wrote the narrative of the Creation and the Law in the *Egyptian language*, and that not till Samuel's day did the Hebrews begin to have a written language of their own. "The hypothesis of Prof. Robertson Smith," he "cannot for a moment accept." "No author, certainly, ever enstamped the impress of his own spirit and genius upon his work more deeply than Moses has upon the book of Dueteronomy." "In the course of the long period extending from Samuel to Malachi, holy men of God, * * * wrote in their own Hebrew language all the books of the Old Testament * * and * * translated and gave to the Church and the world the old Mosaic records, the full text of the divine law."

Mr. Clark's book is stimulating; its candor is conspicuous; the bold theories do not leave the impression of an irreverent explorer, but of one devoutly loyal to the divine Saviour and the Christian Scriptures as the word of God. His reasons for believing that word inspired are peculiar to himself and forceful. But when he speaks of "the Fall" as "an unspeakable blessing" we part company with him; and are not yet prepared to accept his evolutionist theories, although he only holds that one species sprung from the preceding, "*per saltum*, by a sudden leap in advance." This act he believes to have been by the direct agency of God; and thus man "sprung from some pre-existant man-like animal now extinct," by an abnormal birth, *per saltum*; a direct act of God, as was also the creation of woman.

Theological questions are also discussed, and while he is positive in saying "Heaven is the home of God's obedient, loving children, and of them alone," he also asserts that "The future will not be limited to two narrow abodes, a heaven of glory and a hell of everlasting woe. * * * Our God and Judge" will "give to every man according as his works shall be. * * The conscientious and virtuous heathen, like Socrates, * * will find an appropriate place * * no less than the faithful Christian, or the greatest sinner under gospel light."

We look on the book as a finger-post on the way toward that day when the written word of God and Science shall be recognised as but two parts of one perfect whole.

W. S. HAWKES.

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A PART OF THE NAVAJO'S MYTHOLOGY.

BY W. MATTHEWS.

The world in which we now live is the fifth world. Our fathers dwelt in four worlds before reaching this. In the the first world there dwelt three; the first man, the first woman and the coyote. It was dark there and the world was small, so they ascended to the second world. On the second world they found two other men; the Sun and the Moon. There was then no sun or moon in the firmament; but these people are so called because they afterwards became the sun and the moon (or the sun and moon gods). Yet there was light in the second world. In the east there was a great darkness; it was not a cloud, but it was like a cloud. In the south there was blue light; in the west a yellow light and in the north a white light. At times the darkness would rise in the east until it overspread the whole sky and made the night. Then the darkness would sink down, the blue light would rise gradually in the south, the yellow light in the west and the white light in the north, until they met in the zenith, and made the day.

Then there were five dwellings on the face of the second world: first man, first woman, sun, moon and coyote. After a time sun approached first woman, and coyote, who was the wisest of all, and knew all things whether he beheld them or not, told first man what had happened, and first man became angry with sun. Now, at this time, there dwelt beyond the earth, in its four corners four other persons. One was he of the darkness in the east; another was he of the blueness in the south, another was he of the yellowness of the west, and the last was he of the whiteness in the north. And the five that dwelt in the center of the world, called these four into council, concerning the cause of their discord. The decision

of the council was that the second world was too small for all to live upon in peace, and that they should ascend to the third world, which was larger, and where first woman and sun could live so far apart that they might never meet one-another again.

When they came up to the third world, they found it a land, in form much like that in which the Navajos now dwell, bounded, like their present home, by four mountains. There was one mountain on the east like San Mateo, one on the south like the heights beyond the Salt Lake of the Zuñis, one in the west like San Francisco mountain, and one on the north like the mountains of San Juan. And they found a great water at each of these four points.

But the land into which they came was not empty; another race of people dwelt in the mountains, and they called the people of the mountains into council and said to them: "We have come to this land to stay a long time and we desire to live at peace with you." And they of the mountains said: "It is well; the land is wide enough for us all, and we seek not war, but there [illegible] in the great water beyond the eastern mountains, a monster named [illegible] he who seizes you in the sea, [illegible] approach or harm." The Navajos [illegible] and the council broke up. [illegible] one, and he went [illegible] So, in time he strayed [illegible] eastern mountain, [illegible] monster, brought them back [illegible] them in his blankets.

When [illegible] he went in search of them. [illegible] four corners of the earth [illegible] came to the conclusion [illegible] the strangers [illegible] Then he caused the [illegible] the west, and the north [illegible] that at the end of the [illegible] for the people to [illegible] and held a council [illegible] but what [illegible]

[illegible] mountains of the [illegible] that stood in the [illegible] the people of the [illegible] then dwelt on the [illegible] mountain the [illegible] waters continued [illegible] escape the flood.

At length the mountain ceased to grow and they planted on the summit a great reed, into the hollow of which they all entered. The reed grew every night but it did not grow in the day time; and this is the reason why the reed grows in joints to this day—the hollow internodes shows where it grew by night, and the solid nodes shows where it rested by day. Thus the waters gained on them in the daytime. The turkey was the last to take refuge in the reed and, therefore, he was at the bottom. When the waters rose high enough to wet the turkey they all knew that danger was near. Often did the waves wash the end of his tail; and it is for this reason that the tips of the turkey's tail-feathers are, to this day, lighter than the rest of his plumage. At the end of the fourth night from the time it was planted, the reed had grown up to the floor of the fourth world, and here they found a hole through which they passed to the surface.

In the fourth world they had still the darkness of the east, and the *three great lights*, as in the second world; and they found the mountains and seas distributed as in the third world. A great river ran through the centre of the land; on the north bank of this, the people settled, while the lower animals, who were but human beings in animal shape, dwelt on the south side.

In those days the seasons were much shorter than they are now. A year then was but as a day in our time, the children grew to be men and women, and became fathers and mothers in a period that would now be considered but a few days. So the people multiplied rapidly in numbers and dwelt at peace under twelve chiefs until again disturbances arose concerning the infidelity of woman; and the men and women had a war of words. The women said: "We depend not on our husbands, it is they who depend on us. We till the soil and carry the water; we make the fire and weave the blankets; we can take care of ourselves and will, therefore, do as we please." The men said; "It is we who clear the fields and help to till them; we kill game for you, and guide and assist you in all your labors; you cannot live without us." So the arguments continued until the sexes agreed to separate; and the men built a boat and crossed over to the south side of the river, leaving the women in possession of the cultivated fields.

This separation lasted four years. In the first year, as the men had to make new farms, they had a very small crop; while the women, having land already cleared and ditched, had an abundant yield; and they jeered at and taunted the men for their short comings. The second year the men had a better crop, while the women, who had prepared no new land, had

hardly sufficient corn for their increasing needs. Beside men were among game and killed abundance of it, whil women had no meat to eat. At the end of the fourth the men were fat and prosperous while the women were s ing, and many of the latter called across the river and be to be taken back. Then the men whose hearts were softe met in council, and many urged that the women be forgiv but while they were still debating some of the women jum into the river, intending to swim over, and were lost to si under the waters. This decided the men. So they ma boats and took the women across the river, and said to them " You have now learned something that you must remembe You supposed yourselves to be as strong, as willing, and a wise as we; but you now see that you are not and that yo cannot live without us." And the women answered: "Your words are true. We will hearken to you for evermore." Many of the men took back their old wives, but as a number of boys and girls had grown to maturity during the separation, new alliances were contracted.

But all this time the coyote had still kept hidden the young of the sea-monster, Tiè holtsòdi, and the latter having searched for them in vain in all the seas of the fourth world, caused the waters to rise as before. Again was the council held; again was soil taken from the four mountains; once more the northern mountain rose and the reed was planted on its summit; once more the reed sheltered the fugitives and bore them upwards out of danger. In short all the circumstances that attended their flight from the third world was repeated until they reached the floor of the present world, when an appalling difference was observed. Instead of finding a hole through which they could pass, as on the former occasion, all above them, as far as they could see, was solid earth, like the roof of a great cavern.

They were dismayed for still the waters gained upon them. Then the badger spoke and said he thought he could help them out of their troubles, so he climbed up the reed to the earthen roof overhead, delved upwards and soon was out of sight. After a time he came down again and said that he had dug through the earth, but had emerged at the bottom of a lake and could go no further. As a proof of his truth he showed his feet and legs soiled with the black, soft mud, and thus it is, that the badger's feet are black to this day.

Again their distress and disappointment was great, when the locust came forward and said, that he could pass to the surface of the upper waters. So up he went through the hole the badger had made. When he arrived at the surface of the lake

he saw four swans, which were placed and colored as the lights and darkness of the lower world. A black swan in the east, a blue swan in the south, a yellow swan in the west, a white swan in the north. They approached the locust and asked him wherefore he had come to their country. In reply he told them of all the misfortunes that had happened to the dwellers in the nether world, and showed how important it was that they should get access to this world without delay. "Well," said one of the swans, "your people may come up here on one condition, and that is that you will do as I do. Behold!" and the swan thrust an arrow down his throat, passed it through the whole length of his body and drew it out behind; he then thrust another arrow through his body in the opposide direction. "Ho!" said the locust, "that is nothing; but now I tell you that you and your brethren can stay here only on one condition, which is that you do as I do." Whereat the locust thrust an arrow from side to side through his body, piercing his heart, and the next moment passed another arrow through in the opposite direction. The swans dared not accept this challenge, so they all arose from the lake and flew away. Then the locust went back to his people and bade them ascend.

So they came up and huddled together on a little shallow spot in the center of the lake; but they had scarcely established themselves here, when, to their horror, they beheld the water again rising, and it seemed to well up from the hole through which the people lately had come. They looked down into the hole and beheld the horns of Tïèholtsòdi; so, once more, they searched among all their bundles and blankets. The last bundle they examined was that of the Coyote, and there they found the stolen cubs. At once they threw them down to their father and with them a sacrifice to the treasures of the sea—their shell ornaments. In an instant, with a noise like a storm in a forest of pines; but louder than that—louder than thunder—the waters began to rush down through the hole and away from the lower worlds.

So the dangers from deluge disappeared; but still they were in trouble, for they could not reach dry land. They prayed to him of the darkness in the east, and he came, and with his knife, shaped like a horn, he cut through the cliffs, which bounded the lake, and made a cañon, through which the waters flowed away.

Still their sorrows ceased not, for the bed of the lake was so soft and muddy that they could not walk through it. So they prayed to the four winds (Wind Gods?) the dark wind of the east, the blue wind of the south, the yellow wind of the west,

and the white wind of the north. And a great gale arose and blew for four days and on the fifth day the ground was so dry that they could walk out.

They wanted to have their new home resemble that which they formerly occupied in the fourth world. So they took clay and placed it at the four corners of the earth, and there it grew to be mountains such as they had below. The sun and moon went into the heavens, and one began to shine in the day and the other in the night.

The mountains that bounded the world were not so far apart then as they are now, hence the world was smaller, and when the sun went over the earth he came much nearer to the surface than he does now. So the first day the sun went on his journey it was intolerably hot, the people were almost burned to death, and they prayed to the four winds, that each one would pull his mountain away from the center of the earth, and thus widen the borders of the world. It was done as they desired, and the seas that bounded the land receded before the mountains. But on the second day, although the weather was milder, it was still too hot, and again were the mountains and seas removed. All this occurred again on the third day; but on the fourth day they found the weather pleasant, and they prayed no more for the earth to be changed.

On the fifth day the sun arose, climbed as usual to the zenith and stopped. The day grew hot and all longed for the night to come, but the sun moved not. Then the wise coyote said: "The sun stops because he has not been paid for his work; he demands a human life for every day that he labors; he will not move again till some one dies." At length a woman, the wife of a great chief, ceased to breathe and grew cold, and while they all drew around in wonder, the sun was observed to move again, and he travelled down the sky and passed behind the western mountain. As we now never see him stop on his way, we know that every day some one must die.

They laid the dead body to rest among the rocks, and all marveled where the living part had gone; so they searched all over the land and among the mountains that bounded the earth, but they found her not until one braver than the rest, ventured to look down into the hole through which they had fled from the lower world, and he beheld her seated by the side of the river combing her hair. Observing that a shadow was thrown from above, she looked up, saw the Indian peeping through the hole and invited him to come down; but he feared to do so. Then she said to him: "Hither have I come and hither all of our people must come when they die." He

returned to camp and told what he had seen and heard; but soon after he fell sick.

That night the moon stopped in the zenith, as the sun had done during the day; and the coyote told the people that the moon also demanded pay and would not move until it was given. He had scarcely spoken, when the man who had seen the departed woman in the nether world died, and the moon, satisfied, journeyed to the west. Thus it is that some one must die every night, or the moon would not move across the sky. But the separation of the tribes occurred immediately after this, and now the moon takes his pay from among the alien races, while the sun demands the life of a Navajo as his fee for passing every day over the earth. And because he who gazed upon the dead met death so soon after, it is not well to look upon the body after it has been buried, and no Navajo has ever again dared to look down into the hole through which they came to this world.

Among the summits of the San Juan mountains there is to-day a lake bounded by precipitous walls, and there is a little island in the center of the lake with a hole in it [extinct crater?] and something sticks out of the hole that looks like the top of a ladder, and "this is the place through which our ancestors emerged from the fourth world." The Navajos never approach near to it, but they stand on high summits around, and view from afar their natal waters.

Until they came up from the fourth world, all the people spoke one language; but when they walked out from the lake their tongues became twisted; they began to speak in diverse ways, and there were many who could not understand one another. So after these deaths occurred they concluded to divide themselves into bands, according to language, and to separate. Those who dwelt in the mountains in the lower world became the people of the mountains. On this other tribes—Utes, Apaches, Pueblos, etc.—went off, each under a different master or guide, who showed them where they were to dwell; but the Navajos remained undisturbed in the center of the earth.

Now, the first man and the first woman thought it would be better if the sky had more lights, for there were times when the moon did not shine at night. So they gathered a number of fragments of sparkling mica of which to make stars; and the first man proceeded to lay out a plan of the heavens, on the ground. He put a little fragment in the north, where he wished to have the star that would never move, and he placed near it seven great pieces, which are the seven stars we behold in the north now. He put a great bright one in the

south, another in the east and a third in the west, and then went on to plan various constellations; when along came the coyote, who, seeing that three of the pieces were red, exclaimed: "These shall be my stars and I will place them where I think best;" so he put them in situations corresponding to places that three great red stars now occupy amid the celestial lights. Before the first man got through with his work, the coyote became impatient, and saying: "Oh! they will do as they are," he hastily gathered the fragments of mica, threw them upwards, and blew a strong breath after them. Instantly they struck the sky. Those to which locations had been assigned adhered in their proper places, but the others were scattered at random, and in formless clusters over the firmament.

Having made the stars, first man and first woman, lengthened the seasons which, before, had been very short, and they caused the moon to so change its form as to mark off the year into twelve parts. They did this in council with Coyote, and the latter laid out the months in a row before him and gave to each one the name it now bears.

The year that these things were done, snow fell for the first time; it was then dry and nutritious like meal, it could be boiled into mush or baked into bread, and the people might have lived on it forever, had not the Coyote, one day, when he was very thirsty and no water was at hand, put some of the snow into a dish and melted it on the fire. Ever since that time snow turns into water when heated and cannot be used as food. When the first woman saw what the Coyote had done she reproached him, saying: "See what folly you have been guilty of. Hereafter the people will have nothing to live on, for you have caused their food to melt into water." "I know more of this than you do," replied coyote. "When the snow melts in the spring it will nourish the grasses on the monntains, and when its water flows into the valleys the people will pour it over their corn-fields and make as good food out of it as it was before I changed it.

It was the coyote who brought from the fourth world the seeds of the corn and other valuable plants, and planted them in the ground for the benefit of the people.

Now, all the tribes of men lived happily and increased in numbers for twelve years; but at the end of that time they had, by their folly and disobedience, so offended the first man and the first woman that the latter determined to chastise them, so she created a number of destroyers. First was *Yéitso*, a being in human shape, taller than any mountain in the Navajo country, and fleet and voracious as he was tall. He had followers

of colossal size, but not as tall as he. The next were two great beings, as male and female, named *Tsináhale*, who had human heads but the wings, plumage, and talons of eagles. They could pounce on a man and bear him off as easily as a hawk carries a little fledgling. Another instrument of vengeance was a great animal called *Délgěth*, who had the form of an antelope, and another was *Tséta-höltsil-táhli*, a giant who dwelt on the side of a precipice, along the face of which ran a narrow trail much frequented by the Indians. When a man tried to pass along the trail, the giant would kick him into the abyss below. The monster himself could not fall, however, for his hair grew into the rock like the roots of a cedar. Besides these, there were some strange-looking people, *Bĭnáye Ahăni*, who dwelt together in a beautiful house. They had many handsome objects strewn around the door to entice the curious, and other things were displayed inside. When the charmed victim entered he was slain with a mere glance of the eye. These plagues devoured the people until very few were left. The vast ruins scattered everywhere over the Navajo land and beyond it, were once inhabited by Indians, and testify to the great number of the children of men, before the first woman let loose her scourges upon them.

At this time the first man and the first woman lived on a mountain to the northwest of the Navajo country. One day first woman went out and found a female child lying on the ground. Her heart was beginning to soften towards man. She felt that she had wrought evil enough for them, so she took the infant to her house to rear. The girl, *Estsánatlehi*, took but four days to reach maturity.

On the fifth day she went out for fuel, and when she came back she told her foster-parents (whom she now called "father" and "mother," and who in turn, called her "daughter,") that there had suddenly appeared to her in the woods a man who had stood and looked at her. This occurred four days in succession, and each time first man went out to look for the track of the stranger, but he saw only two foot-prints, as of a man who had taken but one step on the ground; further than this, no trace of his coming or going was visible. On the fifth day the mysterious visitor spoke to the young woman, designated a trysting-place at a little distance from her home, and begged her to meet him there at night. When she went home she related again to her parents the occurrences of the day, and first man went out as before, to examine the tracks. This time there were four foot-prints as of a man who had taken three steps; but the trail seemed to come from nowhere and to lead nowhere. The stranger, therefore, must have descended

from the heavens and returned thither. He was none other than the sun!

That afternoon first man built a small circle or corral of branches (such as these Indians often make) near his house, at the place designated by the sun, and after sunset he sent the maiden out there to pass the night. She built a fire in the corral, and first man and first woman went out to watch from a distance. When darkness had fallen, they saw by the fire-light, the divine stranger entering the corral. Thus he came for four nights and no more.

Four days after his last visit she gave birth to twins, boys, *Nagènazani* and *Thobadĕstchin*, who in four days grew to manhood, and for four days more remained near the place of their birth; but each day they wandered abroad. On the last day during their stroll, they met one of the men of the mountains, and he said to the twins: "Do you know where your father lives?" When they replied in the negative, he said: "His home is far to the east, beyond *Tsòtsil*" (Mt. San Mateo.) When they came home they asked their mother where their father dwelt; but her only answer was: "He lives a long way off."

On the morning of the fifth day they set out to find their father. They traveled far to the east, and at noon they arrived at the great house of the sun. A big bear and a long serpent stood guard at the door, but the twins fearing them not, entered. Inside of the lodge sat the wife of the sun, with a boy and a girl who were her children. The woman was alarmed, for visitors rarely entered her house; but the boy and girl knew who the twins were, and ran up to them in the most friendly manner, calling them by the name of "brother." But fearing the wrath of the sun when he came home, they wrapped the new-comers up in blankets of clouds and laid them on the shelf to hide.

At night, when the sun returned, he said to his wife: "I looked down to-day, about noon, and I saw two men entering the lodge. Who are they and what has become of them?" "You are the sun," she answered, "and can see all things. Why do you ask me?" Four times did he ask her, and thrice she gave the same reply, but to the last repetition of the question she said: "Two men came here to-day seeking their father. You have often told me that, during your absence from home, you visit no one. Now who may these men be?" "Where are they?" he demanded." "Your other children, perhaps may tell you," responded the woman. Then he turned round to the boy and the girl and bade them reveal the hiding-place of the strangers. They pointed to the shelf. The

sun seized the cloudy bundle, tore it open, and the twins fell out on the floor.

At each of the four corners of the earth were set a cluster of spikes of iron (ferruginous rock, iron ore) as sharp as the teeth of a saw. He seized the twins, and (as was his custom in dealing with intruders) impaled them on the spikes that stood in the east; but the wounds healed at once and the twins did not die. Then, in turn he flung them on the spikes in the south, the west and the north, but without doing them the least harm, and the sun acknowledged them as his own immortal children.

Then he led them back to his lodge, and, opening a door to the east he showed them an enclosure full of horses and said: "My sons, do you want any of these?" "No." said they, "We will not have them." He then opened a door to the south and showed them a room full of beautiful blankets and clothing, of which he offered them all they chose to take, but they said they did not want them. Then he opened a door to the west, and exhibited a great store of beads and shells; and lastly he opened a door in the north, where he had, in a corral, a multitude of deer and other animals of the chase, but all these things they refused. He knew all the time the wish that was in their hearts, but he pretended not to know it. He then asked them what gifts they desired of him, and they said: "Oh, father! Our kindred in the west have been devoured by pitiless monsters. But few of our people are left, and even the lives of these few are in danger. Give us, we beg, the weapons wherewith we may slay our enemies." On a number of pegs, around the wall of his house, hung various warlike weapons and accoutrements. He bade his sons look well at these and point out which ones they wanted. They pointed to a coat of iron (scales of iron ore) to a great knife, to a wind charm or talisman (an object about the size of the finger, half black and half red) and to some thunderbolts. "Then," said the sun: "You must want to kill *Yèïtso*, the great giant in the east. Know that he is your brother. Nevertheless, I will give you all these things and assist you to destroy him. When your mission is accomplished you must return all these things to me.

The next morning early he bathed them and arrayed them in new clothing. Then he put on his robe cloud, and, taking one of his sons under each arm he rose into the heavens. When he got into zenith he opened his robe and let them look out, and they saw below them a world different to any they had seen before. At noon they were directly over the summit of Mt. San Mateo, and they stopped to partake of some

food. Here again he let the twins look down at the world. The rivers were like little streaks, and the mountains were only as dark spots upon a flat surface. Then the sun said to the elder brother: "Can you point out your home to me?" But he answered, "I can not." Then he addressed the same question to the younger, and the latter exclaimed, pointing downwards: "There is our home, and there is Mount San Mateo, and there is the Salt lake, and there is the Bear spring, and there is the red streak over the mountain," and so on, pointing out the various localities in the Navajo country.

It is well, said the sun, you will know where to travel when you descend. "He continued, "The giant, *Yèïtso*, has a suit of iron clothes, a great knife, thunderbolts, and all the same weapons that I have given you, but he has only four thunderbolts. He dwells in Tsòtsîl (Mt. San Mateo) and he goes to drink at the spring of *Thòsathō*, which he drinks dry whenever he visits it. He may seem to you more than your match, but I will help you by knocking off his armor with a great thunderbolt." Having said this, he shot the youths down to the top of Mt. San Mateo, with the thunder.

No sooner had they reached the ground than they set out for the spring of *Thòsathō* (Ojo de Gallina, near San Rafael). As they approached the spring they saw *Yèïtso* stooping over it and drinking. When they got near enough to cast their reflections on the water, he looked up and said: "Here are two nice little boys, what will I do with them?" The twins said tauntingly in return: "Here is a fine fat giant, what will we do with him?" Four times were these defiant words repeated on each side, when the giant rose to his feet and hurled one of his thunderbolts at his antagonists. They saw it coming, dropped prone on the ground, and allowed the bolt to pass harmlessly over them. Thus did they evade, in turn, every one of the giant's missiles. When his last one was sped, the promised bolt came down from heaven and rent the magic armor, and the twins fell on the naked monster and hacked him to pieces with their great knives.

His head was chopped off and thrown to a distance, where it was transformed into a hill which stands to-day among the foot-hills of San Mateo. The great torrent of blood that flowed from his body, coagulated into black rock, and can still be seen between the *Thosathō*, and the base of San Mateo. They knew that if the blood reached the head, where they had thrown it, the giant would come back to life; so they stopped the current in that direction with their knives. A high precipice, where the black rock ends, shows, to this day, where they checked the course of the sanguinary flood. At the spring,

where they had killed *Yéïtso*, they found his big basket, in which he was wont to take home the corpses of his victims; in this they put the shattered armor and carried both off as trophies.

When they arrived near their home they laid down the basket and entered the house empty-handed. "Where have you been and what have you done since you left here yesterday?" said their mother, *Es-tsà-na-tle-hi*. "We have been to *Tsòtsil* and have slain *Yéïtso*," they answered. She laughed at them, and would not believe them until they led her where they had laid the basket and the armor. Then she was convinced, and they all celebrated the victory with a dance.

Then the young men told their mother that they desired to kill *Delgeth*, the great monster in the shape of an antelope, "That is impossible," she said, "even though you possess the bolts of the thunder and the armor of *Yéïtso*. *Delgeth* dwells in the center of a vast plain, surrounded by high hills, therefore, he can see from a long distance any one who approaches him, and he is ever on the alert." Notwithstanding these warnings, the elder brother (Nagènazani) set out to slay the great antelope, while the younger (Thòbadestchin) remained at home to help his mother.

When the elder came to the edge of the great plain where the monster lived, he met the ground-rat (Nazïsi) and told the latter what he came to do. The rat reïterated the story of *Delgéth's* vigilance; but said he thought he could assist in getting rid of him. So the rat dug a long tunnel from the edge of the plain up to where the great antelope lay, making the terminal opening immediately under the heart, and making four branch tunnels near the hole, where the hunter could hide; then he came back and told what he dad done.

The adventurous youth entered the tunnel, walked through it to where *Delgéth* lay, and shot him in the heart, but not with immediately fatal effect. The wounded animal arose, stuck one of his horns into the hole and ripped the tunnel open from end to end; but while he was doing this the young man hid himself in the first branch tunnel. The monster returned to the hole and ripped open the first hiding place; but the young hero secreted himself in the second. He ripped open the second tunnel. *Nagènazani* crept into the third. He tore open the third, but the fugitive fled into the fourth. *Delgéth* now stuck his horn into the fourth and proceeded to rip this up too; but before he got to the end where his intended victim was hidden, the wound at last took effect and the great destroyer fell dead.

For a while the victor could scarcely believe that he had actually slain his enemy. He feared to approach the prostrate

form lest the vanquished one, perchance, only feigned death. Presently he beheld the squirrel, whom he asked to go up to the body and examine it. Soon he saw the squirrel climbing up on the great antlers as if he were climbing a tree, and dancing for joy on them to show that *Delgéth* was indeed dead. Then the squirrel painted his face with the blood.

Nagènazani cut out a piece of the monster's bowel, filled it with the blood, tied both ends and brought it home to his mother as another trophy, and as an evidence of his victory. And again she rejoiced and had a dance.

Negènazani next declared his intention to attack the winged monsters, *Tsĕnáhale* (which I will here call Harpies for the convenience of the reader.) His mother said to him: "They live on the top of a very high *mesa*, whose sides are so steep that no one can climb them. You can not reach the summit unless you have wings, so do not attempt it." Nothing daunted, however, he set forth on his journey, taking with him his thunderbolts and the bag of *Delgéth's* blood.

The male of this formidable pair preyed only on men; the female only on women. When *Nagénazani* came in sight of the *mesa* the male harpy flew towards him, swooped down on him and bore him away to his rocky haunt. The monster had his nest on a ledge on one of the sides of the mesa, and it was his habit to bear his victims to the summit and let them drop on the ledge, where they were dashed to pieces and eaten by the young. Thus was our hero dropped on the ledge; but, falling uninjured, he tore open the bag of blood and allowed the contents to flow over the rock in order to let the harpy believe he was slain.

The monster then flew off to seek for more prey, and the little harpies approached the man to eat him, but he waved his hand and said "Sh" to them, and they retreated. Thus they approached him four times, but each time they were as easily scared away as at first. When they had retreated for the fourth time he said to them. "When does your mother come back to the nest?" They answered: "When we have a she-rain." (A shower without thunder and lightning is called by the Navajos a she-rain *Niltsa-baăd'*.) "And when does your father return?" He queried. "When we have a he-rain." (A shower with thunder and lightning, *Niltsà-baká*), they replied. As they spoke, the bodies of two Pueblo women fell on the ledge beside him; this showed that the female *Tsénàhale* had returned to the mesa from a successful hunt. Presently the body of a man fell on the ledge, indicating that the male had got back.

While the young ones were busy devouring these bodies, drops of rain began to fall, lightning flashed, and, as the

young birds had predicted, their father descended and sat on a crag close to the eyry. He had no sooner folded his wings than the twin hurled one of his thunderbolts, and the monster tumbled down to the foot of the *mesa* dead. Soon another shower passed, but there was no thunder or lightning, and the mother of the foul brood descended and perched near the nest on a point of rock, whence another well-directed thunderbolt sent her corpse down to the plain to join that of her spouse.

Nagènazani then took one of the young fledgelings up in his hands, waved it back and forth until it became an eagle, and saying to it: "Thy name shall be *Atsà*," cast it into the air where it spread its wings and flew upwards out of sight. In like manner he metamorphosed all the young ones in the nest into different large birds of prey, and gave to each one a name according to its kind.

When he had done all this, he began to think of his own condition. He was standing high up on the side of a perpendicular cliff, from which he could not descend. He gazed downwards and pondered long as to what he should do, when at length, he saw the bat-woman passing behind a point of rock with a basket on her back. He called to her, for an instant she appeared from behind the rock but hid herself again. Four times did he thus call, and three times did she thus trifle with him; but at his fourth call she came out on the plain and asked him what he wanted. When he told her she said: "I will take you down in my basket if you will give me all the feathers of these great birds that you have slain, except the wings, which you may keep to show your people when you go home. You must also go back from the edge of the rock on which you stand, for you must not see how I ascend, and all the time you are in my basket you must keep your eyes shut, for I do not want you to see how I come down." He readily agreed to all her conditions, and in a short while he beheld her standing on the rock beside him. He looked at the basket which hung on her back, and observed that it was suspended by two slender strings which seemed scarcely strong enough to support the weight of the empty basket. He told her he was afraid to sit in it. She bade him fill it with stones, which he did; then she jumped and danced with the basket on her back, but the strings broke not. Thus assured, he shut his eyes, entered the basket and soon felt himself borne slowly and carefully downward. When he was about half way down his curiosity overcome his prudence; he opened his eyes and began at once to fall violently through the air. The bat-woman slapped her blanket backwards striking him over the face, and commanding him to shut his eyes. He obeyed, and, once

more, experienced the sensation of being wafted gently down. When they reached the bottom he plucked the promised feathers from the dead *Tsénáhale*, and filled with them the basket of the bat-woman.

As she started for her home, he said to her: "Do not go in that direction. You must not pass through that bed of (Ĭndĭgète) yellow flowers. Take another trail." But she paid no attention to his warning and stepped among the forbidden plants. She heard a flutter at her ear, and a little bird, such as she had never seen before, flew over her shoulder. She took a few more steps—strange little birds in increasing numbers whizzed by her. She looked over her shoulder, and to her astonishment, found that the little birds were coming out of her basket. The feathers of the *Tsènáhale* were undergoing metomorphosis into all sorts of little wrens, warblers, titmice, etc. Giving up her feathers for lost, she turned her attention to giving names to the different kinds of birds as they flew out—names which they bear to this day among the Navajos—until her basket was empty. Thus it was that the little birds were made.

Nagènazani cut off the wings of the dead monsters, and took them home, and once more did his mother dance and rejoice.

The next victim was Tsétá-hòtsĭl-tháhli, "He who kicks you down the rock." (I will refer to him as the Ogre, for the sake of brevity.) The young hero walked along the fatal path; as he passed the ogre, the latter kicked at him, but he evaded the kicks and said to his would-be destroyer, "What did you mean by that?" "Oh! I was tired sitting and was only stretching my limbs," replied the ogre. *Nagènazani* turned round and passed the kicker again with the same result. When he had passed the ogre for the fourth time he took out his knife, cut the hair where it grew into the rock, and let the monster fall over the precipice.

Presently he heard a cry coming from beneath, and it occurred to him that the ogre's family must live at the base of the cliff, where they could receive the bodies when they fell just as the young harpies did. So he went to the bottom of the precipice by a circuitous route, and there he found the children devouring the body of their own father. He took them up, one by one, and cast them from him, as he had done with the young harpies, and they were changed into birds of prey. This time, the trophy he took home, was the ogre's scalp.

The next task which Nagènazani essayed was the destruction of the *Bĭnáyé Ahá'ni*, the people who lived in the beautiful house, and slew with their glances. He took with him

some salt and his knife, and boldly entered their lodge. They glanced at him but he fell not. They stared at him but he still lived. They stared harder, till their eyes began to protrude from their sockets. Then he threw his salt on the fire; it cracked and sputtered, and some of the atoms, flying from the fire, struck their eyes and blinded them, when they fell an easy prey to the knife. He took home their scalps as trophies.

The only instruments of the first woman's vengeance now left were the followers of *Yeïtso*, the giant of San Mateo. They were numerous, and to effect their destruction was no easy task. After a long consultation the twins decided to try to raise a great storm. They took the wind-charm they had received in the house of the sun—this they put in a particular place, designated by the sun, and performed over it dances and incantations. As a result of their devotions, a great tempest arose which uprooted the highest trees, and tossed, as if they were pebbles, the greatest rocks of San Mateo. In this tornado all the followers of *Yeïtso* perished.

The twins had now conquered all the enemies of their race. Their task was finished, and in compliance with their father's wishes, they went to his house in the east and returned to him all his weapons. He said to them: "My sons, I have done much for you. I have given you anything you asked for, and you have slain all your enemies. You must do me a favor in return. I want to dwell again with your mother. Take her to the far west, and build for her a lodge there, where I may behold her any evening when my labors are done, and as I am ashamed to look at the faces of her parents, build for them a lodge in the far east beyond where I live." The twins did as they were bidden, and ever since that time it has been the custom among the Navajos, for the man to shun the presence of his wife's mother.

Before they departed they said to the father. "There are few people on the earth now. How shall we repeople it? "Your mother," he replied, "knows that as well as I do. Go back to her and tell her to make men."

When they returned to their mother they told her the commands of the sun. She took some white corn, ground it, and laid it in a pile on the floor, then she made an equal quantity of meal of yellow corn and laid it in a separate pile. Next she took some dust from her right breast and put it into the white meal, and some dust from her left breast and put it into the yellow meal, and she moulded with water the white meal into the form of a man and the yellow meal into the form of a woman. She laid the images side by side, covered them with a

blanket to keep them warm, and watched them all night, singing and praying over them. Occasionally she raised the blanket and looked to see how her work progressed. When morning dawned, they received the breath of life, arose, went forth, and were thenceforward man and wife. The Navajos call the white corn "male corn," and the yellow "female corn," to this day.

In four days from her creation the woman bore a girl, in four days more a boy. In four days more these grew to maturity, and in another short period of four days found themselves parents. And so rapidly did the generations increase in these cycles of four days, that the earth was soon populous again, but not so populous as it had been.

Estsanaltehi built four large stone pueblos at the four corners of the world for all these people to live in, and she divided them into gentes and gave names to each division. But all the gentes of the Navajos did not then exist. After this she went as the sun had directed, to live in the distant west. When she went west she concluded to make some more men and women to increase the tribe. She made four of each sex from corn of different colors as she had done before, but this time she scratched the skin from her breasts to mix with the meal. She sent these eight to the Navajo country, and with them a bear, a puma and a wild-cat to hunt for them and protect them from their enemies. The people were the ancesters of the Navajo gentes.

The celebrated twins went to a place called Tho-hyĕt'-li, the junction of the two rivers in the valley of the San Juan, where their images may yet be seen reflected in the waters. They still dwell in a mountain cavern near this place.

Before *Estsanaltehi* departed from her western home she said: "I will always be a friend to the Navajos, and will send them everything that is for their good." Every year her promise is fulfilled; for is it not from the west that the snow comes in the winter, the warm thawing breezes in the spring, and the soft rains in the summer to nourish the corn in the valleys and the grass on the hills? Therefore, it is that when we are in need we pray to *Estsanaltehi*, the Goddess of the Sunset Land.

But first man and first woman were angry because they were banished to the east, and before they left they swore undying hatred and enmity to our people. And for this reason all evils come from the east, small-pox and other diseases, war, and the white intruder.

VILLAGE DEFENSES OR DEFENSIVE ARCHITECTURE IN AMERICA.

BY STEPHEN D. PEET.

The defensive structures of America form one of the most interesting subjects of study. The correlation of these works to the natural surroundings, the different grades of architecture exhibited in them, the similarity of their forms and characteristics in the different sections, and their manifest adaptation to the use intended, make them especially instructive.

We propose to consider these works in the present paper, but especially in their relation to the ancient village life.

We shall consider them, however, in their architectural character rather than according to their geographical location, and shall endeavor to show their analogies, and the various purposes and principles manifest in them wherever they are found, and so trace through them the habits and character of the people who erected them.

It might be easier to divide the prehistoric works of the continent according to geographical lines, and treat of the structures of each section separately. It might be easier even to classify them according to ethnical divisions, grouping all of the works of the different races together—the works of the Indians by themselves, those of the Moundbuilders by themselves, and those of the Pueblos also by themselves; but we have preferred to follow another method, and therefore would call attention to this particular class of works wherever they are found, and to the analogies which are presented in them.

We might say, however, that the geographical distribution of the prehistoric works is too well known to need any recapitulation. The correlation of those works to their natural surroundings has also been dwelt upon in former papers, and the different grades of society manifest in them have been previously studied.

We shall, therefore, merely refer to the fact that all of these points are more manifest in the defensive structures than in any other.

(1) The geographical distribution is similar to that of other structures, but with the same distribution there is more adaptation to the natural surroundings. They are conformed always to the spot on which they are built, their shape always partaking of the shape of the ground. The material is also that furnished by the locality, and is seldom carried any distance.

(2) The unity of plan is more manifest in the defensive works than in any other class. The residences or habitations of the pre-historic people varied according to the demands of the people, their domestic habits changing more than their military customs. The habitations, as we have seen, partook very much of the character of the soil and climate, and so varied with each section, those on the mountains differing from those in the valleys; and those on the coast differing from those in the interior. They varied also according to the mode of life of the people, the employment having great effect on the house architecture. In military structures, there was much less variety than in the domestic.

(3) The grades of society are also manifest in the defensive structures as well as in the village residences. The correlation between the works and the cultus of the people is very manifest in them. The architectural skill peculiar to the different grades of cultus is, in fact, more thoroughly displayed by the defenses than by any other class of structures, the military necessities often involving much outlay of labor and the exercise of strategic power.

In treating of the defensive works we have used the term "village defenses," for the very reason that village life is so often associated with them. It appears that in the prehistoric age the population was collected mainly in villages, and the defense of the villages was the chief thing undertaken by the natives. Military architecture is always distinguished by this peculiarity, both in historic and prehistoric times, that it protects people in masses, not as individuals. If society is not collected, it compels a concentration at certain points, especially in the times of danger, and then makes personal safety a part of the protection given to the public. In the prehistoric age, this concentration seemed to always prevail, for while there was much property outside of the village, the residences were mainly in the village enclosures. If village enclosures did not exist, the habitations were erected close together, and so the defense was comparatively easy.

The law of consanguinity and the communistic system made the village a very important factor of society, but the law of defense made it even more important still. The village was the unit, as it contained the gens, just as in modern society, the house is the unit, as it contains the family, the gens taking the place of the family in the prehistoric age.

The village was defended rather than the tribe, the provision for defense of the tribe being found in the defenses of the villages. The different members of the tribe were, to be sure, affiliated, and were interested in having a common defense,

Plate I.

and so a system of tribal defense was established, somewhat different and separate from that of the village, but the main defense was in the village, the walls or enclosures very rarely embracing more than a clan or a phratry, other clans and phratries being gathered in other enclosures.

In studying the prehistoric villages of America we have found that there were three or four methods of defense among them which are especially prominent, and to these methods we would call attention in this paper. These methods, it appears, were common in all parts of the country, and though the structures differ in many other respects, yet the same uses are manifest in them, and so the analogies between the different works appear.

The first method of defense to which we shall call attention is that which appears in the extensive system of signal and observatory stations which is everywhere manifest. We have already called attention to this system in connection with an article on the Emblematic Mounds, but we would here consider it more especially in its connection with village life, and therefore shall take the liberty to repeat a few of the cuts, using them to illustrate a new point. The fact is that a system of signals existed by which the villages could communicate, and among some of the races this system became very elaborate. The extent of this signal-system was, of course, dependent upon the extent of the tribe or the confederacy to which the villages belonged. In some tribes the signal system would extend over a whole state; in others it would be limited to the valley of a single river and in a few cases to a small river. Where confederacies existed, the signal system would extend over the whole grounds occupied by the confederacy.

The study of this signal system, then, should first engage our attention; after that, the provisions made for public defense in more limited localities, and the characteristics of each system. This, then, is the plan according to which we shall treat the subject. We shall first consider the signal system as it prevailed among all classes of prehistoric people. We shall next consider the combination of this system, with that of defensive enclosures, and shall also consider the location of the enclosures, especially as this location shows evidence of defense. The consideration of the village enclosure with the provisions made for defense in the very habitations, will form the conclusion of the paper.

I. Let us then consider the defense which the signal system gave to the villages. This system has been studied by others, and many things have been brought out which are new and of great importance. Here we acknowledge our indebtedness to

Plate II.

Col. Garrick Mallery, Dr. W. J. Hoffman, W. H. Holmes, and others. We present a few cuts taken from the last report of the Ethnological Bureau, which illustrate one method of signaling a village in the time of danger.

We call attention to Plate I., as illustrating the habits of the present tribes of Indians. Their custom is to station a sentinel at some high point where he could overlook the country, and where the approach of an enemy could easily be seen. By the sign-language the tidings can be given, and alarm be spread a great distance. The horsemen had a way of riding in a circle, so that they could be seen in all directions, and the sign was easily understood. Another method is to build fires upon prominent points, so that the smoke could be seen by day or the flame by night, and the warning be given in this way.

Plate II. illustrates the use of fire in signals. This particular cut shows the signal which was given to convey tidings of victory, but similar signals were given also as warnings. The natives have a method of signaling by fire, which is peculiar to themselves. The Dakotas, for instance, mix their combustibles so as to cause different shades of smoke; using dried grass for the lightest, and pine leaves for the darkest, and a mixture for intermediate shades. These with their manner of covering a fire with their blankets, so as to cause puffs of smoke, or of leaving the smoke to rise in unbroken columns, gave to them a variety of signals. Sometimes a bunch of grass was tied to an arrow and lighted, and shot into the air.* The tribes of the south-west signal by this means. The Aztecs signaled to each other by fire during the siege of the City of Mexico.

There are many signals among the tribes which are used in case of victory, and others for hunting purposes, and still others for purposes of recognition, but those for defense are the most important. We give a cut illustrating the method by which the natives now make signs to one another for the purpose of recognition (see Plate III.) The same custom of stationing sentinels on prominent points as look-out stations, has been long prevalent. Circles of stones are often found upon elevated points of land, where a good view of the surrounding country can be obtained. These circles are common upon the Upper Missouri, among the Dakotas in Arizona, among the Hualpai, among the Pah Utes of Nevada, in the Sho-Shonee county, in Wyoming, and in many other places of the far west. Frequently the ground around these watch stations is literally covered with flint chippings, as it was the

*See reports W. Hoffman, U. S. Geological Survey for 1877, page 474.

Plate III.

custom of the sentinels to spend their time in making bows and arrows while watching.

This signal system still prevails. It is more prevalent in an open country like the plateau of the west, and yet it probably prevailed in ancient times, in the region east of the mountains. Traces of it are seen among the Moundbuilders.

2. This leads us to a consideration of the signal system of the Moundbuilders. We have already referred to this, and have given cuts illustrating it.* The system prevailed among the Moundbuilders throughout the entire valley of the Mississippi, and observatory mounds are very common. They are to be distinguished, however, from another class, as this class was used for the purposes of defense, while another was used for the purpose of watching game.

The distinguishing points of the observatories designed for village defense are as follows:

(1) The signal station designed for defense is generally a mound located on a prominent point, in close proximity to an enclosure, and is so connected with other observatories that signals can be easily exchanged. On the other hand the outlook for a game-drive may have a more extensive prospect, but takes in the wide range of country without regard to the strategic points. To illustrate; the single isolated mound, called the Henderson mound, near Beloit, Wis.,† commands an extensive view in every direction, and just such a view as would be fitted for the discovery of buffalo herds, as they might come over distant hills and approach the river, the prairies offering no barrier to the sight. On the other hand the village enclosure at Aztalan, forty miles to the northward, on a branch of the same river, the Crawfish, has observatories or lookouts on all the hills surrounding.

Situated in the midst of the amphitheater of hills, this ancient capital was well defended. A cordon of signal stations surrounded it, while the lofty truncated pyramid in the enclosure commanded a view of every point. The signal stations on the hills commanded other views at a great distance, so that no enemy could come within miles of the spot without being seen. A similar system of outlooks may be seen surrounding the ancient capital at Newark, which was similarly situated in the midst of a natural amphitheater, and the observatories were located on the hills surrounding. It has been stated also that observatory mounds are located on all the hills in this region, forming lines between this center and other prominent though distant points. A line has been partially traced from

*See AMERICAN ANTIQUARIAN, Vol. III., No. 2.

