

PRIMITIVE MAN.

SEARCH FOR HIS FOOTPRINTS IN THE NORTHWEST.

The American Museum of Natural History Exploring in Far Off Lands.

In the Klondike gold strike another argument presents itself for dispatch in the important ethnological work which is being prosecuted through the northwestern part of this continent. The appearance in that territory of hordes of miners and prospectors will hasten the changes already in progress among its interesting native population.

All that region is known to be in a state of transition. Its wild inhabitants are rapidly divesting themselves of their original habits. They are passing out of the age of stone into the age of iron; they are abandoning their snow-backed bows, their edged tools of obsidian and their rude bow and arrow implements for the more domestic utensils of the white man.

That problem is a part of the primal problem of the distribution and dispersion of the human race. A definite attempt was being made by American ethnologists to determine the hypotheses that this country was peopled, at first in sections, from the contiguous countries in Asia.

It is believed that one of the results will be to show that not only are the Indians of the Northwest of a different stock than the Indians of the plains, the Mississippi Valley and the East, but that they are a later arrival upon American soil, deriving their origin more purely from the tribes of the Kamchatka Peninsula and the peoples that roam the frozen steppes in the waters of the Arctic seas.

To get at the facts, explorations will be pushed on both shores of the Behring Sea. From the Northwest, where received from the expedition under Dr. Franz Boas that left here in May for the interior of British Columbia. It is working up toward the Alaskan Territory, but will scarcely enter that field before next year.

Every step taken in the kindred pursuits of archaeology and ethnology has indicated a greater dignity and diversity in the native life of this continent than was foreshadowed when it first became the object of serious attention. The loose generalization by which all of its peoples were set down as red men of one family has yielded to the stores of more accurate knowledge that have been gathered about the squat Eskimo of Labrador and the taller Eskimo of Alaska's littoral.

The remnants of a higher life subsisting here side by side with the rudest customs have raised the perpetual question whether the continent is continuous with a conquering savage who has overturned a dynasty or a debased and ignorant descendant who has survived the culture of his ancestor while he has forgotten its traditions. The soil of America fulfills the interesting figure of De Quincey, the old world, it has approved itself the palimpsest of vanished civilizations, where the hand of one race has half obliterated the writing of another that it might trace its own signature. To decipher the earlier and the later inscriptions is the task of the ethnologist.

Over the interior of British Columbia and in Alaska Dr. Boas will find what is practically a virgin field. So little is known of it that it has been asserted and denied with equal emphasis that the mastodon still roams there amid

the low forest inside the Arctic circle. The work of exploration has been confined to the coast and to the valleys of the navigable rivers. Several years ago Dr. Dawson, of the Canadian Geological Survey, said that British America still contained an unexplored area of 954,000 square miles. Practically all of Alaska, a territory as great as that part of the United States east of the Mississippi and north of Georgia, awaits the enterprise of the explorer.

A very suggestive exhibit of the utensils and products of the Indians of the North Pacific Coast has been installed for some time in the American Museum of Natural History. But practically the first returns from the interior of that region have just been received from Dr. Boas. His letter accompanying them announces that his success has been beyond expectation, but it gives no details. The cases forwarded contain photographic cylinders on which are recorded the peculiar religious and folk songs of the tribes he has visited, together with a number of their myths as they had been induced to recite them into the phonograph.

Some kinship of the vampire legend is discerned in the carved wood figure of a monstrous bird now in the Museum. It has wings half a score of feet in sweep, and a long sharp bill in which a riddle-resemblance to the mosquito may be noted. With this bill it cracks the skulls of men and beasts, the brains a vigorous fancy. Perhaps it is due to an experience which happens to every savage people, but the tale of the wolf is preserved in the custom of the Nootka of Vancouver Islands. The story is that a wolf abducted the son of an Indian chief, and teaching him the dance of the wolves, made him a member of his people. The dance is still practiced, and he who leads it wears a horrible mask, in which he personates the chief of the wolves.

Legends similar to those found among the Chinese and in the stories in the Arabian Nights, and the guardian spirit of the waters around certain families, abound among these people. The gent who sought vengeance on the fisherman who hauled him from the sea in his casket could find lodgment in the queer Chinese-looking figure of the Tingit artifice. A peculiar and somewhat grotesque tribes is that they have no pottery. For their vessels they use shells, slate, sometimes beautifully carved, and wicker baskets so closely woven that soup can be boiled in them. Spoons are fashioned out of the bone of the mountain goat.

