

The next morning was beautiful and clear, and after an early breakfast, we were again in motion. The scenery was truly sublime, and ascending one mountain after another, valley after valley appeared in view; hills which at first seemed mountains, seemed gradually sinking before our feet, and the range of vision constantly extending, we could not help making frequent halts to admire scenes which cannot be surpassed, and which at every successive turn broke upon our sight with redoubled magnificence and grandeur. We were now in the region of pines and northern plants; the old familiar oak, the birch, and trees unknown to the lower countries, were around us; the heavy undergrowth had disappeared, and we could almost imagine ourselves in our 'dear native land.' Cultivation does not extend up as high as we expected to see it; we passed the upper limit about 8,000 feet elevation. About 12 o'clock, and at an elevation of rather more than 10,000 feet, the guides reported that the mules could go no farther, and not knowing anything of our route beyond, we were compelled to encamp for the night. A brother officer and myself, however, being on horse-back and feeling comparatively fresh, determined to go forward and explore. We concluded that it would not do to stop where we were, but the mules with light loads could go still higher. Accordingly, next morning we again started, four or five of us going in advance to select a good place for encampment, and also to explore the best route for the final ascent. We selected our camp on the verge of vegetation, and went forward by routes far above the line of eternal snow. Under shelter of a rock, and far above that line, some of the party found a rude cross, decorated with paper ornaments and surrounded by tallow candles. Its history we were unable to learn, but it gave rise to many reflections. Who placed it there? when was it erected? and what event did it record? were questions asked, but not answered. During the trip several parties of Indians passed us, who make a regular business of bringing down snow on their backs to the citizens of Orizaba. The cross was probably erected by some of them. On our return, we found all our baggage brought up to the new encampment, notwithstanding it had been pronounced impossible, and on comparing notes, selected the route which seemed most practicable, and prepared for the ascent in the morning. The night was clear and cold, the thermometer falling below the freezing point; a heavy frost and frozen water reminding us forcibly of 'auld lang syne.' While sitting round our camp-fires this evening, it was discovered that there were two flags in the party; the sailors not knowing that one had been brought along, had carried materials

and manufactured one in the camp. It was proposed to get up a rivalry as to which flag should be planted first, but we came to the conclusion at last, that should the summit be reached, the honor should be equally shared. As night came on, we enjoyed a most magnificent sight; the clouds gathered round the foot of the mountain so as to entirely obstruct our view, while the distant lightning flash, darting from cloud to cloud, was visible far beneath our feet; the sky overhead being bright and beautiful. We were encamped at an elevation, according to the barometer, of 12,000 feet, about double that of the highest peak of the White Mountains—while the summit still raised its snow-white head above us to a height nearly equal to that of Mount Washington above the sea, and seemed to frown upon the pigmies who dared to attempt to scale its giddy, and, as yet, unascended height. At daylight on the morning of the 10th of May, we were again in motion; many of the party had already given out, so that there were but twenty-four persons to start on the final journey. In a few minutes we were at the foot of the snow, and taking the route over which there seemed to be the least of it, passed for half or three-fourths of a mile over loose volcanic sand. On measuring the slope of this, I found it to be 33°. It was by far the most difficult portion of our ascent;—sinking up to our knees in sand, we seemed to go back about as far as we stepped forward, while the rarefied condition of the atmosphere made exertion painful in the extreme; indeed, during the whole of this day's ascent, it was impossible to advance fifty paces without stopping to take breath. When not exerting ourselves, we could breathe with comparative ease; but the moment we moved, we were reminded of our great elevation. I can only compare the sensation to that felt by a person who, after running at the top of his speed, is ready to sink down from sheer exhaustion.

“At length, however, we reached firm rock, and it was quite a relief to be able once more to climb with our hands and feet. But we were yet far from the point at which we were aiming, and before reaching it were to be many times sorely disappointed. A projecting crag, far above, would be hailed as the summit; step after step the weary body was dragged along, until at length it was reached; but, once there, it was found to be but the base of another still higher;—this, too, being overcome, another was discovered above. Thus, time after time, were our expectations crushed, till hope seemed almost to have forsaken us, and one after another dropped behind in despair. But—'advance'—was our motto, and onward we pushed, until at length the efforts of some of the party were

crowned with success, and they dropped exhausted on the brink of the crater.