†See Article on Moundbuilders, in AMERICAN ANTIQUARIAN, Vol. II., No. 3, also Vol. III., No. 2.

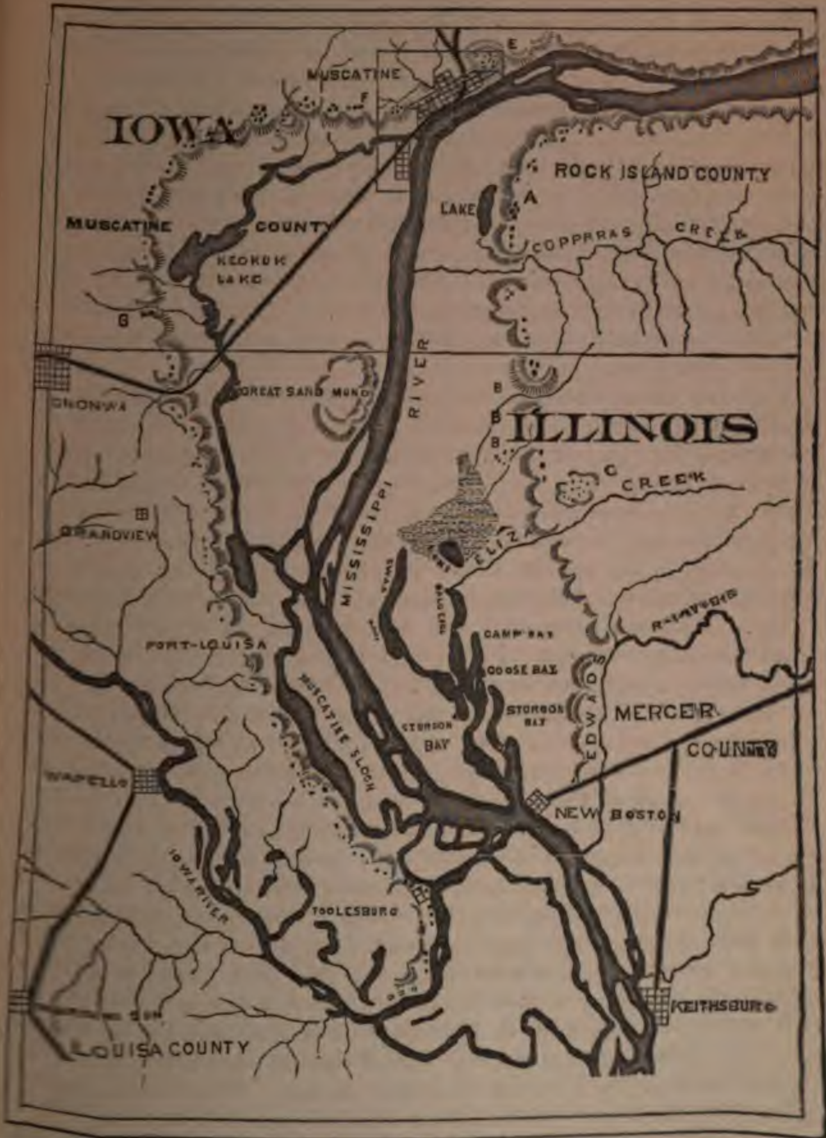


Plate IV.

Mt. Vernon to Newark, the large mound in the cemetery at Mt. Vernon being one of the series.

(2.) The combination of signal stations or observatories with beacons is evidence of a village defense. There are traces of fires on many of the lookout mounds. Many of the supposed beacons may indeed have been burial places, and it would appear as if the burial mounds were sometimes used as watch stations, or as beacons. We give here a map of the mounds at Muscatine to illustrate this point. It will be seen from this that the beacons were located all along the banks of the river, making a complete cordon of signal stations. Many of the mounds on this map have been opened and prove to be burial mounds, but their location on the bluffs surrounding the ancient lake illustrates not only the use of burial mounds for beacons or signals, but also shows how prominently situated the villages were.

(3.) Another peculiarity of the observatories for defense is, that they are some times placed upon very high points, and command the view of other points at a great distance. This idea is given by Dr. Lapham, in connection with Lapham's Peak, a high knoll in Washington county, which commands a very extensive prospect for miles in every direction. Dr. J. W. Phené, in his visit to this country recognized the same in connection with the great serpent mound in Adams county, Ohio. He states that this work is located on an eminence, from which a view can be had of Lookout mountain, in Hancock county, twenty miles away. The same has been observed by the author in connection with the works at Circleville. The great mound at Circleville was sixty feet high, and commanded a view of Lookout mountain, twelve miles to the south of it. On this mountain an observatory was located which commanded a view of the works at Hopeton, situated just below, and the works at Chillicothe, twenty miles to the south of it. It is maintained by E. G. Squiers, that such a series of lofty observatories extend across the whole States of Ohio, of Indiana and Illinois, the Grave creek mound on the east, the great mound at Cahokia on the west, and the works in Ohio filling up the line. Other persons who have made a study of the works along the Ohio river, maintain that there is a series of signal stations running up the branches of the rivers, such as the Scioto, the Great and Little Miami, the Wabash, and other rivers, and that all the prominent works through Ohio and Indiana are connected by a line of observatories. This net-work of signal stations is interesting if studied in connection with the village enclosures; as there are many scattered throughout this whole region.

(4) Beacon fires were frequently lighted on the walls of the defensive enclosures, and many elevated points within village enclosures were also used for the purpose of signaling distant places, so that we cannot confine the signal system to mounds or to isolated stations, though as a general rule the signal system was outside and supplementary to the village enclosure.

We would refer here to the fact that in the ancient fortification at Bourneville, O., there was a rocky summit which overlooked a great valley below, on which traces of beacon fires have been discovered, and that upon the walls of the enclosure at Ft. Ancient traces of fire have also been discovered.

On the other hand there are many villages where the location of some lofty point near by would give great opportunity for exchanging signals either by fire or smoke for great distances. Many such points are seen in different parts of the country.

Messrs. Squiers and Davis mention the fact that between Chillicothe and Columbus, in Ohio, not far from twenty of these points can be selected, the stations so placed in reference to each other that it is believed that signals of fire might be transmitted in a few minutes.

On a hill opposite Chillicothe, nearly 600 feet in height, the loftiest in the entire region, one of these signal mounds is placed. A fire built upon this would be distinctly visible for fifteen or twenty miles up, and an equal distance down the valley of the Scioto, including in its range the Circleville works, twenty miles distant, as also for a long way up the broad valleys of the two Paint Creeks, both of which abound in the remains of ancient villages. In the map of the Miami valley a similar position may be observed, and similar mounds occur along the Wabash, the Illinois, and the upper Mississippi, showing how extensive this signal system was, at the same time showing how intimately connected it was with village residence. The author has also, during the preparation of this paper, discovered the sites of ancient villages near the lofty eminences called the Platte mounds, in Wisconsin, and the conviction has grown with the study of the works in all sections of the country that the signal system was closely connected with all the prominent points, and that villages were frequently located near these points for the very purpose of securing the defense offered by this system.

II. We turn next to an entirely different class of ancient defenses. It is a class which consisted in the combination of lookout stations and defensive enclosures. We shall mention three varieties.

1. There are many fortifications located on the heights of ground which command a view of one another, and which seem

to combine the character of observatories and defensive enclosures. Many such have been seen and described in the northern part of Ohio.* Col. C. Whittelsey has described some of these. They are situated at Conneaut, at Ashtabula, at Painesville, at Cleveland, and various places on the Cuyahoga river, near Sandusky, on the Sandusky river, and at many points along the valleys of these different streams which run into Lake Erie. We call attention to these works, as they illustrate the number and situation of the works of the later Indians, and also show the difference between their works and those of the Moundbuilders.

It would seem that a perfect network of these defenses was spread over the northern part of the State. We give a cut of two forts, one at Newburgh, Ohio, and the other eight miles from Cleveland, on the Cuyahoga River. It will be seen from these, that the defense consisted mainly in the location. The walls were erected merely to supplement the natural defense which the rocky precipices and the isolated points of land would furnish. But with these inclosures there was also the combination of the outlook. Dr. Hill, of Ashland, O., has given this idea in his description of his works which are situated in Ashland county. He says, that here the forts are within sight of one another through the whole length of the river, those prominent points or tongues of land, which would give distant views having been chosen for the erection of the forts. It should be said that this part of Ohio abounds with prominent bluffs, whose precipitous heights furnish excellent defense. The Huron Shale is here worn down by the action of water, leaving the terraces which project out in scalloped form, and which make a series of level platforms, while the circuitous valleys below make an

*See tract No. 41, Western Reserve and Northern Ohio Historical Society, Ancient Earthworks. See also, Ancient Earth-Forts of the Cuyahoga valley, Ohio, Cleveland: 1871. See History of Ashland county, by Dr. [illegible] Hill. See, also, description of Mound-builders' works in Ashtabula county, by Rev. S. D. Peet, in William's History of Ashtabula county.

open territory between them, and thus fortifications could be easily erected, and a complete system of signal stations be established along the river.

2. In some places, as Conneaut, the fortifications were attended with signal mounds which connected them, and so a system of outlooks was established by the two methods. This system of defense is very common in the State of New York. Here there are remains of stockades, the stockades having been placed on the summits of the hills where an extensive outlook could be had. These stockades may have been connected so that a complete system of signals could be conducted across the country, and the natives defend one another by the combination of the outlook with the enclosure. These ancient stockades have been described by E. G. Squier, but the connection between them has not been traced.

It is a fact, however, that this State was the seat of a great confederacy, that of the Iroquois, and this renders it probable that these prehistoric forts were connected by a signal system. It is known that the Iroquois had a complete military organization; their central capital was at Onondaga, but there were trails running from this point throughout the whole State, and the villages were connected by the trails. It is known also that the Iroquois had stockades, and that they defended themselves against the whites by these fortifications. Some of the sites of the Iroquois forts have been identified. The boundaries of the different tribes are also known. Under such an organization the signal system would come into use, and we can imagine how completely the State was protected by the combined watchfulness of the people with the defenses offered by these stockade forts.

There are descriptions of the defenses of the Iroquois which enable us to understand the military architecture of the prehistoric races. We give a cut taken from the Documentary History of New York, which illustrates the subject. It is a picture of a village of the Onondagas, which was attacked by Champlain in 1615. "The village was enclosed by strong quadruple palisades of large timber, thirty feet high, interlocked the one with the other, with an interval of not more than a half of a foot between them, with galleries in the form of parapets, defended with double pieces of timber, proof against our arquebuses, and on one side they had a pond with a never-failing supply of water from which proceeded a number of gutters, which they had laid along the intermediate space, throwing the water without and rendering it effectual inside for the purpose of extinguishing fire.

The picture illustrates several points. (1) The villages were frequently surrounded by stockades, the houses within the enclosure being arranged in blocks. (2) The location of the enclosure was convenient to water, and attended with natural defenses. There is no evidence of the signal system in this case, and the use of water in the manner described is uncommon among the northern races, though in the southern states there are many cases where the villages were surrounded by artificial ditches and ponds of water. (3) The manner of constructing the wall which surrounded the defensive village enclosures. We call special attention to the elevated platform or parapet, as it may possibly help us to understand the manner in which the villages of the Moundbuilders were defended. If we substitute for this timber wall a solid earthwork, making the top of the earth wall a platform or parapet, and place the barricade on the outside, we shall have a defense very similar to this of the Iroquois. The combination of stockade with an earth wall would thus make an admirable defense for a village, and with much less expense of labor and time than if it were wholly of timber.

2. We turn now to the Moundbuilders' works. The same system of erecting military inclosures and connecting them by lookout stations, seems to have prevailed among them, which existed among the later Indians. One of the most marked illustrations of it is given in connection with the work at Fort Ancient. Here we discover an enclosure capable of holding an extensive settlement, the walls being nearly four miles and a-half in extent, and the area of each part of the enclosure being in the neighborhood of eighty acres. We see also an outwork, consisting of a covered way, which runs from the enclosure toward the east. This outwork is distinguished by one feature: At the end of the covered way is an observatory mound. The supposition is that this observatory was the place where a watchman was stationed, but that the distance was so great that the communication might be cut off, and that the parallel walls were constructed so as to give protection to the sentinel and to keep up a communication. The country about the enclosure, especially that to the east, is open prairie, and has no natural defense. The wall would be the only defense. This wall is 1,350 feet in length. The height of these walls is not known, as the cultivation of the soil has nearly obliterated it. Two high mounds are found between the enclosure and the covered way, making a double opening to the enclosure, and, at the same time, giving an outlook from this point. The enclosure itself is remarkably well adapted to the purposes of defense.

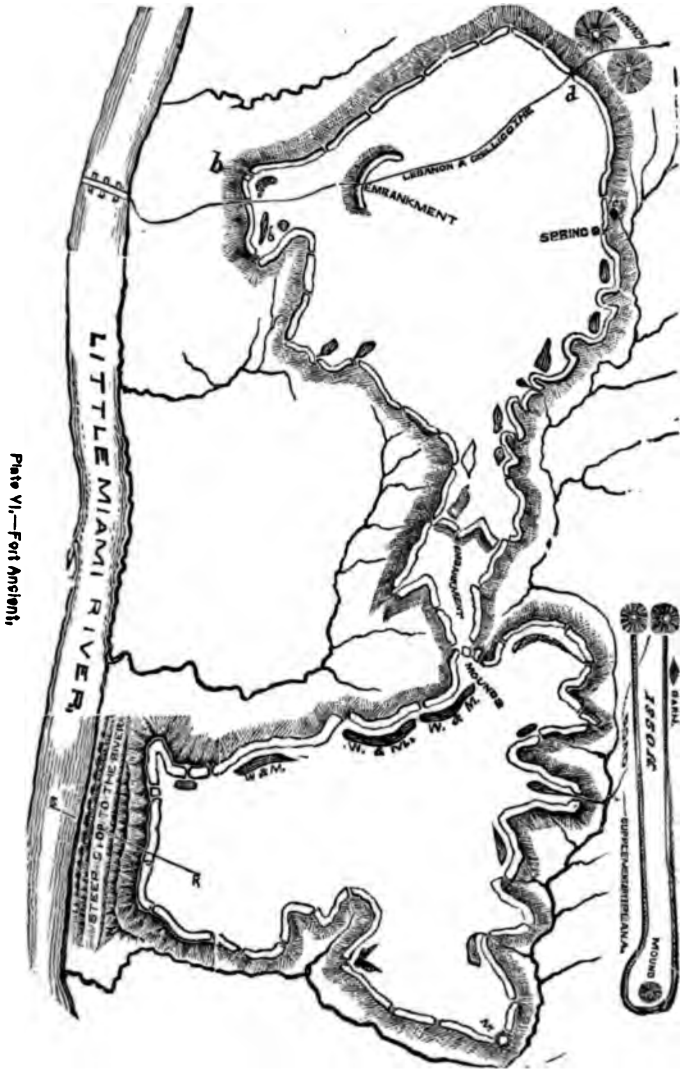


Plate VI.—Fort Ancient.

Explanation of the Cut.—The unshaded lines represent the walls, the shaded lines the bluff, the dark lines the ditches inside of the walls. The parallel lines "supplementary" properly should extend from the mounds at *d* to the corner of the page, representing a north-east direction. The serpent symbol begins between "embankments and mounds," and extends around the lower enclosure.

(1.) In the first place, its situation is on the top of a promontory, defended by two ravines, which sweep around it to either side, forming precipitous banks, in some places 200 feet high. The ravines are occupied by small streams, with the Miami river close by, below the works on the west side. The wall of the fort is built on the very verge of the bluffs, overlooking the ravines meandering around the spot, and reëntering to pass the heads of the gullies, and is itself very circuitous. The embankment in several places is carried down into ravines at an angle of 30 degrees, from fifty to one hundred feet in length, guarding the sides of the ravines and then crossing the streamlet at the bottom. The embankments may still be traced to within seven or eight feet of the stream.

(2.) On the verge of the bluff, overlooking the river, there are three parallel terraces. It has been suggested that these were designed as stations, from which to annoy an enemy passing in boats along the river.

(3.) At all the more accessible points, the defenses are of the greatest solidity and strength. The average height of the embankment is between nine and ten feet. In places, however, it is no less than twenty feet. At the spot where the State road ascends the hill and where the decline is most gentle, the embankment is fourteen feet high and sixty feet base. Near this point, at a place where a stream makes an opening in the wall is a crescent embankment which is so built as to protect the opening, and make a barrier against approach. The wall about the large enclosure is perfctly level on the top, and is from six to eight feet in width, the angles and sides being peculiarly well formed and clean cut, giving to the whole structure the appearance of great finish and of much skill. There are over seventy gateways or openings in the embankment, which were originally about eight or ten feet in width. The object of so many gateways is unknown, but it is supposed that they were once occupied by block houses or bastions, composed of timber which has long since decayed. There is no continuous ditch, but the earth had been dug from convenient pits, which are still quite deep and filled with water. These are on the inside of the wall. The wall is composed of tough clay, without stones, except in a few places, but is remarkably well preserved. The slope of the wall is from 35 to 45 degrees, but in the lower part of the Peninsula the wall conforms closely to the shape of the land.

(4.) There are two grand divisions to the fort, connected with one another by a long and narrow passage, the wall between the two enclosures being nearly parallel, but conform to the shape of the ground; across this narrow neck there is car-

ried a wall, as if to prevent the further progress of an enemy if either of the principal enclosures were carried. Two large mounds are also built at the narrowest points, and between them was a paved way, as if some special arrangement for a gateway or entrance had once existed. The combination of the signal system with the fortified enclosure are manifest on all four sides, *i. e.*, on the northeast side, with the two mounds in the covered way; on the northwest side, in the walls themselves; in the southwest side, by terraces and by the walls which here command an extensive view; and in the southeast side, by a mound. This mound was erected at the extreme southeast point of the inclosure, as if for a lookout station on that side.

(5.) Abundant provision was made for the supply of water. The ditches, on the inside of the walls, would always contain more or less surface water. The springs in the enclosure would furnish a continual supply.

(6.) The author thinks that he has recognized in the shape of the wall, especially of the walls which surround the smaller inclosure, the form of a serpent. These walls are certainly serpentine in their course, and are so conformed to the roll of land, that their form gives rise to the conception. This may be merely accidental and not intended to embody the serpent symbol, but it is remarkable that the resemblance should have struck the eyes plainly at the very first visit to the place.

3. The Pueblos had the same system of defense which we have referred to, consisting of the combination of an enclosure with a lookout station. The combined system is here also connected with the village residences. This system helps us to understand many of the structures which were prominent among the cliff dwellers. There are watch-towers associated with the cliff dwellings which illustrate the point. These towers are generally situated on the summit of the cliff above the dwellings. They are described as having extensive outlooks, and yet they are so connected with the dwellings that communication could not be cut off. It has been supposed that these towers were estufas, and that they were used for religious purposes. If this were the case, then it is only another instance where the military and religious uses were combined in the same structure. The analogies between the Moundbuilders' works and the Cliff-dwellers, in this respect, are quite striking. To see this, we have only to compare the mound and circular inclosure at the end of the curved way at Fort Ancient with the circular tower above the cliff in the ruins in the Montezuma Canon (see the cut, fig. 1, on next page).

There are other towers among the cliff-dwellings which served as look-out stations or observatories. Two such towns have been described by W. H. Holmes.* These were situated on the Mesa above the cliff, a portion of the towers being left open on the cliff side. The towns were placed immediately above the caves which were excavated in the cliff-wall, and which were probably used as dwelling-places, while the towns served as fortresses, look-out stations, council cham-

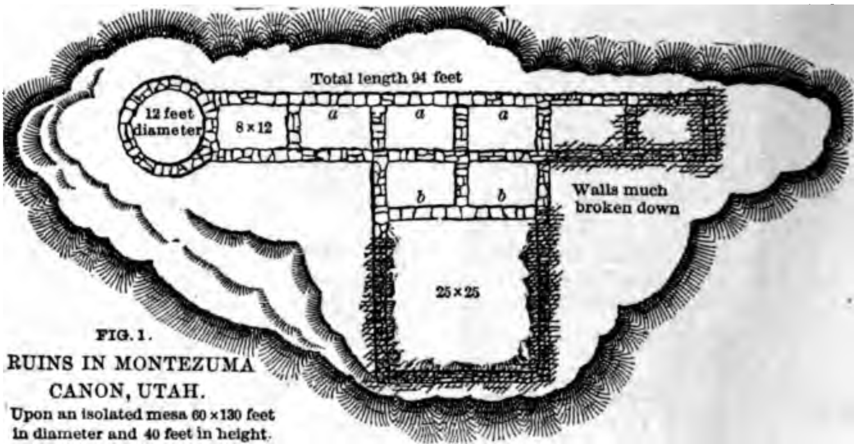


FIG. 1.
RUINS IN MONTEZUMA CANON, UTAH.
Upon an isolated mesa 60×130 feet in diameter and 40 feet in height.

bers and places of worship. Being on the borders of the Mesa, the strong outside walls were found necessary to protect against incursions from that direction. A square tower on the McElmo illustrates the same point. This building surmounts a rocky pedestal, and covers the whole surface of the rock. The windows open toward the north and east, directions from which the enemy, according to tradition, came. Another on Epsom creek, similarly situated, illustrates the same point. These towers are all close by the residences of the cliff-dwellers, and show that they not only depend upon the lofty isolation of their dwellings, which were perched 1,000 feet high on the side of the cliff, but also on the signal system, which would give them tidings of the approach of an enemy.

III. We come now to consider the most common method of defense known to the prehistoric race of America. This consisted in the combination of natural defense, with the works of architecture, the architecture being only supplementary to the defense of nature. It is a singular fact that the prehistoric races never attained to the modern method of defending ordi-

*See cut in AMERICAN ANTIQUARIAN, Vol. IV., No. 3.

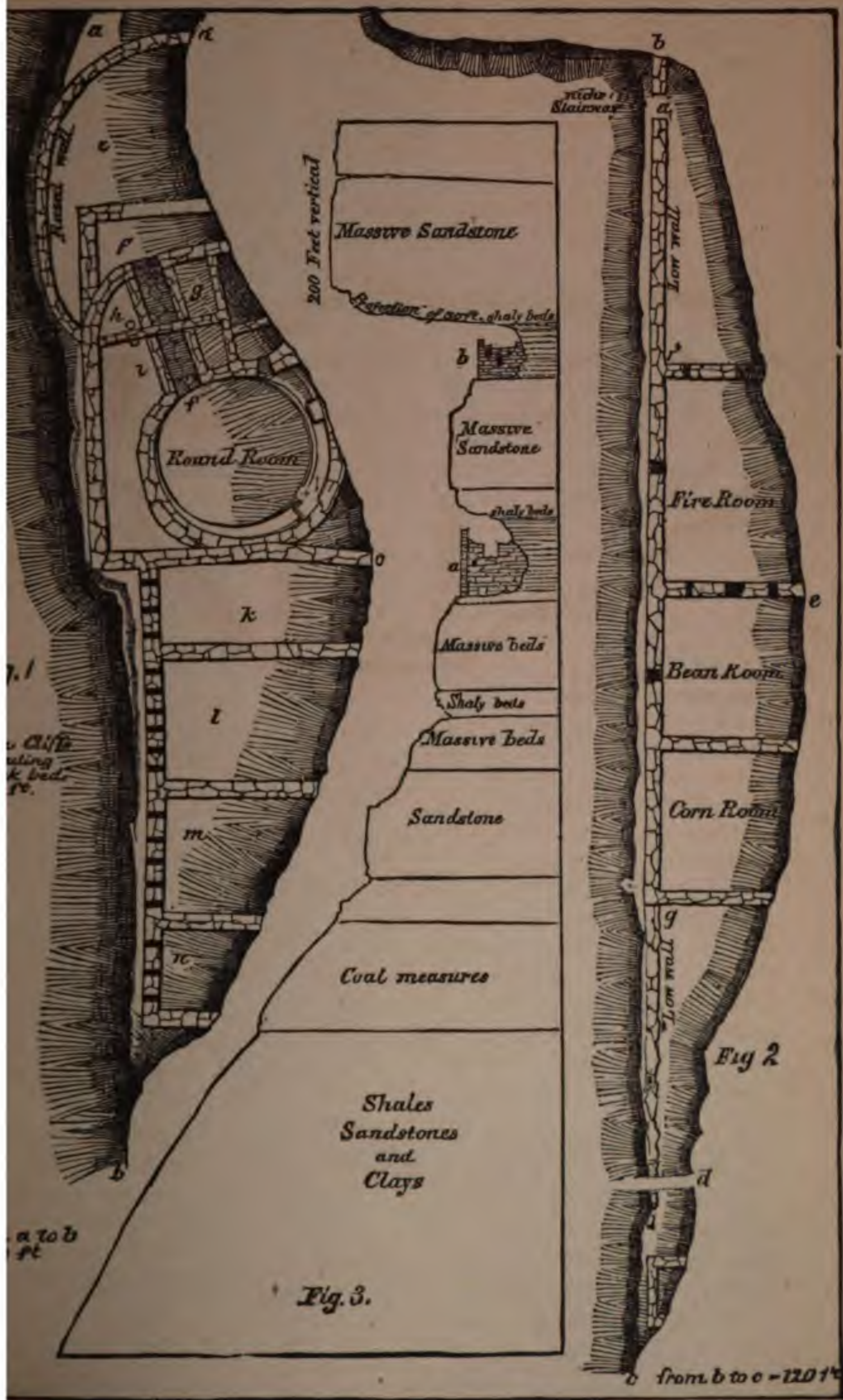


Plate VII.

nary places by military works, but they always chose strong points of nature and erected their military works upon them. There are, to be sure, many villages located in agricultural plains, which are protected by walls and enclosures; but the real defenses of the same people are generally found in the vicinity in the shape of strongholds, and the supposition is that the resort was to them in cases of extremity. The village inclosures have already been referred to, and their location with a view to agricultural advantages there spoken of. We are now treating of village defenses as such, and not village inclosures.

This method of taking advantage of the locality and adding to it an artificial defense was common with all the races. We see it among the Indians of the Atlantic coast, as their stockades were always on bluffs or islands, which were naturally impregnable. We see it also among the Moundbuilders, as their forts, so called, are always well located for defense. We see it also among the Pueblos and Cliff-dwellers, and even among the civilized races of Mexico. We would call attention here to the ancient Mexicans, for the idea is common, that they had attained to almost a modern skill in defense, and to modern methods of warfare. The history of the City of Mexico is remarkable, and illustrates this point; the history shows that the Aztecs were originally a weak tribe, but that they gained their superiority by the advantages of their location as a means of defense. They were crowded from the shores of the lake by neighboring tribes. They dug trenches and opened channels through the ground which they occupied, surrounding it by water, turning the channel of the streams which came into the lake, for this purpose; they made a long causeway, which connected the island with the mainland, leaving an occasional slough, covered by bridges, which were capable of quick removal; they divided their city into four quarters; erected their immense teocalli in the center, and then from this position they made their raids on the neighboring tribes. Their superiority consisted not in their valor, nor in their military organization, nor in their generalship, but in the invulnerable position of their capital. Montezuma did not prove to be a hero nor a warrior when the Spaniards came, and there is no evidence that he ever had great military skill. Human sacrifices and the custom of taking captives in war, made his people dread and fear him. There were many others more advanced in skill and culture than the Mexicans.

The defenses of the Mexicans outside of their city, were generally of the same character as those of other native races. They combined the advantage of natural location with artificial works. Even their far-famed towers, such as the pyramids of

Cholula, at Xochicalco, were of this character. They combined with the advantage of nature the additions of architecture and were used as places of defense. There were also the additional features to these pyramids, that they were regarded as places of worship, and were at the same time immense outlooks or observation.

The hill of flowers, or Xochicalco, is mentioned as a wonderful structure, and as giving evidence of the marvelous advance of the Mexicans in architecture and military skill. The idea is not common that these pyramids were designed for defense, but the combination of an outlook with an elevated, isolated position, gives to us a thought. It is possible that these were really fortifications, but fortifications built on the same plan as the Pueblo of New Mexico, the elevation of the pyramid giving the special advantage for defense. It is after all a somewhat cowardly method of defense, but one that corresponds with the character of the people. Retreat to the summit of the platform, like retreat to the cliff-dwellers, might secure safety for the time, but did not rid the country of an enemy. In the last extremity, a modern, civilized people would resort to it, but with the strange mode of warfare, prevalent among the native races, it was a common method. The sudden raids and fierce onsets, which resulted in immediate victory or entire defeat, would under this mode of defense, be almost a necessity. There was no organized or disciplined army, such as exists among other civilized races. There was really no military or strategic skill among them. Their fighting was like that of a mob. Vast numbers were massed together, but they crowded upon one another, and no military movements and no generalship existed among them.

Rapid mobilization was the peculiarity of the army, great forces without trains, or with trains carrying the simplest equipments were common. War was conducted by sudden forays or raids, but no regular campaigns. Deeds of valor on the battle field were common, but there was no skill in retreat. Rapid pursuit followed defeat. The vanquished fled to the Pueblo, and the question was, which would reach the Pueblo first.

In general, the conception of the tribes of Mexico in fortifying any particular place, amounted to raising it above the surrounding level and crowning the area with a parapet of stone or wood. As a principal means of protection they resorted to elevation. In some cases several tiers of parapets covered one side of the mountain declivity. The dwellings of the people rested on the highest terrace, but the huts of the warriors were erected on the outermost defenses.

There was also, in connection with this method of defense, the religious idea. The teocalli were both temples and towers of defense. "The great majority of the Indian towns of Mexico were open places without circumvallations or enclosures, and without any other strong holds than their massive communal dwelling and their pyramidal temples or teocalli.†" Added to these defensive means of their architecture, the recourses of a strong, natural position were sought for, and those tribes proved to be most powerful, which secured the strongest position.

We find the most singular illustration of this method of defense, however, among the Cliff-dwellers, and to these we would call especial attention. The Pueblos and the Cliff-dwellers owed their security to the same methods of defense. The positions which the villagers secured were of three kinds: (1) The cliffs. (2) High precipitous ridges. (3) The Mesas, which were somewhat isolated and surrounded by valleys. There were locations on the Mesas, where several villages could be grouped, and in these one Pueblo would aid another. The least defensible were those in the valleys or plains where there were no opportunities of outlook and no protection from nature.

It is a tradition that the Cliff-dwellers dwelt originally in villages like other Pueblos, but the incursions of fierce tribes like the Arapahoes and the Comanches, drove them from their original seats. They fled to the fastnesses of the cliffs, and there made homes for themselves, until driven out by starvation, as their enemy kept them in a continual siege, occupying the valleys below for entire seasons, and compelling the inhabitants of the cliff to flee over the mesas to distant places. This is rendered plausible by the resemblance of many of the cliff-dwellings to the Pueblos. The village system of architecture is manifest here, with the same features as among the terraced buildings elsewhere, with the exception of the terraces. The communistic system at least, prevailed here.

a. The arrangement of the rooms shows this. These are crowded close together into the shelter of the caves, and are divided by walls, the compartments being wherever it is possible, two storied, and the most of them without any opening for entrance except from the top, the wall being scaled by ladders, as in the case of the Pueblos (see Plate VII., figs. 1 & 2.)

b. The size and shape of the rooms (Fig 1—*k*, *l*, *m*), is another indication. The rooms in the Pueblos, are generally 9 x 20, and 9 feet high; those of the Cliff-dwellers are much smaller, some of them not over 6 x 8 in size. They are generally square, and erected with flat stone, the material being taken from the sides of the cliff.

Plate VIII.

A front view of the Cliff-dwellers' village given in Plate VII. is shown in Plate VIII. It is described as situated 800 feet above the river, and so hidden away in the dark recesses, and so very like the surrounding cliffs in color that it was difficult to detect it. The lower house was accessible by the sloping cliff, but the upper store houses could only be reached by a passage up the cliff near one end at the point marked *a* in the ground plan. It shows how thoroughly protected these dwellings were.

c. There are many spaces among the cliff-dwellings which resemble the open court or Plaza, showing that the play-ground and the place of social resort was sought for by them, and, where it was possible, secured. The houses were erected on the edges of the rock, with the open space within, between the houses and sides of the cliff. (Fig. 1, *e*, Plate VII.)

Fig 1.

d. The presence of Estufas is another point. (Fig. 1, round room). The circular enclosures, found amid the square rooms of these high-perched villages show how essential the estufa was to village residence. If estufas could not be built on the level with the dwellings, they were placed just above on the edge of the cliff above, but closely connected with the village.

e. The store-houses (Fig. 2—also Fig. 3, *b*), found among the cliff-dwellings show that the communistic system prevailed here. Apartments in which have been found remains of corn and other products, are common. These apartments are, some of them, too small for residence, but would answer for store-houses, corresponding to the lower rooms in the Pueblos. The defense of these villages was in the situation. Mr. W. H. Jackson, who first discovered them and furnished an account of them, describes them as perched so high and hidden away so securely, as to be almost invisible to the naked eye, requiring strong telescopes to make out their outlines. Some of them were, at least, 1,000 feet above the valley, and were reached by the most difficult climbing of the precipitous sides of the cliff. Steps were hewn in the sides of the rock in places, but in other places, the dwellings could only be approached by ladders. Isolated dwellings are found among the cliffs, but generally the village was as compact as that of the Pueblos. The defense was in the height of the cliff and in the strength of the wall erected on the edge. We give cuts to represent the peculiarities of the cliff-dwellings. The size and shape of the apartments may be seen from the cuts.

A method of walling up cave fronts is described by W. H. Holmes. Cuts of two of them are given here, as they illustrate better than any description (fig. 1 and fig. 5). The three doorways open into as many small apartments, and these are connected by small passage ways (see fig. 1).

also illustrates the same point, and shows how the
rere provided with the estufa when there was not
ity of having the two on the same level. The cut
; how the estufas were protected by the walls even in
:es where no more than one apartment was erected
ne niche. Figure 1, Plate VII., illustrates the combi-
the estufa with the dwelling apartments and store-
ıd play grounds, or places of assembly. A wall and
assageway, *f f*, of solid masonry leads from the outer
to the estufa. This passageway is but twenty-two
;h and thirty wide, by twenty feet long, and was cal-
› prevent intrusion from the profane, as any one who
: must crawl in the most abject manner possible to
.s in the upper
Fig. 2, shows
storing of pro-
as also connected
apartments for
In this case the
ms are above in-
below the dwell-
nents. The cliff
ifteen or twenty
ɔnd the house,
ʒ both the upper
· apartments. A
of small niches
: rock connected
The sloping bluff
:ss to the water
The position of
s one of incom-
:curity both from
nd the elements.

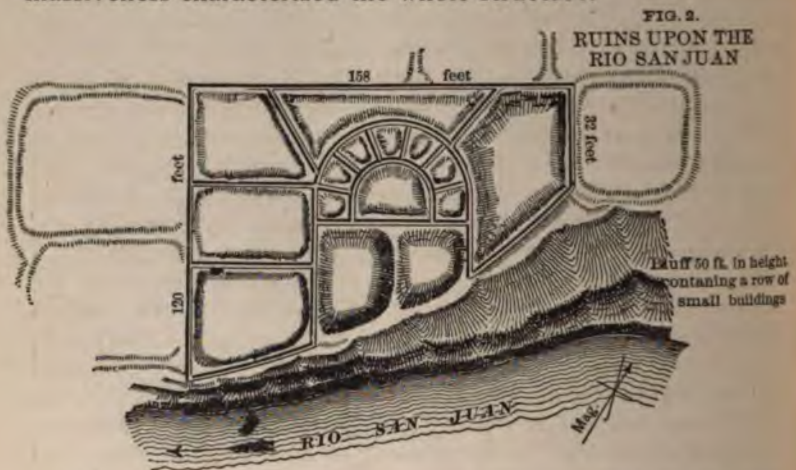
Fig. 5.

ar village, but on a small scale, is seen in the Ruin
San Juan river. The ground plan in the figure
analogy between the Cliff-dwellers' village and the
see cut). The site of this village can hardly have been
· its defensive advantages, as it is situated below the
ıe bank of the river. It would probably come under
ɔf an agricultural village rather than a Cliff-dwellers'
ut is referred to, to show the analogy.
ıcription of this ruin is given by W. H. Jackson.*
the top of a bench about fifty feet above the river,
·neath the bluff, are the ruins of a quadrangular

rt in United States Geological Survey of the Territories, F. V. Hayden in
5.

structure of peculiar design. It is arranged at right angles to the river. In the center of the building, looking out upon the river, is an open space 75 feet wide and 40 feet in depth. We judged it to have been an open court, because there was not the vestige of a wall in front. Back of this court is a series of seven apartments, arranged around a semi-circular space which is 45 feet across its greatest diameter, each one being 15 feet in length and the same in width. On the sides of these were other apartments averaging 40 and 45 feet square. Extreme massiveness characterized the whole structure."

FIG. 2.
RUINS UPON THE RIO SAN JUAN



The cliff-dwellings are not the only ones which have their position in strong points for defense. The Pueblos of New Mexico are also noted for this. Dr. Oscar Loew has described the ruins of two Pueblos, in the province of Jemez. They are situated upon a narrow ridge or mesa, which is nearly 750 feet high, and nearly perpendicular. Upon this ridge, near frightful precipices, are the ruins of eighty houses, partly in parallel rows, partly in squares, and partly perched between the over-hanging rocks, the rims and surfaces of which formed the walls of the rooms. Nearly every house had one story and two rooms. The village was only approachable by two narrow, steep trails. The view from the mesa is picturesque and imposing in the extreme.

In the province of Aztlan, are ruins of former fortified towns. Some of the fortified structures had as many as 500 rooms in them. Prof. E. D. Cope has called attention to a village of thirty houses, extending along the narrow crest of a hog-back or ridge, in Northwestern New Mexico. One town he calls Cristine. He says that they were doubtless perched on these high eminences for defense, but they were conveniently

located near a perennial stream, which enabled them to carry on a system of agriculture. He says also that the number of buildings in a square mile of the region is equal to, if not greater, than the number now existing in the most densely populated rural districts of Pennsylvania or New Jersey. The inhabitants of the rock houses necessarily abandoned the communal type of building, and considered only the capacity of their buildings for defense. Mr. Cope also mentions other buildings erected on the summits of knots of land, or circular conic hills. These are only fifteen to twenty feet in diameter, were probably either a lookout station or towers connected with other buildings which are in ruins. Dr. Yarrow has described the ruins of an ancient village, in the valley of the Rio Chaca, and mentions six or eight other towns in the vicinity which, together, would contain a population of two or three thousand. The mesa is 250 feet above the level. The front of it is a sheer precipice, allowing no ingress to the town, capable of being defended against thousands, by a dozen resolute men, with no better weapons than rocks and stones.

3d. The seven cities of Cibola have been described by many. Col. Simpson, who was the first person who visited the region and discovered the remarkable ruins of the buildings of the Pueblos, considers that these cities were identical with the Pueblo of the Zunis. This has been disputed, but the descriptions help us to understand the nature of the defenses. The number, seven, has been used to prove the identity, but there are several localities where seven villages may be found in close proximity. Dr. Loew says that the seven villages belong to Tehue, the same number existed among the Moquis. There is no doubt that the Spaniards, in their march under Coronado, in 1541, found many fortified towns. In fact, the villages in all the canons of this section, the San Juan, Las Animas Jemez, Canon Chaco, Rio Mancos, and others, have fortified Pueblos, and give evidence of having been densely populated. The description given by the historians of that early date is valuable, because it will apply to nearly all the Pueblos of the region. It may be interesting to identify the exact spot, but the villages are very similar in their characteristics, the main difference being in their adaptation to the particular spot in which they are located. The defense is mainly in the situation.

IV. We take up briefly before we close this paper one other method of defending their villages used by the prehistoric inhabitants, namely, that offered by the religious system prevalent. This part of our subject requires a separate chapter, but we shall refer to it here, especially as it is so closely

connected with the defensive structures, and cannot be understood except as it is associated both with village residences and village defense.

The combination of the religious with the military system has not been sufficiently studied to be understood, but the specimens given are worthy of consideration. It seems to have prevailed among the Moundbuilders more than any where else. It also existed among the Pueblos or the Mexicans. The History of the Conquest of Mexico reveal the fact that the religious element was there mingled with the defense of the people. The resort of the people was to the temples, and the great Sun-God was appealed to for protection. It was with great amazement that the people saw the idols of their divinities thrust down from their height, and when the idea at last seized upon them, that both the power of their rulers and the protection of their gods had been withdrawn, the result was that despair spread throughout the nation, and their destruction became complete.

(1) This point is also worthy of special notice in connection with observatories. There are a few very remarkable works throughout Ohio, which bear the character of effigy mounds. We refer to the Alligator mound at Newark, and the great Serpent in Adams county. It appears that the Alligator mound in Newark overlooked the extensive system of village enclosures, and that its position also made it a prominent object for the whole region about. There are signs also of an altar near the Alligator, where fire was evidently kept alive. The same thing has been noticed by the author in connection with effigy mounds. One such case may be seen on the east side of Lake Wingra, near Madison, Wis. All of these sacrificial places are on high points, and seem to partake of the nature of observatories as well as sacrificial altars.

We give a cut of the Alligator Mound to illustrate this point. The mound is situated on a hill which overlooks the whole valley where the ancient village at Newark is situated. There are signal mounds on all the hills surrounding the valley, and the extensive works are situated in the valley below. The impression given by a visit to this lofty spot where the effigy is seen is, that here the great Divinity of the people resided, and here the beacon fires were lighted which would illuminate the whole horizon. On this spot the sacrifices would be offered. But the idea of defense may prove as prominent as that of worship, for the monster certainly overlooked the whole scene, and it is more than probable that it was regarded as the great Guardian Divinity of the place.

These sacrificial mounds may not have been observatories, in a strict sense of the word, for they seem to have had a religious object rather than a military. We refer to them here, however, for they give evidence that the religious element was mingled with the idea of defense. This we believe to have been one object, for the location of the sacrificial mounds, and especially the shape of the animal effigy, would indicate that a divinity was thus embodied, and that the idea was prevalent among the people that the guardian spirit was in the effigy and haunted the locality. The Animism which prevailed

among the people would lead them to associate the two ideas, the Tutelar divinity being both an object of worship and a protecting power, the sacrifice appeasing it, and the effigy symbolizing it. These effigies were isolated as if the divinity dwelt in lonely grandeur, and yet the outlook over all the region, and especially over the villages which were located beneath them, indicates that the feeling of protection was strong with the natives, their view of the height on which was erected the symbol of their divinity being a constant reminder of the protective presence.*

(2) The point is also worthy of attention in connection with the enclosures. We have referred to the serpent symbol supposed by us to be embodied in the walls of Fort Ancient. This has been doubted.

Other forts, however, have similar walls surrounding them. One such is depicted by Squier and Davis.† A fortification is situated on the Great Miami, four miles from Hamilton, in

*See ANTIQUARIAN, Vol. IV., No. 4.

†See plate II., figures 1 and 2, on page 217 of AMERICAN ANTIQUARIAN, Vol. IV., No. 3.

Butler county. The walls curve inwardly, at the gateway on the land side, forming a semi-circle or a horse-shoe, with a diameter of 150 feet. Between these walls, at the entrance of the gate, is a circle of 100 feet in diameter, which nearly fills the space, leaving the passage for the entrance way only about six feet wide. On the outside of the circle, and guarding the entrance to the passages is a mound, forty feet in diameter and four feet high. The form of the serpent is seen in the shape of the wall at the gateway, and in the curve of the walls along the bluff, as they surround the enclosure. A similar resemblance to the serpent form may be seen also in the stone wall which has been described by Squier and Davis, at Black-run, fifteen miles from Chillicothe, in Ross county, Ohio. The gateway or entrance to this stone fort also has the serpentine form, as the ends of the walls bend around and back upon themselves in a way which suggests that the serpent symbol was intended. The gateway was fifty feet wide, but the walls curved back for the space of sixty feet. There are four peculiar stone heaps on the outside, starting within ten feet of and extending northward for the distance of 100 feet. These walls are twenty feet broad at the ends, but they diminish gradually as they recede to ten feet, at their outward extremities. They are ten feet apart, but being tapering they converge, and, taken together with the enclosure, they give rise to the idea that they were intended to represent the rattles of a huge serpent. No other explanation can be given to the shape of the walls, nor to the outlooks though the resemblance to the serpent form has never impressed any one before.

Dr. Phené says that there are four and not five of these unique and strange stone walls or stone heaps. His idea is that they represent double rattles, a point which he has recognized in other works.

The great stone fort on Paint Creek is but two miles away and overlooks this work. Both may be regarded as belonging to the same system, and probably in some way connected with each other. The situation of this enclosure may be seen from the map of the works of Paint Creek. It will be noticed that this serpent inclosure has somewhat the same relation to the village inclosures of the valley that the Alligator Mound had to the inclosures at Newark.

