



## George B. Wright and Family Papers

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# SCRAP BOOK

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## SPADE AND PICK ARCHÆOLOGY.

I. WESTERN ASIA.

BY THOMAS W. CLARKE.

Less than fifty years ago it was known that Nineveh had existed, and was on or near the Tigris; that Babylon had existed, and was near Bagdad on the Euphrates; that Jerusalem still existed and was on a mountain in Judea. Some supposed that Troy had existed and was in the Troad, but among the writers on Troy few were agreed on its site.

High up on the cliffs of Behistun was a sculpture representing several groups of men, and this sculpture was supposed to represent St. Thomas and his converts, and by others, Christ and his Apostles. Around this sculpture were three tablets, each inscribed with various series of strange characters, formed of sundry arrangements of wedges.

Major Rawlinson, the English Resident at Bagdad, a scholarly man, devoted himself in intervals of official labors to copying these tablets, and on a close examination it was discovered that most of the characters, and several of the groups of characters were many times repeated. By applying conjecture after conjecture to these groups, it became at last clear that the characters were the syllables of a language, that some of the groups were proper names, that the principal of the proper names was Daryavush (Darius), that others were names of the Royal Persians, his predecessors, that the language used in one tablet was "Old Persian," a tongue which bears to Persian Literature much the same relation that the Latin of Cæsar and Cicero bear to the Romance languages.

Assuming from this that the other two tablets told the same story, only in different languages, a similar process was applied, until at last there were reconstructed from these and other materials, the syllabaries of several languages, their grammars and vocabularies. As a consequence of this resurrection of languages, there has been in our day a resurrection of nations and races, Mede, Persian, Babylonian, Akkadian, Assyrian and Elamite, more or less complete.

Nearly all this new knowledge of old things flows more or less remotely from the work done by Sir Henry Rawlinson, while laboriously copying, letter by letter, and stroke by stroke, the incised inscription at Behistun, while dangling in the air on a swing board at the end of a rope, or from paper squeezes of the letters obtained while in a similar suspension, or by aid of skilful native cragsmen.

That before his day nothing had been done must not be understood, for many conjectures had been made, and some few successful decipherments of words and some of phrases in similar inscriptions from elsewhere, and the name of Grotefend as the pioneer, must always be remembered. From Behistun came, however, the first long story, of which a decipherment could be crucial.

The cuneiform languages of Mesopotamia and its neighborhood are not written alphabetically, but in syllabic characters in combination with determinatives in those most recent; and in syllabic characters, determinatives and monograms or word signs in still older sorts, the monograms being more numerous as the age of the inscriptions is greater.

Determinatives are arbitrary signs not to be pronounced, which indicate the sort of word which is to follow spelt out, as name of a man, name of a country, name of a god, name of a king, name of a river, or the like, just as in children's books we have a picture and word name, together.

When it is considered that every character has a signification as a monogram, and often also several phonetic values as a syllable, and that in all there are some thousand characters; that some of the languages belong to the Semitic family, with triliteral consonantal roots and slurred vowels, some to the Aryan family, with predominant differentiation of vowels and slurring of consonants, and some to a more ancient people, who made the original syllabary, and who seem to have slurred both vowels and consonants; that the grammars are singularly complex, some having seven voices to the verb, nearly all having three numbers to the noun, the task set and accomplished, is exceptionally incredible.

The best known proper names of Assyria are perhaps Tiglath Pilezer, Shalmanezar, Sennacherib, Esarhaddon and Sardanapalus. These appear in inscriptions, proximately, as Tuklat-pal-assur; Shalman-hu-azir; Sin-akhi-ir-ba; Assur-akhi-iddin, and Assur-bani-pal. It will be seen from this how difficult has been the work, and indeed while scholars are almost absolutely agreed on results, the finer details of the work cannot be considered absolutely certain as yet.

When the work had been somewhat advanced, however, it was found that these ancient people had anticipated it, and had made and written on bricks and terra-cotta tablets, and stored away in palaces, libraries containing dictionaries, grammars, treatises on natural history, astronomy, and the various arts and science, law books, the legends and annals of these peoples and their kingdoms, accounts of their mythology, superstitions, rituals of exorcism and of worship, and a system of chronology, and of dating events, which have been of great service to historians and archaeologists.

But before these aids to an understanding of these peoples and their life, manners, laws, customs, arts, sciences, civilization, commerce, military tactics, weapons, religion and superstitions were discovered, the archaeology of the spade and pick needed to be invented, for all these things were buried underground until after the year 1840; and it is their exhumation from their sepulchres of 2500 years that has given us this insight into the past.

About eight years after Major Rawlinson's work at Behistun, Botta, French consul at Mosul, heard that after a very heavy rain some sculptures had come to light from the washing away of the mud in a mound across the river called Koyunjik, and the bright idea struck him that possibly some relics were there covered up and might be dug out. He set to work with spade and pick, and with an army of workmen, and after trying at two or three places, brought to light from Khorsabad some wonderful bas-reliefs, statuary, inscriptions and other antiquities belonging to the palace of Sargon, father of Sennacherib.

A fever seized the archaeologists of Europe. Expedition after expedition has been sent out, ship-loads of antiquities have been exhumed and sent to the Museums of Europe. The old fable of the farmer and his sons has been repeated, "Dig and you shall find a treasure."

Nearly thirty cities in Mesopotamia have been more or less uncovered. The dirt of the mounds has been more or less sifted over. Broken pieces of pottery, smashed apart thousands of years since, have been remarried; and by dint of close study, deft handling, clear insight, and almost inspired conjecture, there have been reconstructed the languages, literature, sci-

ence, laws, history, daily life, social customs and habits of thought of these people who died from 2500 to 5000 years ago. We are able to locate the cities of Nimrod, the cities of Asshur. We know pretty well the commercial and social condition of the citizens. We have specimens of their weights and balances. Their orders on the Treasury for payments of standard weights of standard bullion have been found. The tags of their packages of merchandise stating the contents and name of the packer, the records of their lawsuits, the annals of their wars, are in European museums. Tables of weights and measures have been recovered, copies of their deeds and wills. Their superstitions, their mythical legends are now known, and the illustrations which have come from these sources, of the narratives of the Hebrew Bible, of the history of Herodotus, and of the Egyptian monuments have been numerous and valuable, and hundreds of scholars are students of these languages, peoples and their lives.

In Cyprus, also, the spade of Gen. Di Cesnola has within ten years exhumed many valuable antiquities, hardly less in consequence than those of Mesopotamia. The inscriptions, however, upon the Cypriote antiquities are written in another syllabary, are not yet fully deciphered, and this is likely to remain true for some years.

For a long time a most singular series of inscriptions have been known to exist at Hamath, Aleppo and Damascus, and the characters in which they have been written used to be called Hamathite. Things inscribed with these characters have been found in Assyrian and Babylonian mounds and considerable conjectural work had been done upon them, with no very certain result. Lately, however, these characters have been recognized to have affinities of form to the Cypriote characters, and the discovery of a bilingual inscription in Phœnician and in a Greek dialect written with Cypriote characters, has furnished a clue to the peculiar inscriptions of Asia and Asia Minor west of the Euphrates, which promises results hereafter.

One of the earliest and most graphic descriptions of life and manners to be found in literature, is the account of Abraham purchasing the cave of Macpelah at a Hittite town meeting. Comely Hittite women obtained the loves of the sons of Jacob and of the children of Israel; still later: Uriah the Hittite, with his chivalry, his loyalty and his courage, is the bright feature of that episode of David's life which resulted in the succession of Solomon, but was sullied by the betrayal and treacherous murder of this valiant and faithful soldier by his comrade and commander, the King's uncle, and too obsequious servant Joab.

On the Egyptian monuments we read about the "Cheta," and in the Assyrian documents about the "Khathi," as a powerful Syrian confederation, strong enough to hold its own against Rameses Sesostris, and to check the western march of Assyria.

an conquest till the time of Tiglath Pilezer I. (about 1100 B. C.), and even to hold part of Assyria itself under tribute. Their chief town on the Euphrates was Carchemish, about 35° N. Lat. and 40 1-2° E. Long. They occupied with more or less of power the interior of Palestine, Syria, and part of Mesopotamia. They were skilled in metallurgy, for they had chariots of iron and wrote their treaties on silver plates. They are the first people recorded to have had a standard quality of bullion, "shekels of silver current with the merchant"; they were commercial, for the mina of Carchemish was a standard weight in Assyria and Babylonia, as well as the maneh of the country, and was more usually used in treating of gold and silver. They had an art of sculpture.—They had developed a system of hieroglyphic writing, which afterwards had become syllabic phonetic, and which spread as far as Cyprus, for all the Cypriote characters have been traced to a Hittite origin, and identified among the inscriptions of Asia Minor and Syria. The bilingual syllabary in Phœnician and Cypriote Greek, discovered simultaneously by the late George Smith and by Consul Lang, is serving as a key for decipherment and transliteration of these inscriptions, but the vocabulary, grammar, and affinities of the Hittite language are as yet uncertain.