"The crater is nearly circular and variously estimated by different members of our troop at from 400 to 650 yards in diameter. We all estimated the depth at 300 feet. The sides are nearly vertical, and show strong and unmistakable signs of fire, looking like the mouth of a gigantic furnace.

"At the foot of this perpendicular wall was quite a bank of sand or *débris*, which had fallen from the inner surface of the rock, indicating the great length of time since the volcano had been extinct. Indeed its fires were perfectly dead, for the bottom of the crater was covered with snow. Humboldt says its most violent eruptions were in 1545 and 1566,—nor have I seen a record of an eruption since.

"As I desired to test Humboldt's altitude, I had taken the precaution to be as well prepared as circumstances would admit, and accordingly had carried with me the best barometer I could get, which, from previous calculations, I deemed capable of indicating a height of from 300 to 400 feet higher than that given by him. I had, also, provided myself with a spirit-lamp and thermometer, for the purpose of taking the temperature of boiling water; but, on the march, the bottle containing the alcohol was broken and the spirit entirely lost. I therefore determined to test the combustible qualities of whiskey. One of my first objects after reaching the summit was to make observations; but, on preparing the barometer, the mercury sank at once *below* the graduation.

"I estimated the distance between the lowest line of graduation and the top of the mercury at two-tenths of an inch, which gives,—with corresponding observations in the city of Orizaba at the same hour,—an elevation of 17,907 feet, and makes it the highest point on the North American Continent. I do not think I could have been far wrong in my estimate, as the means of comparison were before me; but, even supposing I was mistaken one-twentieth of an inch, we still have an elevation of 17,819 feet, 98 feet higher than Popocatepetl, which is usually considered the highest point,—5,400 metres, or 17,721 feet, as given by Humboldt.<sup>1</sup> The temperature was just below freezing point. My attempt to burn whiskey failed. Since my return to the United States, I have observed that Humboldt states that Mr. Ferrar measured Orizaba, eight years before his arrival in Mexico, and gave the mountain an elevation of 5,450 metres or 17,885 feet. Humboldt's measurement, made from a

<sup>1</sup>It will be seen hereafter that expeditions subsequent to Humboldt's calculation give Popocatepetl a height of 17,884 feet.

plain near Jalapa, is 155 metres less, or 17,377 feet in all. It will be seen that my determination agrees very nearly with that of Mr. Ferrar.

"We remained on the summit about an hour,—planted our national banner and saluted it with three hearty cheers. The day was clear, but the atmosphere thick and smoky, so that we did not enjoy the views we had hoped for; but as we believed ourselves to have been the first who ever looked into the crater, we were amply repaid for our trouble.

"The descent was by no means so difficult as the ascent; a slide on the snow or sand carried us hundreds of feet down a space which had required many weary steps to ascend. About dark we arrived at our encampment, highly delighted with our trip, though much exhausted. All who made the final attempt were more or less affected either with violent headaches, nausea, and vomiting, or bleeding at the nose. The veils which we provided for our journey did good service, but the face, and particularly the lips, of all who reached the summit, became so extremely swollen and cracked as to confine them to their rooms for several days.