Nearly all the utensils of the coast tribes are fashioned after creatures of the land or sea. Their art, as is explained at the museum, is conventionalized, is never entirely naturalistic. The designer emphasizes the characteristic features to a bird, beast or fish, and lets the rest go. A huge dorsal fin is supposed to stand for the killer whale; a quadruped with two large incisors and a scaly tail for the beaver; sucking cups for the devil fish, and a head with a curved beak turning back into the mouth of the hawk. The plague of mosquitoes, of which the Klondiker complain, is attested to by a variety of native spoons where the handle takes the shape of a long bill—universal convention for the mosquito. In the various animal masks used in the dances, the creature is indicated by the shape of the nose.

In considering the origin of these peoples it is interesting to remember that the explorer who made Alaska known to the world did not sail west. He sailed eastward from the Siberian domains of the White Tsar, and August 1st was Europe in the interest of the Klondike Fair in 1891 and had charge of the Bureau of Publicity and Promotion of that exposition.

That a did you ever think. That a kid word put out in interest brings back an enormous percentage of the interest of the Klondiker. That though a loving thought may not seem to be appreciated, it has yet made you better and braver because of it? That the little acts of kindness and thoughtfulness day by day are really greater than an immense act of goodness once a year?

That to be always polite to the people at home is not only more ladylike, but more refined than having "company manners"?

That to judge anybody by his personal appearance stamps you as not only ignorant but ill-bred?

That to talk and talk about yourself and your belongings is very tiresome for the people who listen?

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also, and the raven shall dwell in it. And thorns shall come up in her palaces, nettles and brambles in the fortresses thereof; and it shall be an habitation of dragons and a court for owls. The wild beasts of the desert shall also meet with the wild beasts of the island, and the stray shall creep to his fellow; and the owl shall also place there, and find for herself a place of rest. There shall the great owl make her nest, and lay and hatch, and gather under her shadow; there shall also the vultures be gathered, every one with her mate.

Mr. Saville is likely also to pay a visit to Sonora, in Northwestern Mexico, where a supposed Chinese inscription has been found on a bowlder. He believes it not at all unlikely the Chinese have been in that region. The seal of trade currents would carry their vessels thither, and it is recorded their junks have been wrecked upon that coast in the last century.

The expedition will leave in a few weeks and will be in the field in September and continue through the winter. Some of the fruits of Mr. Saville's previous research in Mexico are already in the American Museum. Parallel researches in ethnological problems are now being conducted for the museum by other expeditions, which may be noted here. Dr. Lumholtz has returned from Mexico, after three years spent among the Indian tribes, and is now preparing his report.

Dr. A. F. Vandelier is at work upon the civilization of the Incas, and fifty cases of material from the borderlands of Bolivia and Peru are on their way hither. His memoir giving an account of the first results of his expedition will be published this winter. He is now exploring the ruins of Trahuaco, where stands the monolithic gateway, the most celebrated ruin of South America.

This is near Lake Titicaca, whence came the civilization of the Incas. Only in the highlands of Thibet has a civilization subsisted at so lofty an elevation as on the shores of this mountain lake, 12,000 feet above the sea. Dr. Vandelier will work northward during the winter into Peru visiting the ruins of Cuzco, the great City of the Sun. The last expedition, that conducted by George H. Pepper under the auspices of the Messrs. Hyde of this city, is also among the ruins of a vanished race. It has been searching those strange cities of refuge where the cliff dwellers found safety from the fiercer tribes of the plain. Its first year was spent in lower Colorado and Utah. It made a discovery of an ancient working amulet which it is less venerable than the gigantic dinosaurs unearthed in Wyoming by the explorers of the paleontological department still stand for a period remote in the annals of the native American.—C. B. Preststone, in New York Mail and Express.

MOSES P. HANDY.

Special Commissioner to the Paris Exposition.

The appointment of Major Moses P. Handy of Illinois to be Special Commissioner to the Paris Exposition in 1889 was a matter of no small importance. He is an old newspaperman. He commenced his career as city editor of the "Dispatch" at Richmond, Va. From 1873 to 1875 he was an editorial writer on the New York "Tribune." Then he returned to Richmond and edited the "Enquirer" for a few years. Then was managing editor of the Philadelphia "Times," later of the "Press," and then editor-in-chief of the "News." His later work has been in Chicago, where he is now editor-in-chief of the "Times-Herald."

Major Handy has had considerable experience in exposition work. He was Commissioner to Vienna in 1873 and also a member of the United States Centennial Commission in 1876. He was Secretary of the Special Commission to the Paris Exposition in 1889. He was also a member of the United States Centennial Commission in 1876. He was Secretary of the Special Commission to the Paris Exposition in 1889.