It is, however, probable, that while the people of Mesopotamia wrote from left to right, the Hebrews and Phœnicians from right to left, the Cypriotes mostly from right to left, except at Paphos, when it was the other way; the Hittites wrote boustrophedon, or alternately one way and the other, in which peculiar method the early Greeks used the Phœnician alphabet. It is probable, also, that the Hittites were not a pure Semitic people, for the various writings by Assyrian and Egyptian and Hebrew of the Hittite names show that they slurred their consonants in talk, as Aryans and as the Accadians did, for Khatti and Cheta and Beni Heth, the names of the nation, and Qua Kamais, and Garguma, and Carchemish, the names of their chief town to these respective peoples, indicate a lack of distinction on the tongue between H, K, Kh, G, and Ch; between T, TT, and Th, and probably also between P, B, F, and V. In the old Ethnic record of Genesis, Kittim or Cyprus is called an Ionian colony, while Heth is said to be a descendant of Canaan, and hence a Hamite. Either affinity would account for the peculiarity of tongue, for the Cushite Accadian language, the probable speech of Nimrod, must have been essentially a sentence language in which the words and syllables were obscure and doubtful, while the unanalyzed thought was conveyed partly by voice, partly by gesture.

The Hittites were allies of the Dardanians against Egypt, and the Keteioi are allies with the Dardanians at the siege of Troy. The Dodanim (Dardanians) and Cittim (Cypriotes) are mentioned together in the famous tenth chapter of Genesis, and so we shall not be surprised to find that Dardanian Troy showed some relation to Cypriote arts and culture, the more that it is probable that the Citium of Cyprus was a Hittite city.

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## SPADE AND PICK ARCHÆOLOGY.

BY THOMAS W. CLARKE.

### II. TROY AND HISSARLIK.

In 1868, Dr. Schlieman, a merchant, the architect of his own large fortune, with a great taste for archæology and a profound love for Greek literature, resolved to find the Homeric Troy, and solve with spade and pick, the questions solvable by their judicious use, and by well applied consideration of their recoveries.

Between 1870 and 1879, Dr. Schlieman has excavated, substantially by methods familiar to those who have seen work on railway cuttings, the core of a hill on the south shore of the Hellespont, called Hissarlik, down to the virgin soil, over a space of somewhat more than an acre, and to a depth from the surface, as he found it, of over fifty feet. He has thus exposed, so that it could be fairly examined, the original hill, and the several stratifications left by human occupation of it. He took careful notes of the position of his finds daily. Upon this site there had stood, till well along in the Christian Era, the acropolis of a city, called Ilium, and beside and behind this acropolis, a city of about 100,000 inhabitants, the temples, citadel and council house of which occupied the acropolis.

Historic traces of this Æolic city go back for 500 to 600 years before Christ, at least. Alexander visited it, Xerxes sacrificed there, and it always pretended to be the Sacred Troy of antiquity, and to have been continuously inhabited. Up to the time of the Roman Empire it had certain international relations, said, with great show of probability, to have originated soon after the Trojan war. The rubbish of this city was about six feet thick, and contained only objects of the sort usual in historic times.

The story of Troy as told by the poets is singularly confirmed by Schlieman's excavations. It is true in this confirmation, that the city of the Trojan war is shifted from the stratum in which he hoped it was, to that next higher; but with this exception the theories and finds of Schlieman exactly compare with the myth.

Evidences of pretty continuous habitation of the hill of Hissarlik are numerous. Seven cities have been built on this site, one on top of the ruins of another. The city of the lowest stratum was clearly abandoned and in ruins, before the second city was built. After the ruin of the second city, some time elapsed, enough to furrow the ground deeply by atmospheric action, but not enough to destroy the walls and houses. Some have said a year was enough for this. There are evidences of a great deal of human work to prepare the site of the third settlement in levelling off the site of the second city, and bringing it up to grade, by use of the rubbish of the old town. The third city was nearly destroyed by fire, but it unites with the fourth in an unburned corner, and the fifth city presents many resemblances in its objects to the fourth, and seems to have been built on its site promptly after the fourth was destroyed. The remains of the sixth city just below the remains of the seventh or Hellenic city, are distinct in character from all the others.

The remains in the lowest and two highest strata are very distinguishable from the others and from each other; the second, third, fourth and fifth strata, show marked relationships, with some differences, all of which the legend of Troy explains.

From the original surface of the hill to the top of the fifth deposit, a distance of from forty to fifty feet, one object is common, a fiddle-shaped fetish. The second, third, fourth and fifth cities, have another common object, the owl-faced vase. The generic shapes and paste of the pottery, and of the votive whorls are common among these four strata. Their pottery differs in paste, shape and technique from that of the first, sixth and seventh cities. In the character of the implements and indeed of all objects, there is a great resemblance between the articles of the strata from second to fifth. While the resemblances of the finds in these four strata are so numerous and important, the differences between the finds of the first, sixth and seventh strata from each other, and from those, and each of those of the second, third, fourth and fifth are very marked.

Let the legend of Troy give the reason for all the resemblances and all the differences. If it solves them all, shall we not say Schlieman has dug up Troy from Æolic Ilium to the hill of Ate?

Dardanus emigrated to the Troad and built a city on Mount Ida. His descendant, Ilus, received a present of a cow from the King of Phrygia, and the command of a colony of fifty young families. An oracle ordered that he should build a city where the cow should lie down. The cow rested on the hill of the Phrygian Ate, and Ilus camped there. Next morning, he picked up from the ground the Palladium, which had fallen from heaven in the night, and this Palladium became the protectress of his city.

In a classical story of the founding of a city, the selection of the tutelary deity, the building of the sacred hearth, the dedication of the Acropolis, the establishment of the worship, all are of prime importance. Gods must be fixed to the abode of men by rites and sacrifices. When once fixed to a shrine, it remains theirs forever.—Abandonment by inhabitants did not snatch away the divine presence. Removal of a turf and of the sacred fire might make a new shrine the child of the old one, but where the god had once deigned to allow his priest to call him with suitable rites, the divine presence appropriated that spot forever and could share it only with other gods, with priests, soothsayers and kings.

In the story of Troy, the hill is the hill of Ate. This phrase teaches that here a hearth and sacred fire had been established, that the habitations of men formed into society, united by kinship or adoption, having a common worship, and a common machinery of worship ready for invocation of the divine protector at any critical moment, had once been built.

The word Phrygian betrays the origin of the dedicating colony. The statement that it was a hill, and not a city or a shrine, implies that the settlement had been abandoned. That Ilus found near his tent the image of the fetish of the place is not remarkable. Schlieman found several in the lowest stratum. Ilus adopted it, and it continued the city fetish. The five lower strata of Hissarlik each contain several



copies of this fetish, a relic of the old worship, found on the ground in the morning, whose cult Ilus re-established.

The first city of Schlieman was therefore Phrygian, and the second was "Ilios" the city of Ilus.

The legend continues,—Laomedon, son of Ilus, rebuilt the city and its walls with assistance of Poseidon and Apollo; that is, by aid of men who came by the sea, perhaps Phœnicians, and of men from the East.

This myth may refer, as Virchow suggests, to the great use of clay and brick in the third city, which would be accounted for as work of men of the East, the land of brick and clay structures.

The city of Laomedon was assaulted, captured and burnt by Heracles, a myth which certainly points to a destruction by fire. Schlieman's third or *burnt* city, is then the city of Laomedon. It was not all destroyed. Priam was allowed to rebuild it. So the city of Priam was the fourth.

In the time of Priam, when he was old, occurred the Trojan war.

Among the finds of the burnt city were seals, cylinders like those of Babylon and Assyria, with different and characteristic intaglios, numerous inscriptions in Hittite characters, and with the paramantha or svastika emblem, objects of glass and porcelain, showing Egyptian and Phœnician connections. Its architecture differed from that of the second, fourth and fifth cities. The number of axes and hammers found here is small.

In the fourth city the architecture reverts, and is like that of the second city, and like that of the Troad to-day; the objects of art and importation are few, but hammers and axes of stone were found in vastly greater number than in the other strata, while bronze weapons were scarce.

The thing principally noticeable besides the vast preponderance of weapons, in the fourth city, were the kitchen middens, which were all within the walls and houses in the fourth city, while in the first three

and last three cities, no such collections of food refuse were noticed.

Is it not fair to conclude, then, that the city with Phœnician and Eastern affinities in its architecture, the city which gives up Egyptian porcelain and Phœnician glass and bronze, which reveals by the frequent presence of the Eastern Aryan emblem, called Paramantha by the Zends and Svastika by the disciples of Brahm, the city opulent of gold and silver wrought with the repousse work of the Hittite, which yields inscriptions in Cypriote characters,—the city three quarters destroyed by fire, is the city of Laomedon,—built by foreign assistance, by men of the sea (Poseidon), and by men of the sun (Apollo), enriched by commerce on sea and land, threatened by the sea monster, or pirates sent by Poseidon, relieved by Heracles, the mercenary Oriental, and sacked and burnt by him in a quarrel about payments?

Is it not fair also to say that the city of the kitchen middens and with a wealth of early weapons, wherein few if any, marks of fire exist, where precious objects and signs of commercial intercourse are wanting, but where the goddess fetish and the goddess vase still exist, as in the two lower and next higher strata, was the long besieged city of Priam; betrayed and captured by stratagem, taken, sword in hand,

in the early morning, the garrison slain or enslaved, the city sacked and pillaged of the wealth left from the needs of war after paying the subsidies to allies,—this city of the long siege, the sudden capture, the undoubted pillage, was the city of Priam?

Has not the spade of Schlieman unearthed to us the home of Hector and of Priam? How the archaeologist's finds of precious objects would be mere gleanings, after the owner had shared with his friends, and the spoiler had harvested at his will! And they are scarce, as may be well imagined.