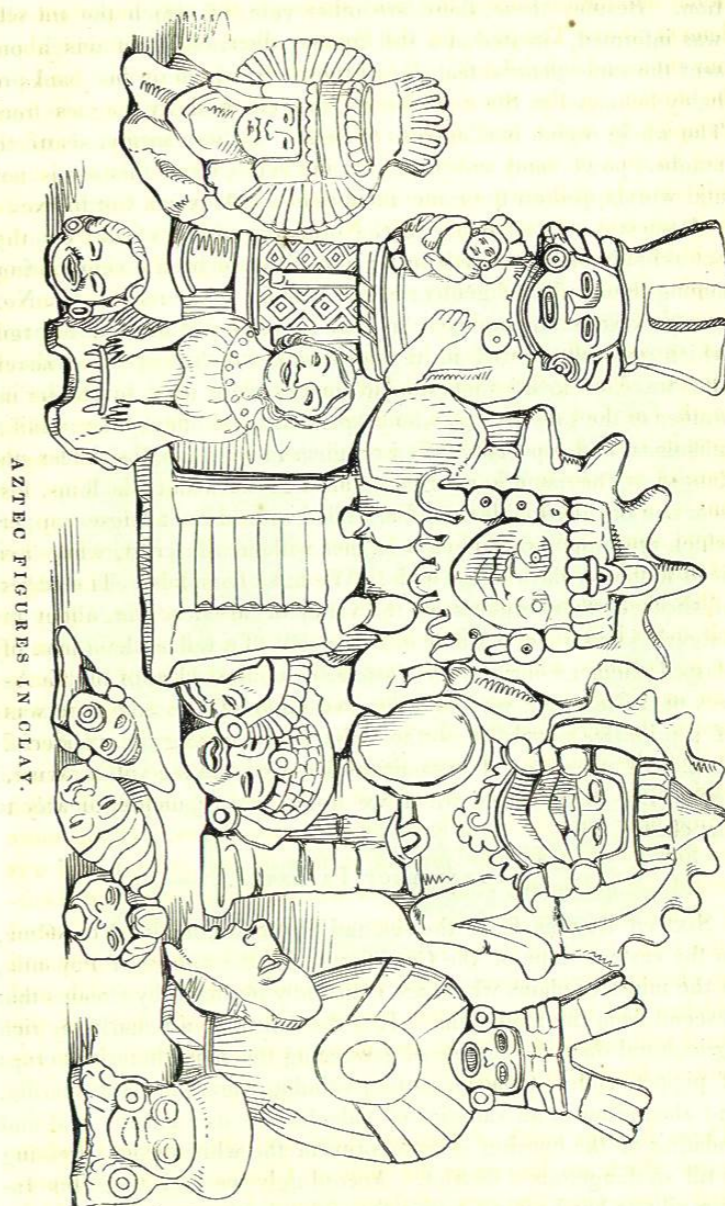
"The difficulty of the undertaking had been greatly magnified;—none of our preparations, excepting veils, were necessary. The sand is the most serious obstacle to be overcome, and by taking a more circuitous route from our last encampment, this might have been avoided. All that is required is patience, perseverance and a physical constitution capable of sustaining fatigue."

#### ANCIENT REMAINS IN THE STATE OF VERA CRUZ.

During the sojourn of Mr. Norman in Mexico, in 1844, as described in his "Rambles by Land and Water," he made an excursion to visit the ancient town of Panuco, where he was received with the greatest kindness and hospitality by the white and half-breed inhabitants. His route lay along the banks of the river, and across the prairies: the common road being only a bridle path through the forest which is never travelled but with the greatest caution and watchfulness. Here, as in the State of Tamaulipas, he visited the Indian huts that lay in his way; but it was quite impossible to convince the credulous children of the wilderness that the acquisition of gold was not the real object of his visit;—and this circumstance may account for the fact that he obtained from them so little information respecting the neighborhood.