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WIRELESS TELEGRAPH.

PROCESS AS PERFECTED BY TESLA AND MARCONI.

It Is Said Messages Can Be Sent Around the Earth Without Wires.

Nicola Tesla's formal demonstration at New York on Tuesday of his apparatus which is designed to create electrical disturbance throughout the earth, by means of which intelligible messages may be sent anywhere, was not a first experimental illustration of a great discovery, says Holland, the New York correspondent of the Philadelphia "Press."

Tesla believes that his apparatus is now perfect, and as he is singularly cautious when speaking of his own inventions, it is fair to infer that he has an apparatus which will do all that he expects it to accomplish.

But with regard to the apparatus invented by Marconi, designed to accomplish in a widely different way what Tesla proposes to do with an apparatus—the transmission of intelligence by means of natural media—scientific opinion is explicit and in the highest degree commendatory.

That Marconi had perfected an apparatus which had been indorsed by Preece, the chief electrician of the British Postoffice Department, was information brought to this country early in March by British scientists. Then, however, the apparatus in its important principles was a secret known only to Marconi and a few scientists.

In the romantic interest which the invention of Marconi has excited, and in the world-wide excitement caused by the publication of the Roentgen discovery and the swift application of the principle to commercial and medical use, the services of one man greater than any other of the age, have been overlooked. Tesla's tremendous voltage, with its accompanying earth disturbance; Marconi's communication without wires and Roentgen's apparatus for producing the so-called X-rays, would have been impossible had it not been for the marvelous demonstration made by Hertz some years ago.

That great scientist, Dr. Helmholtz of Germany, among his other services to mankind, became the benefactor and teacher of a young German student, Hertz, by name. The young man had revealed his genius by his ability to Helmholtz as to establish the relation between student and teacher of protegee and admiring and confiding friend. The young man undertook the solution of the prodigious problem of the identification and measurement of the electric waves.

It was a problem offering colossal difficulties, which the young man of the giant intellects of Galileo, Newton and Kepler could approach. It was one of the grand problems of history. To solve it was to place him who found the solution in rank with those men who have created some of the mightiest secrets of nature and reduced these mysteries to accurate law.

Hertz solved his problem at last. He measured the electric wave which he created, fixing it definitely, accurately and perfectly in his computations; measuring it after the manner of measuring sound waves. His method could be applied to the electric waves, and then having wrested from nature one of her sublime secrets, and one of which the effects of the revelation upon civilization is inconceivable, Hertz called himself into the greater mystery, and he was an immortal.

The law which Hertz discovered, and so clearly elucidated Marconi, Tesla and Marconi possible. He left his discovery for other to apply commercially and to the benefit of mankind, just as Newton and Kepler and Galileo and Faraday were done.

It was a youngster, only a little past voting age, who, with the Hertzian waves as his basis, perfected an apparatus which, to the entire satisfaction of Preece and other British Postoffice authorities, transmitted those signals from West to East, a distance of ten miles, which were sufficiently pronounced to work an ordinary ink writer.

The signals were produced by a source of electricity of only two or three amperes and about twelve volts. In this description of the apparatus, the vast difference and contrast between Marconi's method of signaling without wires and that which Mr. Tesla is reported to have adopted.

Marconi's transmitter is really Professor Righi's form of a Hertz radiator, and it consists of an ordinary induction coil in the primary circuit of which is a battery, interrupted by an ordinary Morse key. In the secondary, there are three or four solid spheres, so placed that a current in the primary causes sparks to pass in the air gap separating them. The secondary circuit contains a condenser, a variable capacitor—being oscillatory, cause Hertzian waves to be projected against a receiving instrument, which consists of two wings or sheets of metal between which, and connected with which, is placed the receiver. But using different metals, and with the addition of a vacuum of four millimeters in this auxiliary battery works a mechanical tapper, which restores the coherer to its normal resistance, and also the ink writer. When the Morse key is pressed the current in the primary causes sparks to pass between certain points in the apparatus. The resulting waves acting upon the coherer cause the resistance of it to fall, and a current passes in the auxiliary circuit, thus moving the mechanical tapper and the ink writer. When the Morse key is raised, the coherer is left in its original condition of high resistance.