The legend of Troy goes on to say that after the sack of Troy by the Greeks, Æneas, a relation of the Trojan royal family, the head of the elder branch of the Dardanians, rebuilt Troy, continued the sacred cult, and ruled over the Troad.—The original population of Troy, collected by Ilus, was Phrygian under a Dardanian leader. It seems clear that the Dardanians were a mixed Thracian and Phrygian people. We should therefore expect to find a modified architecture and art, with a modified people. With the same religious cult, we ought to find similar religious articles. This we do find. Besides, there, to this day, clings the Dardan name. The Hellespont has been for centuries the Dardanelles.

The story of the Locrian maidens sent annually, till the time of Plutarch, to serve at the shrine of Athene in expiation of the outrage of Teucer at the sack of Troy, points to a continuous occupation. The ubiquity of Æneas as a leader of colonies to the West, indicates that after the Trojan war, Troy ceased to be a commercial city, a toll-gate of the commerce from Europe to Asia; probably from the substitution of Aegean and Ionian ports for the caravan trade over the ferry of Helle. Apparently Troy existed for several hundred years as a religious watering place. Constantine pronounced its doom by making Byzantium its capital and making Christianity the religion of state.

The sixth city Dr. Schlieman calls Lydian. There is a tradition that the Lydians did make a settlement at Troy about 700 B. C. The pottery and objects of the sixth city are described as having Etruscan or Lydian affinities. The seventh stratum is the Æolic Ilium, an historical city.

Elsewhere in early Eastern researches, the finds have seemed to demonstrate that after the age of polished stone implements,—and to this age of polished stone the five lower cities of the Hill of Hissarlik belong,—there followed an age of bronze implements. Bronze is an alloy of copper and tin. Tin-stone is one of the rarest of ores. Cornwall in Europe, Spain to a small extent, India and the Straits of Malacca in Asia, Mexico and Peru in the Western continent, have for ages supplied the world.

What an extended commerce is attributed to the neolithic peoples when they are charged with a prompt advance from stone implements, to those of the 9 to 1 alloy of copper and tin! Schlieman's discoveries show that the bronze age was not an immediate step. The age, or at least the period, of copper preceded it.

The two lower cities had copper implements in which no trace of tin was found. The third or burnt city was trying the alloy of tin and copper, but had not reached the best proportions. Its bronze alloy carried from 3 to 8 per cent. of tin, and the 10 per

cent. alloy is never met with. Yet this presence of tin shows a commerce at least as far as Spain. Amber beads found intimate a correspondence with the shores of the frozen Baltic. Jade axes tell a story of commerce with the plateau of Tartary. Tools and weapons of obsidian tell of an importation from some far-off volcanic country. With what tools these ancient peoples did their work we do not wholly know. The potters worked by hand and with the wheel, and though they probably had no kilns, it is equally probable that they had a technique of managing fires in pits, in the burning of earthenware, which we should search for in vain, outside of Japan, to-day, but which is represented in Japanese picture books. These early Trojans were acquainted with the art of casting bronze, gold, silver, copper, and the electrum alloy, of working all these under the hammer, and of making repousse work. Their crucibles and mica-schist moulds have come down to us,—specimens of their marvellously perfect arts. Apparently they were just learning the arts of soldering, brazing, and of close plating. They had not learned the color decoration of pottery, but the use of "grog," to avoid shrinkage, was usual, and their selection of material for it was judicious.

The seals and stamps found seem to imply records and formal writings of some sort, but none such have been discovered. Evidently the Troad was at one time a notable mile-post in ethnic migration, Troy a great khan on a line of commercial intercourse. Its successor lived almost a thousand years as a shrine, upon the memory of an episode in the youth of the world, an object of pilgrimage and patronage to kings, consuls, generals and emperors, and died when Byzantium was founded; because, with the death of the classic religions, there was no future possible to a mere watering place of paganism, situated in an indefensible *cul de sac*, with no back country to serve as its market.

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## SPADE AND PICK ARCHEOLOGY.

BY THOMAS W. CLARKE.

### III. DEDUCTIONS FROM SCHLIEMAN'S WORK AT TROY.

Earliest history presents us two great civilizations, one located in the valley of the Nile, the other in Mesopotamia. Between these, from about the latitude of 39° north to below the latitude of the head of the Red Sea, stretched the Desert. A narrow strip of land along the Levant, intervened between the Mediterranean and the Desert. Proceeding upward from the south, a coast range ran, never more than twenty miles from the sea beach, sometimes within short cannon shot. East of this was a rough country, rolling at the south, hilly and mountainous at the north, and this, farther east, was cleft from Hermon to the Dead Sea by the chasm of the Jordan, for the most part lower than the Mediterranean. Eastward, again, the land rises to the desert, separated by a short hundred miles from the Levant. Farther north, the coast range becomes the mountains of Lebanon and Anti-Lebanon.

Hardy Phœnicians, sailors, fishermen, glass blowers, dyers and merchants, clung

Near here ~~at~~ <sup>the</sup> ~~Rameses II~~ "alone with no man  
near him" drove his chariot horses <sup>Victory</sup> in  
Thebes" and "Contented Nana" full on <sup>from the</sup> ~~the~~ Cana  
ite phalanx, with his war lions leaping before  
him and gave to Pentaur the occasion of  
~~the~~ his brilliant Egyptian war lyric.



to the rocks and sands of the coast, and planted the land from the coast range to the sea.

The interior of this country, beyond the coast range, save in a few places, is impracticable for troops or caravans, and constituted what was early known as Canaan, and later as Israel and Judea. Gaps and passes led through the coast range to the interior, and thence northward and eastward to Syria and the Euphrates. Of these one at Gaza connects eastward with a tolerable road north in the valley of Jordan. Another debouches near Acre close to Mt. Carmel, into the plain of Esdraelon or valley of Jezreel, a noted battle ground. Here at Megiddo Thotmes III. broke the power of the Hittites, and Nebo routed Josiah. Here Sisera met his defeat.—Here Crusaders, and later, Napoleon himself, fought the battles of Mt. Tabor. At Tyre the valley of the Leontes or Litany, leads to Damascus. Still farther north near Aradus, the valley of the Nahr El Kebir opens into the valley of the Orontes near Homs, and forms the plain of Kadesh or opening of Hamath, where several early Egyptian battles were fought with the Hittites. Above Aradus, the coast road is barred by mountain spurs, and though the lower valley of the Orontes was the harbor of Antioch, and roadway thence into the interior of Syria, and was utilized by the Seleucids and Romans, yet its advantages were not appreciated by early navigators and traders. Thence the coast range continues, guarding no considerable roadstead, northward to the Gulf of Issus or Alexandretta.

The range of Anti Taurus, with its connected system of foot hills or "Daghs," fortifies, save in a few passes or gaps, Asia Minor from Asia, and forms a perfectly defensible line from the Gulf of Alexandretta to Erzerum and Trebizond and the toe of the buskin shaped Euxine.

West of Anti Taurus is Asia Minor.—The Taurus chain extending east and west and the numerous lakes in the interior, have always rendered the south coast of Asia Minor difficult of access from the north, and it possesses few good harbors. North of 39° of latitude, however, practicable east and west routes extend from the valley of the Euphrates on the one side, to the Bosphorus, the Propontis, the Hellespont, and the Ionian cities on the other; of which routes, the most practicable, giving due consideration to the systems of the Sakarra river, and of the lakes east and south of the Sea of Marmora, are those to the shores of the Hellespont and of the Aegean.

The caravan route from Asia to Europe lay over straits so narrow as to be called Bosphorus (ox ferry) and Hellespont or Hellesporos (ferry to Hellas), both of which were bridged before the Christian era. In places they are but little over a mile wide, and are supposed formerly to have been narrower. Northward through the Chersonese, to the line of the Danube, and westward by that and its tributaries, or by a route closer to the coast, the adventurous trader could move into Europe laden with the riches of the East, and towards the east, carrying the tin of Cornwall or Spain, or the amber of the Baltic.

The Euphrates breaks through a gap in the Anti Taurus mountains about the thirty-ninth degree of longitude, and the thir-

ty-seventh of latitude, and the country north of Palestine bounded by the Euphrates, the mountains from the head of the Gulf of Issus to where Euphrates bends from southwest to southeast, and by the Desert already referred to, constituted Syria or the Confederacy of the Hittites; which thus interposed between the maritime and commercial countries of Asia Minor and Phoenicia on the west, and the rich agricultural and manufacturing countries of Mesopotamia on the east, and of Egypt on the south.

This geographical and ethnic situation is a key to the constant wars which desolated this western part of Asia for 1500 years, from the time of Thotmes I. nearly to the Christian era.

Syria and Judea might thus be the toll-gates of commerce to Phoenicia. Troy commanded the passage of the Dardanelles. By its Phrygian alliance, Troy controlled the place where the road from the east forked, to lead, west by south to where were planted in later times the Greek cities of Ionia, or west by north to the Dardanelles. By the existence and freedom of the northern route it could diminish the Phoenician carrying trade, and by its command of the forks of the road, could impede commerce by way of the Moeonian coast.

Now let us try to read the legend of Troy by the light which has come to us from Egyptian and Trojan researches.—The dates taken are those of Brugsch Bey.

About 1900 B. C., there was established in lower Egypt a dynasty of Semitic Kings (Hak-shasu or Hyksos), who thereby barred hostile Egyptian conquest in the north and east, and retained in the hands of Phoenician and Syrian Semites and Hamites, the control of water and land transportation. The Hyksos were expelled from Egypt about 1700 B. C.