ANCIENT MEXICAN CIVILIZATION.

BY L. P. GRATACAP.

Central America and the Indies, with its untold treasures, its measureless extent, its wilderness teeming with a tropic profusion of life and color, was an enchanted land to the romance loving and imaginative minds of the Spaniards. An age of chivalrous wars, boundless ambition and fantastic prowess, in fancy pictured the new continent across that mysterious ocean as a strange and wondrous fairy land. The dangers of shipwreck, the horrors of isolation, the hostility of savages, were forgotten before the golden visions of wealth, of enjeweled cities, of the fountains of youth, of a dreamy and resplendent El Dorado. The anticipation of sufferings only stimulated their adventuring spirits to conquer, convert and plunder these men and priceless realms. Religion lent the cheap cloak of its loftiest motives to hide the mingled cupidity and lust which inflamed the ardor of these soldiers, and the fascination of the unknown tempted them with ideal projects, hopes, and destinies. Rude and sharply felt, in most instances, were the cruel disenchantments that succeeded the first glamour of the new world's inscrutable meaning, but the poetry of strange lands and peoples met in Mexico, its luxurious cities and grotesque terrors, lent to the story of their conquest, an undying charm. The successive visits of Cordova and Grijalva to the shores of Mexico, that led to the equipment of Velasquez's final expediton, under the command of Hernando Cortez, ushered Europeans upon a civilization, thoroughly aristocratic, immediately developed in the direction of a minority's enjoyment, and marked too, with a peculiar and even yet indecipherable enlightenment. The heroism, sagacity, and commingled perils, triumphs, and pleasures of the conquest have been painted by the charmed pen of Prescott. Its history is known and is irrelevant here, but the customs and organization of the races the Spaniards subjugated, are not. A rapid review of their social and political status, and a glance at the course of events which regulated their distribution will add a more definite delight to the astonishment inseparable from the contemplation of their ruins.

The sources of our information are, first, the early Spanish writers who accompanied the conquerors or followed them, and wrote from personal observation and study. Their industry, not always intelligently directed, compensates but insufficiently for that aimless fanaticism which impelled the Catholic prelates to destroy the Mexican MSS., and aboriginal histories, works

shocking to their piety and insulting to their creed. Don Juan de Zamarrago, Archbishop of Mexico, heaped up into an immense pile the works of native authors, their long garnered and much reverenced scrolls, and committed them to the flames, himself to posterity's unreserved contempt. This example was followed, and bonfires lit up the cities, fed by choice productions of Aztec patience, learning and ingenuity. A few precious volumes escaped, and others may await in hidden places some student's skill to discover and translate them. The writing of one of these early monks—Torquemada—is deservedly famous, and though his volumes are fraught with a preposterous amount of biblical allusion and irrelevant bigotry, they form the most important source from which our knowledge of the Aztecs is derived. Pre-eminent among those who, at a later day, devoted their lives to the collection of the remaining fragments of Aztec literature, traditions, and antiquities, enduring reproaches, penalties and the more poignant disappointment of seeing this work suppressed is Boturini. Sahagan is another authority earlier than Torquemada. He came to Mexco in 1529, was occupied for some time with missonary work, which he relinquished to give himself up to the compilation of his Universal History. He mastered the Mexican language, lived amongst the Tezcucans, by adroit and persistent inquiry and comparison gained a deep insight into their hieroglyphics, and penetrated the singular mysteries of their religion. Thus equipped he wrote his history in the Mexican language, a bulky and inestimable composition. Ecclesiastical censures followed delay, interference, and hostility; his papers became scattered, were indeed threatened with destruction. The President of the Council of the Indies interceded, procured a restoration of the papers and desired the aged scholar to translate them into Spanish. It was done. The translation was dispatched to Spain and there it vanished. Two centuries elapsed, and Muñoz brought it again to light. Bustamenti, a Mexican scholar, published it in Mexico in 1829, and Lord Kingsborough included it in his redundant and generous compilations.

The Chevalier Boturini, a Milanese of aristocratic birth and much learning, is another example of persecution inflicted by whimsical formality under a stupid government. This gentleman crossed the ocean to New Spain upon a business errand, and along with some religious enthusiasm for establishing the authenticity of the apparition of our Lady of Guadaloupe, conceived a plan to hunt up in the most thorough-going manner the antiquities of Mexico. This method was unexceptional. He prowled through the forest, lived with the Indians, fed in

their huts, hid in caves, watched, stole, begged, until he had amassed a museum of curiosities, and learned the superstitious language and legends of his strange hosts. He emerged, after eight years, from his wild haunts only to find himself, for an ecclesiastical informality, thrown into prison. He was transported to Spain, and while yet in confinement prepared his *Idea de una nueva Historia General de la America Septentrional*. He was released, pensioned, and while yet engaged on his General History of North America, a resumé of what he had learned, seen or collected, died.

More recent writers, as the Abbe Clavigero (1767), Antonio Gama (1790), the renowned interpreter of the calendar stone and of the astronomical and astrological systems of the Aztecs, Veytia (1836), and Lord Kingsborough, have assisted in the publication of all that can be known, and to it have devoted their money, time, and the varied influences of station, associations and popularity.

One native author, a direct descendant of the noble Tezcucan houses, and living in the beginning of the sixteenth century—Ixtilxochitl, has written on the earliest history of the Aztecs, embellishing the narrative with wonderful stories from hearsay and fatal speculations over hieroglyphics. These form the principal authorities, and while students find it difficult to reconcile their divers statements, there is quite enough in common to enable us to reconstruct an accordant picture of that polished *savageism* which, however temperately presented, imparts a sensation of unreality and romance.

We have become accustomed to regard, through colloquial usage as much as anything, and the reiterations of general writers, the name Aztec as representative of a homogeneous nation, who ruled Mexico almost in its entirety at the coming of the Spaniards. Nothing could be more incorrect. The Aztecs were the prominent race, the most active warriors, the renowned antagonists of the Spaniards, but they were, in the first place, but one of a confederation, each member of which enjoyed equal privileges and cultivated as advanced a civilization as the rest, and but one of various strong nations who withstood their arms, and beyond the limits of their empire, maintained a separate existence. Such were the Tarascos of Michoacan, who dwelt in a rich and pleasant land west of the table-land of Anahuac, a strong, well-governed people, speaking a persuasive and expressive language, and tasteful artists in mosaics (Clavigero); the Matlaltzincas, who were immediately outside the Aztec limits, and between them and the Tarascans—an ancient race—the Miztecs and Zapotecs ruling in Oajaca, "distinct in tongue from the Aztecs and from each

other;" the Mijes and Thranes (?) of Tehuantepec, very old stocks, the latter referred to Maya colonization from the South, antedating the Zapotecs, who in great measure dispossessed them; the Olmecs, Xicalancas, etc., on the Atlantic shore; the Totonacs of Vera Cruz, and the unknown Huastecs; the primitive cave-inhabiting Ottomies, and the brave Tlascaltecs who maintained their republican freedom in the midst of an encircling despotism. The Aztec empire was itself the patched up unity of many fragments. A somewhat common cultus developed in various degrees underlaid the separate civilizations, or else a unique culture had been appropriated in different measures by separate communities. Existing ethnic affinities seem traceable throughout, and the victorious Aztec, insatiable and propagandist, spread far and wide the influence of his ideas. Besides, these nations by commerce, migration, and war were impressed with each other's customs, and insensibly mingled foreign observances with their own. In short, back of all the varietal phases of religion and society of these crowded tribes, was the early and intrinsic Nahuan civilization which, as early as the sixth century, we find planted on the Nahuan table-land as a beacon, toward which the exhaustless North poured its variegated hordes (Müller's Ethnography) and whose light they again reflected with diminished brilliancy and spurious effects, but with a somewhat general appropriation of its color and intensity.

Thus, though it was the Aztecs that the Spaniards encountered, their formidable assumption of power marked the culmination of a slow growth through centuries, in the face of other foes, and on the decay and ruins of previous and more cultivated dynasties. Before them that slowly moving tide from the northwest, which ushered tribe after tribe into the fair places of Mexico, had drifted thither before the sixth century, a vast, ill-defined, and doubtless intellectual race. They were the Toltecs. There a civilization sprung up, which, embodied in a dignified and aggressive government, and an elaborate and impressive religion, for five centuries ruled supreme. They founded Tollan, and began their monarchy in 667 A. D., which lasted until 1031, expiring after the reign of eight monarchs. They were expert workmen, proficient artists, metallurgists in silver and gold, gem-cutters and authors of the chronological system used by the civilized nations of Anahuac. Boturini speaks of their Divine Book, in which the orign of the Indians, their dispersion after Babel's downfall, their journeys in Asia, their settlement in America, and subsequent prosperity were related. They were a mild and refined people, and their religious rites were free from the criminal stains

of human sacrifice. In the eleventh century, after a diversified and at times turbulent history, the Toltecs, already weakening before the storm of barbarous incursions from the north, yielded to the Chichimecs. These wild hordes were attracted by the fair promise of these southern lands, and pushed their way into its midst. The Toltecs at first conciliated them by concessions, mingled with them and taught them their own elevated arts and usages. No longer awed by an unaccustomed discipline, which they had now appropriated themselves, the Chichimecs, or the Dogs, as they were contemptuously styled, assumed control, and subverted the Toltec power. Tradition says that a great exodus of Toltec nobility and their people ensued, who, traveling south, settled in the Maya country, where they either originated or stimulated that prolific and elegant civilization. The Chichimecs were wild tribes, living in communities, practising no arts of agriculture, and living on game, fruits, and roots, and seeking pleasure in wrestling, running, and sanguinary combats with wild beasts. The Chichimecs were succeeded by armies of new people, all of whom readily assimilated the Nahuan habits, and in varying degrees represented similar principles in religion and government. The Chichimecs were a composite society, the Culhuacans at Culhuacan, the renovated metropolis of the Toltecs, the Acolhuans at Tezcuco, and the Tepanecs at Azcapuzalco represented three strong factions who contended for preëminence until, no longer disguised by the thin veil of political intrigue, their enmity broke out in open war. The Tepanecs overcame their rivals only to yield before a new apparition, the sanguinary and ambitious Aztecs. It was these indomitable warriors whom the Europeans encountered, and who mark the type and quality of Mexican civilization, though their culture was inherited from a superior race, and their less subtle brutal nature defaced, obscured and degraded it.

They came from the north, were restless fugitives for a long time, until lured by an auspicious omen they encamped along the shallows and in the marsh of reeds (tuli) and flags on the southern border of the large lake of the Mexican valley. They were originally seven tribes, from Aztlan, of whom the Tlascalans (place of bread), claim preëminence from their warlike, courageous, and zealous natures. The wanderings of these bands was a record of privations, insults, victories, and ominous episodes. In their new rendezvous they slowly increased in numbers, in sagacity and fortitude. Had the neighboring powers been at accord with one another, a defensive alliance might have crushed these intruders out, but favorably for their future the subjugation of the Tezcucan people by the Tepanecs afforded them a new and unexpected recognition.

The burdened Tezcucans, groaning beneath the exactions of their conquerors, invited the wily Aztecs to their assistance, and by their aid quickly succeeded in throwing off an odious yoke. The Aztecs assumed preëminence, and their predacious, bold, and unfettered spirits soon domineered over the softer nature of their mild and lettered allies. A unique alliance was then concluded between the Aztecs, Tepanecs, and Tlacopans —a small and inoffensive tribe—by the terms of which all conquests were in a certain ratio to be shared by each member of the coalition. Then began the armed conquest of other nations. The victorious Mexicans, securely fortified within their rock-bound valley, and assimilating with martial intuition the improved processes and implements of war, undertook the systematic subjugation of new lands, and dispatched in all directions their victorious arms. Tenochtitlan, their sordid little capital, built on piles with reeds and thatch, became a graphic index of the nation's progress, and reflected in its new phases of limestone buildings and spreading skirts the rising glory of its builders, its ancestral poverty soon to become only a recollection of enjoyable pride. Such, briefly, is the often repeated story of this race, a story which by incessant repetition has assumed the character of unquestioned fact, but which really only represents a legacy of tradition, half-understood writings and hypotheses, yet not to be too suspiciously regarded on that account, but considered as the best substitute a shrouded past can offer for its dateless and nameless deeds.

The extent of the Aztec empire, at the arrival of the Spaniards, is given by Prescott as 16,000 square miles, by Humboldt as 18,000 to 20,000, by Bancroft as less than either. Its limits fluctuated with the successes and reverses of war, and much of it was always beyond the fixed control which springs from an organic union with the center of the government. A glimpse, and a glimpse is all we can afford, of their mythology and religious rites, of their political system, and of the social usages which regulated trade, friendship and education should precede any survey of their archæology, which is of indifferent interest compared with these extraordinary instances of indigenous culture. When conjoined to aristocratic tendencies in society, religion, however deformed by superstition, bigotry, or vice, stimulates invention, classifies society, and developes an esoteric science. A priesthood is created, the arts cluster about them, and they establish their supremacy by a factitious or real wisdom. The office of research is theirs, and they are not slow to make it the guarantee of their maintenance as a special class.

The religion of the Aztec was a most comprehensive and intense affair. It entered at every point into the daily life of the

people, as all idolatrous services must, and the affairs of life, war, and love supplied them with every imaginable sort of rituals, idols and prayers. A monarch flattering himself that he retained the elements of divinity, persistently relieved his vanity and his fear by monstrous oblations to a voracious Olympus; an ignorant people were beguiled by the excitement of perpetual display; a frenzied priesthood, dizzy with ecclesiastic mania, fed with devout rage the popular insanity. All this led to the erection of an inordinate and cumbrous ritual, to the building of temples, the carving of idols, the decoration of vestments and altars, the invention of music, studies and occult science amongst the priests, disposition of life's occupations with reference to seasons, stages of life, stars, etc., pursuit of war under divine auspices, the institution of orders. Their religion saturated their life, because their rulers were allied to Gods, and partook of the mystical properties and functions of their priests. It was an earnest savage faith, a motley of pure precept and barbarous cruelty, embodying the principle of asceticism and the principle of sacrifice to a most outrageous and abominable excess, and applying its remedial offices in every crisis and event of life. The religion appears a concretion of rude, brutal, and absurd superstitions, drawn about some central ideas of surprising loveliness and intellectual elevation. The constant succession of feasts, their duration and attendant sports is bewildering, and gives one the curious impression of a people solely occupied with the celebration of a prodigious and bloody worship.

Thirteen principal gods composed the sacred circle in their Olympus, and 200 inferior deities supplied appropriate provocations for endless ceremonies, feasts, and pageants. Rain, drought, seed-time and harvest, grain, flowers, the avocations of life, war, salt, commerce, fire, in short, the interests and means of life, all claimed special representatives in the crowded Aztec heaven. Feasts of every kind thickened the year. A great festival was observed each month, and on the fourth and thirteenth years, supplementary occasions, demanded more stringent, varied, and impressive rites. Human sacrifices darkened almost all these festivals, and lent a savage terror to the weird and painful scenes. Hundreds and thousands were slaughtered upon the reeking altars of their gods, the blood of babes defiled the hands of their odious priests, and cannibalism, sanctioned by religion, added its sickening atrocities to this disgusting catalogue of crime. Captives were reserved for these sacrificial deaths, and wars were undertaken to replete the empty shambles with human flesh.

The Aztecs engrafted these shocking excesses upon the more pleasing faith of the Toltecs, whose worship was not out-

raged by murder and cannibalism. It is likely to this original faith they are indebted for the gentler aspects of their own. Thus the names Teotl and Ypalnemoani indicate one absolute, supreme and indivisible God (Clavigero), "the God by whom we live," "Omnipresent that knoweth all thoughts and giveth all gifts," "without whom man is as nothing," "invisible, incorporal, one God, of *perfect perception* and purity" (Prescott.) As if unable to sustain so enlightened and exalted a conception, they soon obscured this primitive ideal by a curious and absurd mythology.

The god of war, Huizilopochtli, assumed in their theogony a grandeur and importance commensurate with the frequency and urgency of the occasions on which he was needed, the vast development of the army and the love of war. His idols were weighed down with jewels, and his altars everlastingly smoked with loathsome sacrifice. He was born of Coatlicue, who was impregnated after seizing a ball of feathers, floating in the air, and placing it in her bosom. Born with a shield, a spear, and a crest of green feathers, and streaked with blue lines. His idols were gigantic, seated on blue couches, from whose corners proceeded four snakes, in his left hand he held a shield and five balls of feathers arranged to form a cross, on his neck a collar of ten figures of the human heart, while a golden serpent knit itself about his waist (Clavigero.)

Quetzalcoatl was the Saturn, the Hiawatha, the Bochicha of the Aztecs, and his mild and gentle image seems borrowed from a previous civilization, that culture which was adopted by the Aztecs, and which imparted to their religion its only sweet and exalted sentiments. Quetzalcoatl was god of the air, a deified benefactor, whose figure, tradition says, was tall, his face fair, with large eyes, his beard flowing, his black hair long, and in his presence nature seems suffused with an unusual kindliness; the maize ears were each a man's load, and the gourds grew five feet long. He was a disciplinarian and moralist. He introduced severe penances, such as pricking the body with agave leaves and cactus thorns, and inserting reeds into wounds to cause the blood to flow freely. "We seem," observes Humboldt, "to behold one of those *rishi*, hermits of the Ganges, whose pious austerity is celebrated in the Puranas." He brought at the same time a reign of innocent pleasures, and touched nature with a magic wand. Her fruitfulness and beauty increased, and the things of the earth spontaneously met and satisfied man's desire. But the great spirit filled Quetzalcoatl with a longing to travel, and he disappeared toward Tlapallan, which is thought to indicate the original starting point of the Toltecs, though tradition says he passed

southeast, and not north. However that may be, he was intercepted at Cholula, where he taught the people the arts of peace, religion, and the course of the seasons. Finally he escaped, going eastward, promising his return, sailing off in a skiff of serpent's skins.

> "And the people from the margin
> "Watched him floating, rising, sinking,
> "'Till the birch canoe seemed lifted
> "High into that sea of splendor,
> "'Till it sank into the vapors,
> "Like the new moon, slowly, slowly,
> "Sinking in the purple distance."

A kind of dualism prevailed in their religious notions, and the spirit of evil and enemy of mankind was impersonated by Tlacatecolototl, or the Rational Owl, while Mictlan figures as a hell, a place of utter darkness, where, with a god and goddess of this loathsome region, the damned endured the terrible monotony of endless gloom.

Prevalent and prominent in the various stocks of legends, are confused stories about a deluge, and the impressive ceremonies which ushered in every fifty-second year were regarded as intercessions to avert its ominous recurrence. At that time, when water covered the earth, a man and woman were saved, on a mountain top, in a bark, their children were born dumb, and only regained the gift of language from the inspired instruction of a dove, which, designedly or not, taught them different tongues, and left them provided with speech, but unable to enjoy its benefits. The Tlascalans pretended the survivors of the deluge were changed to apes, and slowly recovered speech and reason. One aimless and characteristic fiction runs as follows: The goddess Omecihuatl was delivered of a knife flint, which, falling to the earth broke in many pieces, and from these fragments sprang up 1,600 heroes, who, recognizing their divine origin, besought their mother to supply them with servants, a somewhat unintentional satire upon aristocratic helplessness. They were directed to the god of hell, who unpropitiously dismissed Xolotl, their ambassador, with a bone, and then chased him to the surface of the earth in hopes to regain his niggardly gift. Xolotl, in his precipitate flight, dropped the bone, but had sense enough to pick up the pieces and hurry them off to his expectant brethren. These bits were collected in a vase and sprinkled with the blood of the heroes. This important decoction produced a boy on the fourth day, and a girl on the seventh, from whose pre-ordained espousal sprang the race of common men.

The heroes then discovered they had no sun, and sitting around a fire, wished they had, but hard wishing, despite their distinguished origin, proved ineffectual, and one of their number, Nanahuaztin, leaping into the fire, by his voluntary im-

molation, procured for himself the glory of becoming the sun. Bets instantly ensued between the heroes, and the quails, locusts, and other animals, as to where he would appear, and this highly disingenuous contest of intelligence resulted in the disappointment of the animals. These unhappy creatures were sacrificed, establishing an unlucky precedent for their kith and kin, who were thenceforth devoted to solar offerings for all time. At this moment the sun unceremoniously stood still, and demanded the death of all the heroes, a request becomingly resented by the heroes, who began picking at him with arrows. He stooped and escaped, but the heroes, yielding to the decree of fate, all died in the contest, leaving the mortuary exuviæ of their old clothes as the single testament of their existence, which, as Clavigero has it, the Indians possessed in his time.

The *teocalli* or temples of the Aztecs, were high and commanding pyramids of earth and stone, built four or five stories high, in terraces, at whose angles steps led to the summit, where were the chapels holding colossal idols, the sacrificial stones and the altars. It was up these steps and around the successive platforms that the retinues of priests led their garlanded and apparelled victims, moving sometimes to the sound of music from horn and pipe, sometimes to the dismal chant of their own hoarse voices. The chief priest bearing the name of the deity in whose honor the victim was offered, was clad in a red gown fringed with cotton, plumes of green and yellow feathers nodded on his head, from his ears and mouth gold and jewels hung in glistening pendants. Five assistants dressed in white, and with bodies painted black, attended him. In the midst of these cruel acolytes the luckless captive walked, watched in his measured circuit, from floor to floor, by an awe-struck multitude who thronged the base of the teocalli. At the summit, before the designated idol, and at the sacrificial stone the group stood still. In an instant the victim was thrown down across the block and pinioned, the chief priest tore open his breast with a knife of flint, pulled forth the palpitating heart, and first presenting it to the sun dashed it at the feet of the mocking idol. Its blood annointed the lips of the idol, and was smeared over the visage and matted locks of the priest, sometimes, as at the feast of Xipé, the blood was sucked up from the gushing wound and spouted through a tube into a cup, which was then carried around to many idols and lifted up toward them as if for their recognition. The teocalli, like the κεριβολος of the Greeks, embraced a walled enclosure in which it stood, where were gardens, fountains, and the dwellings of the priests, and Cortez instances one, wherein five hundred houses might have stood. Scaffoldings, crowded with human heads, were erected on the tops of these

temples, and the Spaniards counted in one of these Golgothas, 136,000 skulls. Their altar fires never died out, and the City of Mexico reflected the rays of over 600, flaming from the slopes of these religious Thares, while some notion of the excessive idolatry of the Aztecs may be gained from the statement of Zumarraga, that in eight years, the Franciscans destroyed 20,000 idols, the detested occupants of the teocalli shrines.

Priests, to the number of thousands, resided in the city, and were concerned in the intimate education of the nobility, in the enforcement of religious discipline upon the wards of the city under their charge, and in the absolution of penitents. Fasts and penances of the most extreme severity preceded important feasts, as before the festival of Camaxtli, when the priests fasted 160 days, and "passed several hundred sticks varying in thickness from one-half inch to one and one-half inches, through a hole freshly made in the tongue" (B), while vigils of extravagant length heightened the exorbitant exactions upon their physical endurance. The high priest was elected by a council, and right of his position was celebrant at the altar of Huitzilopochtli. He exercised control over the whole ecclesiastical machinery, was regarded as a spiritual king, anointed with the same sacred unguent as the temporal king, and consulted upon the weighty affairs of state, a choice of policy or a declaration of war. Beneath him were vicars who represented steps in the religious hierarchy. Some superintended colleges, others had charge of the vessels and apparatus of worship, others cleansed and renewed the vestments of the high priest, and yet others made up the choirs, and instructed them in the hymnology of their religion. Teachers in the seminaries were selected from the order of priests. Lastly the Tlamacazqui constituted the great order of monks whose lives were marked by great austerity, and by their self-imposed vows, they cultivated continence, fasting, and penances, assisting the monotinous rigor of their existence with all the aids of lovely and contemplative rhapsody. Nor was their composite societies wanting in priestesses. These sacred vestals thronged the nunneries, mortifying the flesh by fasts, feeding the incense braziers, and obeying the inexorable matrons appointed to curb their uncertain impulses. Priests violating their chastity were slain at night by the people with the bastinado.

One of the very suggestive and curious rites practised amongst the people, and so clothed with symbolism as to offer a significant field for exegesis to mystical minds, was celebrated in the festival of Tezcatlipoca. This very important deity was represented as the soul and creator of the world, and figured as a strong and beautiful youth. A year before the festival, a captive without any physical blemish and of surpassing

beauty, was chosen to typify the god. He enjoyed the homage of the populace, the varied pleasures of a luxuriant and wanton life, and the felicity of endless flatteries. But all these indulgences preceded his awful sacrifices before the idol of the god, and in sight of the whole people. His garlands fell from his hands, his musical pipes were broken on the steps of the Teocalli, and his loved companions separated from him on his way to his painful death. He rose terrace by terrace to the summit, and then stretched along the sacrificial stone, underwent his fierce and cruel execution. What abstract notions the Aztecs held in their religion, may be summed up in their belief in a hereafter, where the wicked expiated their sins by eternal punishment, a second class possessed a tame and inglorious immunity from pain or exciting pleasures, and the heroes and martyrs danced and sung in celestial frenzy about the sun; and they may be further gathered from many beautiful petitions given by Sahagan, whereby humility, chastity, holiness, and gentleness are depicted with surprising justness.

The aristocratic government of the Aztecs, Tlacopans, and Tezcucano assisted their industrial life, developed a lengthy and pompous etiquette, and called forth those embellishments which adorn life and nourish artistic impulses. The three kingdoms had each a separate ruler, who took council with his colleagues on momentous occasions. The kings of Tezcuco and Tlacopan were hereditary, the king of Mexico elective, a peculiarity strikingly democratic at first, since men and women participated in the franchise, but on the ascendency of the monarchical principle the king was elected by a commission of four or five lords, whose power ceased with that legislative (?) act. The king had about him a privy council, at once an assistance and a restraint, but the limits of his prerogative were stretched more and more, and he gradually dispensed with every distasteful reminder of his dependence, until the national courts of justice and the privy council became either the instruments of his despotism or the objects of his resentment. The lives of these aboriginal sovereigns, as reported by Peter Martyr, Herrera, Clavigero, Ixtlilxochitl, Torquemada, is an almost *incredible* tissue of barbaric magnificence, sumptuous excess and worldly pomp. The Aztec king resided in an immense palace, which was an estate of vestibules, apartments, hallways, court-yards, menageries, storehouses and baths in labyrinthine and endless succession, their floors of jasper, alabaster, absidian, and marble, from whose polished surfaces sprang vistas of columns and balconies, while radiant mats and curtains of bird's feathers, and alae cloth swung from the walls amid burning censers and odoriferous braziers. Here the enormous household of the king, his lords, ministers, ambassa-

dors, attendants, generals, menials, and his stupendous harem of 1,000 wives were accommodated. The menageries and aviaries of Montezuma baffle description. Enormous areas were reserved, divided into sections, appropriately furnished for their several occupants, and here birds and beasts of every variety were preserved, the birds amid groves and ponds and fruitful gardens, and the animals in wooden cages.

Beautiful summer residences invited these luxurious monarchs to their suburban quiet, where each natural feature was seized by a dexterous art to minister to pleasure, or enhance architectural wonders; water plashed in marble basins, hidden paths wandered through delectable recesses of the woods, curving terraces led to distant glimpses of surpassing loveliness, gardens of tropical profusion and sequestered groves, while the pavillions and palaces buried amidst this earthly paradise, yielded all that sensuous appetite could ask or kingly arrogance command. Precious gems, gold, silver, iridescent plumes and nacreous sea-shells supplied the material for decorations, and over their multiplied combinations the Aztec artisan employed his unwearied skill.

The dinners of these kings were most august affairs. They were eaten alone or, at least, in the presence of a few aged nobles, and his retinue of court jesters and athletes, whose performances amused his mind between the courses, or helped his digestion after them. Hundreds of dishes composed of every imaginable viand were placed before him by as many pages, and as we read of frog spawn and ants, among these delicacies, we recall those Roman gluttons, who satisfied their imperial stomachs with pastries of beetles and rats stuffed with crushed figs, basted with olive oil. His repast over, the affairs of state were reported, and his audience claimed by ambassadors and suitors. All this, and much more, illustrate how incongruous was the mixture of barbarism and refinement in this strange race.

Immediately below the king was the Aztec nobility, composed of several distinct orders: 1. The governors of provinces under the king, a powerful society commanding legions of warriors, and possessing inalienable and hereditary rights. 2. The princes. 3. Lords without royal power, but provided with vassals. 4. Pili, or men of noble birth; then followed rich men, landed proprietors forming an upper middle class.

The nobles were permitted to wear gold and gems and fine raiment. The Tecuhtli or knights composed a special class of merit, but candidates to its ranks were limited to the nobility. The ordeal preliminary to admittance was prolonged over four days, and consisted of a fast for twenty-four hours, a constant vigil, maddening taunts and scarification. Sumptuous banquets, costly presents and magnificent attire awaited the suc-

cessful termination of the trial. The Tecuhtli claimed preëminence at council-board in peace, in war, at feast and festival. They were a distinguished and redoubtable class, and their origin dated from a very distant period, mingling indeed with the fables and advent of their gods. Slaves, of course, constitute an immense class, they were captives taken in war, culprits who had forfeited their freedom, or voluntary bondmen whom indolence or necessity had driven to seek the protection of a lord.

Tribute was, of course, exacted from the royal vassals throughout the realm, though an immunity was extended to those cities who supplied the king with his servants, furniture, vestments, etc., no inconsiderable task certainly. The calpixques or stewards collected rents and taxes in the various provinces, delivered them to the governor or cacique, who, in turn, forwarded them to the treasurer. Taxes were paid on everything produced or wanted, and an inspection of the articles mentioned in the mendoza codex, as paid to the crown, indicate the occupations, tastes and trades, amongst the people. A random selection includes shields of feathers, a live eagle, paper, honey, varnish, chocolate, sea-shells, gold dust, cotton, axes of copper, bells of copper, turquoise stone, deer skins, timber, cane, perfumes for the mouth, cochineal, ensigns of feathers, lip jewels, jade, tiger skins, salves, apparel. Sahagan naively remarks that the gems were discovered by jewel hunters from certain characteristic exhalations which they emitted, as the sun reached them.

The industrial life of the Aztecs reflected the various expressions of their social organization. There were workers in gold, silver, and copper, expert lapidaries, whose gems were sprinkled in consecutive patterns over the dresses of the lords and princes, carvers of wood, potters, cloth manufactures, dye and paint makers, paper makers, feather artists, and soap and torch firms, builders and architects. The artisans and merchants lived in the large towns. Gold and silver-smiths lived at Azcapuzalco, and were sheltered by the divine favor of the God Xipé. Pottery was made at Cholula, and formed the material from which the vessels, idols, heads, etc., were made. Cloth of cotton and rabbit's hair, of the finest texture, paper from maguey fibre, dyes and paints, and feather mosaics, of the most exquisite beauty, softness and finish, were all prepared by them. Agriculture was pursued by the nation, and the astonishing floating islands in the great lake of Mexico, were no insignificant evidence of their skill and invention.

Education was munificently provided for, partaking in its first stages of a most exemplary morality, children were diligently taught to seek truth and shun vice, to respect the Gods and honor their parents. Their education was nicely adjusted

to their increasing years, and to the social position they were to occupy. Nothing was left to caprice or disposition, and even their food was measured out with scrupulous regard for their years and strength. Primary instruction was imparted at public schools, most of which embraced appropriate behavior at religious feasts, and some knowledge of the menial duties of life. Monasteries contained the children of the nobility, who were instructed in the mysteries of their religion, the various branches of knowledge, as law, oratory, poetry, astrology, astronomy, etc. They were inured to fatigues, dangers, and penances, trained in athletic sports, and exhorted to pursue paths of virtue and patriotism. There were also female seminaries where the wifely arts were explained by sagacious matrons, offices about the temples fulfilled, and the value of sobriety and diligence insisted on with summary emphasis. Pricking with maguey thorns seemed, in all cases, an efficient and agreeable corrective for youthful indiscretion or negligence. Their learning was by no means insignificant. They had an arithmetic adequate to express all numerical combinations, a system of horology, a complicated calendar, a ponderous ritual with movable and recurrent feasts, and a widely developed system of picture writing.

The military life, naturally predominated over every other, and no means were spared to render the army invincible and obedient. Every incentive which fanaticism, ambition, or greed could devise, was used to stimulate their warriors. Promotions tempted the novice to be brave, and punishments and shame threatened any show of cowardice. Sahagan describes the magnificence of the military dresses, headdresses of feathers, body armor of feathers, helmets of silver, insignia of feathers, of which the most gorgeous were knit together with gold thread, with silver spangles and fiery gems, and as they wound round steep cliffs, through dark defiles, and over dizzy chasms, their radiance shone as from the sinuous progression of a beautiful and monstrous serpent. Armor of cotton, made two or three inches thick, enveloped the body and thighs, and was practicably impenetrable to arrows and javelins. Their weapons were arrows, spears, club, slings, and swords, which they used with marvellous precision. Fortifications, citadels, and towers, were planted at all strategic points. Very slight pretexts provoked a war, for the consciousness of power in a semi-civilized race acts as a constant irritant to their warlike and ambitious spirits.

Victims for their sacrifices were constantly needed, and human booty was most frequently the object of their systematized rapine. Declaration of war preceeded their advance upon any hostile powers, and three embassies followed each other to ex-

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THE RELIGION OF THE OMAHAS AND PONKAS.

BY THE REV. J. OWEN DORSEY.

The idea of a Supreme Being is said to have existed among the Omahas and cognate tribes prior to the coming of civilization. The writer heard this not only from Joseph La Flèche, now a Christian, but also from men still holding their ancestral faith. One of these, Two Crows, has been connected in several ways with the ancient organizations of his people. He is now one of the head men or nikagahi of his tribe, and is thus *ex-officio* a member of the class which exercises the religious and civil functions of the state. He has been a policeman during the buffalo hunt. He has acted as captain, or war-chief; and he is the leading doctor in the Buffalo dancing society. Padhiⁿ-naⁿpaji, or He-who-fears-not-the-sight-of-a-Pawnee, is one of the servants of the Elk clan, whose duty it is to be present at the sacred tent of that clan, and assist in the ceremonies pertaining to the worship of the thunder-god. From these and others the writer has learned about their ancient beliefs, having taken care not to question them in the presence of an interpreter.

When there were no white people in this land, the ancestors of the Omahas and Ponkas believed that there was a Superior Being, whom they called Wakanda-Wakanda t'aⁿ i tĕ edheganⁿi. *They believed that Wakanda existed.* They did not know where He was, nor did they undertake to say how He existed. There was no public gathering, at which some of the people told the rest that there was a Wakanda, nor was there any general assembly for the purpose of worshiping or praying to Him. Each person thought in his heart that Wakanda existed. Some addressed the sun as Wakanda, though many did not. Many addressed Wakanda, as it were, at random. Some worshiped the thunder under this name. This was especially the case when men undertook to go on the war path.

The name Wakanda seems to imply power and mystery or wonder, as appears from the use of the terms wakandie (idea of a putting forth of *strength*), and wakandagi (applied to water monsters, *mysterious* animals, unlooked-for or premature qualities or acts, etc.) Hence, we may translate Wakanda by "The Wonderful or Mysterious Power," with which compare the Wakaⁿtañka and Taku Wakaⁿ of the Dakotas.

Prayer to Wakanda was not made for small matters, such as going fishing, but only for great and important undertakings, such as going to war, or on a journey. When a man wished

to travel, he used to go alone to a bluff, and pray to Wakanda to help him. Compare the Dakota custom of praying to a boulder on a prairie, called Tuñkaⁿ shidaⁿ, or grandfather, symbolizing the earth deity. The places for prayer are rocks, mountains, and high cliffs. All the Omahas go to such places to pray, but according to Frank La Flèche, they do not pray to the visible object, though they call it grandfather. Yet they do smoke towards the object, and place on it presents of *killickinnick*, etc. When animals detected the approach of the hunter by the odor wafted by the wind, and consequently fled from him, the latter prayed thus, "Ho! Wakanda, you may have given me an animal, but it seems that you have taken it back. I hope that you will cause one to appear again for me." But if he shot at one and missed it, he said nothing.

Padhiⁿ-naⁿpaji gave the following, which has been doubted by J. La Flèche and Two Crows: "The superior deities are seven. Darkness is a great deity. The others are the Sky, the Ground, Thunder, the Sun, the Moon, and the Morning Star. The principal deity is in the sky or upper world, above every thing." These were doubtless the deities worshiped by himself and the other men of his clan. He also said, "Warr[illegible]th is a good deity. Ni dhiⁿ, *The flowing water*, is thus addressed by a man wishing to ford it: You are a person and a deity. I, too, am a person. I desire to pass through you, and reach the other side." Two Crows said that they never prayed to the water, though some did appeal to a subterranean Wakanda when their word was doubted, saying, "The venerable man under the ground hears me." During the ordeal of the wa[illegible] egistu, the successful warriors were called on one by one to address one of the sacred bags as grandfather, at the same time dropping a stick, which was supposed to rest on the b[illegible] if the man had told the truth.

Though J. La Flèche and Two Crows said that a high bluff was merely a place for praying to Wakanda, and was n[illegible] addressed as Wakanda, the writer has learned from members of the two tribes that when they went on the war path for the first time, and their names were changed, one of the old men was sent to the bluffs to tell the news to the various deities, including the bluffs, trees, birds, reptiles, insects, etc. The originals of these addresses will appear in Vol. VI. Part I. Contributions to N. A. Ethnology.

Some persons thought that they saw or heard different animals, ghosts, etc. All did not see the same kind of visitants. Sometimes men were aroused suddenly from sleep, and imagined that they heard voices. Others pretended that they had these interviews and visions. These last were the conjurors

magicians, and a few members of the dancing societies. They claimed to have interviews with Darkness, Cloud, Ground, Thunder, Sun, Moon, Morning Star, animals, birds, etc. But this belief or pretense was restricted to the class of persons referred to. Sometimes a conjurer would say, "I have received such and such a medicine from that animal." Each animal seems to have been considered the special deity or guardian spirit of the person who claimed to have communication with it. These animals were as follows: the Rattlesnake, Grizzly Bear, Black Bear, Buffalo, Big Wolf and Prairie Wolf. Those who communicated with the Thunder never danced at the meetings of their society. They invited one another to feasts, and sang as they remained seated. The songs referred to the Thunder. When they finished eating and singing, the ceremonies were ended. These persons pretend to be able to cause eclipses of the sun and moon, as well as seven colors in concentric circles around those luminaries. At times, these men say that they can cause rain.

Though Two Crows belongs to the Buffalo society, he never had any communications with a supernatural buffalo. His work in the society was confined to the practice of surgery.

Fasting. J. La Flèche and Two Crows heard the following spoken of as an ancient custom. It was told them in thei youth by some of the old men, who had received it from their elders as having been practiced by the tribe from time imme morial. When old men had sons, nephews or grandsons, who approached manhood, they used to command these youths to fast and put clay on their faces, saying, "Walk ye in remote places, crying to Wakanda. Neither eat nor drink for four days. Even though you are qube (mysterious, sacred), Wakanda will aid you. If you act as poor men, and pray as you cry, He will help you." When their throats became dry, their voices gave out. When they had completed their fasts, they went home, being very much emaciated. They could not eat solid food, so they had to subsist on mush mixed with much water, till by degrees they became able to eat what they pleased. Many thought that this fasting enabled them to have supernatural communication with Wakanda. In modern times it has fallen into disuse.

Ancestors are not worshiped. They are addressed reverently when alive, and when they are dead it is not against any custom to refer to them by name.

Demons or Devils. They never had any idea of a bad spirit till they met the white man. Now they have adopted the term, "Wakanda piaji," the bad Wakanda, or "Wanaxe piaji," the bad spirit.

Hero Worship, the worship of demi-gods, and phallic wor ship are unknown. Two Crows and J. La Flèche were sur prised to hear that the latter was the custom in any tribe.

Fetichism. Inanimate objects are not worshiped, thoug there are some who consider as sacred the skins of animals and the skins and feathers of such birds as are used for thei sacred bags. Among these are the eagle, sparrow-hawk, yel low-backed hawk, green-necked duck, great owl, martin otter, flying-squirrel, mink, mika-ska (white raccoon ?), an maza^{n}he. J. La Flèche and Two Crows never heard of th mika-ska and maza^{n}he among the Omahas, but Padhi^{n}-na^{n}pa gave them as so used.

Though the Omahas have stories of four creators, the Musk rat, the Beaver, Flying-squirrel and Kingfisher, these belong t the realm of the higa^{n} or myth, which is called an "iusisht iudha," or lying tale, which no one believed. It was "ikha wadhe-as adhisha^{n}," pertaining to the ludicrous, being tol only for amusement.

Totems have not been worshiped, though there is a sacred ness associated with what are called nikie or ancient trib names, the sacredness of antiquity, such names having bee transmitted from the earliest ages of the existence of th tribe, and containing references to the mythical origin of th people. But they are not "uwaqube" (sacred ordinances nor are they "Wahandataica^{n}," of religious signification.

Shamanism, the worship of the sacred men and women, not practiced, though some of these sacred persons preten to be Wakandas, as did the Ponka Na^{n}be-dhiku, when he sa the writer. J. La Flèche and Two Crows say there is no dis tinct order of sacred persons, and that the holding of such a office is regulated by the tribe, not being hereditary. A so might succeed to the office, if his father revealed the secrets t him, as did Uha-ma^{n}dhi^{n}, the son of Na^{n}-be-dhiku.

Altars or altar-stones are unknown. Incense, too, is nc used. And the Omahas never practiced human sacrifices.

Sorcery and Witchcraft. There have been sorcerers, i. e such as prepared love-potions for those who bought them, an who were thought to cause the death of those who incurre their displeasure.

Jugglery. Some of the Omaha and Ponka doctors preten to draw sticks from the bodies of their patients, or worm from aching teeth, saying that these things are the causes c pains and diseases. This ishkade or sleight of hand, exist not only in the societies, but also along with the practice c medicine, government and religion.

There are no sacred ceremonies at the birth of a child though when four days have elapsed after a birth, there ar

ceremonies at the naming or reception of the infant into the gens.

There are sacred rites practised by the dancing societies, including those to which the doctors belong. But Two Crows said that he did not know those of his society.

Belief in a Future Life. They have a very crude belief. Each person has a wanaghe, or spirit, which does not perish at death. They were told by the old men, "If you are good, you will go to the good ghosts. If you are bad, you will go to the bad ghosts." Nothing was said about going to dwell with Wakanda, or with demons. Frank La Flèche heard some of the old men tell the tradition that years ago a man came back to life, and told about the spirit land. He said that for four nights after death, the ghost had to travel a very dark road, but that after he reached the milky way, there was plenty of light. For this reason, said he, the people ought to aid their deceased friends by lighting fires at the graves, and keeping them burning for four nights in each case. After going along the milky way, the ghost came at last to a place where the road forked; and there sat an aged man, clothed in a buffalo robe, with the hair outside. He said nothing, but pointed to each inquirer the road for which he asked. One road was a very short one, and he who followed it soon came to the place where the good ghosts dwelt. The other road was an endless one, along which the ghosts went crying. The spirits of suicides could not travel either road; they hovered over their graves. But J. La Flèche and Two Crows said that the road of the ghosts was not the milky way, and they regarded the account of the endless road as a modern addition. The ancient story, as they heard it, is given just before Frank La Flèche's account.

Though Gahige, of the black shoulder (a buffalo) gens, spoke of four souls for one person, J. La Fleche and Two Crows said that the Omahas did not believe in more than one soul for each person.

There has been no belief in the resurrection of the body, but simply in the continued existence of the spirit or ghost. While some of the Iowas have expressed a belief in the transmigration of souls, that doctrine has not been found among the Omahas and Ponkas.

The foregoing material is far from being exhaustive. The writer wishes to revisit the two tribes for the purpose of ascertaining whether he can find any traces of ceremonies resembling those still in existence among the cognate tribes, the Osages and Kansas.

CORRESPONDENCE.

ANTIQUARIAN INTELLIGENCE FROM CORNWALL, ENGLAND.

To the Editor of the American Antiquarian:

This county, including the Lands End, is the West Wales of the ancient Daumonie, and is one of the richest in antiquities of all parts of England. Thus it is specially worthy of a visit from the American tourist who wishes to see the archæological relics of his British ancestors. It has been sometimes said by archæologists that if Kent be the richest county in mediæval antiquities, Cornwall is richest in prehistoric remains.

The safety of these antiquities is a matter of primary importance. We are glad to see that Sir J. Lubbock's bill in the British parliament will secure some of the most valuable of the remains in other parts of England, but, strange to say, Cornwall has been excepted from its provisions. It is likely, however, that further efforts will be made to secure to posterity some of the remains spared by the hand of time and human mischief. An article was recently published in the London "Antiquary" on this subject by Rev. W. S. Lach-Szyrma, of Newbern, and the matter has been taken up in many other papers. In Cornwall the matter is of importance. Several valuable remains have been destroyed in recent years, as the "Chips from a German Workshop," by Prof. Max Müller, has reminded the public, and we are sorry to add that we hear that both the buried church of Perran Zabuloe, perhaps the oldest Church in England (probably 1,200 years old), and also the famous British village of Cysauster, near Penzance, a valuable specimen of communal habitation, so interesting in illustrating primitive Aryan customs, are in danger. Something, we trust, will be done to save them ere it is too late.