This is all the apparatus required

when the distances are short and the receiving and transmitting devices are in sight of each other, it being, of course, understood that the receiver must be tuned to the transmitter. When the distance to be traversed is great, or if there are obstructions to be overcome, one of the wings of the receiver is replaced by a kite, covered with tinfoil, or a metal plate at the top of a high pole. In this case the other side of the coherer is grounded as is also the secondary of the transmitter. It was discovered that mirrors help the action of this device, probably by greatly concentrating the waves.

While the scientists are of the opinion that there is no insuperable obstacle to the increasing of the power of Marconi's apparatus so that it may be able to transmit signals for a much greater distance than is now possible, nevertheless the impression is that the apparatus will be commercially available almost immediately for the transmission of signals between ships, fleets, garrisons and for other short distance uses.

In Great Britain there is far more interest in Marconi's apparatus than in the reports which have reached there of the work which Tesla has been doing. This is not wholly due to the fact that Marconi is an English citizen, and that his labors have been fostered by the ablest scientists of that country. He made no preliminary announcement of what he proposed to do, as Tesla did some years ago. Marconi worked in secret, almost in mystery, always in silence, until he had practically perfected his apparatus and secured the protection of the British Patent Office for it. Tesla works in secret and in something of a romantic mystery, but he has been willing to take his friends somewhat into his confidence, and to say that he believed that he was well on the road to the discovery of the secret of instantaneous transmission of intelligence by natural media.

Scientists say that even in this latest demonstration which Tesla has made he simply repeats what he has so often said he believed to be within the possibilities of his intellectual power, the discovery of a method of transmission without wire, but we do not know what his apparatus is, excepting that it is one which requires an enormous voltage, and one which will cause such disturbance of the earth's electrical conditions as will enable the apparatus to do its appointed work.

Pat's Anxiety. A Gulf Line special, filled with officers of the road and full of inspectors, was flagged by some men working on a section near Colorado Springs. Shocked by the suddenness of the stop, all of the officers rushed to the rear platform, where the men were congregated, to learn the cause of the hold-up. Each apprehensive that a wreck had occurred on the line in the vicinity, the paymaster was the first to inquire of the man nearest him, a raw boned

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Girls' Dresses, 25c and up. These ready to wear Dresses sold from 50c to \$4 and are for ages 2 to 14 years. Made from Dimity Lawn and Percale, dainty colorings and patterns, lace, braid and embroidery trimmed. All reduced to less than the worth of the material in them. Viz, 25c, 48c, 58c, 75c, and up to \$1.50.

Kik Gloves, 65c. The price you've been paying for these gloves is \$1.25. They are still worth \$1.25, but we are going to replace the line with a new style. They are 4 button, Dressed Kid Gloves, in mode and pearl. Reduced to close out to 65c.

Silk Mitts, 19c. Women's Silk Mitts in black and tan color, the 25c kind, to close out at 19c pair.

Women's Silk Mitts in black and tan color, the 25c kind, to close out at 19c pair.

Another lot of Silk Mitts are long, and in colors of pink, blue, yellow, red, black and cream, reduced from \$1.25 to 75c.

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recruit from Tipperary, who had not been in the service of the company more than a fortnight. "There's bin no accident, yer honor," said the Irishman; "I jst wanted to inquire of yez what the pay-roll be along." That if it was some wiring engaged in at the next stop, and Pat's solicitude for the arrival of the pay car was relieved by the prompt receipt for his pay check.—Argonaut.

A Relic of Mendelssohn. Those who visit Burnham Beeches—and there is no more enjoyable outing for a summer's afternoon—should not forget to see an interesting relic of Mendelssohn that is preserved in the garden of the little villa opposite the White House, once the home of the historian Grote. The relic consists of a broken tombstone, which was erected by Mrs. Grote to commemorate a spot in the garden where Mendelssohn loved to sit and compose when staying at the Beeches. The stone is defaced not so much by time as by the mischievous village urchin, but the following lines can still be read: To mark the cherished spot which once he

A Musical Wheel. I know a young man who, in cleaning his wheel a day or two ago, struck one of the spokes in such a way that it emitted a clear tone, and on a little investigation he was able to find six spokes that furnished as many notes of an octave. The other two notes were never raised, but might have been secured by tightening or loosening other spokes. At it was, he was able to play a few simple airs, either in whole or in part.—Springfield Union.

"Fuzzy had what might be called a hairbreadth escape." "Why?" "The girl wouldn't marry him because he was red-headed."—Philadelphia North American.

Men's Hand-sewed Tan Russia Galf Shoes at \$1.95. Men's Heavy Riveted Overalls at 35c. James Means' Shoes at 95c. To-day, MONDAY, Children's Seamless Black Ribbed Hose at 8c a pair.

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