The expelled foreigners were not followed farther than the southern frontier of Canaan, until seventy years later.—Thotmes I. remembered the oppression of the Shasu, and, as he says, "washed his

heart" in Northern Syria. The tribute imposed by him, was more or less regularly paid to his son and daughter for thirty years. To collect arreages, and revise the tariff, about 1600 B. C., Thotmes III. led the Egyptian power northward. He defeated the forces of Canaan and Syria at Megiddo, and vigorously and victoriously swept forward to Carchemish and perhaps beyond. For fourteen years he collected his war tax, annually, at the head of his army. He garrisoned the country. At his death the tributaries revolted, and for a hundred years the Egyptian annals are full of campaigns to collect the tribute and records of tribute paid.

It is during this period of interruption of Syrian trade, from 1666 B. C. to 1466 B. C., that the founding of Troy by Ilus and its rebuilding under Laomedon, by Phoenicians and Syrians (Poseidon and Apollo) is to be attributed. The southern caravan route was free from the possession of Egypt only by fits and starts, and hence of necessity and policy a new one was opened, by way of the Ferry to Hellas (Hellesporus). Troy was the garrison town on the Asiatic side, built to secure Phoenician and Syrian control of the West-

ern carrying trade.

Egyptian power in foreign parts decayed in consequence of the Sun worship heresy under Amenhotep IV. and his successors, and the southern road became free from about 1466 B. C. to 1366 B. C., when Seti I. and his greater son Rameses II. re-asserted Egyptian sway in Syria.

What more natural, than that the Phoenicians of the Levant should endeavor to cut the northern route at the Hellespont by a blockading fleet, or by destroying the ferry boats and driving off the ferry men, when the shorter and to them more profitable southern route was open? This satisfactorily elucidates the Neptunian Sea monster which ravaged the coasts and caused the Trojans to build a fortification near the shore. What again more natural than that the Eastern allies of Troy from the upper Euphrates and perhaps from Armenia, should desire to pursue their trade, and should attack and disperse the Phoenician fleet?

There appears to have been a Greek element in alliance with the East in this operation, for Telamon accompanied Heracles. The story goes that the reward promised was divine horses, and the reward paid was mortal horses. Divine and mortal often mean in these myths native and foreign, just as now-a-days orthodoxy is my doxy, and heterodoxy is another fellow's doxy.

Rationally explained on the commercial plane of thought, this story may mean that the Trojan ruler proposed to own the means of transport from Troy on, and not to allow the Oriental or the Greek to share them. Thereupon Heracles (the Oriental), destroyed the city by fire, and thus taught the Trojan custodian of the ferry his proper place in commerce. The date of this Heracleian intrusion into the northern caravan route ought not to be far from 1300 B. C., the time of Ramses II. and his conquests in Syria.

During these troubles around Troy, doubtless the southwestern branch of the northern route leading to the coasts of the Aegean, had been opened; and perhaps a desire to direct traffic to this lower route, and have Troy simply bar the passage of the Hellespont; while Troy wanted to keep that open, and bar the lower route, is the myth of mortal and immortal horses. At any rate Troy was rebuilt and got into trouble with Hellas about Helen and her treasures, and was destroyed by a Greek army.

On the side of Troy in this war, came Dardanians, the Lycians of Pandarus, the Adrestians and the subjects of Asius, all from the coasts of the Hellespont and Propontis, Mysians from the Bosphorus and from the coasts of the Aegean, Pelasgians, Carians and Lydians from the approaches to the west and southwest coasts of Asia Minor, Phrygians from its interior, Paphlagonians and Bythinians from the shores of the Euxine, all nations who got their employment and had their international relations by virtue of the Caravan route in Asia. To these were added later, Ketians, perhaps Hittites of Syria, perhaps Phrygians from around modern Kuteia, and Aethiopians or Cushites under "Memnon, son of the Morning," a nation of Oriental traders under an Oriental prince. Her European friends were Pannonians, Thracians and Amazons, all from South

*Khes-en-Alex*

of the Danube, and all deeply interested in keeping open the land route to Greece and the West, and she had no other allies.

The Greek settlement of the Ionian and Eolic coasts was not complete till after the Trojan war, and probably resulted from a preference for short water transport across the Aegean, over the longer and more dangerous land carriage by way of Thrace and Macedonia.

That Greek mariners had marked the harbors and made international relations with the East, the stories of the Heracleid or Oriental immigrations show sufficiently. An insult to one of the Heracleids brought on the war, and thus we are again brought face to face with the international relations of Syrian and Hellene in the alleged cause of the war.

Aeneas succeeded to the throne after the fall of Priam's city, but the control of trade from that time on, was Greek and not Oriental, and Phoenicia dwindled gradually away as a commercial power, and is known to us most vividly from her great and noble daughter, Carthage.

The date of the siege of Troy usually accepted is from 1194 B. C. to 1184 B. C. It is said by Herodotus to have occurred during the reign of Ramses III. in Egypt, (Rameses III. Pa-Nuti) which falls from 1200 B. C. to 1166 B. C. The Egyptian interruption in Syria and Palestine to the southern caravan route seems to have been effectual till about 1000 B. C., when the establishment of the Assyrian dynasty of Nimrod in Egypt, and the rise of the Empire of David and Solomon restored temporarily Semitic control.

All this series of synchronous events have come to us from monuments and discoveries of contemporary documents absolutely unknown a hundred years ago.—Treated as we have treated them they afford a reasonable explanation of the legend of Troy. That legend is rhapsody, but it conceals the truth, and will yield it to a proper analysis. Whether the one we have made is a true one depends upon whether it fully accounts for the whole of the legend, by comparison of contemporaneous events with each other and with the different parts of the legend; and whether the assumption that the human nature and workings of the human nature of the commercial and warlike nations of those times, was, in those days, analogous to what it is now. Whatever result scholars may reach as to the underlying facts of the legend, the world will forever be indebted to the Egyptian researches of Brugsch Bey and Mariette Bey, to the Assyrian and Cypriote discoveries and decipherings of Rawlinson, Hinks, Smith, Sayce, di Cesnola and many others, and to the explorations of Schlieman. Even the chance of an attempt at explanation, based upon ascertained historical and geographical facts, was wanting, till they had done their great and unselfish works. It will also be grateful to the present prime minister of England, Mr. Gladstone, for an early attempt to group these collateral facts in something like the comparative method for the illumination of this period of history.

## SPADE AND PICK ARCHÆOLOGY.

BY THOMAS W. CLARKE.

### IV. OTHER WORK IN EASTERN ASIA AND EUROPE.

Dr. Schlieman was not content to have analyzed the story of Troy on the spot and by the study of the things which the Trojans actually handled, but at Mycenæ, the city of the King of men, and at Tyrius, and later in other Grecian cities, he has laid bare the buried past for inspection and study.

Sure confirmation of the treacherous crimes of the sister of Helen, and her paramour, Egestheus, against her husband and his King, Agamemnon; sure evidences of the pious care of Orestes, in punishing the murderers, and completing the maimed burial rites of his father and father's friends, have come from the discoveries of the pick and spade in the acropolis of Mycenæ. Painted pottery, portrait masks of the dead in gold repousse, corselets, mail, greaves of hammered gold, two-handled cups like those of Troy, sheaves of swords and spears—these were the funeral offerings of the son to his father and his father's friends.

Altars of sacrifice over the tombs reminded the attendants at the town council in after times, of the heroic dead; and round the graves of the great Greek general, and the sad prophetess Cassandra, the seats of the ancients of the city, called to counsel the King, were ranged, that their advice might haply get some share of the wisdom and authority of the one, and of the prophetic vision of the other, with better personal and civic fortune than either.

The discoveries of Schlieman, by establishing that the tutelary deity of Mycenæ, Hera, was represented as a cow-headed deity, and the tutelary goddess, Athene of Troy, as an owl-headed deity, have enabled us to give new translations to boopis and glaukopis, the "ox-eyed" Juno and the "blue-eyed" Pallas, and to know them, as the pre-historic ancients did, "cow-faced" and "owl-faced." And by these discoveries it further appears how great the spread, and wide the influence of the Hittites were in this pre-historic past, for all the marvellous metal work of Mycenæ is assigned by scholars either to Hittite metal workers or to those who had learned the art from the Hittite.

Schlieman discovered also at Mycenæ and Troy certain things which are called moulds, and which let us into much of the metallurgic technique of the people of those old cities. Some of these are of mica schist, a very refractory stone, and were cut out so as to furnish a hollow for half of an object, and they were furnished with holes for the insertion of pins to bring another part of the mould to face the first, and a channel from the object was carried to the edge of the mould for the sprue. These were undoubtedly two-part moulds for casting and were of well selected material. The other so called moulds were of granite, a material which splinters under the action of fire, and of basalt, which does likewise, and which also fuses at a lower temperature than the melting point of gold. These granite and basalt moulds do not have pouring holes carried to the edges, and it is conceded they are not parts of two-part moulds.—Many of them also have patterns on more

than one side, and the patterns are more elaborate than those cut in mica-schist. It seems from the engravings, that the patterns on some of these granite or basalt moulds are wholly or in part in relief.—From this, are we not authorized to conclude that instead of moulds for casting metals, they are dies for making terra cotta, as some undoubtedly were, or for hammering plates of metal into, fitting them to every part by aid of chasing tools or blunt chisels or sets. Swedge blocks are not unfrequently to this day made with patterns on more sides than one, and for such small work as repousse, such a construction would reduce the bulk and weight of tools and be a great convenience. Repousse work is now made by hammering and by chasing tools, operated first on the back side of the metal plate, and afterwards on the front, the plate being sustained by a bed of pitch, and it is also made by stamping in dies, and by rolling in patterned rollers. The use of a granite mould in hammer work as a stake is understandable, but not as a mould for casting.