The last British Archæological Congress was held at Plymouth, and Cornwall came in for a share of their resources. A portion of their attention was given to the relics and history of the great circumnavigator, Sir Francis Drake, to whom America owes so much, as the probable discoverer of Cape Horn and of British Columbia, and the first Anglo-Saxon who sailed into the bay of San Francisco, and landed on the California shores. A memorial to Drake is being erected at Plymouth (of which he was Mayor and M. P. in the reign of Elizabeth), and also another statue at his birth-place, Tavistock. The tercentenary of his return from his voyage of circumnavigation occurred in 1880.

Among the curiosties of Cornwall are the retention by the people of ancient customs. This year May-day and also the

Helston Furry Day (May 8) were well kept up. The latter is very interesting, and should be witnessed by those curious about antique customs. Some thirty couples of gentlemen and ladies dance through the streets and in and out of the houses, to the tune of the ancient Celtic Furry Song. The scene is very curious and antique, reminding one of the scenes described by Herrick and Chaucer.

Both the chief antiquarian societies of Cornwall, i. e., the Royal Institution, and Penzance Antiquarian Society, have had interesting sessions. A very good local magazine, the "Western Antiquary," is now published in weekly and monthly parts. All remains of antiquity in Devon and Cornwall are now carefully inquired into. W. S. LACH-SZYRMA.

PITS AND AMBUSHES.

To the Editor of the American Antiquarian:

In Vol. IV. No. 1 of the ANTIQUARIAN I gave you a description of the pits used by the Muscogee Indians in their wars against the Choctaws. I will here supplement that article by describing the strategy often employed by small predatory Muscogee bands in the Choctaw country. The same Indian to whom I am indebted for the former information, states that in ancient times a small party of six or eight Muscogees would frequently make an attack on a Choctaw house or small village in the following manner:

After the ground had been thoroughly reconnoitered, during the night a warrior would be stationed in ambush a mile or so distant from the village. The party then moving forward, at a convenient interval and a suitable spot another warrior would be stationed, and then another, and thus on until—one warrior being reserved—a line of ambuscaders was formed, extending to within about three hundred yards of the village. This reserved warrior, always a man of unflinching bravery, would now crawl up as near the village as was practicable, dig a pit and place himself in it. The object of the pit was not only concealment, but should the warrior in any manner be surprised and surrounded, he could sell his life at a dear rate, as the protection of the pit would doubtless enable him to kill several of the enemy before he met his own death. The warrior in the pit now would wait patiently until day-break. The first Choctaw whom he then saw stirring about near his ambuscade he would shoot down, spring forward and scalp in the twinkling of an eye. He would then flee toward the second ambuscader. If he was pursued, which was generally the case, the pursuers received the fire of this ambuscader. The two

warriors then fled to the third man in ambush. If the pursuers still followed, they received the fire of this man. The three now ran to the fourth ambushed warrior, where the same scene would be enacted, and so on until the place of the last man was reached. If the pursuers persisted in following thus far, they were subjected, all along the line, to the fire of each ambushed warrior.

By this and similar kinds of strategy, the Choctaws often suffered severely at the hands of their Muscogee enemies, who, of all the southern Indians, were the most complete masters of the wiles and stratagems of savage warfare.

CRAWFORDVILLE, Miss., April 2, 1883. H. S. HALBERT.

FRAUDS FOUND IN NORTH CAROLINA.

To the Editor of the American Antiquarian:

Within the past year a number of well-executed objects purporting to be prehistoric have made their appearance here at the east, from Cherokee county, N. C. Some are rare though well-known forms, and some are forms heretofore entirely unknown.

I have from time to time met with these things, one or two in a place, and have suspected them from the first, but an invoice received from headquarters has given me an opportunity of examining them at my leisure; and the result of that inspection is to satisfy me that each one is an ingenious, elaborate and dangerous fraud. I append a description of five pieces now before me.

The first, a discoidal stone, deeply double concave, 4⅝ in. in diameter, 1⅓ in. in thickness, varying somewhat in form from any other example that I have seen; the breadth of the concavity is 3⅛ in., and from its rim the edge of the piece slopes outward to the median line, thus making a section of the edge triangular; the workmanship is fine, too fine to be old, with just enough blemishes and irregularities to deceive the inexperienced collector; the material is steatite, a substance wholly unadapted for the use to which it is supposed that these objects were put, and amongst the hundreds of discs and discoidals that I have met with, I have never seen one in this material that was not open to suspicion.

The next object claiming attention is a tube, of that variety known as the hour-glass pattern; it also is of steatite, 6¾ in. long, 1¾ in. in diameter at the ends, and 1¼ in. in the centre.

We have next a pipe, called a duck pipe, of red sandstone, 7⅜ in. long, 3½ in. high, 2½ in. thick; the back of the bird,

by a very large opening, forms the bowl, the stem enters the center of the tail.

Another pipe is of far more striking appearance than the one described. The owner calls it an eagle pipe, and it is really a somewhat wonderful piece of work; its length, 5⅝ in., breadth, 2⅝ in., height, 2 in. The body is broad and flattened at the back, the head, at the end of a short, straight neck, is turned downwards, and the beak and eyes give it at the same time a whimsical and most vicious aspect.

Another pipe in the collection may be described as cup-shaped, with a thick band extending around it somewhat nearer the bottom than the top, on the outer circumference of this band are fourteen boss-like projections, each with a perforation extending into the interior of the cup; this thing is of steatite, 4 in. in diameter, 2¼ in. high, the diameter of the bowl being 3 in., and its depth 1⅝ in. The idea that the artist had was evidently to construct a tribal or family pipe, perforated for fourteen stems. It is quite unlike any smoking apparatus that I have ever before met with.

The place of finding of these various things is Cherokee county, N. C., Floyd county, Ga., and Polk county, Tenn. They were all shipped north by N. B. Graham, of the firm of N. B. Graham and P. W. Woods, England's Point, Cherokee county, N. C. These gentlemen announce that their specialty is "ancient archæology."

While on this subject I may say that even in this cold climate, as far north as New Hampshire, the "Flint Jack" lives and flourishes. I recently had brought to me a soapstone pipe, quite ancient looking, enough to be prehistoric, and of a shape frequently occurring. My suspicions were aroused, and the vender made a clean breast by confessing the pipe to be a fraud, and informing me who was the maker. He also gave me the curious information that the appearance of age was given by first boiling the pipe in oil, and then subjecting it to the action of fire.

W. ELLIOT WOODWARD.

ROXBURY, MASS., Jan. 3, 1883.

EDITORIAL.

THE MIGRATION OF THE INDIAN RACES

AND THE ORIGIN OF THE MOUNDBUILDERS.

We would call attention to the articles on Indian Migration, in the last two numbers of this journal, by Mr. H. Hale. The position in regard to the eastern origin of the Dacotahs, which the author takes, is not new, for Rev. Mr. Williamson, who was for many years a missionary in that tribe, came to the same conclusion, from the study of their traditions up to the time of his death, and left to his son, Prof. A. W. Williamson, of Rock Island, Ill., a request that he would follow up the subject by the study of language.

Prof. Williamson has already advanced this idea through the pages of this journal. We mention this, because it is a striking coincidence that two investigators in the same field should arrive at the sáme conclusion, without any previous acquaintance with each other's labors. The confirmation of the theory from two such distinct branches of science, as tradition and language, is also remarkable, and gives the opinion considerable weight.

There is, however, one point advanced, which has especially interested us. It was the opinion of the elder Williamson, that the Dakotahs were the original Moundbuilders, and that they are the people who were driven off, going westward instead of southward, leaving their monuments behind them in the valley of the Ohio, and throughout the northern states. There are difficulties about this theory which none but an archæologist can fully appreciate, but which seem insurmountable. In the first place, the mounds and earthworks of the Ohio valley, present a stage of architectural skill and of religious cultus which has never been found among the Dakotah tribes, whether in the northern region of Minnesota, or in their southern homes, and it is not probable that they ever had attained that stage, at any time. If they did once possess this skill and this peculiar religious cultus, it seems most unreasonable that they should lose them by migration, without showing some trace of it; unless we take the ground that there are regular grades of deterioriation as well as progress, and that the primitive races reached these lower grades without signs of disintegration or decay, forgetting the past and going through this process without the sense of loss, and without retaining any traces of their previous condition.

In the second place, we maintain that the Moundbuilders were composed of too many classes for it to be said that any one tribe were the originators of this custom. If the Moundbuilders were Indians, we inquire next, what Indians? The correlation between the customs of the different Indian tribes, after they had reached a fixed location, and the mounds, may signify something, but this grouping the Indians together, and the mounds together, wholly confuses our study.

The Dakotahs, or that branch of them called the Winnebagoes, may have been the builders of the emblematic mounds of Wisconsin, for this was once their habitat, and the cultus exhibited by these mounds is somewhat similar to that prevalent among all the Dakotah tribes.

There would be no inconsistency in this. If the mounds exhibited an inferior cultus this could be much more easily reconciled with the facts than a retrograde process. The traces of animal worship and of the totem system, which may be seen here, are similar to those given by tradition and by history among certain tribes. The same system may be traced among the Algonquins and Iroquois, but not attended with emblematic moundbuilding. It is a remarkable fact, that effigy mounds have been discovered in France and Great Britain, and have been ascribed to the Basques. The strange thing is, that the Dakotahs or Winnebagoes should have left on their former habitat, in Wisconsin, those very effigies which the Basques left in France. The theory advanced by Mr. Hale will account for it.

That the Moundbuilders of Ohio, were not Dakotahs, but were a separate and distinct race, is, we believe, the correct opinion. The architecture presented by these works differs entirely from that known or practiced by that people, and may be very clearly distinguished from the emblematic mounds.

There are some analogies between these works and those found in Tennessee and Kentucky, and possibly two races may, as Mr. Hale maintains, have become blended.

Mr. C. C. Baldwin has already advanced the idea that the Alleghewi, the Cherokees and Moundbuilders of the Ohio vallev, were the same people. He arrives at his conclusion from the study of maps and the Jesuit relations and traditions.

The difference between the earthworks in the State of Ohio, has been referred to by Col. C. Whittlesey. This does not, however, so much indicate a warfare between the two sections, as the occupation by two different races, for there are instances where the military works are found in the midst of the others, the remains of stockades having been found in the same region where the massive earthworks were.

It is noticeable that there are four or five classes of works throughout the eastern, portion of this continent. They may not correspond exactly with the divisions which Mr. Hale discovered the different languages, but are still near enough to be very suggestive. These works are, 1st, the military or stockades; 2d, the emblematic mounds; 3d, the village enclosures of the Ohio valley; 4th, the pyramidal platforms and associated works of the gulf States; A fifth class may be recognized in a general way throughout Tennessee and Kentucky, but lacking distinct characteristics. Corresponding with this division of the earthworks we would place the following languages: 1st. The Iroquois. 2d. The Dakotah. 3d. The Cherokee and Natches, and 4th. The Choctaws and Chickasaws, or the Mobilians. A fifth language is the Algonquin. One tribe of the Algonquins, the Shawnees, has been identified with considerable degree of certainty, with the stone cists and burial mounds of Illinois, Kentucky and Missouri.* There is no question but that the mounds can be divided into five classes, and we think that these classes correspond with the languages and races.

A third point brings us to this question of migration. We have maintained that the monuments are found at the end of the lines. Language may give traces of the directions and sources of migrations, but the monuments are tokens of the fixed habitat. One difficulty in the way of identifying the races with the mounds, is that the cultus of the races has changed. This tradition of the Dakotas, about their migrations, and their having been the Moundbuilders, is clouded by this fact. Their totem system is, so to speak, too far gone to correspond to the emblematic mounds, yet this may be owing to the change of cultus, brought in since historic times. One point in the problem of migration can be cleared up by the linguists. Possibly the Dakotas divided, some of them becoming the Moundbuilders of Wisconsin, some of them developing into a higher stage, and becoming the Moundbuilders of Ohio. The question which we put is, Was there a relation between the Natchez or the Cherokees and the Dakotas?

Mr. Hale brings out the answer that the Cherokees were of Iroquois origin, and so were not Dakotahs. He thinks they may have become mingled with the Moundbuilders, though they are not known to have built earthworks, and in this respect differ from the Choctaws. The Natches, on the other hand, he, in common with others, thinks may have been the survivors of the Moundbuilders of Ohio. "So far as our present knowledge extends their language seems to be entirely

*See article by L. Carr, in XVth Report of Peabody Museum.

distinct both from the Cherokee and Choctaw." This throws us back on the question whether the Natches and the Dakota were affiliated.

Fourth. There are difficulties in ascribing even the emblematic mounds to the Dakotas. The article by Mr. Dorsey refers to the fact that the Dakotas had no altars, and that the totems were not worshiped, and that they had no religious signification, while the emblematic mounds abound with altars and the effigies have almost universally a religious significance. We throw upon the students of the Dakota traditions the task of proving this one, that the Dakotas were the Moundbuilders. With the two sources of evidence—tradition and language—agreeing so well in regard to the migration, we certainly ought to have a confirmation from the third source, namely, their monuments. The migration of the Dakotas ought to be traced in the mounds, but they have not been so far. Will the linguists and ethnologists aid us in following up this line of investigation, and so prove their point?

It would seem from the combined labors of linguists, archæologists and students of history and tradition, that the study of the pre-historic occupation should begin to clear up, and we are happy to refer to these points in connection with those which Mr. Hale has himself mentioned. These parallel lines of investigation may yet prove very valuable.

LINGUISTIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

REV. E. PETITOT, formerly a missionary among several British North American tribes, has just published, in the "*Actes de la Société Philologique*," of Paris, Vol. XII., pp. 41–58 (Alençon, 1883, 8vo.), a myth of the Tρal-tsan-ottiné (copper-people), as they call themselves, who live north-east of the Great Slave Lake, and are identical with the "Yellow-Knives" of the Canadian traders. This myth, "*the Metal-Woman*," belongs to the class of the culture-legends, and contains many new features not heretofore observed in narratives of this kind; it is given in the original Tinné dialect, with a French translation opposite. Ayas ot'atayokian, or the "Story of Ayas," is a mythologic narrative of the Cree Indians inserted in the same volume by the same author. Petitot compares this hero of the Cree people to Noah of Genesis, and finds a great deal of resemblance between his life and exploits and those of Yell, the national hero and demiurgic genius of the Koloshians or Tlinkit of south-eastern Alaska. Ayas' story is given in Cree, with French interlinear translation. Petitot has in former years made important contributions to science by the publication of his "Langues des Dènè-Dindjé" (three dialects), and of his Grammar and Vocabulary of the "Tchiglit-Esquimaux," which have appeared in the Pinart collection (Ernest Leroux, publisher).

PAREJA'S TIMUCUA GRAMMAR, thought to be lost, has been found during the session of the Americanist Congress in Madrid, in 1881, and exhibited to the scientists assembled there. It forms a small volume, partly printed and partly written by the author himself about A. D. 1613, and is now being reproduced by the press of Maisonneuve & Co., in Paris, Messrs. L. Adam in Nancy and Ch. Leclerc in

Paris being in charge. Only two authors are known to have composed books in this Floridian language, the two Franciscan Missionaries Gregorius de Mouilla, and Francisco Pareja. Pareja had the opportunity of studying the language for sixteen years, when he began to compose in it writings of a devotional character, a vocabulary, and the above grammar. The language was spoken in many dialects from the St. Mary's River, on the Atlantic, to St. Marks and the Gulf of Mexico, and is especially remarkable for the simplicity of its phonetic structure, and for its high degree of polysyntheism. Up to the present time Timucua could be studied only imperfectly from the texts, but the republication of the grammar, which is written in Spanish, will give the full clue to the hidden mysteries of its inflections and syntax. Ethnologists and linguists of all countries are looking forward with suspense to the early appearance of this precious relic of the seventeenth century.

SEVEN BOLIVIAN LANGUAGES are given in the form of vocabularies by Dr. Edwin R. Heath, in the April number of the Kansas City Review, pp. 679–687. The languages are those of the christianized Canichána, Cayuába and Mobíma on and near the Mamore River, and on the Beni River those of the Moseténa, Pacavára, Marópa and Tacána. With the exception of the two last-named, the other tongues seem to represent distinct linguistic families, although a few terms of the Mobíma show affinity with the corresponding ones of the Cayuába, of which only fifty words are printed. Of the Mosetena a catechism by the Padre A. Herrero was printed in Rome (1834, 12mo, 20 pp.), with interlinear translation. Heath sharply criticises the comparative vocabulary of Bolivian languages given by Fr. Keller and reproduced by Prof. Orton.

ETRUSCAN LANGUAGE.—The extreme difficulty experienced in making inquiries on the Etruscan language is owing to the one-sided character of the 3,000 to 4,000 inscriptions worded in that language (these being mostly short and uninteresting funeral inscriptions, containing proper names only), to the almost total absence of bilingual inscriptions, and of Etruscan terms mentioned by the classic authors. The field being thus an open one for all sorts of conjectures, some professors endeavored to trace the mysterious tongue to Basque or Turanian sources, while others found unmistakable proofs of its German or Semitic origin. The mythology, institutions, many habits and peculiarities of Etruria certainly point to a common descent with the populations of Latium and Greece, and over a hundred years ago Lanzi inferred from these that the Tuscan belonged, as we would express it now, to the Graeco-Italic division of the Indo-European stock. Prof. Corssen, of Berlin, followed up these indications, and brought to bear upon them his vast erudition concerning the Italic and Hellenic dialects of antiquity. By and by the abruptly-worded tablets and sarcophagi-titles, which we possess in this consonantic tongue, revealed to him the existence of six declension-cases, several forms of the verb, a few numerals and many pronominal roots, which partly agree with those in Latin. He also observed a few rules in word-composition, accentuation, and the interchange of vowels and consonants. One of the most interesting parts of his voluminous work is the translation of the celebrated cippus of Perugia, a tall quadrilateral slab inscribed on two sides, and discovered in 1822. This cippus exhibits the longest of all Etruscan inscriptions hitherto found, and has on this account been looked at with peculiar interest by all glottists. The inscription now turned out to be a document giving the names of 24 donors and their donations for the purpose of purchasing ground for establishing a hereditary graveyard. From Corssens' interlinear translation in Latin, we pick out a few terms, which will best serve to illustrate the affinity of Etruscan with the cognate languages of Latium and Greece, observing withal that most nouns in the Perugian stone occur in the accusative case of the singular:

thaura helu: taurum helvum. hareu: ferreum. chva: χοὴν. zea, zia: ζειὰν. zeriun: σορὸν. thuruni: turibulum. thil: titulum. slel eth: cellarium id; aras' peras': aras πυρὰς (*altars burning with sacrificial fires*). cenu eplc felic: cenam epularem felicem. Penezs': Penates. acnina: agninam (carnem). municlet: munivit. Pronouns: eu: eo. hut: hoc. A word whose stem was lost in the classic languages, but survives in the English *think*, is thunchulthe, which signifies a *monument* or *sign of commemoration* and is found also in the well-known historical names of Tanaquil and Tagus. A term, "hinthacapi," meaning *sarcophagus* or *coffin*, is composed of hinta, *corpse*, and capi, *coffin*. Only the latter word has any analogy in Latin, where capulus means *coffin*, or in

Oscan, where kap-id signifies *ash-urn;* the first component had to be traced to the Umbrian word hondu, *man-slaughter*, and to the Sanscrit hantar, *murderer*, hatâs, *killed*.

Many Etruscan epitaphs have to be retraced to Greek names and sources, and in some Corssen has discovered Carthaginian names: V. Puina Armnial, which he explains by: Velus Poenus Arminia matre natus.

The two ponderous and illustrated volumes of Corssen: "*Ueber die Sprache der Etrusker*" Berlin, 1874, &c., 8vo., did not produce the effect upon the philologists of Germany and Europe which he expected, and which they really deserve. He may have erred in some points, but in the main his conclusions seem incontrovertible. Later investigators, as Deecke and Pauli, have been forced to acknowledge that in its foundation Etruscan can be traced to no other but to Indo-European sources.

THE ANTHOLOGY OF SWISS POPULAR SONGS, recently edited by Prof. L. TOBLER, of Zurich, is one of the more noticeable linguistic productions of our times. Being one of the directors and chief collaborators of the meritorious "Schweizerisches Idiotikon," now in course of publication, Tobler had ample opportunities of studying and collecting the national folklore as embodied in popular songs of the most varied descriptions, as historical, religious, erotic, satiric, pastoral and parænetic poems. For studying certain classes of idioms and peculiar shades of national psychology, no literary products surpass in importance the quaint and unmistakable poetry which takes its origin among the uneducated and lowly. And though these verses are rugged, unkempt and often boisterous and cynical, they at other times disclose the heartiest and soundest feelings of patriotism, of parental or conjugal love, and of philanthropism. No doubt many of them have originated with female poets. The volume begins with a historic sketch of German popular lyrics and ballads in Switzerland, and gives a full list of the historic songs known to exist, the oldest of them bearing date 1243 A. D. The texts of the songs are given on 218 pages; and it was the special plan of the editor to publish the unknown or little-circulated songs in preference to those which can be found in the majority of Swiss songster-books. The collection bears the title: "Schweizerische Volkslieder," Frauenfeld, 1882, 8vo., 152 and 235 pages, and forms the fourth fascicle of the Baechtold-Vetter *Collection of Early Authors of German Switzerland*, published by J. Huber, in Frauenfeld ("Bibliothek älterer Schriftwerke der deutschen Schweiz").

PROVERBS OF THE NAGO LANGUAGE.—The Nago people inhabit the countries surrounding Abbeokuta, on the Guinea coast, western Africa, and speak a language which lacks none of the sounds of the French alphabet, excepting the nasalized and the softened vowels. The Abbé BOUCHE, formerly a missionary on the Slave Coast, has published a copious collection of the proverbs current among the Nago, with the title: "*Les Noirs peints par eux-mêmes.*"* This volume gives an exhaustive sketch of all the moral ideas and popular philosophy in vogue among these natives, and many of the ditties and conundrums, riddles and proverbs are highly instructive even for ethnologists and psychologists. They are given in the original language, with translation and notes standing opposite. In the "*Etudes Catholiques,*" of August, 1880, the author has published a linguistic sketch of Nago: "Etude sur la langue Nago," and many of the proverbs above had been previously made public in Samuel Crowthers': "Vocabulary of the Yoruba language." Bouche's collection was published under the auspices of a new society called "Œuvre de Saint-Jérôme," and organized for the purpose of publishing linguistic works composed by missionaries. Subscribers who intend to help and foster this most meritorious undertaking will receive the publications of that society (one volume each year) conjointly with those of the "Société Philologique" of Paris. Address: Mr. le comte H. de Charencey, Rue St. Dominique, No. 3, *Paris*, France.

REV. H. G. TOMKINS has read before the Victoria Institute, London, an interesting article on biblical proper names, personal and local. The names selected by him are those which can be interpreted or at least illustrated from sources external to scripture, f. i., through the Egyptian language and the Semitic dialects of Assyria and Babylonia. Names of kings, queens and other persons were sometimes given to localities and cities; thus, "the Belka" retains the name of Balak, king of

*Paris, Poussielgue frères, 1883. 8vo., 144 pages.

Moab, and Shihân that of Sihon, king of the Amorites. Local and personal names frequently bore the name or title of some god; am *father*, akh *brother*, *kinsman*, are frequently joined to the name of some deity: Abiyah, Ammiel, Ammishaddaï. Akhi-mōth seems to contain the name of the Phœnician Pluto, *Mōt*, which occurs also in Hazar-maveth and in Beth-azmaveth. Sheba (*seven*) appears in Bath-sheba and other names, and may be connected with the deity Sbat and the Seb of the Egyptians. Under the caption "Animal Names" the influences of the totemic worship on nomenclature among the tribes of the Hebrews and eastern Semites are fully discussed. The reprint of Rev. Tomkins' article (38 pages) also contains the discussion subsequent to the reading, and gives a pretty full account of the literature which the researches on biblical names have developed during the last twenty years.

CONGRESS OF AMERICANISTS.—The fifth meeting takes place at Copenhagen, August 21-24, 1883, and parties wishing to join this Association may address Capt. W. A. CARSTENSEN, Secretary of the Organization Committee, Prince's Palace, Copenhagen, K. Although the list of papers to be read before the Congress cannot be completed before August 1, the programme mentions the following *linguistic subjects* to be treated: Differences between the Inuit and other North American languages. On languages cognate with those of the Mexican states, but spoken outside of the Mexican territory. Comparison of the languages of the Peruvian coast with those of the interior of Perû and Central America. On the interpretation of the quipos and of the Maya inscriptions. The prospectus has also the following topics in other departments: Migrations of the Caribs.—The Empires of Cuzco, Trujillo, Quito.—Is Viracocha historical or mythical?—Kjōkkenmōddings in Greenland, etc. — Idols and Statuettes found in Peruvian tombs. — Cibola and Quivira.—Tribes of New Granada.—The Mexican Calpulli.—Popol Vuh examined.—On Affinities between the Asiatic and the American Hyperborean Tribes.—The Flood in American Myths, etc.

ETHNOLOGIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

IROQUOIS TRADITIONS.—Although French missionaries have asserted the close affinity of the *Erie Indians* to the Five Nations at the time of the war of extermination waged against the former (1654-57), this affinity has of late been doubted on insufficient grounds. As far as Indian tradition can prove this fact, we have the testimony of David Cusick (1825), and of Elias Johnson, a Tuskarora chief, who, in his recent publication, "Legends, Traditions and Laws of the Iroquois or Six Nations, and History of the Tuscarora Indians" (Lockport, N. Y., 1881. 8vo., 234 pages; Address: *Pekin P. O., N. Y.*), gives that tradition surviving up to our times in such a circumstantial manner, that it is no longer possible to doubt the primary identity of the Eries with the Seneca Indians. When the Senecas became too numerous, a segmentation of the tribe took place in prehistoric times. A part of them, the Skua'hkîha, went first to the locality where the Tuskarora reservation is now (cf. Legends, pp. 173-185), near Pekin, N. Y. When they increased there, a portion segregated again and went to Ka'hkwâ'hka, a place south of Buffalo, N. Y., and were called the Kâ'hkwas. The name of that locality is explained as "place affording a distant view." From these, others separated again and went to settle along Erie Lake, and these were called Eries or "Cats," from a "chat sauvage," which they were hunting there, and which seems to have been no other animal than the racoon (J. S. Clark in Auburn). The cause of the Erie war is related in the tradition given by Johnson in almost the same manner as by the French missionary in the Jesuit Relations. It does not seem very difficult to separate, in these Iroquois traditions, the historical facts (or what they know about them), from what is purely mythic and fictive. We recommend Johnson's book to all of those who wish to make a special study of the Six Nations, their customs, languages and history, Like David Cusick, he is a native Tuskarora, and gives accounts not only of the former state of his own tribe and the

cognate Iroquois organizations, but also all the laws and statutes enacted by the legislatures of different states for the protection and relief of these Indians. Not many Indians write books upon their own affairs; here is one that deserves perusal.

THE DISTRICT OF COLUMBIA has of late yielded some archæological finds of general interest, which were examined by Messrs. Elmer Reynolds, F. H. Cushing, etc., and described by them. Of the two soapstone quarries discovered, one lies about one mile south-east of the Receiving Reservoir, another at Rose Hill, south-east of Tenallytown. Pottery, axes and arrowheads are found in quantities a short distance east of Benning's bridge, also east of Benning's station, and near the Chain Bridge at Little Falls, north side of Potomac River. All these finds are described and mapped out in "Contributions to the Archæology of the District of Columbia, by Louis A. Kengla, student of Georgetown University, D. C.," Washington, 1883. 8vo., illustrated, 42 pp. The preface states that "the paper was written only to explain a collection of Indian stone implements and fragments of pottery which the author made, etc." But Kengla did not confine himself to a mere examination of the localities and a description of the finds, for there are some chapters describing the use and manufacture of the implements, together with historical notices of the tribes that once lived around Washington. We do not, however, agree with him when he states that *forty* tribes dwelt within the ten miles square which now form the District; we know of no other but the Anacostias, called by others Nacostines, etc., to have inhabited this portion of the Potomac basin. The Toner medal was awarded to the author for the essay.

SOUTHERN SLAVS.—The folklore, legends and tales of the Slavic inhabitants of Illyria, Croatia, Bosnia, Servia and the southern tracts of Hungary were made the subject of special research by a professor of Vienna University, Dr. Friedrich S. Krauss. Born and raised in Pleternica, Slavonia, this scientist has felt from early youth a peculiar predilection for Slavic folklore, so poetic and imaginative, and has now given to the world a first essay in his "*Sagen und Märchen der Südslaven*" (Leipzig, 1883, 12mo., 32 and 480 pages). The volume is filled with 109 very attractive tales, and the work will probably be continued through four other volumes, by which Krauss intends to establish the ethnic connection existing between the legendary lore of the Slavs with that of the other Aryan nations. His book forms a parallel to the "Arabian Nights" and to Grimm's "Tales and Legends," and in many respects fully equals them.

THE HUSBANDRY OF AMERICAN INDIANS has been made the subject of a careful though short treatise by a German scientist, Max Steffen (die Landwirtschaft bei den altamerikanischen Kulturvölkern. Leipzig, Duncker und Humblot, 1883. 8vo., 139 pages). In limiting his researches to the cultured nations of this hemisphere, viz., the Nahua, Maya, Chibcha and Kechua Indians, and having access to the large material gathered by the South American traveller Dr. W. Reiss, as well as by Prof. A. Kirchhoff, Steffen was enabled to treat his subject very exhaustively from the early part of the 16th century down to our times, and fully availed himself of all the principal authors who could enlighten him. The stupendous works erected by the Peruvian tribes of the coast, and the rivulets dammed up by them to form reservoirs, their early use of manure, the division of agricultural lands among the people, the manifold use of the maize-plant and of the *Agave Americana* by the Mexicans, are some of the most attractive chapters presented in this interesting volume. A fungus-shaped soft vegetable substance, the *Corixa mercenaria*, covered the surface of the lake around the City of Mexico in immense quantities, and was gathered by the ship-load, dried, baked into bread and sold in the public market by the inhabitants. The author thinks it probable that the culture of Indian corn has originated in Guatemala.

RECENT PUBLICATIONS.

GREEN, JOHN RICHARD, M. A., The Making of England. With maps. New York, Harper & Bros., 1882. 8vo., 21 and 432 pages.

GREEN, JOHN RICHARD, M. A.; A Short History of the English People. With maps and genealogical tables. New York: Harper & Bros., 1883. 8vo., 823 pages. Contains a rich alphabetic index.

PHILOSOPHICAL SOCIETY OF WASHINGTON, Bulletin of. Vol. V., containing the minutes of the Society from Oct. 8, 1881, to Dec. 16, 1882. Washington, D. C. 8vo., 139 pages.

DOMINION OF CANADA. Department of Indian Affairs, Annual Report of, for 1881. Ottawa, 1882. 8vo., 62, 225 and 204 pages, with statistical tables and full of ethnologic dates.

CLARKE, ROB. AND CO.; Bibliotheca Americana. Cincinnati, 1883. 8vo. An extensive catalogue of 6,589 valuable books on American history, geography, travels, politics, etc., to which is added the catalogue of the books published by Clarke & Co. 266 and 45 pages. Price, 50 cents.

OLD, RARE AND CURIOUS BOOKS; Ninth Catalogue of Geo. E. Littlefield, 67 Cornhill, Boston, Mass. (May, 1883). The majority of these works refer to America.

DER DEUTSCHE PIONIER, "Erinnerungen aus dem Pionier-Leben der Deutschen in America." Published by the German Pioneer Society, Cincinnati, 1883. 8vo. Illustrated. Editor: H. Rattermann. (This valuable periodical publication has now entered upon its 14th year, and will continue to appear as a monthly.

VON LEIXNER, OTTO: Unser Jahrhundert. (An illustrated record of the history of our epoch, published in 50 numbers.) Stuttgart, Engelhorn, 1880, etc. 8vo.

VALENTINI, PH. J. J. The Olmecas and the Tultecas. A Study in Early Mexican Ethnology and History. Illustrated. 42 pages, 8vo. From "Proceedings of the American Antiquarian Society," at Worcester, Oct. 21, 1882.

WYSARD, A.; The Intellectual and Moral Problem of Goethe's Faust, Parts I. and II. London, Trübner & Co., 1883. 12mo., 80 pages.

TOEPPEN, DR. HUGO. Wanderungen auf Corsica. Separately printed from "Aus allen Wettheilen;" Leipzig, 1883. Map and illustrations. 23 pages, 4to.

BRINTON, DR. D. G. The Journey of the Soul. Address delivered before the Numismatic and Antiquarian Society of Philadelphia, Jan. 4, 1883 (75th anniversary), 9 pages, 8vo.

BOOK REVIEWS.

The Beginnings of History, according to the Bible and the Traditions of Oriental Peoples, from the Creation of Man to the Deluge. By François Lenormant. Charles Scribner's Sons, 1883.

Lenormant's Beginnings of History is one of the most interesting and startling books. It is an apparent identification of the statemeuts found in the book of Genesis with the traditions of the East. It is interesting because it concentrates into a small compass these traditions, comparing them with the Bible record, but startling because of the position of the author in reference to them. It has long been the opinion of archæologists that a parallel to each of the main facts of the Scripture record, such as the creation of man, the first sin, the cherubim, the slaying of Abel, the antediluvian patriarchs, the building of the city by Cain, the deluge, could be found in Mythology, but this shadowy information now comes forth

in bold outlines and assumes definite shape. No work has appeared which gives analogies so complete, and presents resemblances so striking. In this respect the volume is unique, for the author's acquaintance with the archæology of history has given him entire command of the subject. His previous studies have been embodied in the "Ancient History of the East," and in a volume on "Chaldean Magic" devoted to the special line of mythology and symbolism. What he says upon the topics considered in this volume must, therefore, be regarded as authoritative. The devout and reverent spirit of the author would naturally lead us to the belief that his scholarship would be exercised for the support of the scripture, but the fact that he is a communicant of the Roman Catholic church accounts for his attitude in reference to confirmatory or parallel tradition. His position upon the matter of tradition confirming scripture is not peculiar to him, however. The only difference is that he makes the fragments of early history the basis of the scripture facts; maintaining that the spirit of inspiration took these fragments and gave them a monotheistic tinge. The value of the book to our readers will be in what it suggests rather than what it contains. The question is, whether the bible and tradition are not both based on prehistoric facts, both of them giving these facts in figurative or symbolical language. If we take this view and read between the lines, we may possibly recognize many familiar things. The writer does not include the prehistoric age, but the reader may. The reader may follow the author through his descriptions of the symbols which were common at the beginnings of history, and recognize in them many familiar prehistoric relics. For instance, the symbol of the flaming sword, Lenormant thinks was nothing more than a disk with sharp edges and hollow center, which is used by primitive people as a weapon of defense. After having whirled it around the fingers to give it a rapid revolving motion it is flung horizontally, and thus used is a dangerous weapon. This disk was placed above the gateway as a symbol of defense. The serpent, whose symbol is everywhere, and whose worship is universal, the author recognizes as at the basis of the story of the serpent in the tree as recorded in Genesis, and equally so of the mythological creatures which are represented as guarding trees, such as Cerberus among the Greek, the dragon among the Hindoos, and the serpent Hvergelmir among the Scandinavians. The cherubim, whatever they were, were also derived from prehistoric times, and have been perpetuated in history, in the sphinxes of Egypt and in the winged bulls of Assyria. This view is interesting to the archæologist, and is carried out by the author very completely. The book does not quite clear up the problem of man's origin, or reconcile the scientific and revealed account of the creation and first condition of the human race. It does not furnish the connecting links which have been sought for so long between the historic and prehistoric times, but gives hints which are very useful in this direction. No book has appeared which is more suggestive and more fraught with learning and the statement of interesting facts.

A Greek-English Lexicon, compiled by Henry George Liddell, D.D., Dean of Christ Church, Oxford, and Robert Scott, D.D., Dean of Rochester, late Master of Balliol College, Oxford. Seventh edition, revised and augmented throughout, with the coöperation of Prof. Drisler, of Columbia College, N. Y. Large 4to, 1776 pp., full sheep. Harper & Brothers, New York, 1883.

The first edition of this lexicon appeared in 1843, the fourth in 1855, the fifth in '61, the sixth in '69. This, the seventh edition, appears in a ponderous volume of 1776 pp. quarto. It would hardly be recognized as the same dictionary as the one published by the Harpers in '49.

There are several periods in Greek literature. First, the early epic, the times of Homer and Hesiod; second, the lyric, from 800 to 530 B. C.; third, the tragic, 530 to 470 B. C.; fourth, the Ionic prose of Herodotus, from 470 to 431 B. C.; fifth, the old Attic prose, Pericles and Thucydides, 431 to 403 B. C.; sixth, the philosophic period, Plato, 403 to 352 B. C.; seventh, the oratorical period, Demosthenes, 352 to 336 B. C.; eighth, the Roman period, 336; ninth, Macedonian and Alexandrian age, age of Polybius, etc.

The editors of the lexicon have made a point to give such references to the authors of these different eras as to make the work an actual history of the Greek language, and by giving the definitions peculiar to each age have actually given a history of Greek thought.

It would seem as if the medium had become almost as clear and complete as the atmosphere itself, and that the light of the classic period was destined to be

transferred to the present generation, with the least possible hindrance from the barriers of language.

We notice that much more attention has been given to tracing the history of words through these different periods than to tracing them back to their origin and their affinities with words in kindred languages. For the purpose of comparative grammar this would be desirable, but at the present stage of the science there is too much uncertainty to embody the results in a lexicon. The department of mythology, and, in fact, all the departments of archæology are but briefly represented, the effort of the lexicographers having been to make it complete in a linguistic sense, and apparently relegating all such subjects to the classical dictionaries, or to the dictionaries of antiquity and geography. The study of Greek as a language and in a purely literary sense has come to be so much of a specialty with classic students, that it would seem the modern discoveries in other directions can hardly secure a hearing, but as long as such is the case a lexicon which is confined to the strictly philological grounds must be the one which will be in demand, and it would seem as though nothing could exceed this work in its painstaking care and completeness.

Great progress has been made in archæology as well as in lexicography during the past twenty-five years. The lexicons show this, as well as the histories. Among the changes we note the use of the old Greek alphabet in giving the root forms. This, for the scholar, is important. Other results of archæological discoveries are manifest throughout the work. Certainly one who desires to study the Greek language in its relation to the early cultus, will find this feature desirable.

The Red Man and the White Man in North America from its Discovery to the Present Time. By George B. Ellis. Boston: Little, Brown & Co., 1883.

Two opposite methods of treatment of the Indian seem to have characterized the history of this country, one consisting of sincere endeavors to improve their condition and to exercise justice, the other consisting of efforts to oppress and defraud them, and only resulting in exasperating them, and developing the worst qualities of their natures. An impartial record of the events which have followed these opposite courses is the object of the book whose title is given above. It is a task which few would have the courage to undertake, but one for which Mr. Ellis has some peculiar qualifications. In the first place the style of the book indicates the sentiment and sympathy which the author exercises while treating of the subject, and thus has given to it a charm which cannot fail to interest any reader. His evident acquaintance with the facts of history also qualifies him to state what may need to be told. The object which the author has set before himself is also additional reason why the book should be an interesting one. Nothing can be more inspiring than the plea for humanity which comes up in connection with the Indian race. The claims of this oppressed and fugitive people have often been advocated but as often deferred, but they are now pressing upon us as never before. The resources of our vast territory are at last finding a limit, and this people, which have been shoved farther and farther away, have reached the extreme. The 129 Indian reservations which dot the map are likely to be swallowed up, as no new territory presents itself for a removal of the tribes. It is a remarkable fact that the first to protest against the wrongs practiced upon the defenseless natives were the pious Queen Isabella and the intelligent priest Las Casas, but 400 years have elapsed, and for the first time in the history of our country has the government united with the church and both fully recognized their responsibility in the matter. Religion has not always been humane, nor has the government always been just. The change has come at last, and all seem to unite in the opinion that these wards of the nation are to be civilized and cared for rather than exterminated. The fair and unprejudiced statements contained in this book cannot fail to bring about good results. It is full of instruction, is well written, and is exceedingly valuable.

The Olmecas and the Tultecas: A Study in Early Mexican Ethnology and History. By Philipp J. J. Valentini. Reprint from the *Transactions of the American Antiquarian Society.* 8vo., pp. 42. Map.

A study in American ethnology as thorough and faithful as the one before us merits more than the passing notice which such papers usually receive. Prof. Valentini, in fact, undertakes the solution of the fundamental question of pre-Columbian history: Who really were the originators of Mexican civilization? They are spoken of by many early writers as Olmecs and Tolteca. What do these words mean, and who were these peoples?

Prof. Valentini answers that these were "pacific and cotemporaneous co-workers in the task of civilization during the long period from the sixth to the eleventh century;" and further, he believes that neither of them was of the blood or the language of the later Aztecs or Mexicans, nor that either belonged to the line or the speech of the Mayas. Both came from the north-east, landing somewhere about Tampico, conquered the country, and adopted the languages they found there (p. 40). Their original nationality he does not pretend to define; but he hints (p. 41) that they may have been Aryans.

Most of his argument is based on etymologies, and fully recognizing the importance of these, we will examine those which he offers, beginning with *Tulteca.* All agree that this, in Aztec, means "inhabitant of Tula, Tulan, or Tollan." The question is the derivation of this local name. Now it is a just and well-established rule among linguists that when a local name can be readily explained by the language of the locality, it is inadmissible to seek its etymology in a foreign tongue. Tezozomoc, a native Mexican authority, tells us that Tollan is a syncopated form of *Tonatlan,* place of the sun, and explains its origin. It seems, therefore, quite needless to seek a derivation, as Prof. Valentini does, from the Maya *tul,* abundance, and *d*, in; the more so as this terminal *d* cannot be used in Maya without a demonstrative pronoun or adverb of place precedes the noun (Perez, *Diccionario Maya,* s. v.)

Tamoanchan is another name occurring in Aztec annals which our author derives from a Maya dialect, and renders "the place where serpents live." But Sahagun, whom he often quotes, says this was not the name of a place, but of a people, and is compounded from the Nahuatl words *temoa tochan,* "we who are seeking homes." Prof. Valentini says nothing about this obvious etymology.

Chololan our author identifies, for no other reason apparently than the analogy of sound, with Chorotega in Nicaragua, again passing in silence the derivation of Sahagun from the Aztec *choloa,* to run away, and the local ending *tlan,* i. e., the place of the fugitives.

The ancient people about Cholula were called *Quiname,* a word which Prof. Valentini derives also from the Maya. But the word *quinametli* is the common Aztec term for a man of unusually tall stature (see Molina, *Vocab. Mex.,* s. v., Gigante, and Duran, *Hist. de la Nueva España,* cap. II.), and is probably a compound of *qui,* they or he, and *ameua,* a large, heavy object.

The Aztecs called the tribes to the south-east the *Vitzteuctli,* corrupted into *Vixtoti.* The word simply means the chiefs (*teuctli*) of the south (*uitz*). But the writer before us, neglecting this obvious rendering, prefers to connect it with the Maya Itzas, and their hero-god, Itzamna. Still more surprising is it that he adopts from the visionary Abbé Brasseur the translation of *Nahuatl* as "one who knows," when all the dictionaries translate it simply as "sonorous, agreeable to the ear." In this siginfication it was applied by the Mexicans to their langaage; very properly, too, as it is an idiom without gutturals, without nasals, and with ample vocalic wealth.

We might pursue these critical observations further; but we have said enough to show that our author's etymologies must be received with much caution; and that however creditable to his industry and learning is the work before us, it is far from presenting a satisfactory solution of the problem it approaches. D. G. B.

The Medical Language of St. Luke: A Proof from Internal Evidence that "The Gospel according to St. Luke" and the "Acts of the Apostles" were written by the same person, and that the writer was a medical man. By the Rev. William Kirk Hobart, LL.D., ex-Scholar Trinity College, Dublin. Dublin, Hodges, Figgis & Co. London, Longmans, Green & Co.

This title sets forth the aim of the book with a fulness and clearness which is well maintained throughout the work. It was work worth doing, and it is well done. The plan of the author is to compare the language of Luke with that of the great medical writers, Hippocrates, Aretæus, Galen and Dioscorides, all of them, like Luke himself, Asiatic Greeks. Of these, Hippocrates, B. C. 460–357, was the great master, the rest came in the first or second century A. D., and so are a little later than "the beloved physician." A careful comparison of more than three hundred words which are peculiar to Luke or used only by him among New Testament writers, in a medical sense, and of more than one hundred others which seem to have taken on special uses in the medical dialect, brings out the fact that in ancient as well as in modern times, a well-read physician might be known by his

speech, and that the author of the Gospel and of the Acts was a well-read physician. This demonstration not only identifies the evangelist, but illustrates that scholarly spirit with which he investigated the great history of salvation which he presents to us.

An interesting note, added to the book, treats of the "probability of St. Paul's employment of St. Luke's professional services" just after the sickness which had come upon him in Galatia, when Luke accompanied him from Troas to Philippi, where he seems to have remained until six years after Paul came there again, apparently after another severe illness at Ephesus. Again a few months later he changes his plans, and takes Philippi on his way from Corinth to Jerusalem, and Luke becomes his companion again to Jerusalem, and afterward to Rome. This may well have been because the apostle had need of his care. Most probably it gave the opportunity to "search out and set in order" the story by which he leads us from Zacharias in the temple at Jerusalem to Paul in the Roman Prætorium.—

J. E.—

The Tutelo Tribe and Language, by Horatio Hale. Proceedings of the American Philosophical Society, held at Philadelphia, for promoting useful knowledge. Vol. 21, 1883. Mr. Hale is following up a line of study in regard to the emigration of the American tribes, which is of very great interest. The Tutelos were a portion of the Dakotas. Being found on the Atlantic coast, they furnish additional proofs to the theory that the Dakotas first emigrated from the east.

This Indian tribe resided in the Alleghanies, Virginia, and the northern parts of North Carolina, when first met in history. During the last 150 years they gradually moved north among the Iroquois, and its last remnants, on the Canadian reserve of Brantford, still remember their native language. Mr. Horatio Hale, the philologist of the Wilkes' U. S. Exploring Expedition, met them there some fourteen years ago, and on studying their dialect perceived that it belonged to the Dakota family, and exhibited some of the most archaic characteristics of [illegible] The pamphlet treats of the Tütelo history, grammar and stock of words, and will prove highly profitable reading to all interested in ethnology and related studies.—

Collections of the Rhode Island Historical Society. Vol. I., containing Roger Williams' Key to the Indian Language. John Miller, Providence, 1827. The vocabularies and notes contained in this volume are exceedingly valuable, and the more so because the tribes have long since passed away and become extinct. Historical societies have not been careful enough in preserving records concerning the native tribes. It is fortunate that Roger Williams was disposed to give this record, and that the Rhode Island Society has preserved it.

Battle of Lake Erie. Usher Parsons. One of the most graphic descriptions of the battle of Lake Erie ever given. The narrative by Mr. Usher Parsons is very valuable, as it is one given by an eye-witness. Captain Perry, afterwards Commodore, and four of the commanders in the battle, were citizens of Providence, hence the propriety of the Rhode Island Society presenting the history.

American Statesman Series, "Thomas Jefferson," by John T. Morse, Jr. Houghton, Mifflin & Co., Boston, 1883.

"I sometimes ask myself whether my country is the better for my having lived at all. I have been the instrument of doing the following things:" Then follows the list, the disestablishment of the state church, the putting an end to entails, the prohibition of the importation of slaves, and the drafting of the Declaration of Independence. Who of us will dispute the assertion that Thomas Jefferson did not live in vain? So pleasant a biography as Mr. Morse has written, and so beautiful a book as the publishers have prepared cannot fail to remind us of the debt of gratitude which we owe to the great founder of the Republic.

American Statesman Series. James Monroe in his relations to the Public Service during Half a Century, 1776 to 1826. By Daniel C. Gilman, President of the John Hopkins University, Baltimore. Houghton, Mifflin & Co., 1883.

The Monroe Doctrine is an announcement of the policy of the United States in respect to foreign interference in the affairs of this continent, a political dictum which is still regarded as fundamental law, and bears with it the stamp of authority in foreign courts. The representative of this doctrine has received the honor of a separate biography written by Daniel C. Gilman, reviewing his life as student

and soldier, as legislator and governor, as envoy in France, as Secretary of State and of War, as President of the United States. Mr. Gilman undertakes to *explain* the genesis of the Monroe Doctrine, but the experience of the person whose biography he is writing and the offices he filled furnish explanation enough.

Words and their Uses, Past and Present. A Study of the English Language, by Richard Grant White. Sixth edition, revised and corrected. Boston, Houghton, Mifflin & Co., 1883.

Every-day English, a sequel to *Words and their Uses*, by Richard Grant White. Houghton, Mifflin & Co., Boston, 1883.

No person who desires to acquire a command of the English language can afford to be without these two volumes. They both may be regarded as authority on the subject. Though they appeared first in the New York *Times* and in the *Galaxy*, they are none the less valuable for having been magazine articles. Some of the best volumes issued by the American press have appeared in magazines before they have taken the book form. Our readers may be assured of one thing, that Mr. White is not prosy or dull. The merits of his work are proved by the fact that the first volume has reached its sixth edition. It is over fifteen years since the articles on "Words and their Uses" were first published. Abundant opportunity for discussion has since followed, but the position taken by the author may now be regarded as established. We take pleasure in recommending the two volumes for their practical character, as well as for their acknowledged ability.

Labor among Primitive Peoples, showing the development of the Obstetric Science of to-day, from the natural and instinctive customs of all races. By Geo. J. Engelmann, M. D. Second edition. Fifty-nine illustrations. J. H. Chambers, St. Louis, 1880.

The fact that this book has reached its second edition shows that it is in demand. There are points connected with this department of surgery, as there are connected with the department of dentistry, which may prove interesting to ethnologists. We do not feel qualified to review it in its professional bearing, but mention it that our readers may secure and examine it for themselves. The author has been a diligent student of the customs of all races in reference to parturition, and has brought together much valuable information. The volume is profusely illustrated, and is presented in a substantial and attractive form.

OUR EXCHANGES.

Science has entered into the full swing which its large and able corps of writers give to it. Every department of science is represented, Anthropology and Archæology being mainly filled by Major J. W. Powell. Many interesting facts are culled from the different reports, and make up a budget of news which is instructive to the common reader as well as suggestive to the specialist. There are so many workers in the field that a weekly is demanded in order to keep pace with discoveries, and to make a record of them. *Science* meets the demand with thoroughness and success.

The Magazine of American History starts out with a new editor at the head, Mrs. Martha J. Lamb. It keeps the same type and form, and seems destined to a successful career. Mrs. Lamb has a series of articles upon "Wall Street," illustrated. We hope that the eastern states will not absorb all the interest, but that the interior and the far west may also be represented in its pages. Let us have, however, the old documents, rare and valuable papers hidden away in the libraries, and the perishing records contained in the minds of the living, and then history will be interesting for its novelty. The repetition of familiar facts has been the bane of history, and should be avoided by every historical magazine. We welcome Mrs. Lamb to the editorial fraternity, and wish her success. The May number contains, among other creditable articles: Wall Street in History, by the editor; John H. Payne; President Buchanan Vindicated. Richly illustrated.

The *American Journal of Forestry* is a welcome addition to our exchange list. It is practical, intelligent, and treats of a most important branch. One especially interesting to the new settlers of the West.

The Folk-Lore Journal. Lóndon, published for the Folk-Lore Society, by Elliott Stock, 62 Paternoster Row.

The Palestine Exploration Fund, a society for the accurate and systematic investigation of the archæology, the topography, the geology and physical geography, the manners and customs of the Holy Land, for bible illustration.

An Account of Progress in Anthropology in the year 1881, by Prof. Otis T. Mason. From the Smithsonian Report for 1881.

The Smithsonian Institution has done a good thing in issuing its reports on archæology in a volume by itself. No better man could be editor of such a collection than Prof. Mason. We welcome the monograph and are happy to call attention to it.

Archæological Notes on Ancient Sculpturings on Rocks, in Kurmavn, India, similar to those found on monoliths and rocks in Europe, with other papers, by J. H. Rivett-Carnac, Esq., Bengal Civil Service.

From the *Journal Asiatic Society of Bengal*, Vol. II., Part I., 1882: Some Hindu Folksongs from the Panjab, by Lieut. R. G. Temple.

Boston University Year Book, edited by the University Council, Vol. X.

The Dutch and the Iroquois, being a paper read before the Long Island Historical Society, Feb. 21, 1882, by the Rev. Charles H. Hall, D.D.

Notes on Copper Implements from Mexico. From the Proceedings of the American Antiquarian Society, Vol. II., New Series, Part 2, p. 235, Oct. 21, 1882.

Portraits of Columbus. A Monograph, by James D. Butler, LL.D. Madison, Wis., 1883.

A Translation of the Principal Hittite Inscriptions yet published. By John Campbell, M. A., Prof. in the Presbyterian College, Montreal.

A Partial Index to the Proceedings of the American Antiquarian Society, from its foundation in 1812 to 1880. By Stephen Salisbury, Jr.

Groton in the Witchcraft Times, by Samuel A. Green, M. D.

The History of the Science of Politics, by Frederick Pollock.

A Centennial Address, delivered in the Sanders Theatre, at Cambridge, June 7, 1881, before the Mass. Medical Society, by Samuel Abbott Green, M. D.

Rough Notes on the Snake Symbol in India, in connection with the Worship of Siva. By J. H. Rivett-Carnac, Esq., Bengal Civil Service.

Semga II. From the *Journal Asiatic Society of Bengal*, Vol. XLIX., Part I., 1880.

Spindle Whorls. From the *Journal Asiatic Society of Bengal*, Vol. XLIX. Part I., 1880, by H. Rivett-Carnac.

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"THE NATIVE RACES OF COLOMBIA."

BY E. G. BARNEY.

FIFTH PAPER.

The temples of the Chibcha, were not generally of a sumptu-
ıs character. That of Isaca' or Suamos, in the northern part of
e present State of Boyaca and at, or near, the place where the
:ulture hero" of the nation, is said to have disappeared, as sta-
l in a former paper, was by far the grandest, most sumptuous
d most sacred of all the temples existing within the territory
the Chibcha at the time of the conquest.
This temple has been described as being of vast proportions
d by a few writers as having been richly adorned with gold
d precious stones, but the simple narrative of its destruction,
:ms to throw doubts upon the stories of its magnificence.
The Spaniards had entered the town at night-fall, and awaited
: morning to begin the work of pillage. Two soldiers however
mbed in through an open window with lighted torches, and
:re at first surprised and overawed to find themselves in the
:sence of a priest, whose *long gray beard* and majestic appear-
ce, caused them to pause in astonishment; but a moment after,
: seeing a long line of mummies, or embalmed bodies, adorned
th gold and jewels, their cupidity overcame their fear, and hasti-
placing their torches upon the floor, they began the work of
bbing the dead, but a moment after, had to seek safety in flight
ɔm the flames enkindled, apparently, by their own carelessness.
ıe facts upon which all writers agree are; First, That the temple
ıs of vast proportions, constructed of the trunks of the Guay-
an (a wood resembling ebony) which had been brought great
stances and over routes then, as now, almost impassable.—
Secondly—The roof was thatched and ornamented with feath-
grass and rushes.
Thirdly—At the principal entrance was placed or partly bur-

ied a golden figure representing the head and part of the body of a human being of hideous appearance—which was hollow and had a hole in the top, into which were dropped the voluntary offerings of the worshipers.—

Fourth—That the temple was of such proportions that it continued burning for months.— And

Fifth—There was very little booty obtained.

The form of the Golden figure for the reception of offerings, is preserved, and quite recently one of the same pattern, in baked clay, has been discovered at the entrance of a cave temple in Antioquia, where, encrusted in the walls, were found golden frogs, and figures of human beings, an eagle holding frogs in its talons and many other figures, which seem to indicate that the Chibcha culture had extended far beyond the boundaries of the nation.

According to some writers, there were five, and to others, seven of these temples more or less sacred, but no description of any of them has come down to us, unless indeed that first discovered by Espira, and called by him ("Nuestra Senora de la Ascencion") may have been one of the Chibcha temples.—The name given to this by Fredeman, who also stopped at the same point, was Nuestra Senora de la Fraqua"—*Our Lady of the Blacksmith Shop.*" This also seems to have been quite an extensive affair, as it aforded accommodations for several hundred men and horses for several months. When Espira first discovered it, there was in it, a priest and a hundred damsels, the principle duty of the latter being to care for the sacred fire of the temple.

The exact location of this temple is not now known, but it was within or near the South Eastern boundaries of the Zipa and in the same position relatively to the present boundaries of the State of Cundinamarca.

The priestly order as stated in No. 4 of this Series, were at once the religious heads of the Chibcha nation and the civil rulers of their own particular territory, and there is some reason to believe that their influence extended to tribes toward the north and west of them, and particularly to the Guane, who had benefitted by the teachings of Neueteroqueteba in person. The respect in which they were held by the common people is shown by the fact that even when within their very territory, the invaders were invariably misled by the natives, and such was their devotion to their religion that for near a century after the conquest the descendants of the conquered people still had their secret adoratorios where they made their offerings, as had done their ancestors of old; and in addition to their own simple offerings they gave, as well, those things held in most esteem by their Spanish priests, such as rosaries—a friar's cap—a priest's bonnet, a book of cases of conscience, etc. It may be doubted also if

while praying, crucifix in hand, they were not addressing Bachicha. A priest a century after the conquest being called to administer the offices of his creed to a dying person, found concealed within the crucifix held by the patient, a golden image of Bochicha, which may have been caused by a lingering faith and reverence for the gods of the patient's ancestors, or by a desire to hide a relic of value from the rapacity of the conquerors.

It seems impossible to reconcile all the statements of different authors in regard to this people, but I will endeavor to give the facts upon which the majority agree, and leave disputed points and differences to the judgement of the reader

The offerings of this people were made in cases of distress, and were preceded by severe fasts, in which the officiating priest joined.

There was a kind of seminary called Cuca, (Coo.cah) where those intended for priestly office were educated. These students were for ten or twelve years subjected to an almost continuous fast, only being permitted to eat once daily, and then but a small portion of corn meal gruel, with at long intervals a little fish. During this time they were taught the duties of the priestly office, including the computation of their calendar, the tradition of which was confined to the priests, who, as before stated, were the depositories of all the abstract knowledge of their country and time.

"SUN WORSHIP."

The Sun was the only divinity to which was offered the barbarian sacrifices of human life. Prisoners and youths were thus offered up, and their blood was sprinkled upon the stones which first received the rays of the god of day. There seems to have been two classes of these sacrifices,—one, being generally prisoners taken in war, was apparently a sectional or tribal offering, made at certain intervals on some elevated point terminating a graded way leading from the dwelling of the chief of the Section or tribe. In these cases the victim, first made drunk or crazy by a certain poisonous drink, was escorted midst grotesque songs and dances to the place of sacrifice, where being charged with messages to the friends of the living members of the tribe, who had already taken their journey to the world of spirits, the prisoner was duly sacrificed and his blood sprinkled upon the stones, as already stated. But at each returning cycle of fifteen years there was sacrificed a youth who had been selected and prepared in the temple for this purpose. This youth was selected at abont the age of ten years, was reared in the temple with great care, and like the former, was made unconscious before the ceremony of thesacrifice. This victim was offered for the Nation at large.

These sacrifices—the solemn dances, and the care which they bestowed in educating the victims, all had a direct symbolical relation to the division of time in their calendar, and to those ingenious inter-calations necessary to make them coincide exactly with the apparent motions of the orbs which ruled the day and night, and which indicated seed time and harvest.

These bloody sacrifices seemed intended to fix the attention of the people in a mode they were not likely to forget, and seemed to serve the purpose of the Quipus of Peru, and of the painted pictures of the Aztecs.

But the principal adoratorios of the Chibcha were their sacred lakes, where they were enabled to make their offerings without the fear that others would abstract them, for although they had the utmost confidence in their priests, and knew that these buried their offerings in vessels destined to that pnrpose; the natives very naturally thought deep lakes to be the more secure places of deposit.

The lake of Guatavita was the most celebrated of all the sanctuaries, and each town had its path well worn, by which the people descended to make their offerings.

Two strong cords were stretched at right angles across the lake intersecting at the centre, and to this point the priests and devotees went by means of balsa's—(light rafts) to deposit the donations of the people.

Each lake had its traditions, and pilgrimages to them were very common among the Chibcha. It is stated that the Cura of Chipague desiring to break up the custom of these pilgrimages procured an image of the Holy Virgin of Chiquinquira (now one of the miracle working shrines of the faithful Catholics of this country) and tried to persuade the members of his flock that they could pay their devotions to the Queen of heaven as well in his church, as by making so long and exhausting a journey to their ancient shrine, but he was always answered, "Very true, good father, but we have always gone to Chiquinquira, because since the time of our ancestors, it has been our custom to go a long distance to our devotions."

While yet the Chief of Guatavita' was an independent sovereign, he made each year a solemn sacrifice, which for its singularity, contributed celebrity to this lake even in far distant lands, and which was the probable origin of tbe belief in "Eldorado," in search of which so many lives and such countless treasures were expended in the 16th Century.

Upon the day designated for the annual ceremony, the chief, after first anointing himself with unctuous gum, sprinkled gold dust over his entire person, and thus decorated (*Dorado*) and resplendent, accompanied by priests and with music and singing by the countless multitudes, surrounding the lake, in form of an am-

phitheatre, he floated on a balsa to the centre of the lake, when plunging into its waters he bathed himself, the gold of course finding its way to the bottom. At the same time he made offerings of jewels, emeralds and other precious stones. Meantime the surrounding hills and mountains were made vocal by the applauses of the multitude.

Upon the termination of this religious ceremony, began the dances, singing and convivialities so universal among the Chibcha of Colombia. In their monotone and measured songs they always repeated the ancient history and traditions of their people and what they knew of their gods and heroes, their battles and other memorable events, which were thus transmitted down to posterity. At the gates of the enclosures surrounding the grounds and dwellings of the chiefs, who always presided at these feasts, as also upon all other important occasions, two old men, nude, except a covering of a *fish net*, the semblance of death among their people;—each with a lute were placed on either side, to make mournful music, that the revellers should never forget that they were mortal, and particularly so during their feasts. At these times there were foot races for which prizes were offered to the flutists.

Another of their religiious customs was the ceremonial journey over their country made at stated periods. This is described by the author of "Carnero," (understood to be a priest, who claimed to have received his information from the last Zaque) as being in the last degree immoral and debasing.

"CIVIL GOVERNMENT."

The governments of both Zipa and Zaque were very despotic. Each made the laws for his particular people, administered justice and commanded his respective armies. Such was the respect and veneration in which the sovereigns were held that none dared look them in the face. None approached the awful presence without making a present, unless he came to be judged, or had a case to be decided, in which case no presents were received.

The sovereign had one legitimate wife and as many concubines as he saw fit. It was considered a great honor to be demanded for the service of the sovereign, in whatever capacity, and particularly so, to be placed among his concubines. Whosoever sought illicit intercourse with the latter was punished with the utmost severity, and the heavy fines paid by such delinquents to avoid death, constituted an important item of the revenues.

The heir apparent of the sovereign was not one of his own sons, but the eldest son of his eldest sister, who, at the age of 16 years was made to enter upon a course of instruction accompanied by fasts, which continued for several years, during which he became

acquainted with the science of government. The same "*civil service*" training, was also required of all officers appointed by the king, as well as of all instructors of such pupils until the sovereign's demise.

The palace of the Zipa in Muequeta (now Funza) contained various departments and habitations, also store houses for clothing, provisions, &c. He also had a house of recreation at Tabio, where he went to bathe in the thermal waters of that place. At this place also he had gardens.

Here it was that after a hundred years of oppression, the enslaved nations still looked with reverence upon two Stately Palms under which the last of their sovereigns was wont to sit, but to drive this memory of their former condition away, the Archbishop Tours caused these trees to be cut down.

Another house of recreation in Tinesuca, on the slopes of the Cordillera, and still another in Theusaquillo, now Santa Fe-de-Bogota, attest the wealth and luxurious tastes of the last Zipa. Bogota preserves the family name of this personage, who always retired to this location when harvest was over and the summer dry season came on.

"PAINS AND PENALTIES."

Homicide, rape and incest were punished with death, but the incestuous criminal suffered the most painful death of the three, as he was enclosed in a dark, damp and noisome cavern, with a number of noxious insects and reptiles, where he was left to starve. Sodomites were impaled by having a stake driven through their bodies.

The person who failed to pay his taxes or his debts, had a small tiger fastened to his door, which he was obliged to feed until he had liquidated his debt The coward in war, was made to assume the dress and duties of a woman for the time determined by the sovereign. Thefts and robbery were punished by castigation in the case of men, aud shearing in the case of women, an affront most keenly felt by the latter. A woman suspected of adultery was given aji, (a small but intensely hot pepper.) If she confessed, she was given water which usually produced death, but if she still persisted in asserting her innocence, she was exonorated.

"SUMPTUARY LAWS."

Only the Sovereign could be transported in a palanquin or chair by his subjects, except by especial permission in cases of persons who had performed great service in war. License, was also required to wear jewels in the nose, ears etc., except in case of the Usaques or sub-chiefs who received the right to wear them with their appointment to office.

The mantles of the common people were colored with anatto, and must always be new and clean; but to wear mantles with figures and with black and red stripes, required a permission from the Sovereign, as in the case of jewels. Neither were the common people allowed to eat venison.

"DIFFERENT CUSTOMS."

If a man desired a damsel for a wife he sent a mantle as a present. If the mantle was not returned in eight days, the wooer considered himself accepted, and first sending another mantle, he followed to the doorway of the house of his desired parents in law, when seating himself, he indirectly intimated that he was present. Soon after the damsel appeared with a bowl of Chicha from which she first drank, and then gave to her lover. Marriages were performed by the Xeque or priest. The two being united by the arms before him, he first asked the damsel if she prefered this man for her husband, and if she would love his children better than herself. The questions directed to the woman being answered affirmatively, the man was then commanded to answer in a loud, distinct voice, if he desired the damsel for his wife. The answer in the affirmative concluded the ceremony, but did not prevent the man from taking as many concubines as he could support.

Matrimonial rites and ceremonies however, varied greatly in different parts of the nation.

Whenever a sovereign died the priests removed the viscera and filled the cavities with melted rosin, subsequently placing the body in a coffin hollowed out of the trunk of a palm tree and lined within and without with plated gold. In this receptacle the priests bore the body by night and with great secrecy to its final resting place, generally a cave hewn out of the rock by those in the priesthood at the time the defunct king ascended the throne.

Of all of the Sepulchres more or less sumptuous, according to the adulation, the veneration and esteem in which their sovereigns were held, the Zipas of Bogota are the only ones which have hitherto remained undiscovered, notwithstanding the diligent searches which have been made by the curious, the scientific and the avaricious.

With the bodies of Chiefs and other prominent persons buried in caves, vaults &c., were also buried their most beloved wives and a certain number of favorite servants, who were made to drink the juice of a narcotic plant to deprive them of consciousness before their immolation.

Provisions, jewels, arms, and the never failing chicha, which they liked so much, were placed within easy reach of the dead. Six days were devoted to the mourning for the defunct at the time of interment, and at each anniversary the friends and rela-

tives united to render tributes of honor, regret and sorrow to his memory. On all such occasions the time was passed in repeating in monotone songs the merits, deeds, prowess and virtues of the dead. chicha being drunk meantime in large quantities—probably to drown sorrow.

The commonalty were also buried with their arms, jewels, food and chicha, but without exterior sign, except a tree planted over the grave. The bodies of these were dressed in their best mantles. Some of the most approved chroniclers also assert that they had seen mounds of earth which served for common sepulchres, from which they took human bones, jewels of gold, horns of deer &c., which would seem to indicate that either as trophies of the chase, or food for the long journey before them, these animals had been buried with the dead. The largest of these mounds were near the great Bridge, (Puente Grande) about four leagues from Bogota, and those on the ridges of Caquiza' from which 24.000 ducats of gold were taken at one time.

In Tunja, (present capitol of Boyaca—ancient capitol of the Zaque) many well preserved mummies have been found, even the painted mantles which indicated the position of the dead while yet in life, being also in good condition. All of these bodies were seated and had their thumbs tied together with twisted cotton thread. In locating a new rout from Puerto Nino' or Valasquez, on the Magdalena river to Paune on the Altaplanicia of Boyaca, the route passed through the ancient territory's of the Muso, Colino Naura-Yaraqui and Velen'o, all of them at the time of the conquest warlike and powerful tribes, holding with strong arm, possession of the broken ric ges and vallies descending from the great basins occupied by the Chibcha to the low valley of the river.

To-day very large tracts of these territories are unexplored, but in one way or other the tribes named have become reduced to a few vagabond families, who still roam at will through the dense forests of the mountain and bottom lands.

In locating the route for a mule road above refered to, sepulchres were encountered, when the bones of the dead were enclosed in urns of calcined clay, the covers of which were wrought into imitations of birds, beasts reptiles, human figures &c., and at other points cylindrical pits were found lined with calcined earth, having depths varying from twelve to twenty-two feet, and and at the bases were found slight elevations placed at equal in-intervals and in concentric circles, from the ouer circumference to near the centre; these elevations being evidently intended as temporary depositories for the bodies of the dead, from which the bones were subsequently removed after the flesh had decayed.

That these pits, some of which were large enough to give resting place to two hundred dead at one time, were well calculated to

protect the bodies from wild beasts during the process of decay, and still admit birds of prey to consume the flesh, seems to curiously coincide with the customs of the Parsees of Asia aud of other Indian tribes of this country, as may be seen in a future paper. The discoverer of these remains of a people but little known to history, seems to have been astonishd at the skill displayed in the construction of these receptácles for the dead, but it will not appear so astonishing when we learn that the near neighbors of some of these tribes were skilled in the construction of cisterns of great size for the preservation of water for use during the dry seasons; having no running water within their territory.

These cisterns were of such extent that they served the purpose of irrigation, as well as for domestic uses.

The uninviting character of much of the territory of these latter tribes, together with a wholesome fear of poisoned arrows, has prevented hitherto, very much of exploration, and we are therefore indebted to occasional discoveries of the kind mentioned above, for the little we know now of an obliterated nation.

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MEXICAN ANTIQUITIES.

L. P. GRATACAP.

The Antiquities of Mexico offer a somewhat bewildering collection of objects to choose from, and among so many important remains it is difficult to select those which are representative, and yet embrace many isolate instances of peculiar and suggestive relics. Despite the apparent frequency of aboriginal monuments, their descriptions are by no means definite or complete in all cases, and only their numerical abundance, not the clearness of detail in the naratives of travellers, make their aggregate imposing. We shall review the whole field in a general way, and afterwards consider separate instances where phenomenal or instructive features appear. In the arrangement adopted we have followed Bancroft, closely consulting in many instances the original authorities quoted by him, and in others introducing supplementary notices—more especially notices of physical features, topography, &c.

The province of Oajaca embraces part of the southern border of Mexico, and boasts an inviting climate, fertile lands and lovely scenery. It lies along the Pacific, uplifted however, beyond the pestilential areas of sand and marsh bordering the Gulf, into a region of salubrious airs, propitious rains and wholesome vegetation. To-day the visitor to Mexico envies the life in its tranquil vales, and long ago an old civilization covered it with curious and ex-

tended cities. It was the home of the Zapotecs. In one place the remains of immense fortifications are reported as extending "over an area measuring one and a half by four leagues." Near Tehuantepec are two pyramids of hewn stone faced with a cement of lime, sand and red ochre, forming a brilliant plaster over their curved sides. One is 55 x 120 on the base line. The second is nearly the same but 50 feet high. Stair ways lead to the summit, and shelves or cornices of stone project from the second story, cut up into smaller divisions by upright slabs, making a multitudinous series of recesses, possibly intended for the the exposure of skulls—a not uncommon custom among the Aztecs, as the Spaniards encountered scaffoldings on the top of the Teocalli loaded with these ghastly trophies, in one instance as many as 136,000 being counted. Altars are found here—or what have been called altars—being cone-like creations of stone and mortar. Mounds cover the territory in the vicinity of Oajaca, the capital from which mortuary relics in the form of copper and flint implements have been exhumed in considerable numbers. Monte Alban presents a series of mounds, terraces and walls, situated on a high plateau, guarded by frowning and precipituos sides. Mounds of stone are pierced by long passages which expand into rooms near the centre, and masses of mortar, stone, and sculptured blocks are distributed over half a square league, while copper and obsidian implements, necklaces of agate, copper money and golden ornaments add their significant testimony to its occupation by a numerous and cultivated race, who built here their temples, their palaces and forts. Zachila yields fantastic idols, curious sculptures, and graceful trinkets.

MITLA.

Mitla is the best known and the most imposing of the ruins in Mexico, suggesting more impressively than other relics the architectural dignity of an ancient city. It is situated in Oajaca, 30 miles from the capital, in the midst of an inhospitable, wind-swept and barren country; bare hills tower around it; sand plains encompass it, and dreary clouds of dust fill the air and overwhelm the scanty stream whose unshaded banks add to the scenery their congruous desolation.

The descriptions of the ruins are quite explicit and numerous, and, with minor variations, the stories of different travellers substantialy agree. The ruins embrace four palaces and two pyramids. The mounds form two groups of which, in the northern suite, the largest is built of adobes, 75 feet high in four terraces. A stairway facing west leads to its summit, and it is flanked or preceded by smaller mounds, the whole making a court way. The southern group also compose a court yard, in the centre of which an altar appears. Many mounds conceal tombs, and one

of these was laid out in the form of a cross. A fortified hill, 600 feet high, occurs west of the village, its flat summit crowned by an irregular wall 18 feet high, forming in its circumference of one mile, buttresses, veils, &c., while on the only accessible side the construction line forms a loop, making an outer and inner wall. Dupaix says, great boulders were carefully balanced on projecting points outside the walls in a condition to be started down the cliffs on the appearance of invaders.

The palaces are distributed over a wide area, and may be the remnants of a once large city whose more perishable structures have long since disappeared. They are themselves in sad decay, though the absence of a robust vegetation, as at Palenque and Copan, has permitted them a less jeopardized existence than their great age would guarantee. The palaces are very similar in construction, varying in height, and in the presence or absence of the supporting mounds. One of them is built above a large tomb in the form of a cross whose roof is formed of large slabs spanning its whole width, 6 feet. The floor is made of similar blocks, the whole encrusted with the universal cement, but its walls show designs in mosaic, less skillfully executed than the pannels in the outside edifice, and therefore attributed to an earlier date. The principal or best preserved palace, illustrates the character of the others, and that more completely, as these latter are for the most part reduced to formless heaps of masonry and stones. This structure consists of three low mounds walling in a court yard—each mound 5 to 6 feet high by 120 or 130 feet in length, and supporting a stone structure. The building to the left has disappeared, crumbling down to its foundation: that on the right is also hopelessly dilapidated, while the northern palace presents in its walls, the best and clearest example of the peculiar ornamentation which was doubtless common to all. The palace has two parts, a southern and a northern end; the first is 36 feet by 130 feet, the latter 61 feet square—the whole 18 feet high and 4 to 9 feet thick. The exterior surfaces of the walls are divided by vertical and hor izontal partitions of smooth blocks into oblong pannels, which are filled in by brick shaped pieces arranged in a variety of symmetrical and ingenious patterns—each pannel affecting a distinct motif, and the whole uniting in an effect pleasing and tasteful. Great stones form the bottom course of these walls, and on some of these slight sculptures are found. The interior is floored with cement and flat stones, the walls with plaster, and through the centre runs a line of tapering columns 14 feet high, and buried 5 feet in the ground—cut from porphyry or granite. The northern wing except in internal arrangement and dimensions, is similar to this wing, but the four compartments lining the interior courts have their walls ornamented by three grecques, which extend in parallell strips around the room. The roof appears to have been

made of beams of wood, over which mats, slates of stone and plaster were laid, making a massive and impervious covering. Several stones are in the neighborhood 19 feet long, 5 feet broad and 4 feet thick.

Archaeologists have long regarded these peculiar remains with intense interest. They are quite unlike the ruins we find further north—those directly referred to the Aztec influences, but the many resemblances they present to the Maya buildings of Yucatan, awaken fascinating surmises as to their similar origin. They are regarded older than Palenque or Copan—older indeed than the Zapotec civilization whose territory they enrich. Whether this is the work of Zapotec builders influenced or taught by Maya Art, or of a branch of the Maya race, themselves reaching at this point a northern limit, or a vestige of the exodus of the great Toltec people who passed southward from the table lands of Anahuac to the regions of Yucatan is now undeterminable.

In the labyrinthine decoration and distribution of the apartments analogies have been recognized with Etruscan and Egyptian Art. Tradition asserts that the monarch of the Zapotecs withdrew to the somber seclusion of these temples to mourn the loss of relatives, or that its halls resounded with wailing dirges of priestly processions watching above the ashes of the royal dead. An illustration of the abuse and misapplication of words.

Vera Cruz is a narrow strip of of land bordering the Gulf of Mexico, reaching from Tobasco on the south, to the river Tampico in the north, and sloping upwards from the eastern lagoons, marshes and streams to the highlands in the west. This region includes the *tierra caliente* with its pestilential and arid tracts, and the higher and salubrious territory lifted up from these malarious borders, and skirting on the west the still more elevated country of Anahuac—the Mexican Tableland.

Vera Cruz is strown with ruins, scarred by fortifications, mounds, and tumuli; and in the even distrubution of its antiquities points to the past presence of a dense population. Traces of an active agriculture occur over extensive regions, at elevations of 2000 to 5000 feet above the level of the coast, terraces of stone walls, supposed to have assisted in fixing the ground, are seen; tanks of stone and mortar, ruined edifices in the midst of forests, or alone on deserted plains, skeletons, tombs, and burial urns, fortresses reared on natuaal strategetic points—the inaccessible cliffs that form the dividing combs of land between ravines issuing upon lower levels—all indicating the possession of the country by a race accustomed to resident industries, an organized government and disciplined warfare.

The Ruins of Centla, situated thirty miles north of Cordova, evinced in their builders a knowledge of the rules of defense and their just estimate of the impregnable character of their sur-

roundings. These ruins consist of pyramids, walls and ditches, surmounted by parapets, and so arranged as to completely command a narrow pass which winds about many hundred feet below, penetrating the highlands here and bounding with a companion ravine, a plateau with successive constrictions and wide arable fields. The narrow necks of land were fortified and the open land inhabited by the ancient population. The structures partook of a semi-warlike character, powerful, massive and bulwarked, and may have served as edifices for religious rites and mansoleums, or the statelier domiciles as citadels for defense and refuge.

At Huatusco, a very well preserved castle occurs on top of a terraced pyramid, its ground floor being a single compartment with three pillars in its center which supported the roof and suggest the purposes of those found at Mitla. A dark and closed cavity forms the two upper stories.

The region throughout must have been bristling with lines of fortifications and groups of solitary castles, for we find mention of Catastla, Paxtla, Xiamtla, Matlaluca, Tlapala, as localities where such remains may be seen. The divided and crevassed nature of the country, its peninsulated stretches of table land, frowning cliffs and tortuous *barrancos*, favor their erection, especially inviting in the turbulence of those times when the irruption of new tribes over the northern borders communicated fresh disturbances throughout the closely packed communities, leading to encroachment and resistance, or when the great nations of Mexico ravaged their weaker neighbors with periodic incursions to catch human booty for their hideous and smoking altars. The uniform features of these numerous remains are "terraced walls, parapets with loopholes, a plaza with plastered pavement, in the center of which stands a pyramid, a cubical structure or altar on the very verge of the precipice and scattered pottery and implements.

Towards the north beyond these congeries of belligerent colonists, stands the beautiful structure known as the Pyramid of Papantla. It is 48 miles from the sea and 52 north of Vera Cruz, in the midst of an unvisited country, abounding in natural products, and hidden beneath forests of rare and costly woods. This remarkable edifice itself rises from the midst of a deep wood, and framed in an umbrageous solitude of trees, strikes the traveler with its unusual and unique beauty. It measures 120 feet on every side at the ground, and is about 68 feet in height.. Only the upper story contains apartments, the remaining structure appearing solid, made of blocks of sandstone, laid in mortar, and the entire fabric is plastered over with stucco, on which are traces of painting. Niches divide the friezes on each story into regular intervals; they are 3 feet square and 2 feet deep, and sur-

round the building, except where interrupted by the stairway on the east side. They are uniform in size, with the exception of those on the east, and form a peculiar feature scarcely explicable, unless attributed to the exposition of idols and figures as the recesses in the fortresses at Centla. Southeast from this locality there are other pyramids buried in the surrounding forests, and blocks of granite are found heaped over with debris or clad in the verdure of tropic vines. Forty miles west of Papantla are the singular ruins of Tusapan, a city of the Totonacs, on a plain at the feet of the eastern Cordillera of Mexico. A single pyramid represents almost all that remains of this settlement. It lies in a dense forest presenting features similar to those we have inspected. It is surrounded by a solid walled building built of "irregular fragments of limestone," and probably smoothed exteriorly with a coat of plaster. On the summit opposite the stairway which leads np a side of the pyramid, a door with its posts and lintels ornamented with arabesques, opens into the single apartment of this shrine, and opposite to it is the pedestal on which the ancient idol stood. The great numbers of fragments and sculptured blocks which have evidently been used in parts of buildings, with ruined walls and figures, would seem to show that other buildings surrounded this one and formed a wide-spread city about it. One very unusual monument of aboriginal skill occurs in this vicinity—a fountain. It is "a statue 19 feet high, sculptured in the living rock," (Nebel) which is so planted as to permit the water to pass through its perforated bust, entering at the plumes in the head-dress above, and escaping from beneath the skirt into a basin, whence a canal conducted it to its appropriate reservoirs for distribution over the city.

The state of Puebla embraces a portion of the central plateau of Anahuac, and introduces us within the area over which the Aztec iufluence and dominion extended its sway. In the centre of the great plain of Puebla those vanished workers reared to the "God of Air," the "Feathered Serpent," the beneficent Quetzalcoatl, the enormous teocallix of Cholula commanding from its elevated platform the wide arena that recedes in softening loveliness to the feet of the Sierra Madre and looking up to the snow-capped peaks of Popocatepetl and Iztaccihuatl, the tawny crest of Malinche, and the distant slopes of Orizaba. It is now a wonderful picture, and every visitor in recollection of its superb atmophere and elastic landscape, the commingled serenity of field and prairie and the splendors of the stupendous mountains, wishes himself back amid its placid beauties.

"Ten miles west of the city of Puebla de los Angeles, and on the eastern outskirts of the pueblo of Cholula," stands the torso of this famous pyramid. Originally a great and populous town was at its base, and before the tenth century of our era the Tol-

tec reign about this massive turmulus was glorious, prosperous and happy. Often ravaged by the desperate followers of rival gods, it survived every outburst of fanaticism, preserving unimpaired the worship of its divinity administered by an army of priests and honored by a year of fasts. There is a striking legend repeated of this temple, that when first erected its pristine magnificence angered the gods and, and they partially demolished the ambitious edifice and scattered its insolent architects. (?)

This immense pile covers a space of over 40 acres—twice the space which Cheops covers—and is built of sun-dried bricks, mingled with pebbles of porphyry and limestone. A tradition exists of these having been handed from man to man standing in a long line from a great distance. It is now a quadrangular heap, 204 feet high, believed to be entirely artificial, overgrown with a tangled mass of bushes agave and dracoena bearing on its summit a plat 165 feet square—a Çhristian church—and showing imperfectly its arrangement into four stories. A tomb was accidentally broached many years ago, and two idols in basalt, pieces of pottery, and two skeletons were uncovered, but whether the interior or central regions of the pile were devoted to sepulture; is unknown. A few other mounds are near it, and may be the relics of the 400 temples surrounding the chief eminence which Bernal Diaz mentions in his diary, when a city of 40,000 (?) inhabitants spread its skirts about this colossal monument.

The country between Puebla and Tlascala is covered with relics, terraces, statues, walls, moats and subterranean passages, and in Mexico, the adjoining province, at Cuernavaca, natural boulders occur, inscribed with various hieroglyphics. Eighteen miles south of Cuernavaca, we encounter the pyramid of Xochicalco or the pyramid of the "Hill of Flowers." It is a natural elevation, about 300 feet high, encircled by a deep moat at its base and ascended by "five spiral terraces supported by walls of stone, joined with cement." Subterranean galleries paved and walled with masonry and stone, pierce the limestone hill, the main hallway terminating in a large chamber from whose ceiling rises a dome shaped cavity narrowing to a funnel-like passage, down whose tube, the Indiaus say, the rays of the sun, when in the zenith, fell upon the altar placed beneath (Nebel.) The five terraces embracing the hill in five successively narrower ellipses, are supported at intervals by parapets and bastions. The plaza on top was once occupied by an elegant structure five stories high, built of massive dressed and carved blocks of stone so reared that the whole structure maintained its integrity without cement, the superincumbent weight forcing it into a compact unity. Only the lowest tier of stone now remains, the

rest having yielded to the ravages of time and the more pitiless spoliation of the neighboring settlers, who used the beautiful fragments for their dams, their houses, barns, and furnaces. The story that remains is composed of enormous blocks of porphyry, some of which are 5 feet 2 inches long, by 2 feet 6 inches wide, and about 3 feet high. The porphyry is found in a distant quarry and must have been transported to its present site. These stones are sculptured and offer some analogy in their designs to those at Palenque. At each angle and on each side is seen a collossal dragon's head, from whose great mouth, armed with enormous teeth, projected a forked tongue; but in some, the tongue is horizontal, while in others it falls vertically. In the first it points towards a sign, which is believed to be that of water. Various squatting figures with necklaces, preposterous head-dresses, sometimes with swords, hieroglyphic allusions and the chronological emblem of the rabbit are found on both plinth and frieze. Some other dismantled and formless ruins are found on this pyramid, but afford little of interest.

A few miles east of Tezcucco, the ancient capital of the Tezcucans, where Cortez prepared his second attack on Tenochtillan or Mexico, and launched his war-ships—though now dry land usurps the place of the fallen waters of the lake—rises the steep hill of Tescocingo. It is densely covered with aloes and napals, and the traveller climbs its abrupt slopes with difficulty, assisted in part by the remains of a road cut into the solid rock and winding about the mountain. Everywhere are seen the vestiges of Indian works, and evidences of its occupation by the aboriginal races are found in the prepared avenues, the stone seats, the recesses, the rock basins, the pottery, the implements and the relics of buildings scattered over its surface. (Bullock.) On the east side is the stone bowl, famous as Montezuma's Bath, though the designation is most inappropriate, as this was the home of the luxuriant monarchs of Tezcuco. This bath received water from the distant highlands by means of a long aqueduct whose strong and broad embankment is yet seen, and in places the waterpipe through which the water was conducted. A precipitous wall descending 200 feet, arrests the visitor at this spot, and the eye turns towards a pleasant picture of hills and valleys, which, animated by all the accessories of color in sky and foliage, the shadows of clouds or the breath of refreshing winds enthralls the fancy with suggestions of the indolent life of the Tezcucan kings. In fact, the whole hill is regarded as the suburban residence of the Indian monarchs, a pleasure garden upon which was expended the revenues of the state and the ingenuity of its artists. Northwest of Tezcuco is another relic of Tezcucan luxury—a cypress grove, arranged about a rectangular space whose sides face the points of the compass and enclose 10 acres of ground. There

the level waters of a lake once lay, over whose surface sported flocks of fowl for the amusement of Nezahualeoyotl, the popular and benignant prince, whose escapades, loves and sagacity form a chapter of almost oriental fascination.

Twenty-five miles north of the City of Mexico lie the pyramids of Tetihuacan, monuments which have been examined by a number of writers, and which form one of the oldest examples of aboriginal culture. These ruins embrace two prominent mounds around and between which are scattered many smaller elevations. Some of the latter are arranged in two parallel rows enclosing a long avenue by which one of the pyramids is approached from the south, and still further south beyond the Teotihuacan River, is a quadrangular area shut in by immense embankments on whose summit 14 small mounds are symmetrically distributed. The two pyramids are known as the Temples of the Moon and Sun, the alignment of mounds as the Road of Souls, and the rectangular enclosure, as The Citadel. They occupy the centre of a level plain, surrounded, except towards the east, by volcanic peaks and ranges; black basalt underlies the blanket of soil from which they rise, and aloes, napals, mesquite and maguey cover them with a meagre verdure. The Moon Temple is a pyramid 426 feet north and south, and 511 feet east and west, with a top 36x60, and is 137 feet high. The material is a conglomerate of stones, mud, volcanic breccia and lime, mortar, super-imposed in contiguous layers for a thickness of nearly 60 feet, beneath which facing, the core of the mound has never been reached. Four terraces break the slope of this pyramid, and between the second and third an opening penetrates to two cavities some 25 feet from the surface, but characterized by no sculptured remains or mortuary relics. South of this pile is the Micoatl, the path of the dead, which is a road passing between adjoining mounds, and which expands immediately at the southern foot of the Moon Temple, suggesting a *Tau* or cross and regarded by Sr. Mendoza as a mystical figure correlated in its significance with its constant use by various primitive peoples, and related here to the occult worship of the two great luminaries whose rites were here celebrated. It is 250 rods long and 250 feet wide; the mounds are small, 20 to 30 feet high, and at intervals in the middle of this aisle are low heaps of stones. These central mounds have been explained as stations upon which the symbols of the passage of the moon amongst the constellations, were placed, whilst the spectators of the colossal ceremonies crowded the slopes and summits of the bordering embankments, watching the pompous movement of the sacerdotal procession to the top of the teocalli. South of the Moon Temple, some 2700 feet east of the Micoatl, and parallel with the latter is the Sun Temple, 735 east to west, 203 feet high, with a summit platform 60x90 feet, and in

nearly every other respect identical with its companion. A number of mounds accompanying this pyramid and an embankment 20 feet high and 130 feet wide (Mexican Commission) embraces it on three sides. The citadel is a rectangular enclosure embracing 984 square feet, and contains yet other mounds. Many small and apparently sepulchral mounds break the surface in knots or groups, falling away in half effaced ruins on the plain; in these some curious sculptures have been found, and almost all afford specimens of the hard and brilliant stucco, which formed the floors, walls and roads in this ancient city.