At Ephesus, an Ionian city, Mr. Wood, an architect, laid bare the temples of Artemis, and solved many interesting questions in the archæology and science of building. Both he at Ephesus, and di Cesnola at Cyprus, discovered a bed of charcoal under the foundations of early temples, and there is distinct mention with regard to the Ephesian fane that this charcoal was laid there with the intelligent purpose of preventing dampness, as has been recently done with coal tar in some buildings erected in Washington.

At Olympia, the scene of the athletic and literary contests of the Greeks, where friendly controversies of skill and strength and competitive recitals of history, epic, lyric, and romantic poetry, and fraternal sacrifices at the common altar of the separated clans who had developed into nations, took place for many centuries, in the presence and with the aid of all the Peloponesus and cemented the brotherhood of the Hellenic peoples, the spade and pick have recently exhumed the statuary and inscriptions chiselled in memory of the victors in the games, or of the treaties agreed upon at the festival, and have uncovered the altars around which were celebrated rejoicings over the athletic results or over the author's crown, or at which oaths to treaties were sworn by chiefs, and solemn feasts of ratification were celebrated by popular representatives.

At Jerusalem, also, English officers of engineers have inspected the foundations of the temple and seen the quarry marks of the workmen of Hiram. They have unravelled the elaborate system of water supply and drainage of this ancient capital. They have ascertained the topography to some extent, at least, of the city of the Jebusite; of the city of David and of Solomon, which paid tribute to Sheshonk; of the city plundered by Jehoash; of the city which baffled the army of the mighty Sargon, and which laid its treasures at the feet of his mightier son Sennacherib; of the city rifled and dismantled by Nebuchednezzar; of the city of Ezra, restored by permission of Cyrus, devout worshipper of Ormazd; of the capital of the Maccabees, invested and stormed by Pompey; of the city of Herod the Great, stormed by Titus, to which event we owe the sole representation of the treasures of the Temple which have come to us, sculp-



tured on the monument of this emperor, after gracing a Roman triumph; of the city piously restored by Helena; of the Moslem and Saracen city of the dark ages, which fell before the bloody war swords of Godfrey and the Crusaders, followers of the Prince of Peace; and of the city surrendered by Lusignan, as they differed from the Holy city of to-day.

In Italy, not only Pompeii and Herculaneum have been unearthed with all their well known wealth of art and illustration, but far down below the busy life of the capital, between the catacombs where the early Christians took refuge, and the streets where the noisy carnival life seethes to and fro, or the priests glide stately along, or the quick trot of the royal escort resounds, or the bric-a-brac dealer plies his trade, half in antiquities and half in fraud, a Royal Commission has been searching for a more ancient Rome, with spade and pick. They have found it, buried in the rubbish of the storm of the constable of Bourbon; covered by the ruins of the wars of Henry and Gregory and the assaults of Robert the Wizard and his Saracens; below the wrecking of Genseric and his Vandals; below the ashes of the fires of Nero; below the fragments of destruction from many an intestine conflict and many a foreign invasion, from the time of Marius and Sylla to the time of Mastai Ferretti and Mazzini; and all through these strata of the things that were, the Rome of the past has been found, examined, ascertained and chronicled.

In the Swiss lakes, in the Irish crannogs, in the Scandinavian kitchen middens, in the English barrows, in the tombs of the Vikings, in the gravels of the Loire, in the mounds of our own great West, in the shell heaps of our Atlantic coast, scene of many a feast of the red man, in the graves of the Algonquin, the spade and pick have done their faithful work of unearthing the facts of antiquity for study, classification and explanation.

And it is pretty definitely established that long before the earliest record of our modern nations, peoples adapted like the Esquimaux to a severe climate and a hard life, with about their civilization, with a similar skill in carving and drawing, using similar weapons, living a similar life, hunted the Arctic elephant near the shores of the Mediterranean, and the reindeer in the south of France; that at a later time the Basques and Finns worked their way westward with an improved civilization, and later still the Celt, the Teuton and the Slav, the Greek, the Latin, the Etruscan moved west, and the Phœnician ploughed the stormy Atlantic and traded on the Baltic amber coasts and at the tin mines of Cornwall.

History begins only with a prosperous and progressive people. Literature follows art. Egypt's oldest monument is the most massive building of the world, and proves by its constructive features that astronomy, instruments of precision, geometry, stone working, engineering, the arts of transportation, intelligent organization of human effort, and combined endeavor to produce a desired result, were known and practised, more than four thousand years ago, and long before the axis of the earth pointed to the present polar star.—These are the arts and springs of civilization, and how old they are.

Not half of the buried treasures of the East, of Asia, of Europe, of Africa, has yet been touched. Kileh Shergat, Nebbi Yunus and very many other mounds of

Mesopotamia, are still objects for careful and intelligent excavation; Damascus, Carchemish, and Tadmor need investigation; Sidon and Tyre, and greater than either, Carthage, await the spade. The archaeologists of the old continents have a hundred years work before them, and the history of Phœnicia and her colonies and commerce, of the Children of Heth and their wars and civilization, of we know not how many other early peoples to recover, ascertain and reconstruct.

What is there left for America?

[NOTE. In the last article, "Nero" is said to have "routed Joshua" at Megiddo. It was *Necho* who was the victim, and *Josiah* the vanquished. Joshua was more than 600 years too early and Nero about 600 years too late.]

For the Boston Home Journal.  
**SPADE AND PICK ARCHEOLOGY.**

BY THOMAS W. CLARKE.

V. MEXICO.

In the 16th century, Hernando Cortes led his band of Spanish filibusters against Mexico, and by aid of harquebus, cannon, cross-bow, barbed horsemen, and a divided enemy, made himself Marquess of the Valley, and made the King of Spain, Emperor of the Indies. Francisco Pizarro, with similar but lesser means, backed by unparalleled perfidy and falsehood, added another kingdom to the Spanish dominions.

In these conquests it has been said the Spaniards destroyed a civilization superior to their own. The charge is, in the main, true. What civilization Spain has or has ever had is borrowed. Phœnicia opened her mines, and Carthage worked them. The Catalan forge indicates Carthage as the source of Spanish metallurgy of iron, as clearly as the culture of the olive and the vine, the works of hydraulic engineering, the highly enamelled pottery, the orchards and gardens, the great excellence of the Toledo blades, the old silk industry, the cultivation of cotton and sugar, and the Cordovan or Morocco leather manufacture, indicate Arabian occupation.

No industry of Spain, no art, no science is either autochthon, or the voluntary importation of the Iberian, the Goth or the Vandal. Every art of peace was brought thither and naturalized by a foreign conqueror, who colonized in his conquest, and who, on his expulsion, left the relics of these arts behind him.

Cannon and hand-cannon were the legacy of the Moors to the Spaniard. The secret of temper of the Toledo sword is a direct and traceable inheritance from the master sword makers of Damascus. The magnificent sword and buckler play of Spanish soldiers was invented by the Romans. The cross-bow originated at Genoa. The legionary tactics of Hannibal and Scipio gave the sword and buckler their fullest advantage, and the cross-bow and harquebus their most distressing utility.—The long pike of the Greeks and the phalanx formation, so grandly superior to cavalry assaults and to every other formation, except that of the legion, were borrowed by Spaniards from the Swiss, who re-invented them both. The generous blood of the horse of Andalusia was derived from the Numidian chargers of Carthaginian cavalry and from Arab and

Berber crosses introduced with the invasion of Tarik and Count Julian, and continued through all the times of the Caliphates, till the tearful farewell of Boabdil el Chico.

These were the warlike methods and advantages which carried Spanish arms to the valley of Anahuac and to the palaces of the Incas; and which forced and maintained the transfers of the thrones of Mexico and Peru to the Spaniard. And except the cross-bow, the pike and the phalanx, each and every one of these warlike advantages was absorbed by the Spaniard from physical contact with, and involuntary education by, his conqueror and his foreign lord, for many generations.

With these arts, however, the Spaniard had absorbed the religious fanaticism of the Moslem in behalf of his own faith.—He had no charity of opinion, was narrow, bigoted, conceited, avaricious, self-seeking and superstitious. He was a desperate gamester, in politics, in business, and with cards and dice. But he had the patient courage of his ancestors, the trusty troops of Hannibal and Rome. He had their obstinacy in the face of disaster, their singleness of mind for the accomplishment of an end, their ability to average their happiness, by following a year of labor, famine and toil, by a week of feasting and merriment. He had the character and physique to make the best of soldiers in war, but this character was untempered by those softer predilections for beauty, comfort, love, charity, humanity and justice, for co-operative industry, advantageous to all concerned, which made the Moors of Spain labor continuously in the arts of peace, which also characterize modern commercial and industrial nations, and which as vital forces of civilization, underlie all or nearly all material progress.