Teotihuacan is regarded by the authorities as a very old settlement and seems to have been attributed to the Toltecs, Totonacs, and Olmecs in turn, and yet probably antedates all these. Sr. Mendoza, Director of the Mexican Museum, calls attention to the fact that the sheet of vegetable earth which hides the pavements of this city, has been formed by the decay and detritus of the stone slabs of the pyramids and temples and other buildings, and in places, this is more than 3 feet in thickness. Though the rains continue only through six months, and are often very light, yet in spite of unfavorable influences yuccas of common size have planted themselves amidst these venerable ruins, and in spots we find three superimposed floorings, uniting these habitations between each of which a vegetable mould has accumulated, pointing to three successive reconstructions, desertion and subsequent exposure to weathering and neglect.

The temples and their idols have disappeared from the summits of the pyramids, but masks pottery, sculptured monoliths, a pillar, &c., have been found, indeed the terra-cota masks and obsisian fragments are universally prevalent everywhere in the ruins. Doubtless it formed a ceremonial city whither at stated intervals, great multitudes congregated to witness the elaborate rituals with which the deities of Day and Night were honored.

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ON THE GENTILE SYSTEM OF THE OMAHAS.

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The Omahas belong to the Dakotan family. That family is divided into six or seven groups, which are as follows: I. The Dakota, comprising the tribes of Dakotas and Assiniboins. II. The Dhegiha, including the tribes of Ponkas, Omahas, Quapaws, Osages, and Kansas.

III. The Winnebago group, embracing the Winnebagoes,

Iowas, Otoes, and Missouris, IV. The Mandan. V. The Hidatsa and Crows. VI, The Tuteloes now in Canada; and to these some add a seventh group, the Kata'ba of South Carolina.

The Omahas, to the consideration of whom this essay is limited, form a tribe of the Dhegiha group. This group consists of Upper Dhegiha or Omahas and Ponkas ; and Lower Dhegiha or Quapaws ; Osages and Kansas. Dhegiha means "belonging to the people of the land."

It answers to the Otoe—Olwere, and the Iowas—Oekiwere. If an Omaha or Ponka be challenged in the dark when on his own land, he will reply, "I am a Dhegiha." A Kansas, on his own land, will say, "I am he who is a Dhegiha." But when away from home, even when on the land of a tribe of the same group, the man must give the tribal name, saying, "I am a Ponka," or "I am he who is a Kansas."

Omaha, or rather U–ma"–ha," means "up–stream people." They say that in former days their ancestors were on the Ohio river. When they reached the mouth, they crossed the Mississippi. There these people separated. Some went down the river and became Ugakhpa, Quapaws, or Down-stream people; while the rest traveled up the Mississippi, and were called Uma"ha," or "they who went against the wind or current."

There are four classes of relationship among the Omahas, as fol lows:

I. By consanguinity (including gentile-relations, and those of other gentes in the same tribe or in other tribes, II. By affinity (including all of the affinities or consanguinities; III. By ni'kie (the taboo, etc., of the gens or sub-gens); IV. By w'eawa, (the calumet dance.) (There can be ni'kie relationship without identity of taboo, as when sub-gentes or gentes having different taboos claim descent from a common mythical ancestor.)

Each gens has a list from which a father is expected to select the names, and generally refer to some act of the mythical ancestor, or to some part of his body. There are, in addition to these, seven names sacred above all others, as referring to the mythical origin of the gens, and which used to be conferred upon the sons born into each household; and there were as many similar birth-names for the daughters. These Cardinal birth-names should not be confounded with the household names (Cardinal birth-names : First son, First-daughter, etc.,) of the children.

Origin of Gentes.,—The Black-shoulder people say that their ancestors were buffaloes, who lived in the water. When they came out of the stream, they made the water muddy; hence the first-born son is called "Makes, the water-muddy." Having reached the land, they snuffed at the four winds, and prayed to them. The north and west winds were good, but the south and east were bad. The ancestors of the Foremost gens were buffa-

loes, and lived under the water. They moved about with their heads bowed down, and their eyes closed. By and by they opened their eyes in the water; hence their first name, "Opening their eyes in the water," which is also their birth-name for the First son. Emerging from the water, they lifted their heads and saw the blue sky for the first time, hence they took the name of "Clear sky makers." The Ingdhe-zhide or the Red dung gens, has been so called since the visit of the seven old men with the sacred pipes. When they reached the camp of their sons, they found the erect body of a buffalo partly buried in the ground visible from the flanks up.

The animal had been flayed, and the skin was made into a tent. The body was bloody and frightful to behold so the old men passed by without giving the pipe. The only thing pointing to the mythological origin of the Elk gens is the sacred bag of that people.

This bag is the skin of a prairie-wolf, and contains a clam or oyster-shell, the bladder of a male-elk filled with killickinnick, some tobacco leaves, a pipe, a cedar stick, and a piece of the sinew of the male elk.

Rights and duties of each gens.—(*a.*) Seven have the sacred pipes: Black-shoulder, Dhatada, Kansas, Wolf, Buffalo-tail, Deer-head, and Ishta-sanda. Elk keeps the war-tent, and leads in the worship of the thunder-god. Foremost lights the the sacred pipes for the chiefs, and keeps the two sacred tents. He regulates the buffalo hunt.

(*b*) *Law of Membership.* A child belongs to the gens of the father; hence, half-castes have no status in the gens.

(*c*) *Law of Marriage.*—A person must marry outside his gens, and under certain restrictions which can not be given in this paper.

(*a*) *Law of things prohibited to be touched or eaten.*—In some cases this covers the whole gens, in others, each sub-gens has its special taboo. Thus, the Elk people can not touch or eat any part of the male elk or deer.

(*e*) *Religious ceremonies peculiar to each gens or sub-gens.*—Among these are the naming of an infant, and the worship of the thunder-god. In the Deer-head gens, the first ceremony is conducted as follows: All the members of the gens assembled on the fifth day after the birth of the child. Those men belonging to the sub-gens of the infant can not eat anything cooked for the feast, but the men of the other sub-gentes are at liberty to partake of the food. The infant is placed within the circle of the gens, and the privileged decoration is made on its face. Taking some red-clay paint, two parallel lines are drawn across the forehead, two down each cheek, one across the face over the moutht and one under the mouth, then with three fingers of the righ,

hand, red spots are made down the back of the child, at short intervals, in imitation of the fawn. The child's breech-cloth is so marked. On its arms and chest are rubbed stripes as long as the hand. All of the Deer-head people in attendance, even the servants, decorate themselves: rubbing the rest of the red paint on the palms of their hands, they pass their hands backward over their hair; and they finally make red spots on the chest, about the size of the palms of their hands. The members of the Pipe sub-gens, and those persons in the other sub-gentes who are related to the infant's father through the calumet dance, are the only ones who are allowed to use the privileged decoration, and to wear fine feathers in their hair. If the child belongs to the Pipe (or Eagle) sub-gens, char-coal, blue-clay, and the skin of a wild-cat are placed beside him, as the articles not to be touched by him in after life. Then they say to him: "This you must not touch; this too you must not touch; and this you must not touch." The blue-clay symbolizes the blue-sky. According to the Iowa tradition, the Eagle people came down from the sky.)

Worship of the Thunder-God.—When the first thunder is heard in the spring of the year, Elk invites Bear to a feast. On his arrival Bear opens the sacred prairie-wolf bag, takes out the pipe and the elk-bladder tobacco-pouch which Elk dares not touch, Bear then takes some tobacco or killickinnick from the pouch, and fills the pipe. The lighted pipe is held up towards the sky, and the thunder-god is thus addressed: "Well, venerable man, by your striking you are frightening us, your gradchildren who are here, Depart on high." Then all present smoke the pipe, and join in the feast. It is alleged that at the conclusion of the feast the rain always ceases, and the Bear people return to their homes.

(f) *Style of Wearing the Hair.*—The boys of each gens are obliged to wear their hair in a prescribed style. The Buffalo people have four long locks, two on each side, in immitation of (the legs of) the buffalo.

The Bird people have four locks, representing the head, tail, and wings of a bird. The Turtle people have six locks, in immitation of the head, tail, and legs of a turtle.

Peculiar customs of the gens. I give two examples. The Kansas Wind people flap their blankets to and fro, to raise a wind that will drive away the mosquitoes. When the corn-fields of the Ishtasanda gens are troubled with a certain species of worm, the men proceed as follows: They beat some grains of corn, and then pound up with this, a number of the worms. They make a soup of the mixture, and when that is eaten, they imagine that they will have no more trouble.

Sub-Gentes.—Each gens is composed of four sub-gentes, some of which are divided into four sections; and these Sections, in some

cases, are divided into four Sub-Sections. The Elk sub-gentes are: 1. Elk. 2, Keepers of the war-tent; 3, Thunder; and 4, one whose name is unknown to me. The Black-shoulder, sub-gentes are: 1, Keepers of the Pipe (Eagle people), or They who eat no red corn. 2, They who touch no char-coal. 3, They who eat no buffalo tongues, and touch not a buffalo head; and 4, The Criers or Heralds. Foremost sub-gentes: 1, They who eat not the sacred buffalo meat; 2, Real Foremost, they who eat no buffalo tongues; 3, Servants of the Sacred-Tents; and 4, They who touch not "Blue-skins." Dhatada sub-gentes: 1, Bear; 2, Bird; 3, Eagle; 4, Turtle.

Two of the Kansas sub-gentes are 1, Keepers of the Pipe and 2, Wind people. Earth-Lodge sub-gentes: 1. Prairie-Wolf and Wolf, 2, Keepers of the Sacred Stones; 3, Keepers of the Pipe; 4, They who touch not a white swan (*not a taboo.*) Buffalo-tail, sub-gentes; 1, Keepers of the Pipe; They who touch not the lowest buffalo-rib; 2, Keepers of the sweet medicine, They who touch not a buffalo-calf; 3&4. Names not obtained. Deer-head, sub-gentes: 1, Keepers of the Pipe (Eagle and Thunder people;) They who touch not charcoal, blue clay, and the skin of the wild-cat; 2, They who touch not charcoal, and the fat of a deer, and who can not wear deer skin moccasins; 3, Deer; 4, Thunder people.

The names of the four Red dung gentes have not been gained, though I have the names of their heads. Ishtasanda, sub-gentes: 1, Keepers of the claws of the wild-cat (Thunder people;) 2, Real Ishtasanda, (Reptile people); 3, Keepers of the clam shell, (Thunder people), 4, Keepers of the Pipe.

Origin of the sub-gentes.—The Eagle people of the Dhatada are known as "They who touch not the buffalo head." This name originated when the seven old men carried the sacred pipes around the tribal circle. The Eagle people found that they were slighted, and started away in anger, determined to abandon the tribe. But the old men pursued them, and handed them a bladder filled with tobacco, and also a buffalo skull, saying, "Keep this skull as a sacred thing.' Hence, the name of the sub-gens, and also "Dried or withered Eagle," meaning "Dried buffalo skull," the Cardinal birth-name of the first son.

Rights and duties of sub-gentes.—The second Elk sub-gens keeps the war-tent and the sacred bag, and leads in the worship of the Thunder-god. The members of the first sub-gens of the Hanga or Foremost, keep the Sacred Bark-lodge, the most sacred of the three, which contains the sacred pole of the Ponkas and Omahas. While they can not eat the sacred buffalo meat, they can eat the tongues. Real Hanga keeps the sacred lodge made of the skin of a white buffalo. This lodge regulates the buffalo hunt. These people can eat the sacred buffalo meat, but

not the tongues. The members of the Bear sub-gens assist the Elk people in the worship of the Thunder-god. The Raccoon section of this sub-gens is called Kh'u-ka, because its members are the Singers whenever there is a dance. The Eagle people keep the sacred buffalo skull (*used in inaugurating chiefs*), and *fill* the sacred pipes for the chiefs. (Foremost *lights* the pipes for the chiefs.) The pipe sub-gentes of the Black-shoulder, being Eagle people, are entitled to use Eagle birth-names, as well as the Buffalo birth-names of the gens. So the Pipe sub-gens of the Deer-head people have Eagle birth-names, as well as the Deer, birth names of the gens.

The Bird people have a curious custom. When birds eat the corn before harvest, the men of this sub-gens go into the field and roast several ears of corn, chewing the grains which they spit out all around them. They imagine that such a procedure deters the birds from making further inroads upon the crop. When there is a fog, the Turtle people draw the figure of a turtle on the ground. They place at its head, tail, and at each of its feet, pieces of tobacco, which they cover with small pieces of red breech-cloth. This, they say, causes the fog to disappear very quickly.

The following is the arrangement of the gentes and sub-gentes in the Dhatada camp or gentile circle:

I, Bear. 1, Black Bear, 2, Raccoon. 3, Grizzly Bear, 4, Porcupine.

II, Turtle; 1, Great Turtle, 2. Turtle that does not flee, 3, Red-breast Turtle, 4, Spotted Turtle with red eyes.

These are on the east and on either side of the opening or gateway:

III, Bird; 1, Hawk, 2, Black bird, 3, Thunder bird, 4, Owl and Magpie.

The Black birds are sub-divided into white heads, red heads, yellow heads and red wings; the Thunder birds into grey black birds, meadow larks, prairie chickens and swallows; and the owls and magpies into great and small owl and magpie.

IV, The Eagle; 1, White Eagle, 2, We-go-ni-be, 3, Spotted Eagle, 4, Whitish head.

The servants are placed at either side of the entrance to the circle and the gentes and sub-gentes or phratres and the clans are arranged according to the above order.

It has been suggested that the ten secondary divisions of the Omahas are *tribes* and that what I have termed sub-gentes, are the *real gentes*. But this is inconsistent with the Indian terminology as well as with the marriage law. The "camp-fire," whether among the Dakotas, Winnebagoes, or Omahas, is the "gens." Among the Omahas and Ponkas this "camp-fire" has another name, "tan'wang'dhan-uba'nan." from tan'wang'dhan, a tribe, **nation**; and urbana," "clump of shoots from a common stock or

root." But a sub-gens is styled "u,kigdha,sne," (from uga,sne, to split a log), and denotes "One of the divisions of the common stock."

This exhibit of the Omaha Gentile System is far from being exhaustive. At each review of the subject, new ideas have been suggested, the correctness or incorre tness of which, I hope, may be revealed by future investigations.

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PRIMITIVE NORTH-WEST.

BY C. W. BUTTERFIELD.

A brief inquiry is proposed concerning what was known of the territory now constituting the Northwest before any portion of it had been visited by civilized man. Early in the seventeenth century, French settlements, few in number, were scattered along the wooded shores of the River St.Lawrence, in Canada. To the westward, upon the Ottowa River, and the Georgian bay, were the homes of Indian nations with whom these settlers had commercial relations, and among some of whom were located Jesuit missionaries. In the year 1615, Lake Huron was discovered. To it was given the name of the Fresh Sea (Mer Douce). But, as yet, no white man had set foot upon any portion of what now constitutes the States of Ohio, Indiana, Illinois, Michigan, Wisconsin and eastern Minnesota. And thereafter, for nearly a score of years this whole region remained,so far as the visitation of white men was concerned, an undiscovered country; and such it continued down to the year 1634. However, previous to this date, something had been learned by the French settlers upon the St. Lawrence, of this (to them) far off land; but the information had been obtained wholly from the Indians. This knowledge was of neccessity crude and to a considerable extent uncertain. Such of it as has been preserved, is properly treated of under the following heads: First, as to what had been gleaned concerning the physical aspects of the country; second, as to what had been brought to light relative to the various tribes inhabiting this region.

Previous to 1634, nothing had been learned of Lake Erie,Lake St. Clair, or Lake Michigan, although it was understood there was some kind of a water-way connecting the Fresh Sea (Lake Huron) with Ontario. A little knowledge had been gained of a

[1]. During this year, a portion of the Northwest was, for the first time, explored ee *History of Nicolet's Discov. of the Northwest.* Cincinnati: Robert Clarke & Co. 1881.

great body of fresh water lying beyond the "Mer Douce"—"a grand lac," so called by the French—now known as Lake Superior. The length of this superior lake with that of the Fresh Sea (Lake Huron), the Indians declared was a journey of full thirty days in canoes. At the outlet of the great lake was what was described by the savages, as a considerable rapid, to which the French gave the name of "Sault de Gaston,[2]," the present Sault St. Marie, in the St. Mary's river, the stream which, it is well known, flows from Lake Superior into Lake Huron.

Accounts also had been received from the Indians prior to the year last mentioned, of a lake of no great size, through which flowed a river discharging its waters into the Fresh Sea (Lake Huron). These were reports of Lake Winnebago and Fox river, in what is now the State of Wisconsin. As the French upon the St. Lawrence had no knowledge as yet of Lake Michigan, they imagined the location of this small lake, and its river was beyond, and to the northwest of Lake Huron, and that they emptied into it; 3 Green Bay into the head of which Fox river really flows, being (like Lake Michigan) wholly unknown to them.

It had further been reported by the Indians before this date that there was a mine of copper[4] on an island in what has been mentioned as probably Lake Winnebago; doubtless, however, this island should have been located in Lake Superior. A specimen of native copper had, as early as 1610, been exhibited by an Indian to an interested Frenchman upon the St. Lawrence, and an account given by him as to the rude method employed by the savages in melting that metal? 5 But other islands besides the one containing the copper mine had been brought to the knowledge of the French settlers. A large one southeast of the "Sault de Gaston" being described, and two smaller ones, to the south of it. These islands were, it is suggested, the Great Manitoulin, Drummond, and Little Manitoulin, of the present day.

To the south, from the Sault de Gaston, it was said there flowed two rivers into the head of a lake, supposed by the French, to be what is now known as Lake Huron; but the reference was doubtless, to the head of Lake Michigan;

1. It is quite certain that down to 1632, nothing definite had been learned of these lakes by the French: for upon the map of that date usually known as Champlain's, they do not appear; in their place is a wide and continuous water-way intended to represent a river, leading from Lake Huron into Lake Ontario. It seems equally certain that no farther knowledge had been obtained concerning them prior to the visit of Nicolet in 1634.

2. Sault de Gaston, contenant pre's de 2 livres de large qui se descharge dans la mer Douce, Venant d'vn outre grandissime lac, lequel a la mer douce continent. 30. iourne'es de cannoux Selon le rapport des sauuages.—Champlain, *Voyages*, 1632.

3. See on Champlain's map of 1632, a small lake and a river running through it, where are marked the homes of "La Nation des Puans."

4. Champlain's map of 1632, gives the location of the mine as above stated ("Isle ou il y's vne mine de cuiure"). So, also, in his *Voyages*, 1632, in speaking of the stream now known as the Fox river of Green Bay, he mentions the mine—("qui vient d'vn lac auquel il y a vne mine de Cuiure de rosette").

5. Champlain's *Voyages*, 16.3, pp. 246, 247.

and, the streams mentioned, were probably the Chicago and St. Joseph rivers. Two other streams had also been heard of, which the Indians described as flowing from the south and emptying into the water course (whatever it might be) which had lead from Lake Huron into Lake Ontario. It is conjectured that reference was thus had to what are now called the Maumee and Sandusky (or Cuyahoga) rivers, in the present State of Ohio. But the largest of all the Western streams was one spoken of as South of the "Grand Lac" (Lake Superior), which, from the descriptions given by the Indians and still preserved, is at once recognized as the Upper Mississippi; although it was supposed to flow north into the lake last mentioned. [1] The civilized world, therefore, had *some* knowledge of the "Great Water," at least two score years before its discovery in 1673, by Louis Joilet; but there was no suspicion that it was the upper-waters of the mighty river passed up many years before by DeSoto.

Turning now from what had been learned previous to the year 1634, of the physical aspects of the Northwest, to the facts which had been gleaned concerning the Indians inhabiting this region, we discover that only five nations had been heard of: The Winnebago, the Mascoutin, the Sioux, the 2 Illini, and the Chippewa; and, at that date, only the names of the first two had become known.

The Indians living upon the Ottowa river of Canada were called Algonquins by the French. To them, the Winnebago nation had long been known, having received from them the name of Winnipegoû. As Frenchmen were early domiciled among the Algonquins, they very soon heard of the Winnipegou, to whom they gave the appellation of Puans as an equivalent for the name bestowed upon them by the Indians of the Ottowa river. [3] Now, the Puans, it had been learned, lived around the small lake before described as having a river running through it which discharged its waters into Lake Huron, as was supposed. It had been found out that the stream last mentioned had also upon its banks, some of the villages of that nation; it received the name, therefore, of the river of the Puans (Riviere des Puans); [4] and after white men had visited the country, the little lake was called the lake of the Puans (Lac des Puans). In the course of time, the French names have been dropped, and the Winnipegou (Winnebago) restored—but to the lake only, the stream flowing through it being known as Fox river.

1. This is conspicuously marked upon Champlain's map of 1632, but is spoken of as "Grande riviere qui vient du midy."

2. Subsequently known as the Illinois.

3. By the Huron nation living upon the waters of the Georgian bay they were called Aweatsiwaenrrhonon.—LeJeune, *Relation*, 1636, (Quebec ed.) p. 92.

4. The French also frequently spoke of them as the People of the Sea. (Gens de Mer), from the circumstances of its being reported that they came originally from the shore of an ocean.

The Mascoutins had been heard of as early as 1615. The nation was frequently at war with tribes near the head of Georgian bay, and with those further to the eastward. The French, in speaking of them gave them a name supposed to be equivalent to the one used by Algonquins—the Nation of Fire (les Gens de Feu). [1] That these Indians lived two hundred French leagues or more to the westward beyond the south end of the Georgian bay was all that had been positively learned concerning their dwelling places. [2] Their territory was, in fact, on the Fox river of Green bay, above Winnebago lake, extending southeastwardly as far possibly, as the site of the present city of Chicago. A brief reference to certain individuals of this nation has been preserved ante-dating the year 1634. It is to the effect that a child and its parents had been captured belonging to the Mascoutin, by some Indians of Canada. The parents were burnt but the child was given to the French. [3]

Some facts as to the Sioux had reached the ears of the French before 1634. They were known to have their homes to the westward of the Winnebagoes, coming by water (up the Wisconsin and down the Fox river) to trade with them. A little knowledge had also been gained of some of their clans inhabiting the upper waters of the Mississippi, their territory extending a considerable distance south. The name of these Indians had not been learned

To the south of the Mascoutins (so said Indian reports), there dwelt a nation, in a country where there were great numbers of buffalos. [4] It is very certain that this report referred to the savages afterward known, as the Illinoi (Illinois), whose homes were in what is now the State bearing their name.

Accounts had also been received by the French of one or more tribes dwelling around the Sault Ste. Marie, on either side of the St. Mary's river, which connects Lake Superior with Lake Huron. But these Indians like the Sioux and the Illinoi, were nameless, as yet to the settlers up the St. Lawrence; they were, however, the ancestors of the present Chippewas.

As early as 1632, if not before, some of the Europeans in Canada had heard of a nation of Indians called the Neuters,[5] who,

1. Champlain's *Voyages*, 1632.

2. The Hurons gave them the name of Assistagueronons, which had the same meaning.

3. Sagard's *Histoire du Canada*, p. 201; Chapmiain's *Voyages*, 1632, I. 262 [272]. On Chapmain's map of 1632, they are located beyond Lake Huron simply, as Lake Michigan had not yet been heard of. Hence the mistake of geographers subsequently, in locating them upon the territory lying *between* these two lakes. They were never dwellers, at an early day, upon the Peninsula afterwards formed into the southern portion of the the State of Michigan.

4. Le crois yu'il fust Hiroquois, mais i'ay appris qu'il est de la Nation du Feu; son pere et sa mere.e et les ont este' pris en guerre par les Algonquins,, qui ont bresile parents et donne' l'enfant 'a not Fran,cois.—LeJene, *Relatiyn*, 1532, p. 14.

5. Vide Champlain's map, 1632, where they are represented as a "Nation ou il a quantite' de beufles".

they supposed, dwelt to the *South* of the water-course leading from Lake Huron into Lake Ontario; and that such was the location of their homes, they put upon record, thereby making them inhabitants of the Northwest. That there was such a people as the Neutral nation was true, but their homes were *north* of the lake which was afterward discovered and named Erie, where in 1636, they were visited by a missionary, and where they continued to reside until destroyed by the Iroquois, a quarter of a centaury after. The Neutrals, therefore, were never occupants of the Northwest. It is not known that they ever lived south of Lake Erie.

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BABYLONIAN AND ASSYRIAN ART.

BY W. ST. C. BOSCANTEN.

All authorities, sacred and secular, agree in regarding Assyria as the child of Babylonia; and the truth of this is substantiated by every brick or tablet obtained from the buried cities of Assur. Each inscription or sculptured slab or quaintly graven seal, brings before us in a most forcible manner the fact that out of Babylonia went forth Assur bearing with him the germs of Assyrian civilization, which he had learned in the already advanced schools in the southern motherland. Until recently we have had but a paucity of Babylonian monuments to compare with the copious supply of artistic remains which the explorations of Messrs. Layard, Rassam, Botta and others have recovered from the grave mounds of the palaces and temples of ancient Assyria. During the last three years however, the successful exploration of Mr. Hormuzd Rassam, on behalf of the Trustees of the British Museum and M de Sarzec on the part of the French Government, have recovered for us an important series of monuments from the oldest cities of Chaldea; and we are thus enabled to see the germs of the artistic progress in western Asia and to guage the indebtedness of Assyria to the motherland of Babylonia. Two empires stand out prominently as the representatives of antiquity—Egypt and Babylonia, and both furnish us with a strange, almost paradoxical stage of artistic skill at the very threshold of their history. The wooden statues and the green Diorite statue of Keptren, iu the Museum at Boolak and the paintings in the tomb of Prince-Ti., which we find in the ante chamber of Egyptian historical life, are almost unequalled certainly not surpassed by any thing in a later stage of national art. In Egyptian civil ization there seems to be no childhood, no tottering foot prints mark her progress on the pathway of culture. She comes before us full born like some Oriental Minerva.

The earliest known sculpture and inscription, that of King Set-na preserved in the Ashmolean museum at Oxford, presents to us a language whose pictured characters exhibit great artistic skill, a fully developed language, grammar and vocabulary. All these are facts which serve to show centuries of growth and developement, yet are unrepresented by monuments or inscriptions.

On the threshold of Babylonian or Chaldean history, we meet with a similar astonishing problem—art remains, which for skill, and finish, far surpass works of a later period, and which would seem inconsistent with the primitive life around them. Here in the cuneiform writing, already far beyond the pictorial form from which it originated, in the perfect state of language, grammar and mythology, we find ourselves face to face with strong evidence of a long period of growth and developement, unaccounted for by monuments or inscriptions, and yet, nevertheless, clearly passed through by the nation.

Assyriologists are all agreed that the rudely inscribed bricks and cones from the mounds of Mughier on the west bank of the Euphrates opposite the mouth of the Shat el Hil, and which we know, mark the site of the ancient city of Ur—the Ur of the Chaldees of the Hebrew writers, are the most ancient records of Chaldea. Yet, cotemporary with these, we have works of art exhibiting a style of writing, a skill in art workmanship and conception, far in advance of these rude remains.

The bricks from Mughier, or Ur, bear inscriptions in the name of King *Ur-bahu*, "the lion of Bahu," and his son *Dungi*, "the established hero." This relationship between these two primitive kings is shown by an inscribed cylinderseal now in the British Museum. The son of Dungi was viceroy of the neighboring city of Zergul, during the life time of his father. This fact is preserved to us by a small olive-shaped talisman agate in the royal cabinet of gems at the Hague, which bears the inscription, "Gudea Viceroy, (sceptre holder) of Zergula, son of Dungi his lord. We have thus two generations of patriarchal Babylonian Kings, namely Ur BAHO Dungi and Gudea. In the year 1874, the Arabs of the Afadj, or delta of the Shat el Hil discovered in the mound of Tel Ho on the Shat el Hil, a statue of a King seated on his throne. Owing to the isolated nature of the locality in the centre of the marshes, and the great size of the figure, it could not be moved in a perfect condition. Not wishing to lose so valuable an *antika*, the finder broke off portions of it to sell. The head was unfortunely lost in the Tigris. The folded hands were purchased by Geo. Smith, and are now in the British Museum, and the torso which was richly worked and inscribed, was at a later date taken by a French traveler.

In 1879, Mr. Rassam, visited the mound, and made some slight excavations which resulted in the recovery of some inscribed

tablets, cones, &c. He also uncovered the lower portion, and pedestal of the great statue of the king, and took paper impressions of the inscriptions. I examined these on his return to England, and found them to be a dedication by Gudea, the son of Dungi to NIN-GIR-ZU, "the fire god." The inscription contained several very important facts, names of temples and deities worshipped in them, also the language and writing were very archaic in style. Since Mr. Rassam's departure, a series of excavations on a systematic plan have been carried out by M de Sarzec the French Consul at Busra, and these have furnished us with a most important collection of primitive Babylonian antiquities; which we may regard as the germs from which developed the art of Assyria, and indeed of Western Asia. The statues in stone and bronze discovered by the French explorer, now in the Louvre exhibit certain forms and styles of art which in after time, though treated, perhaps with greater freedom, always remain characteristics of Mesopotamian art.

I may site three of the objects found by the French explorer as typical ones, (1) statue of green diorite, evidently a duplicate of the larger figure first found by the Arabs, (Head lost). 2, Figure of a King or priest in *alto relievto* carved on a block of porphyry. (3), Head of a statue carved in porphyry and in very good preservation.

With these I mention two bronze statues of fire priests, holding the sacred cones found by the Arabs and purchased by Mr. George Smith in 1874. In the first of these figures, we have a seated figure, with folded hands, clad in a long robe striped and fringed at the bottom. The lower part of the statue and the throne are covered with an inscription of King Gudea, which duplicates that of the larger figure. Upon the knees of the statue is a tablet with a curious geometrical figure, possibly the plan of some temple. It is evident that this seated figure, which in posse, has some resemblance to the Egytian Seated statues, is the type which in after times was copied in the statue of the Sungod at Sippara, a representation of which was found by Mr. Rassam in 1880, and the seated figure of Assur nazir pal (885 Bc), formed at Kileh Shergat the ancient Assur.

Indeed from the Babylonian memorial stones such as those of Nebuchadnezzarr (I,BC. 1130), Nabu-ukina-abla,(BC. 1020),in the British Museum, and from the scenes on the engraved cylinder seals, it is evident that this seated figure, was the style in which all divine and kingly personages were represented. Like the ancient Egyptians, the sculptors of Chaldea, were never very profficient in the round, and even the few attempts we have, such as the black basalt figure of "the great Goddess" contemporary with this figure of Gudea, and bearing a dedicatory inscription by him, the statue of the same Goddess of Kurdur Mabug (BC2000)

now in the Louvre, are so cut that there was evidently little study of anatomy, and they are but one degree removed from the conical stones worshipped in early times as the figures of the Nature Goddess.

They have indeed from their extreme shallow work, and their flatness more the character of *alto relievo* removed from the back ground. An example of this class of work from Assyria is the figure of Assurnazir pal (885 BC) found at Nimroud. As an example of the transitional style, I may quote the second example in M De Sarzac's collection, the figure of a priest cut in high relief on a rudely prepared block of porphyry. It is by a certain amount of under cutting evidently made a precursor of the few attempts at sculpture in the round which we meet with.

As a contrast with these we have the small head of a statue, the body of which is unfortunately lost. The face is carved with the greatest care and exhibits all the facial characteristics of the Turanian mongol type to which the Akkadians belong. High cheek bones, oval-round face, sharp small eyes, and no beard. These are all produced with the utmost fidelity, and the turban head-dress such as in aftertimes became the characteristic dress of the Elamite, marks it as a very trustworthy reproduction of the Ethonographic type. By the side of these we have some still more astonishing examples of primitive art, in the two bronze figures obtained by Dr. George Smith, and originally from Zerque or Tel-Ho. The figure is about nine inches in height, and represents two ancient bearded priests holding the cones, inscribed with dedications by Gudea. These statues are not beaten or hammered work—but cast in bronze—a mixture of "tin or copper," a considerable progress in art workmanship and metallurgy for 4000 B. C. That the art off using and amalgamating metals was known at a very early period, is shown by mention of it in hymns written in the Ancient Akkadian language of Babylonian. In Western Asiatic Inscriptions, Vol. IV, pg. 14.1, there is a hymn to the Firegod, in which we read, "Of *copper* and *tin* the mingler thou art!" Again in another fragment we read, "Like melted bronze poured forth may his disease pour forth from him."

Such was the state of art and artistic workmanship in the marshes of Chaldea four thousand years before the Christian Era.

The question of the date of these statues is one that can not be fixed with absolute certainty, but a near approximation can be arrived at on the basis of a passage in an inscription recently found by Mr. Rassam at Abbo Hubba, the Site of the ancient Sippara of the Sun. This temple was restored according to Nabonidus King of Babylon, from B C 556,339, by a monarch named Naram-Sin ("Beloved of the Moon-God), 3,200 years before his date, that is at least 3,750 B C." The date of Naram-Sin judging from fragments of the Canon inscriptions in the British Museum,

was at least 500 years after the time of Ur bahu, and his dynasty. So we may safely give an approximated date of 4000 B C to the statues.

The connection between these most ancient examples and the early Assyrian types are furnised by some of the monuments discovered by Mr. Rassam at Abho-Hubba the Site of the ancient Sippara. The great antiquity of this temple is shown by the tradition of the Chaldean Priests Berosus, that it was in the treasure chamber of this temple that Xisusthrus stored the book containing the story of "the beginning, progress and end of all things," and its recorded restoration B C. 3,750, confirms this ancient tradition. That in the lower strata of the buildings at Abbo-Hubba, there existed remains of a very early and primitive type, similar to those found by Mr. De Sarzac at Zargul or Tel-Ho, is proved by the discovery of a small seated figure of similar style by Mr. Rassam during his last expedition there.

But the examples which form the connecting link between the art of Babylonia and that of Assyria is found on the memorial stones of Mili-Sipak (B C 1350), Nebuchadnezzar I, (B C 1140), Nabu-ukune abla (1020 B C), and the memorial stone of Nabul-bal esdina, (860 B C.) These monuments show how base relief was becoming the dominant style and sculpture was confined to seated figures. One of the most interesting features of this period is the symbolic art and the great fertliity of the artist's mind in giving expression to the various mythological conceptions.

In the case of the votive statue of the Sun god made for Nabubal esdina King of Babylon by Nabu-iddina-suma, the sculptor, we are told, that it was made of "polished alabaster," and as we see it depicted on the tablet it must have been a seated figure similar to these of Gudea at Zargul or Assurrnazir-pal in Assyria. From this inscription we learn, however, an important fact as to the reason why Assyrian and Babylonian sculptors in the round never reached any higher degree of perfection. In the fifth column of this inscription, we are told that among other donations given by the king were "three striped robes," "woven robes," and "shining robes" to be given on the six "great festivals of the year." In an earlier inscription of a Kassite King, named Aga-kaknini, which I translated in the Transactions of the Society of Biblical archœology (Vol. iv. pt. 1), the king speaks "blue and variegated robes," together with "gold jeweled crowns" which he had given to Merodach and his consort Zirat-banit. From this, it is clear why the examples of sculpture in the round of this period are so inferior, such as the statue of Assurrnazir-pal (885 BC.), or those of Nibo given Rimmon (BC. 812). They were never intended to portray the beauty of the human figure, but only to serve as dummies on which to place the rich robes the gifts of pious donors. In this the Babylonians and Assyrians did not differ from

the early Greeks for the only statue mentioned in the Iliad (Il. vi. 303), must have been a seated one, and the presentation of a veil seems to vindicate its being vested.

Turning now to the Assyrian collections for examples of the Assyrian art of this period, we find a considerable progress has been made in the colony on the art of the motherland.

The sculptures from Nimroud may be taken as the types of this period, and they come from the palaces of Assurr-nazar-pal and Shalmanesur III, and range from (885-800 B. C.)

This improvement is due to two things, namely: First: The greater facility for obtaining artistic material. The scarcity of stone in Babylonia, always exercised a great limitation on art, which was now replaced by a rich supply of gypsum, and alabaster from the mountains of Assyria; which was far more easily worked than basalt and diorite. Again the Assyrians had come in contact with the Phœnicians, who while borrowing largely from them, did not fail to impress Assyrian artistic workmanship, especially in metals, with their stamp. The long lines of bas relief from the palaces at Nimroud now in the Nimroud Saloon of the British Museum, are stiff and conventional, but they certainly exhibited an advance on Babylonian art. They in their turn, are far surpassed by the art of the golden age of Assyria, during the Sargonide dynasty from B C. 721-625. In bronze and metal work we have that chef d'uvre of Assyrian art; the plating of the bronze gates from Ballowat, a work of the highest excellence.

The characteristic of the art of this period is a close, almost scrupulous attention to detail in costume decoration &c., and in certain conventionalities as to friezz, due to Babylonian influence. But that they posssessed great skill in drawing is shown by the fine line drawing traced out on ivory pannels from Nimroud, and in modelling in clay by the reduced terra cotta reproduction of one of the scenes in the lion hunt frieze formed by Mr. Rassam at Kouyunjik in 1878.

The winged bulls and lions and the carvings in ivory show that they were attaining greater skill and less conventionally while the acme of truthful work and attentive study of nature is reached in the lion hunt frieze from the palace of Assurr-bani-pal at Kouyunjik now in the basement room in the British museum. Here we have marvelous studies of animal life, and a keen preception of the trait and character of animals, such ascould only be the result of a careful study of nature with a view to truthful reproduction and representation.

The range of the artist is largely extended now. Historical tableaux such as the war scenes from Nimroud, or the panorama on the bronze plates from Ballowat—or the seige of Lachish by Sennacherib or Elam by Assurbanipal place these works of art before us as historical pictures and authorities. Animal life ap-

pears in the hunting scenes from Nimroud and Kouyunjik—while flowers and fruits are reproduced in scenes in the gardens or parks.

Religious life has many illustrations; such as the worship of the Sacred tree, the king attended by the Anunaki or Spirits, or the sacrificial scenes on the brouze gates; while symbolism is ably represented by winged lion and bulls, and the eagle and lion headed figures on the palace walls.

The art of this period is of such a high character that those who would study the origin and development of art and especially of Greek and Asiatic art cannot neglect it. But the rich collections of the British Museum are not accessible to all students of this great subject. But it is for the benefit of those who wish to compare the art of the golden age of Assyria, with that of other nations, that Mr. Jarvis of Willis Road London, N. W., has prepared a series of reduced reproductions of the most typical examples. History is represented by two statues of Sennacherib and Sardanapalus or Assurbanipal. Court life by a picture of the queen of Assurbanipal. Symbolic art by figures of the winged lion and bull. These interesting figures are most faithful reproductions of Assyrian art and may be safely used by lecturers and teachers.

The statue of Sennacherib, the opponent of Hezekiah, who reigned from (B. C. 701–681) represents him clad in his royal robe; in his dual character of King and Priest. The picture is taken from a slab from the Koyunjik palace and every detail of dress and feature is carefully reproduced. The long robe somewhat resembling a cape is richly embroidered and fringed. The King wears on his head the tall cap or tiara, such as is worn at the present day by the Kurdish chiefs. In his hand he holds the sacred bow. This bow which was handed down from King to King was the gift of the Goddess Istar or Ashtaroth, who had the name of "Mistress of the bow"—"Archeress of the Gods"—"Lady of war and battle'—and the possession of it was supposed to insure victory. This small statuette 13½ inches high, serves thoroughly to convey to us the idea of the great King who styled himself the "Father of the people of Assyria."

The statue of Assurbanipal, which is modeled with great care from one of the figures of the King in the Lion Hunt prize—places before us a true portrait of the Sardanapalus whom Ctesias and Byron have made so familiar to us.

Assurbanipal who reigned from B. C. 664-645, was the ***grand monarque***, of Assyria. A bold and determined warrior, he carried the arms of Assyria from the mountains of Persia to the borders of the Libyan desert and from the shores of Lake Van to the Persian gulf. Necho of Egypt—Gyges of Lydia—Cyprian Greeks, and Babylonian Princes were tributaries to him and his strong arm made the power of Assyria felt far westward to the

shores of the Ægean. He was also a lavish patron of arts and literature. In the new palace which he built at Nineveh—the North palace at Koyunjik—he had the finest sculptures that Assyrian artists could produce and rich tributes of Tyre and Sidon Egypt and Cyprus and of distant Greece, served to decorate its saloons. But the greatest and most lasting record of this royal patron was the library which he founded "for the instruction of his people"; consisting of more than twenty thousand tablets, all carefully written in the most finished style, it contaiued copies of every great work that Assyrian or Babylonian learning had ever produced. From this library came the Deluge and Creation Legends, the beautiful Hymns and Poems—such as the "Descent of Istar into Hades" or "the Legends of Isdubar or Nimrod". It has however been very valuable to Assyrologists for the series of bilingual education tablets. Syllabaries, bilingual Assyrian and Akkadian texts with notes and annotations, for from these we have been able to learn as the young Assyrian Students did—the ancient tongue of the Chaldeans. Science was represented the great works on Astronomy and Astrology or the Zooloical catalalogues of Animals, birds and fishes. This is the work which will make the name of Assurbanipal ever a bright one on the roll of history.

The statue of this King (12 inches high) represents him clać in close fitting robe, reaching to the knees in front and somewhat longer behind: the whole being decorated with richly embroidered lozenge or rose pattern. Over the right shoulder and crossing the breast is a broad belt and round the waist a metal zone richly decorated and jewelled. The King wears boots, of the Median style, these havingreaced the sandals which were worn by the Kings of the middle empire represented on the sculptures from Nimrod—Upon his head he wears a simple diadem or fillet which like his robe is richly worked.

The free and athletic bearing of the figure before us fully conveys to us the idea of the King who was styled alike "the warrior" of the Gods, "the beloved of Ishtar or Venus" a conquerer and a King.

The figure of the Queen of Assurbanipal is an exact reproduction of the figure of that personage given in one of the bas reliefs representing a garden scene. Her robes are less elaborately embroidered than those of the King and she holds in her hand a wine cup of Cypriote workmanship. This figure is extremely interesting to compare with some statuettes of later Babylonian art, probably of the time of Nabonidus which were found in the Birs Nimroud, the site of the city of Borsippa—as they exhibit the same tendency to disregard anatomy. The winged bull and lion place before us those strange creatures of the Cherubim which guarded the entrance of the palace and corridors—

They are called in the inscriptions *Sedu* "Spirits" and are said "to protect the going and coming in of the King" and "to exclude all evil". The winged bulls are called "the Bulls of Heaven" and were suppossed to have been made by Anu the God of Heaven. The winged lion was sacred to Anat or Anatis and also to Beltis the Goddess of war and a very fine example was found at the entrance to her temple, at Nimroud. Among the evidences of Assyrian commercial life the most interesting are the series of lion weights found in the southwest palace at Nimroud.—To suit the traders of Assur and the merchants of Phoenicia and Syria—these standard weights are inscribed with legends in Cunieform and in Phoenician—The one which Mr. Jarvis has reproduced (4½inches long) bears the name of Sennacherib and the Phoenician inscription of the country.

These statues are produced in fine porcelain, so truthful and accurate in detail that they may well serve as examples and illustrations to students who are unable to use them. They have been strongly recommended by the late George Smith and by Mr. Rassam the Assyrian explorer and those who wish to have some tangible memorials of the great Kings of Assyrian or some example of the art of the studios of Ninever have now an opportunity to possess them.

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CORRESPONDENCE.

SWAMP MOUNDS.

To the editor of the American Antiquarian:

While surveying ancient earthworks within the last year or two, I have met with a class of mounds which has been somewhat of a puzzle to me, and to which I wish to draw the attention of archaologists and geologists, in order to find out if the experience of others may help to solve the problem.

For the purpose of distinguishing them from earthworks of undoubted artificial origin, I call them "marsh mounds". The reason for this term is that, instead of being on summits, they are distributed along the slopes of land bordering the marshes or low lands skirting some of our rivers and lakes. In my researches so far I have found them at points on the lower Minnesota river, the Mississippi river a few miles below here, and at Lake Minnetonka. They may occur as isolated groups, or they may be in

connection with a continuation of the acknowledged or true mounds.