The noble architecture of Spain is in Moorish cities, and dates back to Moorish times, and was the work of Moorish or Arab heads and hands. Murillo, her greatest artist, probably was of Morisco blood. Her industrial arts were borrowed. And the Spanish character has produced four centuries of stagnation and decay of the liberal and industrial arts, in the midst of a country whose natural wealth of mineral and agricultural resource is the finest of Europe. The industries, arts, science, agriculture, the refinements and comforts of life, in Spain, in the time of the Moors were far in advance of those of the rest of Europe, and in many respects equal or superior to those of our own times in the larger cities of the most luxurious nations of the world.

And so the Spaniard has proved himself to be not only unfitted to originate, develop and advance a civilization, but even to preserve one that already existed, and for the destruction of which hardly even a theological excuse could be presented.

If it be urged that it was not the Spanish character but the Spanish institutions and rulers that have been responsible for this, the reply is that men make and remake institutions and set up and pull down rulers. The Spanish constitution of government and methods of administration have continued, because they were in harmony with the national character. The Spaniard is the Spanish state, the Spanish religion, the Spanish habit of thought, the Spanish habit of action, just as John Bull is the English state, the English religion, the English type of thought and action, and as Brother Jonathan is the American.

There were found in the sixteenth cen-

*cavalry*



tury, between a few degrees south of the Equator and the Tropic of Cancer, two and probably three, distinct civilizations, the Mexican, the Peruvian, and the Maya.

Of these we may be sure that the Mexican and the Maya had produced a syllabic phonetic system of writing, and that the Peruvian had not yet reached this stage.

These North American and South American civilizations were independent of each other, but it is probably that that of the Nahuas centering in the valley of Anahuac, and that of the Mayas grouped around Yucatan, Guatemala, and thence southward to the isthmus, were, if not derived the one from the other, at least related.—And so we treat the Nahuatl civilization of Mexico and the Maya civilization of Yucatan and the more southern countries, together, as Central American.

The Spanish conquerors found in Mexico, a people who were in possession of the arts of spinning and weaving, of dyeing, and the use of alumina mordants certainly and probably of those of tin also, of making pottery and ornament in intaglio, relief and color, of moulding and modelling in clay, who had reached a fair degree of skill in representative art in the round, for caricatures and serious figurines of terra cotta, made at the time of the conquest, have come down to us.—They were good sculptors both of statuary and decorative designs, skilful and tasteful architects. They were students and collectors of natural history, and their botanic gardens and menageries were at that time, and for long afterwards, unrivalled. Their hydraulic engineering was superb, and their masonry, both in brick and stone, surpassed all the Spaniards had seen, save that of the Moors of Granada or Seville. The aqueduct from Chapultepec, the canals of Mexico Tenochtitlan, the skilfully built *teocallis* or temple mounds, the terraced gardens, the causeways to the city, the bridges, the paved roads, all testify to a skill in civil engineering truly admirable. They had invented paper, and used it for manuscript writing and painting.—They had invented feather mosaic and the art of drawing, at least, in color, and probably of body color painting.

Carmine, cocoa, chocolate, vanilla, jalap, the domestic turkey, indigo, log-wood, and other dye-stuffs, and maize, are among the things of world-wide use which come from Mexico. Their art of carving the hardest stones, such as emeralds, has never been approached.

Their metallurgy comprised lead, copper, tin and bronze, gold and silver; and it included the winning of the ore in the mine, and the metal from the ore; the formation of definite alloys; refining and parting of gold and silver; casting in moulds, the making of cored work; the inlaying and damascening of gold and silver; hammer work, including repousse and chasing; soldering and filagree. They had utilized the hard thorns of the aloe for pins and needles, a very sufficient material.

They had invented pulque and mescal, two drinks of intoxicating quality which have come down to us. They could dye cotton in fast colors, and could embroider. They had cultivated the art of gastronomy and gave dinner parties of several courses, with skilfully combined service, on tables decoratively arranged with flowers and ornamental vases and flagons of gold and silver, and with the aid of different colored, as well as different flavored fruits, preserves and pasties.

North America furnishes only one animal suitable for domestic labor, but the formidable looking, yet tractable bison had not been yoked. Tamed ocelots and dogs were, however, used to assist the hunter in the chase.

Justice was administered according to standing laws, by judges whose tenure was for life, and the interference of the King was not permitted. A royal council assisted in administration and legislation. Libraries of laws, history, poetry, natural science, existed, and music was cultivated, and the Mexicans were possessed of several musical instruments, and had at Tezcuco a college of music and liberal arts.—A system of education was provided and works treating of it were written. A standard currency was in use, consisting of cacao beans, definite sized ingots of block tin and copper, and of quills containing standard quantities of gold dust. As astronomers they had discovered the globular form of the earth, had invented a calendar, and knew the length of the solar year, and had a system of intercalation more accurate than that of contemporaneous Europe.

Their religion may be looked on in two ways. The cult of Quetzalcoatl and of the Tottec divinities, in its pure form was a mild, Pantheistic creed, apparently modified from a nature worship by a higher conception of the fatherhood of the Creator, and of his constant care for the race. His offerings were flowers and fruits.—Blood seldom stained his altars. The Aztec cult of Huitzilopochtli was a bloodier religion. But we know of it only at the times when this war god was invoked to exercise all of his divine power to give victory to his people, fighting for their lives and liberties, and we hear of its former condition only through those who had seen it at what must necessarily have been its bloodiest period. But it is significant that public attention had been drawn to Quetzalcoatl and his benefits to the Nahuatl nations, to his pretension to the supremacy of the Pantheon, just before the landing of the Spaniards, and there seems to have been a reaction or revival in behalf of this more ancient and milder worship. But the autos-da-fé of Spain in the time of the Conquest and later, were, fairly considered, more terrible human hecatombs than those of the Aztecs, and they were the chief flower of the Spanish Christianity in its own home. The Aztecs practised cannibalism as a religious rite, eating the body and blood of the victim who had been offered to appease the anger of their divinity. But how a Spanish believer in transubstantiation could find fault with this, it is hard to see. The Inquisition were burning men and women a hundred years later for not believing that consecration turned bread into flesh; and shall those who started with a living man and killed and eat him in honor of the God and for the religious benefit of themselves, be set below in civilization, those who believed that they were eating of similar flesh and blood? In laws, administration of justice, inventive faculty, educational system, knowledge and technique of the arts and sciences, in all those things that make a nation prosperous in peace, the Mexican was the superior of the Spaniard, and his religion influenced him to depravity or ferocity no more than the Spaniard's.

In the institutions of government and society, a similar advanced condition appears. They had a standing army, and a militia and a military organization with a

hierarchy of officers. They had a system of postal service by couriers. They had a formal system of marriage, and it was considered an important and permanent social event, a contract not to be lightly entered into, nor lightly broken. The law of Divorce was carefully administered.—Polygamy was lawful but rare. In this last article Spanish practice was hardly preferable to Mexican; unless, in so serious a relation, that which is temporary and capricious, is preferable to that which is permanent, sanctioned by law and the customs of society, and is under the regulation of the law.

In all that was humanizing, mild and beneficent, the Aztec was the equal of the Spaniard, at the time of the Conquest, in arts, in science, and may we not say also, in morals, he was his superior.

For the Boston Home Journal.

## SPADE AND PICK ARCHÆOLOGY.

BY THOMAS W. CLARKE.

### VI. PERU AND CENTRAL AMERICA.

In Peru were similar arts of peace to those of Mexico. The technique of its ornamental metallurgy was not so high.—That of its architecture, probably, and certainly that of its engineering, civil, hydraulic and military, was far higher. It had a more varied agriculture. The llama was a domestic animal used as a beast of burden and also for its wool. Among the products of almost universal use, due to Peruvian discovery and introduction, may be mentioned the potato, Cincona bark and its products, the most valuable of febrifuges, coca, another valuable drug, cassava and tapioca, alpaca and guano.

The Peruvian governmental system continued a hierarchy of supervision by decimal and half decimal groups from ten to ten thousand. It exacted universal and well applied industry from all. It comprised government distribution of the necessities of life, official registration of births and deaths, a census and an hereditary sub-division of labor, or system of caste, from which, apparently, there was no escape, save into or by way of the army. Peruvian weapons, military organization and tactics, were better than in Mexico.

Peruvian policy resembled the Roman,—and on the plateau of the Andes was feasible,—constant war on the frontiers to ensure peace at home. The luck of Pizarro took him into the interior, not by way of the frontier, and *through* the Army, but by way of the sea coast between the two frontier departments.

Peruvian religion was a sun worship, with the Inca as a visible representation of God, but among the highly educated it was apparently developing, as the sun worship in Persia did, into a sort of Zoroastrianism, similar to that of the Parsees.

Pizarro, by his good fortune, struck at the undefended heart of the empire at a time of dynastic dissension. By still greater good fortune, Peruvian institutions reposed all authority in the Inca nobility, and by securing or destroying these, he destroyed the nervous system of Peru, and when he destroyed the brain and nervous system of Peru, he also destroyed her arts, sciences, technique, learning, philosophy, traditions, and history, all that Peru had of vitalizing civilization, and all

of the result of her vitality, except her roads, her bridges, her aqueducts, her public buildings, and things buried beneath the surface of the earth. He found the common people villains, he made them slaves. He found them happy, well cared for, surrounded with comforts, industrious and not overworked. He rendered them miserable, neglected their interests in the care of his own, deprived them of comforts and pleasures, and sent them to die in squalid misery, under the lash, of cruel overwork in the mines.