In regard to composition they are not sand-hills, foroccasional excavation or other exposures of their contents coming under my observation show their material to be ordinary mould, but I have not yet met with or heard of any relics having been found in connection with them, except occasionally one on the surface of the ground there, or so close to it as to be deemed practically superficial.

Their size is small, never above three feet high, and in most cases only one or one and one-half feet, with bases ranging from eighteen to thirty feet—rarely more. They are often very numerous, indeed so numerons that, unless there were very good reasons for thinking them artificial, I should hesitate to spend the time necessary to survey all I have met with.

Can any of your practical readers, from their field experience, give me any information or views on the subject?

T. H. LEWIS.

ST. PAUL, MINN. MAY 28th, 1883.

NOTE.–The opinion has been expressed that these mounds are formed by gophers. They are frequeutly found in the midst of swampyor low lands, separate from any artificial works.—Editor.

"EVE'S THIMBLE"

To the editor of American Antiquarian:

Such is the name given to a thimble owned by a well known "ranch-man" of this state. I have recently seen the thimble and give you a description of it, and of the circumstances of finding it. The thimble appears to be of iron, moulded, and when first found was a whole top thimble. By much handling since some of it has crumbled away. What is left is "flaky" and could be easily picked to pieces. It is marked something as thimbles are now, and has a slight shoulder at the base.

Some years ago when Colorado coal was first burned, the present owner of the thimble drove some 14 or 15 miles to what is now known as the Marshal coal bed to get a load of coal. One old man was the owner and miner of the coal. A "drift" had been run 150 ft. into the side of the bluff, the farther end being about 300 feet from the surface. From this point the coal was taken. Upon my friends return home he placed some large chunks of the coal in the stove, but upon its not burning well, he broke them and in the midst of one, imbedded in a hollow place, but completly surrounded by the coal, the thimble was found, These coal beds are classed by Prof Hayden as hignitic and lying between the Tertiary and the Cretaceous. Much of the coal is "fresh", some of it too "green" to burn well. My in-

formant says the chunk in which the thimble was found "showed the grain of the wood," For sometime he kept it, but it is now lost. The thimble was full of coal and sand and retained its shape well.

Where did the thimble come from? How did it get there? Were there any of these western tribes who possessed such a thing before the coming of the white man? Who can answer?

J. Q. ADAMS.

BOULDER COLORADO.

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EDITORIAL.

EXPLORATIONS OF MOUNDS.

Those who were in attendance at the American Association at Minneapolis had great opportunities for exploring the mounds of the north-west. The editor of this Journal spent several days in exploring while en-route to the Association, and in returning accompanied a party, among whom was the Sec'y of the Association, and with this party explored some other localities. Beside this Mr. W. H. McAdams made a special trip to the central part of Dakota for the purpose of exploring mounds in that vicinity. The localities visited were, 1st: The region situated in Wisconsin along the vallies of the Wisconsin River, from the vicinity of Madison to Prairie du Chien, including the works at Arena, Muscoda, Bridgeport and the Elephant Mound six miles below the mouth of the Wisconsin River. 2d. A region situated on the line of the Mil. and St. Paul Railway from LaCrosse to Madison (the return route) including the celebrated pictured cave at La-Crosse, also Mounds at Sparta, New Lisbon, Baraboo, aud Madison. 3d. A region situated on the James River in Dakota, including some new and interesting mounds never before described. Beside these explorations the editor subsequently visited the central portion of Kansas and there identified the locations of a number of aboriginal villages, and traversed the habitat of many of the aboriginal tribes. Prof. Putnam and Mr. J. C. Kimball also visited Mounds in Ohio and took very interesting sketches of the great Serpent in Adams county, the works at Paint Creek, the old Stone Fort, and other localities.

It might be said that no more extensive or important exploration of mounds has been accomplished for many years. This work has been altogether voluntary, and with the exception of Prof. Putnam's exploration, has been at the expense of the indi-

viduals themselves. The results of these explorations are worthy of notice, and we would present them as they have occurred to us, preserving at the same time the narrative of the various places visited in their proper order.

I. One result of these explorations has been that the archæologists have come to a better understanding as to the object of exploration. It would appear that mounds have heretofore been visited mainly with the idea of securiug relics from them. The universal question is, "Have you ever dug into them? Do you know what they contain?" as if the only way of studying mounds was to dig into them and destroy them–such is the common method of investigating the mounds. No attempt is made to ascertain the reason for their erection in the localities where they are found, rather than in other localities; no study of the topographical surroundings, and no acquaintance with the system prevalent. It should bc said that this method is deprecated by the Sec'y of the Association, by the writer, and by all who have had any acquaintance with the havoc which has followed the unwise zeal for collecting relics prevalent. Private collectors are not the only parties who are guilty of destroying mounds merely for the relics which they may contain There are societies which send out ignorant parties to dig into the mounds, merely for the purpose of getting the relics, but without regard to the value of the mounds themselvs. The destruction of the monuments, we are sorry to say, has been carried on by the agents of the Smithsonian Institution. It is strange that such wantonness shonld be encouraged by an institution designed for the encouragement of science, but the passion for accumulating relics and enlarging the museum, has overcome all consideration for the monuments. Societies at the West, also,have sent into the field men who have destroyed mounds in great numbers, and sent the relics to their museum. Such is Science! It destroys more than it gathers. There is a zealous collector who was once a river pilot, who does nothing else than to dig into mounds and send relics to a Society. No record of the mounds is preserved, no mound is plotted—a mere ignorant and foolish ambition to swell the number of relics in the cabinet.

II. A second result of the exploration has been the recognition of a connected system among the mounds. This system involves several particular elements: 1st. The connection of the mounds of the various localities, both by intervening signal stations and by placing the groups along river vallies, so as to make the complete river system. It was ascertained also that the river systems are connected with other mounds on the watersheds, so as to make the system cover the whole country. 2. A second point is, tthat the various mounds of each locality are to be studied in their connection, as they are only parts of a connected

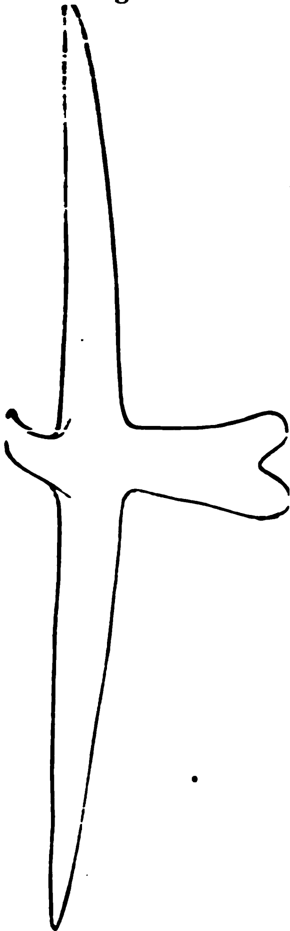
series—some of them serving for defence, some for burial places, and some as the remains of village sites. 3. A third point noticeable in the system is that all the mounds in each locality are to be studied in order to understand the object for which they were erected. The mounds illustrate native life; some of them were used for observatories; some for game drives, some for village defenses; but the study of the different groups will reveal in the relative situation of eaeh the objects for which they were erected, eacn locality presenting a complete whole, and native life explaining the whole. We would call attention to these points as we proceed with the deseriptions.

The mounds explored were chiefly the emblematic mounds of Wisconsin, and those first visited were in the valliey of the Wisconsin River. Mounds at Avoca were described by parties resident in the vicinity, but were not visited.

At Arena several large tumuli were discovered on land belonging to Mr. Meggs, near the Blue Mound Creek, about two miles from its mouth. One or two long walls accompanied these tumuli running parallel with them. Other mounds are situated along the creek and connect the extensive works near the Blue Mounds which have been already surveyed and described.

At Muscoda. An ancient village. No mounds were discovered on the plains, but a very interesting series of them were visited on the bluffs situated north of the village. These consist in the first place of a long row of disconnected mounds interspersed here and there by emblematic effigies which run at right angles to the others. This quasi or fragmentary wall extends from the mouth of Mill Creek to the mouth of Indian Creek, through the entire village of Orion. Back of these farther north, hid away from observation, a mile and a half from the river, is a valley overlooked by high knobs or bluffs, and drained on either side by the two creeks. Here was found what seemed like the location of an ancient village. The village itself was surrounded by effigies—the effigy always being that of an immense eagle. The wings of the eagles were outspread so as to form a quasi enclosure.—Sone twelve effigies were traced; all of them in the shape of eagles. This group we called the big eagle village. A series of earth-works were situated between the village and the vallum before spoken of. The vallum is on the brow of the bluff, these works are half way between. Near the village on the banks of the Mill Creek is a series of works, mainly straight mounds arranged in rows, and along with them effigies. Two groups of this kind were discovered, one having the effigy of a deer running, the other having the effigy of an eagle with outspread wings. Three miles from these works is a series of tumuli situated on the summit of a very high bluff, or knob. These

mounds command a view of the village in the valley below, and also of the river to the westward for twenty miles away, a very beautiful view, and one which would naturaly guard the whole region against surprise from the westward. A large number of effigy mounds are situated near this high point. The group is located at Rudolph's Mills on land belonging to M. A. Cornail. The village is situated on land belonging to John Shafer. A group of mounds described by Dr. Lapham, and called by him the citadel, is situated in this vicinity and belongs to the same general series.



The figure given herewith represents one of the Eagles, surrounding the Eagle village. Other Eagles in the series differed from this in that they were shaped with the wings folded, or in fact, in a variety of attitudes. The size of these Eagles varied from 65 to 75 feet in height and the wings when outstretched were from 50 io 60 feet each.

It here cursorily appeared that a complete system of works is to be found along the Wisconsin River and the streams that flow into it and run either side. The part of the valley explored is composed of a level sand plain, with high precipitous rocky bluffs on either side. The mounds are mainly situated on the plain but near the streams. More of them are near the tributaries than on the immediate banks of the river itself. This can be accounted for bv the fact that the river changes its channel, and is lined by low land except in certain localities. The openings in the bluffs are also accompanied with certain earth-works, and in certain places there are mounds on the summit of the bluffs. The outlook from the high mounds is very remarkable, sometimes giving a view for miles away. As one approaches the Mississippi River he fiuds the two systems combined. A series of works or mounds in the valley, being acompanied by another series on the bluffs. Below the mouth of the Wisconsin the mounds seem to be situated in swails hid away from observation and somewhat remote from the channel of the river. The mounds on the bluffs, however, command a view

of the river.

Another locality visited near the mouth of the Wisconsin River revealed a fact which was not before known, namely: That the high precipitous bluffs which border the Wisconsin and Mississippi Rivers, are often surmounted by emblematic mounds which served both as burial places, as symbolic effigies, and as look-outs. These are often also associated with other works in the valleys of the rivers, and may have been intended as protection to the people who resided in the valleys, and who left their emblems on this soil near the places where they resided.

The Works at Bridgeport.—A series of works at Bridgeport consists of one group in the valley below the bluff near the opening in the bluff, and another series on the very summit and extending along the whole line of a protruding crest. This group commands an extensive view of the Wisconsin River to the eastward and overlooks the site of the present city of Prairie du Chien, to the north. A number of large tumuli are situated on the prairie south of Prairie duChien, and can be seen from the cars—they are less than three miles from the Depot. They have been opened and have yielded some interesting relics—a large number of copper beads, or wooden beads covered with copper—were taken out of one of the mounds. A CORE of obsidian from which arrows or spear heads had been split off, and also a large obsidian spear head; a scalping knife of oil stone, and many other very interesting relics.

III. A third result* of these explorations was a better acquaintance with the symbolism prevalent among the emblematic mounds. It was the remark of Prof. Putnam that he had never before been convinced that the mounds existed in these shapes, having considered them imaginary creations rather than real forms.

The extent of territory covered by the emblematic mounds has not been ascertained. The party found these shapes as far north and west as LaCrosse, but did not discover any in Minne sota or west of the Mississippi River. A number of new shapes were however discovered in the course of the explorations. We would call attention to the different effigies as they came under observation.

The Elephant Mound.—This mound was visited. It has been described by Jared Warner, of Patch Grove, and has been visited by other gentlemen. It is, however, now in such a condition as not to be easily identified. The shape of the body corresponds with the description, but the proboscis has been so far obliterated that it is impossible to trace it at the present time. The mound is situated in a swail,and is hidden away so as not to beseen from the river, and scarcely to be seen from the lands adjoining.

*See Smithsonian Report for 1872, also for 1876.

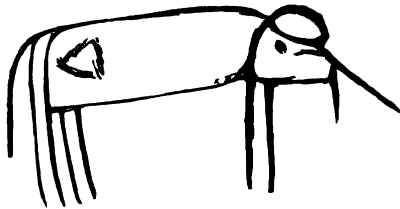
It is overlooked however, by other mounds on the summit of the bluffs at a distance. There is near it less than half a mile away the effigy of an eagle, and along the valley of the Mississippi there are many other mounds, some of them effigies and some of them ordinary tumuli, but nearly all situated in swails resembling the one where the Elephant mound is to be found. These mounds were also visited by the editor, and proved to be very interesting. Most of them consist of long lines or rows of tumuli, alternating with long rows of straight mounds. These lines all run towards the river, and fill up nearly every swail or dry water course for miles to either side of the Elephant mound. The effigy may have been that of a Buffalo, as there is a resemblance between it and effigies of that animal which are still visible in various localities; yet it has always been recognized as an elephant effigy.

Swamp Mounds.—On the way to Minneapolis through Minnesota, Mounds of the character discribed by Mr. Lewis were noticed from the car window. They resemble Indian mounds, but more likely were erected by gophers. This is the opinion of those who have explored them. Indian mounds are found in Minnesota but always near lakes or rivers; these are remote from streams, in the low places of the prairie—in sinks or swamps in the midst of the prairies.

Mounds at Minnetonka.—On the excursion to the Lake the series of mounds near the Chapman House were again visited. They were visited by the editor last year. They consist of ordinary tumuli intsrspersed with oblong mounds, and are situated on the bak of the lake overlooking the water, and bordering a stream that empties here.

Digging into mounds.—On the return the parties spent two or three days at La Crosse. Here Prof. Putnam excavated several mounds. Fortunately the mounds were situated in a Park, and after securing a few relics the shapes of the mounds were restored by the city authorities, and so will be preserved. So far good! Three or four mounds are saved.

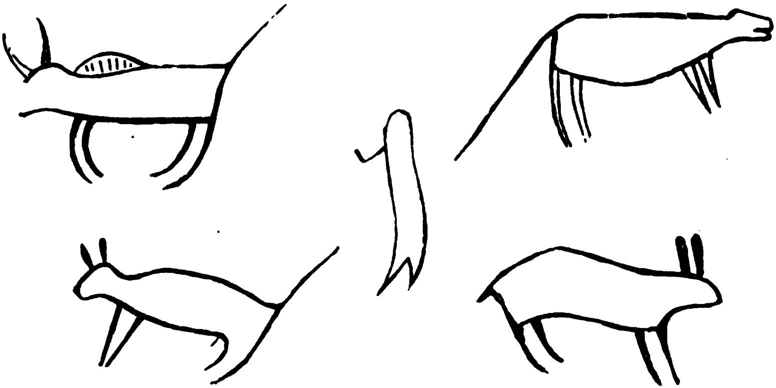
Pictured Cave at La Crosse.—Prof. Putnam alzo visited the cave at West Salem, which has already been described.* We give cuts from the drawings to compare with the effigies, as these are the only pictograps which so plainly represent the common wild animals of the region.



Mounds at Sparta and New Lisbon were visited by the editor, and their location and dimensions recorded. A series of mounds on Mound Prairie, five miles south of Sparta on land

*See American Antiquarian, also Wis. Hist. Collection, Vol. VIII. Rev. Edward Brown and Hon. John A. Rice.

belonging to Mr. Smith. They consist of ordinary tumuli, but were of unusual size, being from 50 to 75 ft. in diameter. There were 19 of them but they were scattered around so as to cover



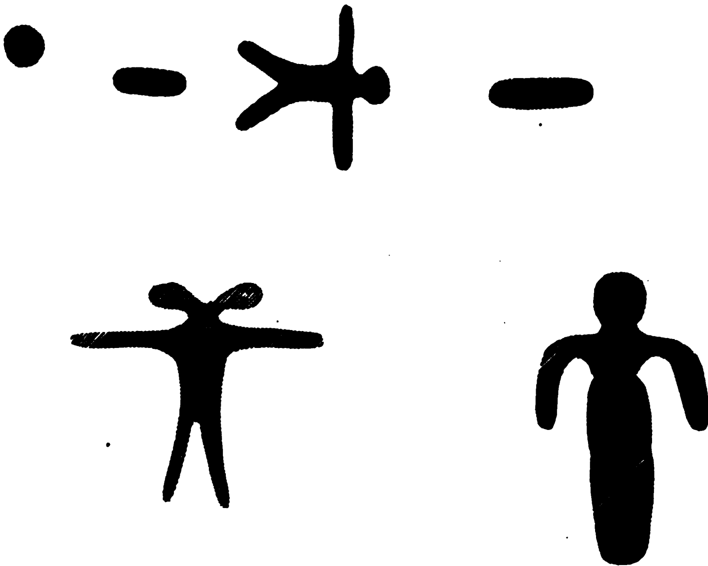
about 20 acres Three groups of mounds were visited at New Lisbon. Rev. Mr. Young assisted in plotting them. One group a mile south of the village, consisted of the effigy of an immense panther, in the attitude of running. and several other effigies. The size of the body, 54 ft.; length of tail 144 ft.; across the head 30 ft.; across the body 20 ft.; length of the legs about 20 ft. Accompanying his were a series of mounds of various shapes, but mainly consisting of long parallel walls or earth-works, some of them parallell and some running at angles to one another. The series of mounds was unlike any other group heretofore visited. This group was situated on a small stream which flows into the Yellow Creek, and may have been intended as a guard to protect some village, or game drive. The object was not apparent. Another group was visited five miles north of New Lisbon, on the road to Naycedah. It consists of a series of ordinary tumuli, which run in parallell rows for near a mile. There were 56 mounds in one row, 26 in another; and 36 in a third. The mounds were 90 ft. apart, 20 ft. in diameter, and the rows lapped by one another so as to extend a long distance. They are situated not far from the Yellow River, and prove to be an interesting group.

Mounds at Baraboo.—The party came together again at Kilbourne City, and after visiting the Dells went across the country to Baraboo. A group of mounds was visited on the way. These were on land belonging to Mr. Eaton, three miles from Kilbourne City, near the Wisconsin River, and in sight of the Dells. They consisted of three eagle effigies. We give no cuts of

these eagle mounds, and would refer to them as a group which has not been hertofore described. The exploration of the mounds at Baraboo occupied a party of five. No less than five different groups were discovered—three of these groups were on different parts of the village or city plot, and are likely to be destroyed. Many of the mounds in these groups have been excavated and relics sent to the Smithsonian, but no description of the works themselves has ever been published. Private parties have also taken away several of the mounds, as it is more convenient to take dirt from a mound for the purpose of filling up lots than it is to dig soil from off the surface. The destruction of the monuments is of no consequence, especially as nearly everybody considers the relics for the musenm of more value than the mounds themselves.

Prof. Putnam was able to secure surveys of a number of mounds at Madison. These mounds are situated close by the stone-quarry, and are being destroyed. Descriptions of them will be given hereafter.

Man Mound. It had been a matter of inquiry whether there was such an effigy as a man mound. Several had been described, but the writers themselves admitted that the human effigy resembled other effigies of birds so that the



matter seemed to be doubtful. A number of man mounds were however discovered. The first one to notice the human effigy was Mr. R. T. Taylor. This effigy was situated near the Blue

Mounds. We give a cut of this taken from the Smithsonian contributions Vol. I. Another locality where the human effigy once existed was at Muscoda, the very place visited by the writer. These effigies have been destroyed and therefore were not discovered. We give however cuts of these and would refer to the description of them in the volume mentioned above.* The first represents the double headed man referred to by Mr. S. Taylor. The second is the effigy of a woman. An effigy was discovered by the writer resembling these but having the arms straight and the body with the lower extremities less marked. It is uncertain whether this effigy was intended to represent a Bird or Man. It was found among a group of straight mounds situated near the eagle village before described about a mile away, in Eagle Township three miles north of Muscoda. An unmistakable effigy of a man was afterwards discovered at Baraboo and was plotted by Prof. Putnam and the writer. This effigy forms one end of a long line of emblematic mounds which formerly ran over the crest of a high ridge and which over-looked the valley of the Baraboo River toward the north and east and west. The effigy itself is situated on the side of the hill a south slope, and is somewhat hidden from observation. Its peculiarity is that it repeaents a man in a sitting posture with one arm extended and bent outward at the elbow, and the other arm bent inward, the elbow forming an angle away from the body. Its attitude apparently represented a man slipping and in the act of recovering from the fall. The outstretched arm might represent a gesture as if attended with speech but the other is bent in inward so as to suggest the idea of a sudden fall. A cut of this effigy will be given by Prof. Putnam at a future time.

IV. The exploration of mounds in Dakota revealed one fact which has great interest to Archæologists, namely: that mounds have been built within historic time. Mr. McAdams discovered a number of such mounnds. A description of his explorations has been published in an Alton paper, and can be secured from him. The peculiarity of these mounds is, that they are connected with one another by paths—the paths being marked by rows of buffalo bones. These are the heavy leg-bones, every one of them broken in two or fractured so that the marrow could be extracted. They were simply laid down side by side, and form a straight line which connect the tops of the mounds. One of the paths was 500 paces length. The number of bones in this path can be judged from the fact that in the space of 50 feet 492 of them were counted. This is something new, but evidently a modern or historical custom. It is not likely that the bones would remain in their situation any great length of time.

* See Squier and Davises account in Smithsonian contributions Vol. 1, taken from R. C. Taylor's and Prof. J. Lock's discription, Page 127. See also the article by S. D. Peet in the Report of Wisconsin Historical Society, Vol. 9. pp 70 and 72. These works were first described in the American Journal of Science, for April 1836.

BLACK HAWK'S GRAVE,

The writer has had the privilege within a few weeks of visiting Black-Hawk's Grave. This grave was situated on the Des Moines River near the village of Eldon, Iowa. There were two aboriginal villages at this place. One occupied by Black Hawk and the other by Keokuk. They were about a mile a part. Black Hawks village was located uear the bank of the river, on a beautiful level spot of ground. The grave was on a slight eminence near this village in a spot which commands a view of the whole region surrounding it. It shows the taste and idea common among the aborigines as to their burial places. The grave has been pillaged and the bones formerly decorated the museum of a medical college in Keokuk; but since the protest of the Sacs and Foxes, have been removed ostensibly at least and restored to the people. The present burial place of the noted chief is not known to the whites. Mr. Jordan who owns the land formerly occupied by the village and the grave, and who well knew Black Hawk, himself keeps the place of the first burial distinctly marked. A description of this grave may be here in place. It will illustrate the difference between the burial of Indian tribes and that of the Mound builders. The body was placed upon the surface,dressed in the military costume which had been presented to Black Hawk by General Jackson. A covering was placed over it and the grave protected by puncheons which were set on end and placed together at the top making a roof, and over it another, but far enough away and high enough to admit of visitors inside of it, here the noted chief lay in state protected by the rude structure until his bones were wantonly carried off. A few rude stones loosely thrown together are the only thing which mark the grave at the present times.

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RECENT DISCOVERIES.

Some years since Mr. C. F. Wiltheiss of Piqua, Ohio, sent us a cast of an inscribed tablet found in a gravel bed. The tablet had on it certain lines which resembled the abbreviated picture writing common among Indians, in outlines or conventional forms. This tablet had a chunk of lead run into the centre of it, and if genuine must have been modern. Another tablet has

been found near the same place. It is of green stone and has certain nondescript characters on it resembling Aztec Phœnician, Greek, Chinese Persian or any other alphabet one chooses to identify them with. A stone axe also has been found, with an inscription on it, which is now in the possession of Mr. Wiltheiss.

JOE MULHATTEN is a character of some interest to archæologists—his residence is in Kentucky, and his business is to invent marvelous stories or lies. He has invented seven stories about finding big caves, Masonic emblems, and other ridiculous things—Wilkes Booth alive, Lincoln's bones on exhibition, Jesse James' stolen Jewels etc., etc. Another just sent to us from Eureka Springs, Arkansas, about an iron box and a skeleton chained, in a cave, shows that he is still at work. The author takes great pride in his skill in writing novels, as he calls it.

A CIRCULAL EARTHWORK in Cornwall, England: "The Rounds" is an extensive earthwork consisting of an outer and inner vallum and a fosse between. The area enclosed measures 495 ft. diameter. The outer vallum is from 5 to 10 ft. in height, and the inner about 2 ft. The breadth of the circumvallation measures from centre to centre of each mound 30 ft. The circle is divided by the Boscastle Road and the inner vallum has mostly disappeared. It is situated on the step of a hill towering above Boscastle. It is supposed to be a Celtic fortification, and lies close to Castle-goff camp. Near this is a group of "standing stones," three circles of which are still seen near Camelford. Each circle consists of three rings of stone, and is about 50 ft. in diameter. The stones are of granite or spar and are from 3 to 7 ft. high, and from 1 to 2 ft. wide. The circles are situated in the shape of a triangle, the sides about 6½ chains and the base 2 chains. The stones have been removed, hundreds having been taken away during the memory of the present generation.

TOOLS OF THE PYRAMID BUILDERS: It has long been a puzzle to Antiquarians to know how the round holes, used for pivot holes of doors of temples in Egypt were made. It is now clear that they were made by tubular drills, supposed to have been made of bronze. The cutting edge set with hard Jewels, probably corundrum. The Egyptians were also acquainted with circular cutters or saws, the cutting edge being set with gems. Fragments of hard stone have been found having marks of circular scourings. Mr. Wm. Flinder Petrie has contributed much information on the subject.

The Anthropological Institute of Great Brittan has been entertained by a visit of some Botocaude Indians. A paper wasr ead on them by Mr. A. H. Kerne, and implements were exhibited.

Mr. J. Rivett Carnac has described some implements found by him in the Hill district of North West India.

DOCTOR SCHLIEMAN'S EXCAVATIONS. At a meeting of the Anthropological Society of Berlin, not long since, Prof. Dr. Virchow presented four letters received from Dr. Schliemann, from which it appears that, by recent excavations the Renowned Trojan Explorer has found reason to modify some former opinions, relating to the Chronology and Classification of his previous discoveries. For example, the treasures heretofore found, which were thought to have been deposited in the debris of the third tower, are now found to have been buried in the rubbish of the second tower. The previous theory as to the relation of the different deposits of debris, to the different super-imposed towers, seems to now be somewhat modified. The first underlying Tower was only a small fortified column, distinguished by its colossal walls and buildings. It may have existed for a very long period. Appearances indicate that the second and third towers were destroyed by conflagration. A dwelling house and door, with a lock attached, has been discovered. Other important items are noticed; and it is probable that still further modifications of opinion may be found necessary, as a more complete exploration is made.

THE WORD CARRIER.—A Dakota paper has been publishing some native myths which may have some value, but they carry with them so much civilization, they describe so many objects peculiar to civilized life such as palaces and rooms and doors and ropes and wells etc., that we doubt their purity as native myths

THE WEEKLY INTER OCEAN has been publishing some valuable articles on Kaskaskia mainly historical yet valuable.

THE CARSON PRISON FOOT-PRINTS,—Continue to interest the California Scientists a number of new foot-prints have been discovered. Prof. LaConte doubts their human origin. Dr. Harkness still maintains that they were made by some anthropoid, the missing link between man and animals.

THE SANTA FE CELEBRATION,—has passed but neither proved a financial success or furnished much of a review of history; too much effort at display for present effect and too little effort in the way of solid contribution to history—from original study. Archæology or ethnology—received but little assistance from the display of Indian dances and mining products. The progress of history was illustrated and the strange mixture of races fully exhibited, but the real character of the ancient civilization and the actual facts as to the earlier history are scarcely better known now than before.

THE CATACOMBS.—More than 15000 epitaphs from the Catacombs have been collected by cavalier De Rossi. The epitaphs belong or rather were written during the first six centuries, they are valuable because they perpetuate the Greek and Latin languages as they were in their time of decay, and because they exhibit the mixture of christian and heathen ideas prevalent at the time.

PALEOLITHICS.—The paper presented at Minneapolis on the quartz implements found at Little Falls was not entirely new. The substance of it appeared in the Antiquarian in 1880 but failed to attract much attention. Those who saw the relics themselves differed according to their own preconceived ideas. An ordinary observer, that is, one who has no scientific theory to establish, would however have failed to have recognized any human workmanship; they resemble the ordinary quartz specimens which may be picked up in the vicinity, a few only of them containing some accidental resemblance to archæological relics. One difficulty exists, and that is, there are so few quartz specimens among archælogical relics, especially those claimed to be paleolithic specimens. Dr. Abbots paleolithic relics are argilites and not quartz. The European specimens are mainly flints.

THE MEDICINE MAN

AND ANIMAL SYMBOLS

WE give as a Frontispiece to this Number a picture of a Medicine Man. It is a copy of a picture contained in Catlin's North American Indians, and represents the Medicine Man of the Mandans. It will be noticed that in the dress and general make up, animal forms or figures are most conspicuous This is the case in the wolf skin and wolf mask which covers the head, as well as in the ornaments which are attached to the spear, and which dangle from the arms and dress in such great variety and number. Several enquiries arise in connection with these figures.

I. Have they any connection with the totem system prevalent among the Indian tribes? 1. The totems are, as is well known, generally in the shape of animals, and a great variety of animal figures may be seen among the totems.

This system of primitive heraldry may have been taken advantage of by this particular medicine man, and all of the animal totems hung to his staff and robe as emblems of the clans or gentes among whom he was placed. 2. They may however have been—not the emblems of the tribal totems, but rather of personal and private charms, and fetiches. The warriors at the time of

their initiation always had a dream. They fasted and were solitary until the dream came. Whatever object appeared in the dream as prominent, afterward became the divinity and personal protector or guardian to the person who had the dream.

The emblem of this object was always carried about the person, and was regarded as very sacred. These charms or private totems were not necessarily always animals, and yet with the tribal totems system so prevalent as it was, the tendeucy would be to dream of animals or to take the animal forms in the dreams as the most prominent object. Thus two kinds of totems, the tribal and the personal, were common.

The Medicine man always presided at the initiation of the warriors. The medicine Lodge, in which the initiation took place, was full of animal symbols. The dress of the medicine man and the furnishing of his lodge corresponding in this respect. Whether the animal figures in the lodge and on the dress were the tribal totems or the personal totems, is here the question, taking it for granted that one class or the other was represented.

3. The idea of system in a Medicine man ! Of all creatures among the primitive races the medicine man was the most uncertain. He was freakish, arbitrary, despotic, devilish. Can it be supposed that there was any method in his madness ? We put this question in its baldest form. A writer in the N. York *Independent*, G. A. Stockwell, has been describing the peculiarities of the Medicine man. The opinion is expressed by him that the medicine man is not a mere knavish varlet, conspicuous only by unblushing impudence and low despicable cunning, but a man shrewd and far seeing, endowed with more than ordinary understanding, and possessed of perceptive faculties so remarkably sensitive and acute as to receive impressions from trifles, and from these drawing deductions so accurate as to appear not only marvelous but supernatural. He in fact is the true clairvoyant, of the Indian race, not mesmerist but spiritist and psychologist. "Medicine" is not only the theology of the savage, but it is philosophy and science. And the Medicine Man is the teacher and exponent of this science. Letters are unknown but, religion and the priesthood are, as among all primitive races very mysterious and cabalistic. The only science or system which the pure Indian has is the science of totemism, and this is inherited. It is a fixed and permanent and universal system, prevails among all tribes and has points of similarity in all sections. The Medicine Man has frequently great influence over tribes outside of his own, and has authority over his own band or tribe which even chieftains dare not assail, and the question is whether this influence is not owing to the same totemism? We leave this point with an interrogation mark.

II. Is there any connection between the animal figures in the dress

of the Medicine Man, and the animal worship which is so prevalent. (1.) Animal worship is known to be wide spread. It prevails in Arabia among the tribes of Bedouins and seems to be an inheritance of the Semitic race as well as of the Turanians. Possibly this animal worship may be referred to in the Bible as existing even among the Twelve Tribes. Possibly the allusions in Genesis may prove a modified totem system, a primitive form of heraldry borrowed from other tribes, and so do not prove that animal worship prevailed among the Israelites.

Monotheism certainly began very early with the Patriarchs and they can hardly be regarded as having animal worship of the same kind as other tribes. Animal headed divinities are among the oldest of the Egyptian Gods, and are very conspicuous in the early history of the Egyptians. And possibly animal worship may account for those human headed animals found among the Assyrian palaces. Assyrian priests are often represented in costumes which have great resemblance to the dress of Medicine Men. The symbolism may be oriental and the animals represented may be those peculiar to oriental countries and yet if the dress of the Medicine Man signifies animal worship the dress of the Assyrian priests may also signify the same. We give a cut of an idol which represents an animal-headed divinity. It will be noticed that the figure has the head of a bird, and the horns of an ox. * On the dress of the Idol may be seen the fangs and face of the Tiger. One might imagine that this idol was a medicine man in disguise. The cotton robes and the furnished room do not consort with the wild surroundings common with the Indian tribes, but the figure has many points of resemblance. If we should say to our readers that it represented an idol of the Northwest coast, or a Shaman among the Thlinkeets or a Thunder bird of the Pueblos, there are not many who would contradict. But the cut represents the grand Lama of Thibet. The Lama was a native divinity of Thibet. It represents the early Mongolian religion, a modified Shamanism or spirit worship, the last traces of which appear yet in Siberia.

Buddhism was engrafted upon this Mongolic Shamanism. We give the two cuts together to show how extensive this animal worship is. It may be said that the animal symbols of the Medicine man are mere accidents, and if they resemble the symbols on the Lama of Thibet it is a mere coincidence. We refer to the resemblances and leave it for our readers to account for them. The genæological family tree of the Thlinkeets contains the beak of a Thunder bird. These family trees or totem posts are connec-

*See Genesis 49. Judah is a lions whelp, Issachar is an ass, Naphtali is a hind, Dan is a serpent, Joseph is a fruitful bough, Benjamin shall raven as a wolf.

* See cut opposite page 310.

A MAYA WAR GOD.

ted with animal worship, and we see no reason why the idol of the Thibetans may not have its origin in the same system.

(2.) The element of the fetich should be noticed in this connection. We have referred above to the village of the mound builders. This village was surrounded by animal figures. Other villages which we have discovered were surrounded by animal figures,i.e. beasts. We believe that the Moundbuilders regarded these birds and beasts, eagles and wolves, effigies, as protectors or guardians, the fetich idea being prevalent. We do not know whether these emblems were the tribal totems or the personal emblems of the chief to whom the village belonged but we believe that the animal figures were regarded as animal protectors. We have found also places where the animal shape was to be recognized not only in the mounds but in the hills or knolls on which the mounds were erected. This correspondence between animal effigies on the ground and animal resemblances in the ground, the conformation of the one being made more visible by the other, is one of the most striking things noticeable among the emblatic mounds. We hardly believed our senses when we discovered this resemblance and correspondence, but Dr. Phene in his visit to us confirmed the impression; he had noticed the same thing in England, and believed it was common in the Indies. We may be called visionary on this point but are willing to bear that implication, we know it to be true.

The Island of Mackinac is in the shape of a Turtle, and is presided over by a Turtle divinity. We believe that the superstition of the natives fixed upon the animal shapes and made divinities of them. A Medicine Man who was clothed with animal skins and who bore animal symbols about him was regarded with very great fear, because of the superstition about animals and this combination of animal worship with primitive symbolism. We think that the Medicine Man in his dress illustrates the point that both totemism and animal worship prevailed in primitive races.

III. Animal worship and the system of totemism may account for the peculiarities of the dress and symbols of the priests other than Medicine Men. Animal figures often appear in the priestly costumes and in the primitive symbolism, of all lands. The question here arises whether this is not owing to the same system of animal worship. We have already referred to the dress of the Assyrian priests resembling that of the medicine man, the imagery being oriental, but probably owing to the same cause. We would now refer to the extent of this symbolism. It is remarkable that priests should be so often clothed with animal skins. This was the case among the Egyptians, their di-

vinities have animal heads and their priests wear animal skins.*

The priests of Ceylon often wear hideous masks containing the teeth of the wild boar and other animal forms. They are accustomed to place these masks in the chambers of the sick as if there was a healing virtue in the animal shape. The Japanese have a religious procession called the procession or Miodjain in which a hideous mask with human face surmounted by the horns of an ox above, and with boars tusks protruding from the jaws with tiger s feelers on the lips is borne behind a great flag and followed by a huge copper axe, blade upward, the axe reminding us of the Mexican tradition, but the mask resembling that of the Ceylon priest. The Maya divinities or priests also wear animal skins and are accompanied with animal symbols. We give with this number, two cuts referred to in our second number as explanatory of the article therein. These cuts are the same as those represented on the outside of the Adoratorio at Palenque, but enlarged. They represent the rain God and the war God, of the Mayas; that is Archæologists think they represent them. It is a question whether they represent the Gods or the priests. The Gods of the Mayas were elemental, symbolizing the sun and moon and other native elements, generally the Gods have elemental while the priests have animal symbols. We doubt whether the Anthropomorphic stage had been reached. Dr. Habel discovered in Guatemala, many very interesting sculptures which confirm this point. The divinities have flames and sun figures issuing from human faces surrounded by other symbols such as wings of birds and branches of vines. Occasionally they are winged bearing Sun symbols, but they do not have human bodies—unless we should consider the face and sometimes the arms as so far representing the human form. The priests however who offer to the divinity prayers and sacrifices are always in the human form. And what is remarkable they almost always have the human form covered with animal skins and animal symbols.

We do not want to differ from Mr. Holden, of Washington or from any of the students of symbolism, but we offer the question whether these figures on the outside of the Adoratorio do not represent the priest rather than the divinities. The great Sun God is within, and the priests are offering sacrifices to the Sun. The same figures of the so called Rain God and War God support the priests in the Adoratorio. The God Tlaloc or the Rain God has the animal skin on his shoulder, exactly as the Egyptian priest has and he resembles the priests in the sculptures of Cosmalwhuapa in many respects.

Rawlinson gives a figure of an Egyptian priest dressed with a leopard's skin, the jaw, claws and tail hanging to the skin exactly as as those of the wolf on the skin on the medicine man. See Rawlinsons' History of Egypt, vol. I, p 283.

See Smithsonian Con. 269. The sculptures of Santa Lucia Cosmalwhuapa, in Gaut. by Dr. S, Habel, Washington city, 1879.

GOD TLALOC.

ARCHAEOLOGICAL NOTES.

PALEOLITHICS. From the Proceedings of the Academy of Science, of Philadelphia, we take the following: A stone relic, found at a depth of 24 feet, in loose gravel, but below strata of undisturbed gravel and clay. Mr. Sartain, the artist, saw the specimen taken out, and so there can be no mistake about the "find." Water, however, flowed freely in the gravel where the specimen was found and 10 feet below or at a depth of 35 feet, the main level of the Delaware River is reached. At a depth of 45 feet, Gneiss rock exists. The "find" occurred as follows: A pit was dug below the cellar of a house, and the relic was in what Mr. H. Carville Lewis styles the "water gravel." The relic is itself a ground or polished stone implement, but differs from any before found. It is called a "lapstone." It is oblong, rectangular; length, 16¼ inches; width, 4 inches, and thickness varying from one-half inch to 1¼, each end ground to make a square cutting edge. A longitudinal ridge an inch and a half in width, runs along one of the faces, and the material is a yellowish-brown sandstone, very compact.—Mr. John Ford has discovered a polished stone axe in a gravel bank near the Mississippi River at Alton, Ill., 20 feet below the surface and 50 feet above the river. This axe is of syenite. It was accompanied by a number of fossil shells, a bone of "canis" and some lignite. It was found in undisturbed gravel. These finds will probably be put down as proofs of the extreme antiquity of man, and will be classed with the Calaveras skull. We leave it for the paleoliths to reconcile the accident of a polished stone age; preceding the rude stone. Is the retrograde progress consistent with their ideas. Who will rise to explain ?

DRILLED MALL.—The Haldeman collection contains a mall which weighs 8⅝ pounds with a hole drilled through it; width of the hole on the outside, 1 inch; in the centre one-half inch; length of the hole in the mall, 4 inches. It was found in Lancaster county, Penn. The only case of a drilled implement besides this is one found by the editor of this jounal in Ohio, near Austinburgh, Ashtabula county.

AZTEC MUSIC.—Mr. H. T. Cressen has an article on Aztec Music in the same report. He states that the fourth and seventh tones were present in their scales. Drums, clay balls, or battles and wind instruments were common. A flageolet is in the Vaux collection, which is remarkaby constructed, showing great knowledge of the musical scale and skill in making musical instruments. The holes in this flageolet are arranged very similar to those in modern instruments. The article is illustrated.

CHALDÆAN ANTIQUITY.—WE take the following from a German paper: "The Louvre of Paris has again been enriched with important archæological discoveries. They appertain to the Chaldaic Antiquity, dating perhaps from 3,000 years before our era. The French Vice-Consul at Bassora, De Sarjec, has been engaged there four years in laborious, private excavations in Tello, in lower Mesopotamia. He has fought during these four years, the obstacles of a swamp-district, lack of communications, and the enemies of his expeditions, the Arabs. His collections consists of statues, bas-reliefs, inscribed cylinders, clay obelisks also inscribed, and a great variety of other objects. The representations belong to a style of art hitherto unknown, yet quite fully developed. They were the ornaments of a temple of the Chaldaic Hercules, which had been erected by Judea, the King of Sirtella, ancient name of Tello. One of the representations is of the king himself, as he is seated before a table, on which is seen the drawing of a building, and a rule, or measure, regularly divided off. This measuring rule is the most ancient article of the kind hitherto discovered. Mr. Oppert has succeeded in deciphering the inscription and also the language in which the inscriptions on the statues of the king are written. He calls it the Sumerian language, after the ancient people of [illegible]. Here is the translation of the introduction to one of the larger inscription.

"Here stands in the temple of Hercules, the image of Judea, his king, regent of Sirtella. He has built the temple of the god Mulgil (Bel or Baal.)

He has vowed to furnish to the temple a bath (20 leiter) of miik, an eyhal (dry measure) of bread, an epha....., an epha of sacred bread, each day, so long as he reigns, in order to escape the curse of God. Through the mercy of Hercules. he will complete his work. He will keep his vow in the temple of God; his word is truth.

It is interesting to note that the word *truth* is expressed by the use of the sign of the Grecian cross."

NOTE.—The Sumerian language, to which allusion is made in the foregoing notices is the Old Accadian, heretofore so known, to which M. Oppert insists upon giving the name Sumerian, from the ancient people of Sumir, a very ancient geographical name, often found in the early Cuneiform Texts. The Accadian, or Sumerian language, was the sacred language of Babylon, in which nearly all the mythological, astrological, and scientific inscriptions were originally written. This language is now pretty well known.

WRITING IN GREECE. It is a curious fact that Greece had a literature before she had writing; but Rome had writing before she had literature. The Romans did not adopt the Etruscan alphabet. Writing was introduced in the time of the early Kings. It has been supposed from this that the Kings were actual historic personages, and not mythical.

EGYPTIAN WEIGHTS. The glass scarabs are found to be all, weights on the Assyro Persian standard of 128 grains. Many examples or 200 grains have been obtained. Mr. W. M. F. Petrie is engaged in studying this subject.

STONE- HENGE. Some hitherto unnoticed letters apparently of Romano —British date, have been found in the stone at Stone henge. The bill for protecting ancient monuments in England is one worthy of notice. Stone henge is likely to have a railroad and would soon be destroyed except for the protection afforded by law.

SURNAMES. Two books one by Isaac Taylor and a recent one by Robert Ferguson, revealed the fact that English Surnames, belong to early Celtic people and that they connect historic with pre-historic times. The day will come when the names of towns, and rivers in this country like the names of families in Europe will be traced diiligently to the pre-historic races. The present is indifferent to the matter.

ARCHÆOLOGY AT THE AMERICAN ASSOCIATION.

The American Association for the adv't of Science met at Minneapolis, Aug. 22d to 29th. Though the attendance was not large, more than the usual work was done by the different Sections. The Geologists were there in full force, and discussed at great length the subject of the terminal moraine and the Glacial Theory. Dr. T. Sterry Hunt, Dr. J. W. Dawson, from Montreal ; Profs. J. S. Newberry, Hall and Pohlman, of New York, Profs. C. H. Hichcock, of N. H., T. F. Jewel, of R. I., Leslie of Penn., E. T. Cox, of Ind., T. C. Chamberlain, of Wis., W. Upham, of Minn., and others took part in the discussions, which lasted several days. One of the most important papers was that given by Julius Pohlman, on "The Life History of the Niagara River." It showed that a double channel had been ploughed by this River—one in the Preglacial times, the other Postglacial. According to this, the Falls are much younger than is generally supposed—the years numbering only tens of thousands instead of hundreds of thousand, as heretofore held.