Wherever the Spaniard set his foot, he stamped out all that was good and bright and best of New World life, and replaced it with the wall of a tortured, oppressed and suffering people, and with pillared pieces of eight in the Spanish treasury, of which it might almost be said that each one represented a broken heart or a broken life.

The world has seen some grievous destructions of libraries. The Romans gave the Carthaginian books and records to Numidians and half breeds. Bishop Truphilus burnt the Serapian library of Alexandria, and Caliph Omar burnt another. Cardinal Ximenes made a holocaust of the Arabic manuscripts of Granada. Scholars regret these, but they did not obliterate all history, all record of civilization, as the Archbishop of Mexico did, when he destroyed the library of Tezcuco, or him of Merida when he set the torch to the Maya manuscripts of Yucatan.

Some books of laws and land titles were preserved in Mexico, and were often consulted in lawsuits, and a professorship of interpretation was maintained for this purpose for many years. Collections of the manuscripts not destroyed were made from time to time, but of all these the fate has been unfortunate. Year by year they have become irretrievably less and more mutilated. Neglect, confiscation, robbery, the disasters of troubled times and unsettled government, have done their work in obliterating things meant by their makers for the information of the intelligent. One of the finest of manuscripts was found in Italy, a children's plaything without a history. Others have been rescued from stocks of waste paper among shopkeepers.

Besides this, the greatest civilization of the Aztec was in the valley of the Anahuac, and most of the other Nahua civilizations were there adjacent, or were between the Cordilleras and the Gulf coast. Here the Spaniards settled, here they practiced intentional destruction of the houses, sculptures, modelling, jewelry and all other things which they thought were associated with the National religion. Here were the plantations of the Spaniards.—Thence they gathered their Indian slaves. All the ruin to be wrought by time and tillage has here been wrought. Here also armies have marched and fought. Only fragmentary and dislocated relics of the past remain to-day in the Mexico of Cortes. There are mounds here and there, stately in their ruins, broken statues, potsherds often incised, painted, embossed, glazed and enamelled. The retaining walls, half demolished, of old terraced gardens and fields, can still be seen. Ruined buildings abound. Everything is fragmentary, perverted, scattered, and probably impossible to be so assembled as to give a fragmentary notion of the wealth and glory of the empire of Montezuma.

But West and South of the Cordilleras in Oaxaca, remains exist, and East of there in the Isthmus of Tehautepec, in Yucatan and Campeachy, in Tobasco and Chiapas, in Guatemala, Honduras and to some extent in Nicaragua and even further South, may be found monumental relics, wearing some resemblance to those described as Aztec, greater at the North, less as we go south, and as yet, only partly explored.

Dense forests untrodden save by the hunter, a lack of curiosity among the inhabitants, the difficulty of exploration, have concealed from the eye of all save a few adventurous travellers these marvellous remains. Stevens has made us acquainted with some parts of Central America and Yucatan; Squier to some degree, with Nicaragua and Honduras; Waldeck, Charnay and others have wrought in the

same field. But nothing complete has yet been done. Much has been done twice and three times over, and much not done at all. Incomplete knowledge has as usual been supplemented by crude and vigorous imaginings of book-makers theories.

These are the nations and cities of the lost Atlantis, says one. Tyre and the Phoenicians were the progenitors of this great people, wrote the late Count Joannes. The Toltecs originated it all, say others. Some think civilization flowed east from Anahuac, and others argue that civilization flowed west to Anahuac, while others place the cradle of the arts in Oaxaca, and allow for an east and west migration. There are those who insist upon two distinct Civilizations, unrelated and ignorant of each other, while others admit common or cognate origin, but independent development. And the lost tribes of Israel are insisted on as found by still another lot.

The materials for solving the mystery are the works of these ancient people. If we had their histories, their languages, their books, their uninjured works of art and use, we might do this work more easily. We must do whatever work is done with what remains after nearly four centuries of exposure, ruin, and decay, in a tropical climate, among a destructive people, who if not formerly enslaved, only escaped slavery by retiring from the agricultural regions into fastnesses of mountain and forest, and who there abandoning settled life and the arts of peace, and reverting to the savagery of constant war, retained their liberty at the expense of their civilization.

It is the mission of regenerate Mexico to re-civilize these peoples. Proofs of their capacity and receptivity exist. Scholarly investigation may, and probably will, enable us to understand fully, the nature and details of the inventive and intellectual work formerly accomplished, and the routes over which it moved. With this ascertained, the results and methods of modern civilization can be, and must be approached from the direction of ancestral methods. Towards these there must be an hereditary bias, which will ease and simplify the work of the educator.

For many years, independent efforts have been made for systematic and thorough investigation of the Central American region, from Oajaca and the isthmus of Tehautepec to Nicaragua, by Mr. P. Lorillard of New York, and by M. Desire Charnay of France. These have at last

resulted in an expedition under charge of M. Charnay, half the expenses of which are paid by the French Republic, and half by Mr. Lorillard, under a treaty between them. The Mexican government gives its co-operation and protection to the enterprise. Considerable excavations have already been made in Oajaca. Photographs of all important places and things are to be made, paper casts of statuary, bas reliefs, and hieroglyphic sculpture are to be obtained, the best efforts will be made to discover if haply any are still hidden away, any manuscripts of the *antiguos*.

It is certain that writings in native characters were habitually made by the educated natives of the Conquest, of Latin prayers and religious formulas, and of Spanish documents. It is also certain that Bishop Landa had the forethought to copy out some part, or the whole, of a syllabary, and explain its method and use. Can any more of these things be recovered?

The intent now is to do thoroughly, in a scientific manner, whatever is done by this expedition, to leave little room for gleaning after them, but at the same time not to destroy or carry away the sculptures, bas reliefs, or the memorial tablets.

It is certain that in Yucatan, several towns of the native civilized race were occupied in the time of the Spaniards.—Merida, the capital, was founded on the site of a Maya town, with many buildings in it of stone, and some of the aboriginal architecture still exists there. Uxmal was undoubtedly occupied after the Conquest and Peten in Guatemala, the capital stronghold of the Itzas, was destroyed by Spanish troops less than two hundred years ago. Stevens found town records in the Maya language, written in European characters, and many such are said to exist in the department of State in Yucatan, from which Don Pio Perez, a scholar of Yucatan, reconstructed, about forty years ago, the calendar of the Mayas, and some part of their historical chronology. The Maya language is still spoken, and it has been written and printed in Latin characters, as well as in its own syllabary.

From the habit of the Spaniards to do formal business by act of Notary, and deposit the notarial act in the archives of town, province, state or bishopric, it is probable that much can be recovered in these archives which will throw light on these antiquities. Something of this has already been done.

The systematic search for the old cities, and the relics of the past, by a well organized exploring expedition coming to learn on the spot the magnificence of this old civilization, cannot fail to stimulate, among the proprietors of haciendas, among the village priests, among the alcaldes, among the public officials and the more cultivated private citizens in the track of the expedition, a spirit of research, which it is hoped may bring to light and save what is left of the records of those early times. The photographic process can cheaply reproduce these old records for distribution among scholars, for study and translation.

The destruction which has come upon the works of Central America is that of time and of the tropical rains and vegetation, and not that of the hand of man, save in few instances. It is even believed by some, that in the wilder parts of the Mexican territory, remote from routes of trade, there may yet exist, more or less



flourishing, the tribes who formerly inhabited Chichen, Itza, Uxmal, Copan, Palenque and other noted sites. And if so, there may yet linger among them traditions enough to recover the readings of the sculptured hieroglyphics. A boy of ten, at the destruction of Peten, might learn the story of his race and the key to their literature, in the next ten years, and if he lived till seventy, have ten years to teach it all to one who was fifteen years old in 1757. Another pair of such lapping generations would carry us to the times of men now alive. If we can find the descendants of the caciques or of the priests, we ought to learn something of their culture. The same indomitable spirit of freedom which resisted the Spanish invader, still exists in Guatemala, as the uprising of the people of that state to expel Walker from Nicaragua, testified. Men with the filibuster expedition have told of the pagan rites and strange customs of these troops, and may it not well be that the remarks related to the old Maya customs still preserved? These should be carefully and systematically searched for.

It is claimed by Dr. Le Plongeon that he has discovered the key of the Maya hieroglyphics, and that he has read some of the inscriptions. This, however, is not conceded by other scholars. Brasseur de Bourbourg thought the same thing, but finally confessed his failure, and took a new departure in the last part of his life.

This, then, is the work of the American—to rescue the relics, and reconstruct the story of civilization in North America.—The elaborate work of Hubert H. Bancroft has faithfully collected the evidences of it, but we now want to gather up material, as the dredge and its tangles sweep the bottom of the sea.

Again, in Peru, the same research ought to be attempted. The Peruvians had no system of writing, but the same notarial system was introduced there by the Spaniard, and among the archives of the towns, provinces, convents, bishoprics and of the State there doubtless exist many documents which will throw light on early history. The repartimientos or allotments of land or Indians were all either notarial acts, or acts of state. The convent fathers were letter writers or annalists, very many of them. They could not fail to have had among them some possessed of curiosity enough to inquire, and industry enough to write something of that marvellous country. What have become of these things in three hundred years?