The *age* of the Glacial Period did not receive much consideration. The general opinion is that it is comparatively recent ; but the main point of difference between the Geologists was on the question, whether the action was wholly that of ice, or part of water and ice combined, or in other words, "land ice or water ice." The Moraine has been traced from the Atlantic coast to the Red River valley, and many interesting explanations of the topography have been given by this theory. No new facts were brought out as to t he presence of man during the Preglacial Age. A paper was presented by Miss F. A. Babbitt, of Little Falls, Minn., which contained the same factst as those presented by her in this journal, (See Am. Antiq'n vol. 3 , No 1.) bu was attended by the specimens which the author claimed to be evidences of

he existence of Pre-glacial man. A box of fragments of quartz was exhibited, on some of which the "Paleo liths" imagined that they could trace a few secondary chippings. Not a dozen of the fragments showed such marks, and to some, even these, seemed likely to be accidental rather than artificial. There was very little discussion over this topic in the Archaeological Section.

Several valuable papers were presented on Ethnology. One by Rev. J. O. Dorsey, on Osage War Customs, was especially valuable; another also, by Miss A. C. Fletcher, on The Laws and Privileges of the Gens in Indian Society. The Editor of this journal had several papers on Typical Shapes among the Emblematic Mounds. "An Ancient Village of the Emblematic Mound Builders." "Game Drives," Sacrificial places among the Emblematic Mounds, and one on the Corrspondence between the Pre-historic Map of North America and the system of Social Development."

There was probably more solid work done in the Geological Section than in any other, but the papers on Ethnology were also of great value. A slight discussion arose between Major J. W. Powell and Prof. Ed. F. Cope on the proper classification of Anthropology in the list of Sciences; Prof. Cope taking the ground that Anthropology is only a branch of Psychology. This was in accordance with his peculiar theory of Evolution—a materialistic view. Major Powell on the other hand claims that the doctrine of the survival of the fittest does not hold in the age or case of man. The main topic of public discussion before the general session and in the evening assemblies was, as usual, that of Evolution Prof. J. W. Dawson in his opening address as retiring president, introduced the subject, and Prof. Cope followed it up both in gener l session and in an evening lecture. The hospitality of Minneapolis was generous, and accommodations good. Excursions to Lake Minnetonka and to the Dells of the St. Croix were given and greatly enjoyed. Very pleasant impressions of the scenery, the clear and beautiful climate were received, and the very sight of the twin cities so large and so enterprising on this spot so recently occupied by wild Indians, was an occasion of wonder. The growing possibilities of the great Northwest were here revealed.

Collections of Archæological Relics.—Mr. Henry Phillips, Jr. has just issued a pamphlet indicating she societies which have Archaeological relics, in this country. He mentions twenty-five as follows: Academy of Natural Science, Philadelphia, containing about 16,000 specimens. Peabody Museum, containing 300,000. Peabody Academy of Science, Salem, about 5,500 specimens. Wisconsin Natural History Society, Milwaukee, 3000 specimens. National Museum, Washington, 260,000 specimens. Metropolitan Museum, 200. Davenport of Science, 12,000 specimens. Wisconsin Historical Society, 10,000. Wyoming Historical Society, 2500. Amherst College, 25,00. Central Park Museum is not mentioned. Cincinnati Historical Society has no report, also Academy of Science of San Francisco, and Western Reserve Historical Society. The Museums which contain pre-historic relics are mainly in the cities on the Atlantic coast. Chicago has no museum worthy of the name. Cincinnati, St. Louis and even Davenport are ahead of Chicago in all scientific matters.

The Hebrew Language.—The striking similarity which Assyrian and the Babylonian languages bear to the Hebrew, has been dwelt upon lately by Prof. F. Delitszch, showing that the three people at one time dwelt together. The names of plants are held in common. Many terms which occur only once in the old testament are used in the Eastern languages. This is an interesting line of study.

Frauds in Hebrew Manuscript.—Much has been said in the newspapers concerning Shapira's frauds. It appears that this gentleman has succeeded in imposing upon European Scholars, and has sold at marvelous figures large consignments of Moabite pottery. He now turns up with a lot of time-worn stained strips of parchment, but he has aroused suspicion and proves to be a fraud. The characters in his pretended manuscripts are those of the famous Moabite stone an Antique fragments.
If true these Moabite characters would give date several hundred years before Christ. The oldest MSS. of the Hebrew date 916, A. D. Dr. Ginsburg of the British Museum, is the one who has exposed the fraud. Prof. Schlotter-

mann of Halle, who is known as the man who undertook to prove that the Cardiff Giant was the remnant of a former race of Giants in this country, is the one who recommended to the Berlin Museum the purchase of the pottery. His experience with frauds both East and West will, probably, prove a benefit to him in the end.

NATIVE PLANTS IN AMERICA.—The American Journal of Science has an article reviewing DeCaudolle's "Origine des Plantes Cultivees" in which the reviewers, Prof. A. Grey and J. H, Trumbull claim for America many of the best known vegetable products of the Globe, Maize or Corn and Tobacco being the chief.

HITTITE INSCRIPTIONS IN AMERICA.—Prof. J. A. Campbell is writing on the above subject and expects to prepare a book. We are sorry to differ with the Professor, but have a deeided opinion that his premises are not well taken. and hat his conclusions wiil not be accepted by the majority of learned men, the linguists especially, being the least convinced.

IRON FROM THE OHIO MOUNDS.—Prof. F. W. Putnam has shown in a reprint from the proceedings of the Am. Ant. Soc. that the Iron and Steel which have been described by Atwater and Hildreth as found in mounds in Ohio, were not either cast iron or a steel sword, but were of the same character as other relics resembling the hammered copper and silver and the meteoric speccimens that are still found. This is an important point to clear up, and no one is better qualified for it than Prof. Putnam. The relics described are, fortunately, in existence, and have been compared with other relics taken from the mounds in the past year.

LINGUISTIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON. D. C.

MR. ALPHONSE L. PINART, the explorer, is now established at Panama and makes frequent excursions into the vicinity to explore the Isthmian tribes, of which so little solid information can be had. He has, in 1882, published Franco's Spanish vocabularies of four dialects of the Guaymi group, collected about 1800 A. D. (See notice in *American Antiquarian*, IV, p, 338.) and is at present studying the dialects of the *Choco* stock, which extend along the western coast of N. W. South America, west of Cauca valley as well as the *Darien* and *Cuna* dialects,. He has transmitted the Lord's Prayer in the Cuna dialect which is spoken on the Pacifiic slope of the Isthmus of Panama; it runs as follows (Spanish orthography):

Patir nanguini, pechigui niptalnega iiperekuichi;penukaguine pebiluleguine; pebalchas pepincheerguin,napkine pagaiopi niptalneguin.

Maatuda nanguin Pan epanegun emigoatguine; peanalchsgogue aaimalguin, pel anni appigua, peanalchugo pelanayuppigua pelilanguimbi; pel imalistarguin ipeanaalchago, O Kuja Jesus.

MENES AND MEMPHIS. Prof. Dr. Lauth, the distinguished Egyptologist of Munich, has discussed in an interesting paper, read before the Munich Anthropological Society, a series of well known historical names of that country. His discourse is reproduced in the Correspondenz Blatt of that society, July number. The oldest form of the name *Memphis* is Mennefer, the beautiful seat (nefer *good, beautiful*); it gradually became corrupted into Men-nefi, Memphi, also into Mof and Nof. From its citadel this city was also called the *white wall*, and is memtioned under this name by Thucydides. The Egpytian form is Aneb-hat.

The discovery of the sarcophagus—chamber of King Phiops Moeris, of

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the sixth dynasty, made near Sakkarah in 1881, has revealed the date of his reign, which is 2785. B. C., the begining of one of the Sothic periods. Now since we are acquainted with the fact that the eleventh *hanti* or 'mouth-shifting' counting back from 2785 B. C., occurred in the reign of Menes (Mena), the first historic king of Lower Egypt, who is called *Pha-n-hapi*, on that account, he must have sat on the throne in 4125, B. C., when this astronomical event took place. We are told besides, that this eleventh *hanti* occurred in the middle of Menes' reign, which lasted 63 years, and as the history of Egypt *begins* with Menes, his ascent to the throne may be set down, from this and from other computations, in the year 4157, B. C. This does not exactly agree with the Biblical or rather *orthodox* computation of Petavius, for Menre's reign would then have begun 173 years before the "creation of the world," Before Menes existed other dynasties, who resided in the pre historic capital, Heliopolis or On, (in Egyptian, Anu,) ruled over the country, and as far as we are enabled to judge, their rule was purely theocratic.

THE DIFFERENT PERIODS OF THE CHINESE LANGUAGE.

Dr. George von der Gabelentz, professor of eastern Asiatic languages at the University of Leipzig, lately published an abstract of his larger work. "Chinesische Grammatik," which appeared in 1881 and was favorably received by reviewers. The abstract bears the title: "Anfangsgrunde der Chinesischen Grammatik mit Nebungsstucken"; Liepzig 1883, 150 pages 8°-(T. O. Weigel publisher) and in very concise language develops the principal laws of the Chinese language in its principal historic phases. These periods of evolution are three in number; 1, the *preclassic* period or Shaug-ku-wen, "high-old literature", from the origin of literature down to the philosophers Lao-tsi and K'ung-tsi or Confucius; in the 6th, century B. C.; 2, the *classic* period or Tchung-ku-wen, "middle-old literature", regarded as the golden age of literary development among the Celestials and extending from the 6th, to the 1st, century B. C.; it is followed immediately by the *post classic* period or Hia-ku-wen, "low-old literature, and extends to the times of the Yuen dynasty, which ruled from 1206–1368 B. C.;3, the *novelistic* period which dates from the Yuen dynasty to the present century and strives to reproduce the conversational language of China. The queer idiosyncracies of this monosyllabic language are sketched very intelligibly even to the reader whose studies do not lie in the linguistic line, and by means of the "exercises" appended he is enabled to apply at once practically the rules which he has just committed to memory.

THE MEANING OF CERTAIN INDIAN NAMES IN CANADA.

REV. J. A. CUOQ has added an important supplement "Additamenta" to his *Lexique de la langue Iroquois* spoken of in one of the last numbers of this quarterly. This supplement of 20 pages contains many important additions and corrections of that dictionary, researches on certain terms and a bibliographic study of Abbe Nantel on Cuoq's "Lexique". From this we extract a few points of interest contained on page 232, referring to proper names: *Canada* is the Icroquois Kanata, "village, assemblage of cabins;" *Hochelaga*, the eastern suburb of Montreal is Oserake "trail of the beaver"; *Caughnawaga*, Indian village nine miles above Montreal, is Kaknawake "where the rapids are" ;*Niagara*, from iorakahre "to resound, roar"(this etymology is rejected by others); *Toronto*, "a tree in the water". The Iroquois call the Frenchmen Onseronni, "hatchet or ax-manufacturers"; the Scotchmen Kentahere, from the form of their highland caps, which they likened to the dung of cows. The French governors, of Canada were called Onnontiio, "great mountain, after the name of the earliest of them, M de Montmagny. This name however means "mountain of the settlements or country-houses", (*Mons de maneries*) and the rendering "great mountain" is correct.

INUIT LANGUAGE. The scarcity of books on the Labradorian dialects of the great Inuit or Eskimo stock prompts us to mention a dictionary, which has been published by a missionary of the Friends (or Herrenhuters) nearly 20 years ago: *Eskimoisches Wortenbuch, gesammelt von den Missionaren in Labrador; revidert and herausgegeben von Friedrick Erdmann, Buddissin, gedr, bei Ernst M. Monse*, 1864, 8° 360 *pages*. The arrangement is not purely alphabetical, al-

though the terms can be found without difficulty by this arrangement after word-stems. There are over 14000 terms and phrases in the volume and although the definitions and editing are not in harmony with the principles of modern and logical lexicography, the book can be readily used for scientific purposes. Some of the compiler's linguistic ideas, as expressed in the preface, are as follows: Verbs are mostly quoted in the third person, for we start from the supposition, that the language will be studied in the country itself,—
—Frequently the females use terms differing from those used by the males. We did not pay much attention to the former, because they are frequently made objects of derision by the males. Erdmann also states, that the southern missions use many expressions differing entirely from those in the northern parts of the country.

ITALIAN LITERATURE has found many historians, perhaps more among foreign nations than among the Italians themselves. Of the latter, Giudici has been the most prominent one in recent times; a German compendium, printed this year (1883) has just reached us, which also deserves eulogistic mention Its title is *K. M. Sauer, Geschichte der italienischen Literatur, Leipzig, W. Friedrich publisher* 8° 629 *pages;* it forms the third volume of a literary series, which proposes to treat the history of all the more prominent literatures of the world. Polish and French literature have appeared already and a sketch of English literary history will be pub'ished soon. Sauer depicts the characteristics of each literary period with accuracy and precision and gives interesting biographical sketches of the best representatives of Italian poetry and prose, as Dante, Petrarca, Bocaccio, Tasso, Machiavelli, Manzoni, Cantu, etc. Choice selections from the authors are inserted into the compendium, taken from the best German translators, and in the whole, the author, who dates his preface from Trieste (Istria, shows himsolf to be thoroughly conversant with the subjects he treats.

ETHNOGRAPHIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

INDIAN JOURNALS. Nowadays there is quite a number of weekly and monthly papers published by or in the interest of the Indians of the United States. We first mention *The Morning Star*, or with its Kayowe title: *Eadle Keatah Toh*, the organ of the Carlisle Indian Industrial School, Pa. Here we find expressed the ideas of Indian educators on their pursuits and the sucesses attained by them, as well as letters and descriptions worded by the pupils, who commit their thoughts to paper in a rather infantine and native kind of English. The *Yapi Oaye* and the *Anpao* are published entirely the in Dakota-Sioux dialect, at Yankton, Dakota, by the missionaries stationed there, whereas the Cherokee Advocate, of Tahlequah, Ind. Ter., is edited partly in English, and partly in Cherokee, making use of the Sequoya alphabet. The Cha( )hta also have an E glish paper of their own. The organ of the Creek or Maskoki Indians is the "*Indian Journal*" edited at Muskogee, I. T., by R. M. Roberts with English text throughout. Most news reaching us by telegraph from the Indian Territory speak of murders and crimes committed, but when reading this paper we become aware that a better sort of spirit begins to prevail in the more civilized communities of these parts. We also collect many ethnographic notices from its columns, which are, on the whole, very instructive to all who take interest in Indians and especially to those who have previously visited Indian countries.

Notice has been taken the friendly intercourse existing between the Delaware and the Osage Indians, both of whom are inhabiting northern tracts.

ON LOCAL NAMES. Of the multitude of local names derived from mortuary customs, the following are quite noteworthy:

Yaqnina Bay forms the mouth of the Yaquina River and extends as a deep inlet for about 16 miles into the interior of the coast lands of middle Oregon. Its shores were formerly thickly inhabited by the Alseya and Coznate Indians, who are now settled on the reservation further north. At the mouth of the bay lies a sunken island, whose presence has the effect of producing two

strong currents of water to and from the ocean. The northern outlet has a medium depth of 24, the southern of 20 feet. Whenever in former times an Indian died, his relatives tied the corpse to one of their primitive dugout canoes; they left it exposed to all the actions of the elements and none dared to approach it. The winds and tides drove the canoe forth and back, until it finally lodged itself in the sands at some point of the beach or was carried out to sea through the southern or more generally through the northern outlet. At the more exposed places the coast was full of these stranded canoes, though their ghastly charges were no longer visible. Even at the present time remains of the dugouts, resembling old trunks of trees, are sometimes seen above the ever moving surface of the ocean, or imbedded in the surf. The rustling, or roaring of the breeze blowing from these parts towards the interior was supposed to be the plaintive voice of the deceased, and hence the bay received its name: i-akuina, "*soul, spirit*" in the Yakwina language. (From Wm. E. Everette.)

Another name belonging to the same category, is that of the Tombigbee River in Alabama, which empties into the Bay of Mobile. It received its appellation "box-maker" from a Cha()hta Indian residing there among his tribe, whose occupation consisted in making coffins for the exhumation of his compatriots, who were, after a custom prevailing among most Indians of the South disinterred about one year after their demise, their bones cleaned from the flesh remaining on them, and then buried in these coffins at some other spot. Among the Shetimasha Indians the men appointed for this manipulation were called "*turkey-buzzard men*". The Cha()hta words composing "Tombigbee" are itumbi *box, coffin* and ikebi maker, manufacturer, from ikbi'h *to make*.

There is a number of other American local names referring to the presence of the dead, as the *Lac des Morts*, a lake formed by the Missinipi River, Canada; *Rio das Mortes* in Brazil; *Matanzas* in Cuba and *Matamoros*, "the killing of the Moors on the Rio Grande, Mexico; this name is like so many other Mexican names, taken from some Spanish town. For these name compare: J. J Egli, Nomina Geo graphica (1880).

Carrillo's Yucatec History. The second edition of D. Crescencio Carrillo Y. Ancona has just appeared under the title of: Historia Antiqua de Yucatan: Merida de Yucatan, Gamboa, Guzman y hermano, 1883, 12mo. 670 pages; the price at Merida being three pesos.—The author, who is canonicus at the cathedral of Merida, had in 1871 published his "Compendio de la Historia de Yucatan". The present work is mostly filled with archaeological descriptions of the ruined cities, treatises on the calendar system, while the history of the country before and at the arrival of the Spanish adventurers occupies but a small space in the volume. Among the appendices we mention a dissertation upon the literature and and ancient culture of Yucatan; others on the ruins of Hotzuc, on Maya geography, on the adoratorio of Motul, on Perez's chronologic system, on the history of the Yucatecan language etc. Carrillo strongly apposes Cogolludo's idea, that Tutul Xiu ever was a city of Mayapan (of chapter 18).

"Charlotte" is the title of a nice little epic poem written in German by Dr. Gustavus Bruhl, the Cincinnati archeologist, published by him in that city (16mo. 159 pages) under the nom de plume: Kara Giorg (the Black George) and dedicated to his friend H. Rattermann, editor of the "German Pioneer". The poem is composed in iambic tetrameters: its style is concise and to the point, its diction elegant and poetic. The heroine of Bruhl's poem is *Charlotte Christina Sophia*, a german princess born 1694 and married to the Russian prince Alexis. Seeing herself neglected by this dignirary, she fled to Louisiana and after Alexis' death was united to a French Officer d'Aubant, whom she had known in her native city, Finally the heroine dies in childbed, as stated by the contemporary reports.

NOTES FROM ORIENTAL PERIODICALS.

BY PROF. JOHN AVERY.

JOURNAL ASIATIC SOCIETY OF BOMBAY, VOL. XV, No. 40.

Pandit Bhagvantal Indraji describes some very interesting archaeological discoveries, made by him last year at Sopara. This is now a town of about 600 houses and 2,000 inhabitants, situated 5 miles north of Bassein and 37 miles north of Bombay. Anciently, it was a place of much greater size and importance, being the capital city of the Konkan, from 250 B. C., to 1265 A. D., and esteemed a holy place by Buddhists, Brahmans and Jains, successively. The Buddhist King, Asoka, (250 B. C.) sent one of his missionaries to this region, and it seems likely that from Sopara, this faith spread over Western India. The writer visited this town in quest of antiquarian remains, in the spring of 1882, with the result of which we shall give the most interesting particulars. The first discovery of importance was a fragment of basalt rock, upon which was engraved a fragment—about one-third—of the 8th edict of Asoka, and thus bearing even date with that monarch's reign. Since these edicts have elsewhere been found in a group, it is hoped that some more of them may yet be unearthed at Sopara.

But the most interesting find was made in a Buddhist's stupa, about half a mile from the village. The structure is now in a ruined state, and presents the appearance of an irregular mound about 31 feet in height by 67 feet in diameter. Cutting to the center of the mound, the explorers came to a hollow brick pillar, three feet square, with pyramidal top, and situated at a depth of 12 feet from the summit of the mound. Removing a layer of two feet of clay and some large brick from this chamber, he came to a circular stone coffer about 17½ inches in neighth, by 24 inches in diamiter. In this coffer was found an egg-shaped coffer casket, surrounded by eight seated images of the same metal, representing the eight Buddhas. The principal figure, facing the west, was the image of Maitreya, or the Coming Buddha. At his right was the seventh, or Gautama Buddha, and next to him, the sixth, and so on around to the first. Within the coffer casket were found four other caskets, respectively, of silver, stone, crystal and gold, and enclosed one within the other. The outermost casket, the silver one, was sprinkled with an aromatic powder, and about it were found some gold flowers, a piece of silver wire, an image of Buddha, some precious stones, and pieces of glass, and, what is of special interest, an unused coin. Upon the face of the coin was a legend in ancient characters, which Mr. Indraji translates: "Of the illustrious Yajna Satakarni, the King of Gotamiputra," the title of a king elsewhere known as Yaj nasri. Within the last, or gold casket, were 13 pieces of earthenware, varying from a quarter of an inch to an inch in length, and of unequal thickness. It was evidently to preserve these unpretending but very precious bits of pottery that the stupa was erected, and the question is, what are they? Mr. Indraji inclines to believe that they are, or were believed to be, veritable fragments of the begging-bowl of Buddha, which, after many wanderings in and beyond India, at last found a resting place in this ancient Buddhist city. We have little to help us to a determination of the age of the stupa, save the coin, and the date of this cannot be fixed with certainty. Mr. Indraji thinks that the monarch who coined it, lived in the last half of the 2nd century, A. D.

The same number contains a paper by Dr. A. Fuhrer, on the Buddhist Law Book of Manusara, compared with the Hindu Code of Manu. There exist in Burmah various law treaties which profess to be founded on an ancient Pali work, compiled by the above named author; and since the law books of Ceylon, Siam, Java, and Bali, are said to be derived from the same source, it is of interest to know the origin, age, and contents of the work. The law books now used as authority in Burmese courts, are claimed to have been brought from India five or six centuries before the Christian Era, by the ancestors of the Burmese; but Dr. Fuhrer thinks that most of them were introduced from Manipur, not earlier than the 11th century, A. D. As is usual with ancient oriental works, a supernatural origin is ascribed to the Code of

Manusara. The author is said to have been the son of a Brahman, who descended from the Brahma heaven, and of a semi-divine mother. He lived as a recluse, devoting himself to the study of law, until at one time coming to the boundary wall of the world, he found the words of this book inscribed upon it in letters as large as an elephant. It was actually compiled, Dr. Fuhrer believes, about the end of the second or the beginning of the third ceotury of our era. It is more Brahmanic than Buddhist, in its character, and appears to be founded upon the work of the Hindu Manu chiefly, but upon an earlier text than the one we now possess. Dr. Fuhrer has collated the Burmese palm-leaf manuscripts of this work, found in the British museum and India office with the native law books, and expects soon to publish a critical text with an English translation.

JOURNAL ROYAL ASIATIC SOCIETY, VOL. XV—PART II.

The longest paper in this part, and one that will be attentively read by all scholars who are interested in the antiquities of the Chinese, is the conclusion of M. Terrien de La Couperie's discussion of the origin and proper interpretation of the Yh-King, the so-claimed oldest book of the Chinese. The author describes at considerable length the failures which have resulted hitherto from both the ancient and the modern attempts to extract any intelligible sense out of the work. So numerous were these attempts from very early times, that we are told that, when the catalogue for the library of the Emperor Kien-Lung in the last century was made out, no less than 1450 different works on the Yh-King were entered. The contents of the book have been so little understood that its detached words and sentences have been used to divine by, and some Chinese have even affimed that the modern sciences of the west are found described on its pages. Modern interpreters have, according to the writer's views, succeeded no better than the ancient ones. They have caught here and there a word, and *guessed* at the rest. The principal modern versions are those of: P. Regis, Stuttgard, 1834; Rev. T. MacClatchie, Shanghai, 1876; and Dr. J. Legge, Sacred Books of the East, Vol. XVI. All of these versions are utter failures, says the writer, and the last one, "a monument of nonsense." The reason why commentators have gone so wide of the mark, is, that they have looked for connected sense where, for the most part, there is none. In the writer's words: "The text of the Yh-King is nothing else than a grand vocabulary of a small number (about 60) of words and expressions. And, no doubt, the impossibility of reading as current phrases and text, simple lists of meanings [as if we should try to read Johnson's dictionary as we would read a novel,] accounts for the absolute obscurity of the book and the astonishing numbers of interpretations which have been proposed by native Chinese scholars, a path in which they have been uselessly followed by several European sinologists." The writer promises us a complete translation of the work, founded on his views of its structure. We shall look for this with much interest. Such specimens as he gives, show how greatly it will differ from the versions of his predecessors. If Mr. Couperie's theory of the origin of the Yh-King is to be accepted, it is a compilation of documents of different ages, some of which reach back to the time of the Chinese Bak families, who migrated to China from South-western Asia. This resulted in the spread of Chaldaean learning, and the Cuneiform script eastward to China. To the former can be traced some of the contents of the Ph-King, and out of the latter grew the present writing of the Chinese. Whether or not the writer's opinions shall be ultimately accepted, they at least deserve careful study.

JOURNAL ANTHROPOLOGICAL INSTITUTE, VOL. XII, NO. 4.

This number contains several papers of interest to the readers of this journal. Mr. W. S. Duncan writes on the Probable Region of Man's Evolution. Starting from the theory that man was evolved from lower forms of life, the writer recognizes the importance of discovering the intermediate links between the human species and the inferior animals. The remains of such transitional organisms are likely to be found in the regions where man first appeared; hence, we should determine as nearly as possible, where that locality is. The following is an outline of the argument by which the writer attempts to fix it: Man's nearest kindred among the lower animals are the anthropoid

apes; these must have originated in some part of the Old World, south of the Arctic circle, since they have never found their way to the Western Hemisphere. Their present habitat is Central Africa and Malasia, but fossil remains of a similar type have been discovered in Southern Europe and sub-tropical Asia, and here Mr. Duncan would expect to find evidences of ape-men. In further support of this opinion, the writer argues that the lowering of the temperature by the approach of the ice age compelled all form of animal life that had been accustomed to a warm climate, either to flee southward, or to adapt themselves to the changing conditions of climate and food. Among these, the apes, living near the narrow land connections with the tropical zone, passed southward, and continuing the same habits, suffered no change of form; but the great majority, debarred by the broad sea-line, more extensive then than now, from escape to a warmer region, were forced to abandon an exclusive fruit diet and a life in trees, and in supporting life to adopt a more upright position. This resulted in the shortening of the arms and a change of the lower extremities, so as to adapt them to an upright position, and more convenient locomotion. The operation of the same cause also crowded together into the same region, other forms of animal life, and intensified the struggle for existence. This was favorable for the development of brain power and special capacities; and so in the course of ages, the lowest forms of humanity were evolved.

We agree with Mr. Duncan that "if by palaeontological evidence we can trace the changes through which the human form has passed from a semi-erect, quadrumanous, small-brained creature, to an erect, large-brained biped, we shall have raised the doctrine of man's evolution from the low ground of hypothesis to the elevated platform of historical fact;" but the missing links have not yet been found, and we must be permitted to withhold our assent to Mr. Duncan's theory of both the mode and place in which our race first came into being, until this essential evidence is forthcoming. By all means, then, let the most diligent search be instituted for the fossil ape-men.

Another paper of value is by Dr. G. W. Parker, on the People and Language of Madagascar. The native inhabitants of this large Island are separable into two clearly marked types: First, the Hovas, with yellow skin, long, straight hair, and flat faces, indicating a Malay origin; and secondly, a people with blacker skins, woolly hair and prognathous features, connecting them with the neighboring coast of Africa. The Hovas, though in the minority, are the ruling race, and at present are improving under the influence of Christian civilivation. Their form of government is a monarchy with a singular device for checking the power of the sovereign. Since 1860, the head of the state has been a queen, but associated with her is a Prime Minister, who is *ex-officio* her husband, and at the same time, is the general manager of the affairs of the kingdom. The Malagasy language was first reduced to writing by English missionaries, who employed for that purpose Roman characters. It has the general Malay-Polynesian type, being simple and regular in its structure. Its alphabetic elements are 22 in number—four vowels, two diphthongs, and sixteen consonants. The verb has two modes—indicative and subjunctive; three tenses—present, past, and future; and three voices—active, passive, and relative; the last seeming to resemble the Greek middle voice. The meanings of words spelled alike is determined greatly by accent and position in the sentence. The reason for the striking family resemblance between this language and the speech of the Eastern Archipelago, is one of the knotty questions in linguistics, and various theories have been advanced to explain it. One is that of the ancient Lemuria, now sunken beneath the Indian Ocean, by which communication would not have been difficult. The Hovas appear not to have been the first settlers of the island, but assert that they expelled a tribe named Vazimba, a remnant of whom, they declare, still exists on the southeastern coast. Their name, which is derived from a root, signifying "to wander," indicates that they were a pastoral race, for whom the grassy plateau of the interior would be favorable. The resemblance of the name to certain roots in Greek, Latin, and German, and to the word Vandal, suggests to Dr. Parker a possible connection between this people and the tribe that ravaged Italy. We need hardly remind the reader how hazardous are such conjectures from resemblance in sound in the absence of other corroborative testimony.

JOURNAL ASIATIC SOCIETY OF BENGAL, VOL. L, PART I, EXTRA NO., 1882.

We have already noticed Mr. Grierson's grammar of the Maithili language, and now the promised chrestomathy and vocabulary lie before us. The former contains a variety of short pieces in prose and verse—nearly all the literature that the editor could find. The greater part of the poetry consists of the songs of the celebrated Tirhut poet, Vidyapati Thakur, who belongs to the latter half of the 14th century, and whose compositions are greatly prized by the people of Behar and Bengal. His verses represent the ardent love of the worshiper for Vishnu, under a figure of a bride and bridegroom. They remind one of the Song of Solomon, but the language is far more sensuous, and would offend a western taste. We are assured, however, by Mr. Grierson, that the people repeat them with no thought, but of their mystic sense. The vocabulary has not been compiled from dictionaries, but from the mouths of the people, among whom the author was engaged in official duties.

VOL. LI, PART I, NO. 2.—This issue is chiefly devoted to a continuation of Babu S. C. Das' contributions, from native sources, to the religion, history, &c., of Thibet. His paper is divided into several heads: 1st, The Rise and Progress of Jin or Buddhism in China; 2nd, Ancient China, its Sacred Literature, Philosophy, and Religion, as known to the Thibetans; 3d, Life and Legend of Nagarjuna; 4th, Detached Notices of the Different Buddhist Schools of Thibet. These Thibetan accounts are valuable to compare with notices of the same subjects from Indian and Chinese sources. We haye space only to give the Thibetan version of the introduction of Buddhism into China. Before this time, there existed in China several religious sects, which had much in common with Buddhism, and prepared the way for its reception. One of these, called Me'-tse, enjoined the duty of devoting one's efforts to the welfare of others, even at the sacrifice of self interest. The founder of another sect, Li-ye-tse, foretold that a noble sage, called Buddha, and possessing remarkable spiritual gifts, would rise in the west. In the 26th year of the Emperor Chou-Wan, a halo of light was seen near the southwestern border of the kingdom, which was declared by the astrolagers to presage the birth of a holy person, whose religion would enter China 1,000 years later. This would make the year of Buddha's birth 953 B. C., while the commonly accepted date in China is 1027 B. C., and the probably correct date is about 567 B. C.

In the 8th year of the Emperor Mindhi, of the Han dynasty, or 1010 years after this event, he saw in a vision a saintly personage of glorious appearance and gigantic stature, approach his throne from the direction of heaven. Learning of the coincidence of this event with an ancient prophecy, he dispatched a message to India, who, after some time, returned, bringing two famous Arhats, or apostles, with a white horse, upon which were packed several volumes of the sacred scriptures, some pictures, and relics of the Sage. The new religion was welcomed by the Emperor, but excited opposition from the priests of the old religion. These earnestly remonstrated with the sovereign for disturbing the old beliefs, and he, perplexed as to his duty, resolved to test the merits of the two systems by the ordeal of fire. By his commands the sacred books of both religions were cast into the flames, and the native works were entirely consumed, while those of Buddhism were unharmed. Subsequently Thibetan sages visited China and contributed to the spread of their faith. Such portions of their scriptures as did not already exist in Chinese, were translated into that tongue.

BOOK REVIEWS.

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The History of the Pacific States of North America, Vol. 1, *Central America*, 1501 *to* 1530, by Hubert H. Bancroft. A. L. Bancroft & Co., San Francisco, 1882.

Mr. Bancroft has already furnished a complete series of books on the Prehistoric Antiquities of the Pacific States, including the history of the aboriginal Trib es, in five large volumes. That work, is a Cyclopedia of archæological information, and is recognized in the best circles as good authority. The compilation of the prominent facts was mainly taken from the very extensive Library which the author has been so fortunate as to gather. Some twelve or fifteen clerks were engaged on the work, and a prodigious amount of material was gathered by them.

The Volume now presented is the first of a new series. This however, is to be on the Historic Period—some fifteen volumes have already been announced and more to follow. All this under the direction of one man ! It must certainly involve a vast amount of money and some very busy work.

There are many features to this Historical Series, which should be commended. In the first place the very attempt to give the history of these States is one which very few would have ventured upon. In the second place, not one man in a thousand is so well qualified. Again, very few would think of giving the documentary history in a popular work. Nor does it signify if some one has found an authority which the author has happened to overlook. The authorities cited ares sufficiently numerous and reliable to excuse a few omisions. We are very happy to give our unqualified praise to the book and its author.

History of Ancient Art, by Dr. Franz Von Reber, translated by Joseph Thacher Clark, with 310 Illustrations. New York, Harper Bros., 1882.

This is one of the most complete and thorough works on Ancient Art and Architecture extant. It is valuable especially for its information as regards the archæology of art in Oriental lands. No work treats so thoroughly the early stages. The evolution of art and architecture is also referred to in a careful and judicious manner, without a special theory, but suggestively.

Kengel, Vitterhets., Historie, Och Antiquitets Akademiens, *Manad's blad*, Haus Hildebrand. Redactor, 1872—1881—10 Volumes. This set of reports contains much valuable information. Among the objects described are the old Runic letters, also the mysterious ring marks and perforations which are found in Sweden as well as in India and America. There are Dolmens, Crom lechs, and various rude stone monuments which resemble those found in France and England, and in a few cases as far East as India, showing that Sweden owes its Antiquities to the Aryan race. Accompanying these are many works of art which belong to the Christian era, and are of historic rather than of a pre-historic origin. The work is profusely illustrated and shows thoroughness of research and great acquaintance with archæology.

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BOOKS RECEIVED.

From the Royal Academy of Belle Letters, History and Antiquities. Anton Blomberg, Ph. D. Librarian.

Kengel, Vitterhets Historie och Antiquitets Akademiens, Manads blad, '72, '73, '74, '75, '76, '77, '78, '80, '81. Stockholm.

Zeitschrifht fur Ethnologie. Organd-er. Berliner Gesellschaf fuir Anthropologie, Ethnologie und Urgeschichte. Berlin1882.

Sechsunddriessigster Bericht zur. Alterthuniskunde. Schleswig-Holsteins Von Heinrich Handelmann.

Journal of the transactions of the Victoria Institute or Philosophical Society of Great Britain. Vol. XVI. London.

Revue D' Ethnographie, publiee sous, la, Direction de. M. Le Dr. 'Hamy. Paris. Ernest Leroux Editeur. 1882 & 1882.

Bulletin du Musee Royal D'Histoire Naturelle, De Belgique. Tome I, 1882, No. 1. Bruxelles.

Bulletin de la Societie De Geographie redige avec le concours de la section de publication les secretaires de la commission centrale. Paris. 1883.

La Croix De Teotihuacan Au Musee Du Trocadero, Par Le, Dr. E. T. Hamy. Conservateur du Musee d'Ethnographie, et naturaliste *au* Museum.

Journal of the Asiatic Society of Bengal. Vol. III, Part I, No. I. 1883. Edited by the Philological Secretary.

Palestine Exploration Fund. Patron the Queen, Quarterly Statement. Jan'y. 1883. London.

Przglad Archeologiczny organ. C. K. Konserwatoryi pomnikowi-Towarzystwa archeol Kraj. We Lwowie. 1882.

La Quatrieme Session des Congres International des Americanistes, Exposition de la Flore, du Nouveau—Monde. L'Exposition des Antiquites Americaines. A. L'Madrid. (25–28 Septembre 1881.) Compte Rendu presente a la Societe belge de Geographie le 31 Janvie 1882, Dr. Anatole Bamps.

L'Exposition D'Antiquetes Americatnes ouverte a Madrid, a l'occasion 4 session des Congres International des Americanistes (25 an 28 September 1881) par Anatole Bamps, Bruxelles. 1883.

Materiaux pour L'Histoire Primitive E. Naturelle. De L'Homme. Revue Mensuelle Illustree. M. Emile Cartailhae. Toulouse. 1882.

Bulletin O'Della Commissione. Archeologica Communale. Di Roma anno xi 1883.

Bulletin De la Societe Ouralienne. D'Amateurs Des Sciences Naturelles. D.' Ekatherinebourg. 1882.

The Journal of the Anthropological Institute of Great Britian and Ireland. 1883.

Anales del-Museo, Nacional De Mexico. Tome I Entrega 2. Mexico. 1882.

Myntfund et, fra Graeslid 1. Thyda len. Beskrevet af Dr. L. Steverson Christiana.

La Distribution Geographique Des Langues par M. Victor Henry. Lille. 1882.

Rune ludskriften Paa Ringen 1. Forea. Kirke I Nordre, Helsingland, udgivet og. Tolket af, Sophus Bugge. Christiana.

Esquisse d'une Grammaite Raisonnee de la Langue Aleoute Par, V. Henry. Paris. Maissoneuve. 1879.

L'Ancien Age De Fer, en selande et dans la Patrie Orientale du Danemark par C. Englehardtc. Copenhague.

Om, en reomersk, Medaillon af, Dr. L. B. Stenerson. Christiana.

Norske Oldsager, I. Fremmede-Museer, en Oplysende fortegnelse af, Ingvald, Undset. Kristiana. 1878.

Gazette Archeologique Recueil de Monuments, Pour servir e la counaissance et l histoire de l'art, Antique. Publie par les Soins de J. DeWitte,

et Francois Lenormant. Paris. A. Levy Editeur. 1882

Proceedings of the Biblical Archæology, Thirteenth session, 1882–'83. Samuel Birch, D. C. C. L L. L. D. &c., President. Sixth meeting Apri 3, 1883.

The Folk-Lore Journal, containing the oratory, songs, legends and folk tales of the Malagasy. Part IV. By the Rev. James Sibree Jr.

Anthropology and the Vedas, by Andrew Lang, M. A., and other articles, published by Elliot Stock. 62 Paternoster Row. London, 1883.

The Antiquary. A Magazine devoted to the study of the past. 1883.

Circulars of Information of the Bureau of Education, No. 2, 1883.

The Kansas City Review, of Science and Industry, edited by Theo S. Case. 1883.

Science; published at Cambridge, Mass., by Moses King. 1883.

The Popular Science Monthly, conducted by E. L. & W. J. Youmans. Oct. 1883.

The Magazine of American History Illustrated, edited by Mrs. Martha B. Lane.

The Greek and Latin inscriptions on the Obelisks. Crabs in the Metropolitan Museum. N. York. A Monograph, by Augustine C. Merriam, Ph. D., Prof. of Greek in Columbia College.

The Folk-Lore Society, Fourth annual Report of the Council, Friday June 30th 1882.

Memorandum of the Archæological Collection of Norman Spang. Etna, Penn.

Semi-Centennial Celebration of the City of Buffalo. Address, by the Hon. E. C. Sprague before the Bnffalo Historical Society, July 3 1882.

Human Proportion in Art and Anthopometery. A Lecture delivered at the National Museum, by Robert Fletcher, M. A. C. S. E., &c.

The Iroquois Book of Rites, Edited by Horatio Hale, M. D., Philadelphia, 1883.

The Folk-Lore of Yucatan, by Daniel G. Brinton, M. D.

Transactions of the Kansas Academy of Science, with Report of Sec'y.

The Journal of the Cincinnati Society of Natural History. 1883.

Proceedings of the New Jersey Historical Society. 1883.

A translation of the principal Hittite Inscriptions yet published, by John Campbell, M. A., Prof. in the Presbyterian College, Montreal.

M Elliott Woodward's Sixtieth Sale of Ancient Implements and Ornaments.

The Old Testament Student. William R. Harper, Ph. D., Editor. Sep. 1883.

Pre-historic Trephining and Cranial Amulets, by Robert Fletcher, Acting Asst. Surgeon U. S. Army.

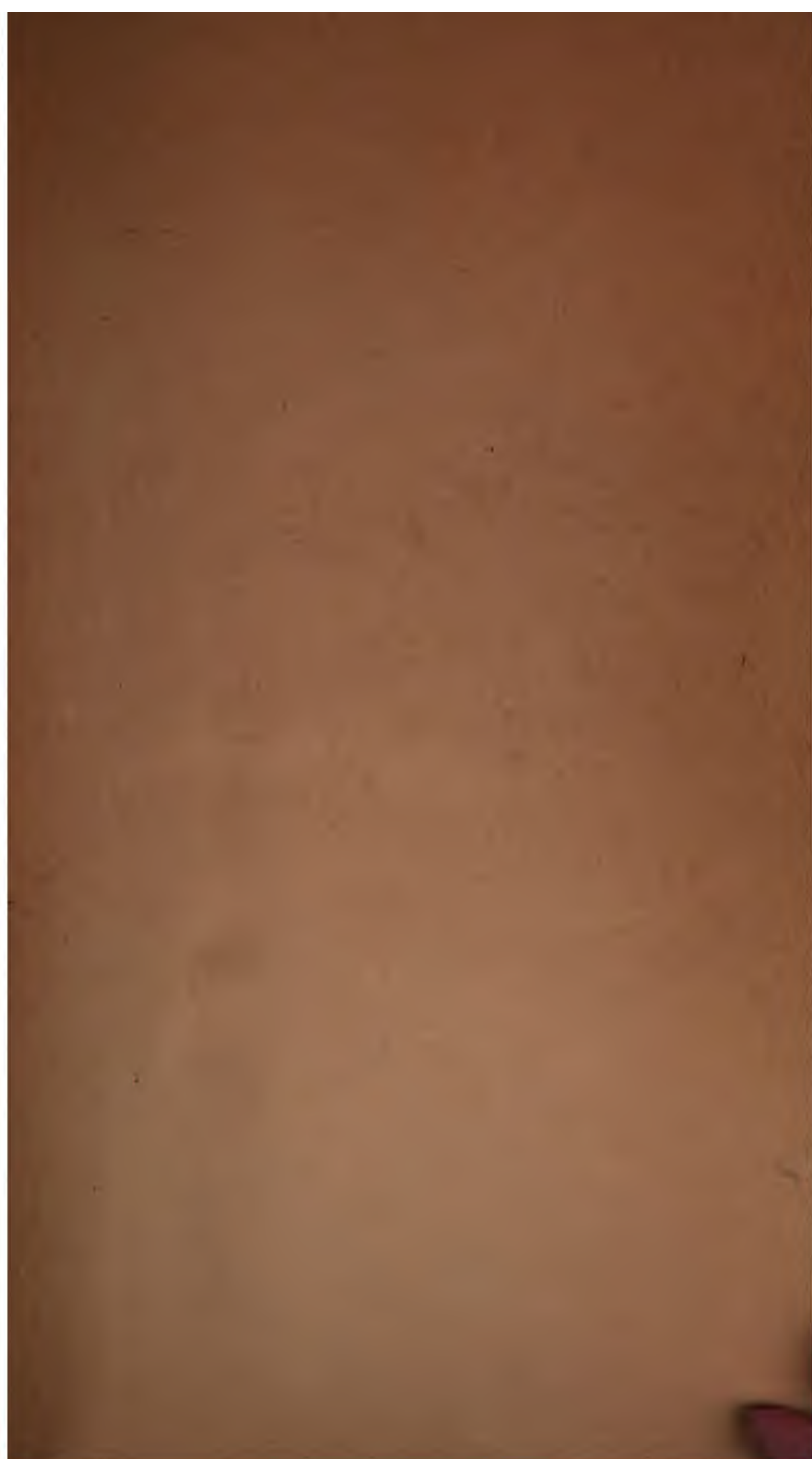
Notes on the Crania of New England Indians. By Lucien Carr. Boston. Mass.

Report upon United States Geographical Survey, west of one hundredth meridian; in charge of First Lieut. George M. Wheeler, corps of Engineers U. S. Army. Washington, D. C.

A brief account of the more important public collections of American Archæology in the United States, by Henry Phillips, Jr., and read before the American Philosophical Society, May 4, 1883, and the Congress of Americanists held at Copenhagen, August 21, 1883.

New Testament Autographs, by J. Rendel Harris. Supplement to the American Journal of Philology. No. 12.

From proceedings of the American Antiquarian Society, Vol. I, New Series. Part pp 235. Oct. 21, 1883. Notes on Copper Implements from Mexico, by F. W Putnam.



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