A ship canal is now projected through Nicaragua, a ship railroad across Tehuantepec, and doubtless surveying and prospecting, and let us hope, constructive expeditions, will be made for these purposes. Shall there not be joined to these commercial enterprizes, some men who have the avocation of archaeology, as well as

the vocation of civil engineering, and shall not the cuttings and excavations for these great commercial works be inspected as they go on, to get from them such facts of the historical past, as they may disclose?

One of the most noticeable features of indigenous American civilization, was the prominence in it, of the mercantile and industrial spirit. Commerce was the pioneer of conquest. Buying and selling was honorable in Mexico as it was in

Carthage. Nobility of birth did not require a man to be an idler or a mere soldier, but every nobleman was an artist, a high class artisan, or a skilled agriculturist, and the winning of a living by personal exertions was respected, and the ability to earn it, universal.

In this particular, it resembled the early Asiatic civilizations, Akkadian, Assyrian, Hittite, Phœnician, the Jewish, Carthaginian. In this respect also it may be compared with the Greek at Athens and Corinth. The Persian, Spartan, Roman and mediæval notions of honor differed from this, and placed the profession of arms above that of trade or handicraft. Modern European society is just reaching towards a preference for the arts of peace over those of war.

England, America, France, honor the ability to earn one's living, and respect honest and remunerative industry. In the north German empire and in Austro-Hungary, great advances in this direction have lately been made.

It is a badge of an advanced civilization to cultivate the arts of peace and to honor the chief advances of them. Shall not we of America, albeit only adopted children, rescue from oblivion and place in fullest sunlight, the proofs that this soil was adapted to produce, unassisted, a civilization equal to that of the old world, and to show by our own conduct and practice, that the influence of the soil upon the Aryan, in developing the arts of peace, is like that upon the Toltec and the Maya, and has placed peaceful industry in more honor than warlike prowess, even with our fighting race?

## NIX'S MATE.

### Traditions Associated with the Fast Disappearing Island.

### New Version of How it Received Its Name.

### Light Thrown Thereon by an Old Letter.

Tradition oftentimes makes history, and the tradition of Monument Island, or as it is more popularly known, Nix's Mate, is received as a purely historical fact by 99 out of every thousand who gaze upon the fast disappearing island, where Capt. John Gallop, who, on the 4th of September, 1633, piloted into the harbor of Boston the ship Griffin, containing among its passengers Rev. John Cotton and Elder Thomas Leverett, had 12 acres of land granted "to enjoy to him and his heirs forever, if the island bee so much," and where the said Capt. Gallop was in the habit of pasturing his sheep.

Dr. Shurtleff, in his excellent "Topographical and Historical Description of Boston," tells us that Nix's Mate is about five and a half miles southeastward from Long wharf, and would be one of the great dangers of the harbor were it not for the monument that stands upon its ruins. This consists of a solid piece of stone masonry, 40 feet square and 12 feet high, which can be ascended on the south side by steps, all the stones being securely bolted together by copper fastenings; and upon this is a wooden octagonal pyramid 20 feet in height, painted black. This monument was, in all probability, erected in the early part of the present century, but the exact date thereof is not known. The tradition of the island, which has, however, no facts to sustain it, is that the mate of a certain Capt. Nix was executed upon it for the crime of killing his master, and, up to the time of his death the mate persisted in his innocence, and told the hangman that, in establishment of his innocence, the island would in time be washed away, a mate, by the way, that would happen to almost all the islands of our harbor, if sea walls had not been built for their preservation. Now, the island bore the name of Nix as far back as the year 1636, but no man, be his name Nix or whatever else, was executed for murder or piracy in the province so early as this, though in later times the island was used for the burial of executed pirates and mutineers. Thus, in the Boston News Letter of the 14th of July, 1726, we read: "On Tuesday the 12th inst. about 3 P. M., were executed here for Piracy, Murder, etc., three of the condemned prisoners mentioned in our last, viz., William Fly, Capt. Samuel Cole, quartermaster, and Henry Granville. The other, viz., George Condrick, was relieved at the place of execution for a Twelve-month and a Day, and is to be recommended to his Majesty's Grace and Favor. Fly behaved himself very unbecomingly even unto the last; however, advised masters of vessels not to be Severe and Barbarous to their Men, which might be a reason why so many turned Pirates; the other seemed Penitent, and that others might be warned by him. Their Bodies were carried in a Boat to a small Island call'd Nicks's Mate about 2 Leagues from the Town, where the abovesaid Fly was hung up in Irons as a Spectacle for the Warning of others, especially Seafaring Men; the other Two were buried there." It may be said here that there is no knowing how Nix's Mate passed out of the possession of the family of Capt. Gallop, who died early in 1640-50, other than by washing away, as no conveyance of it by him or his heirs is to be found on record.

A new version of how the Place Received its Name has recently been brought to the light, by the discovery of the fragment of an old letter, which was, without a doubt, written somewhere between the years 1700-10, and which is certainly more entitled to credence than the blood-curdling story of the murder of Capt. Nix by his mate. Here is the fragment: "You will minde, Niclass, that when wee

war in Lisbon laste yere, you did telle me a marvellous tale about an Island nere Boston, wech had shone the Providence of God in revealing the mistakes and crueltys of man. How a Dutch captain Nix was kyiled at sea, and how hys admirall had taken hys Mate and Try'd hym and Hanged hym on this Island for the Kylling—and how the Mate did saie, I shal prave to ye all that I did not Kyll the captain, for this Island shal wash away to show my innocence. And you said the Island is now washing away, to show the Mate was innocent.

"You will minde I did tell you I had herd a very different stories about that land, and the way yt got hys name, and that I wolde get it write from my grandse, and write it for you. And see, dere Niclass, I have writ it here.

"When my great grandse, Capitaine William Perse came to Virginia in 1607, in the ship Sea Venture, there was on board a little Dutch boy, a kind of pouter monkey, and my great grandse liked hym much. This boy, after manie years, came and settled in James Cittie in Virginia, where he dy'd verry olde, not manie yeres since. Thys Dirke Stone, for that was hez name, had ben a say for man all hys life. He had sayled from Englande to Virginia, and to the Barbadoes and to New Englande manie times in the shippes Bona Nova, Hopewell, Truelove, Frances Bonaventure, Hope, Swan and in the Jewell. He had served the Hogen Mogens under that famous saylor Andrew Block in a little ship called the Hentroot (Unrest), and while with Capitaine Block he came to your Province, and at the place the Dutch called Vosnaven which olde Dirke sayd, meant Fox Harbor. So it happened that when the Jewell sayled from London with the flote, which bro't the worsted Master Wynthrop to Massachusetts, olde Dirke was the Pilot of the Jewell. The people who came in these shippes did not know where they were to dwelle, and so first the flote went to the place called Nahumtick, near to Vosnaven. And by and by they were minded to settle in Shagmut, which you call Boston, and which is in the bay called by the Dutch Vosnaven. The shippes went into the bay, and laid nere a place called Nantiscut, and cast anker behind an Island. Then the sun went down and the winde rose and the surf roared on the beaches.

"Dirke Stone was on the deck of the Jewell, and Master Codrington, one of the passengers ask'd Dirke, as Dirke did thinke, about the noise in Dutch. For Master Codrington had in the voyage ben learning from Dirke manie words of the Lubbockers and Flushingers speech, which Dirke knew verry well. And so when Master Codrington sayde, What do you Dutch call that, Dirke said

Nixie Shumatt.

I do not know how to spel it, but it meaneth the Wail of the Water Spirits or the Water Spirit is chiding. But Master Codrington thought it was the name of the land, and set it down on a map he had Nix his Mate Island.

"And after that, in order to account for the name, Dirke did saie that your Massachusetts people had made up a fairy Tale about a Capitaine Nix and hys mate, and a Kylling and a Hanging and a Sheriff and a necke-speech which was a prophcey, and how the prophcey was fulfilled, and it was all a Tale of a Tub, for there was no Capitaine Nix, and he had no Mate, and the Mate did not kyll the Capitaine, and he was not Hanged, and did not make any speche or prophcey.

"And manie a time did I heare my Grandseir Edward Burbeck say This was a Name which had Made a Story, and not a Maid which had named a Story, and wolde laugh, for he was a right merrie soule.

"This shal go by the Smack which hath brout out Winter's stockish from youre towne.

"And may God have you in his keeping dear Niclass. From your loving friend,

RICH. BURBECK.

To Niclass Merrit, at Marble Harbor in the province of Massachusetts."

Such is the fragment referred to, and it is more than probable it gives the true history of what Bostonians have for so long called Nix's Mate. That the fragment has a certain historical value is beyond all question. Many of the facts made mention of have been verified, and it is beyond a peradventure that there were such persons as William Pierce and Edward and Richard Burbeck in Virginia at the time stated; and ships, snows, pinnaces of what not of the names given, did trade on the American coast during the period. There was, further, a Nicholas Merrit or Merrit at Marblehead early in the past century. In the wars of "the good Queen Anne's" time, when, according to the old song, "Marlborough's name first reared his fame," Portugal was open to the English, while all France was closed to them. It has been impossible to verify the fact that Codrington came over in the Jewell, or the existence of Dirke Stone, who might, after all, have been

"A fellow of no mark, nor likelihood."

But if Dirke did exist, he could have sailed in all the vessels which have been named. On the other hand, there did sail from the good old town of Marblehead, once upon a time, a certain Capt. Nix. He left no family, and consequently, and to make a bad pun, his family is now night. Nevertheless, the fragment here quoted is valuable in so far as our local history is concerned, and will prove of interest to the antiquarian.

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