Panuco, an old town of the Huestecos, which is subject to occasional inundation during the rainy season, is the only important settlement above Tampico, on the Panuco river, and contains about four thousand inhabitants. It is beautifully seated on the banks of the stream, in the State of Vera Cruz, about thirty leagues from Tampico by water and fifteen by land. In its vicinity, scattered over an area of many miles, are ancient ruins, whose history is not only entirely unknown to the inhabitants, but seems not to excite their interest or curiosity. Mr. Norman could not discover the slightest trace of a tradition on the subject amongst the neighboring people, though he diligently sought it from every reliable source. Several days were employed by him in explorations, and his toil was occasionally rewarded by the discovery of strange and novel objects. Among these was a handsome block or slab, seven feet in length, one foot in thickness, and two and a half in average width. Upon its surface was beautifully wrought, in bold relief, the full length figure of a man in a loose robe, with a girdle about his loins, his arms crossed on his breast, his head encased in a close cap or casque somewhat resembling a helmet without the crest, while his feet and ankles were bound with the thongs of sandals. The edges of this block were ornamented with a plain raised border, about an inch and a half square. The figure is that of a tall athletic man of fine proportions, whose features are of the noblest class of the European or Caucasian race, and the execution of the sculpture was equal to the very best that the traveller found among the wonderful relics of the country. It was found lying on the side of a ravine, resting upon the dilapidated walls of an ancient sepulchre, of which nothing now remains but a loose pile of hewn stones. It was more than four feet beneath the present surface of the ground, and was brought to light in the course of excavating which revealed a corner of the slab, and the loose adjacent stones that had been bared by the rush of waters in the rainy season, while breaking a new and deep channel to the river. The earth that covered the slab and sepulchre had not been heaped by the hand of man; but was the natural accumulation of time, and many years must have been requisite to bury it so deeply.

Three leagues south of Panuco, there are other ancient Indian remains which are known as the ruins of Chacuaco, and are represented as covering an area of three square leagues, all of which were comprised within the bounds of a large city; we should mention also the ruins of San Nicolas, five leagues south-west; and



those of La Trinidad, about six leagues in nearly the same direction. Besides these, there are other ruins of which the traveller was informed, situated at a still greater distance, all of which present the same general features as those already described, and probably belonged to the same period, or were built by the same race. The whole region is alleged to be full of these memorials of the number, power and wealth of the ill-fated nations that once dwelt and worshipped on the eastern slopes of the Mexican Cordilleras.

Domestic utensils made of the ordinary pottery of the country, but skilfully and even artistically formed, have been exhumed from among these ruins of ancient cities; and in the course of Mr. Norman's explorations he unearthed two singular and grotesque images which probably figured in the idolatrous worship of the Indians. Our traveller found that similar images were used by the Indian women of the present day, who suspended them about their necks as talismans, and especially relied on them in seasons of sickness and danger. The images referred to are hollow, with a small aperture near one of the shoulders, and are filled with balls as large as a pea, which are supposed to have been made of the ashes of victims sacrificed in former days to the gods. We have ourselves seen numbers of these earthen figures in the valley of Mexico, where they are vulgarly known as "Mexican's Idols." Travellers have usually classed them among the *Dii Penates* or household gods of the Aztecs or Toltecs, but we have regarded them either as the ornaments of a primitive people or as the dolls and playthings of their children. In our plates of antiquities discovered in the valley, several figures are to be found which we think belong unquestionably to this class.

#### PYRAMID OF PAPANTLA.

Sixteen leagues from the sea and fifty-two north of Vera Cruz, on the eastern slope of the Cordilleras, lies the village of Papantla, in the midst of plains which are constantly fertilized by streams that descend from the mountains. It is the centre of a remarkably rich agricultural district, capable of producing the most luxuriant crops of pepper, coffee, tobacco, cotton, vainilla, sugar and sarsaparilla, and abounding in all varieties of valuable woods; but the heat and maladies of the burning climate prevent the whites from venturing to till so dangerous a district. Accordingly we find that this Indian village has hardly a single Spanish inhabitant or visiter except the priest and the traders who come from the coast to traffic their foreign goods for the products of the aborigines. Two leagues



PYRAMID OF PAPANTLA.

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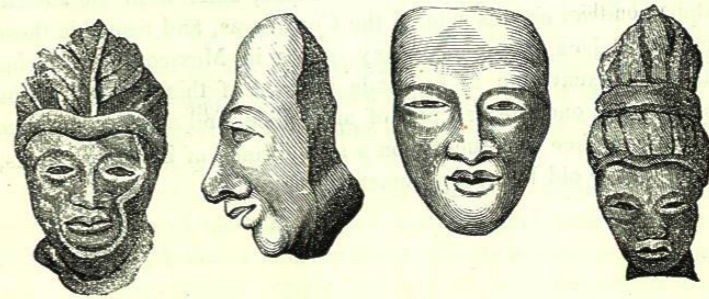
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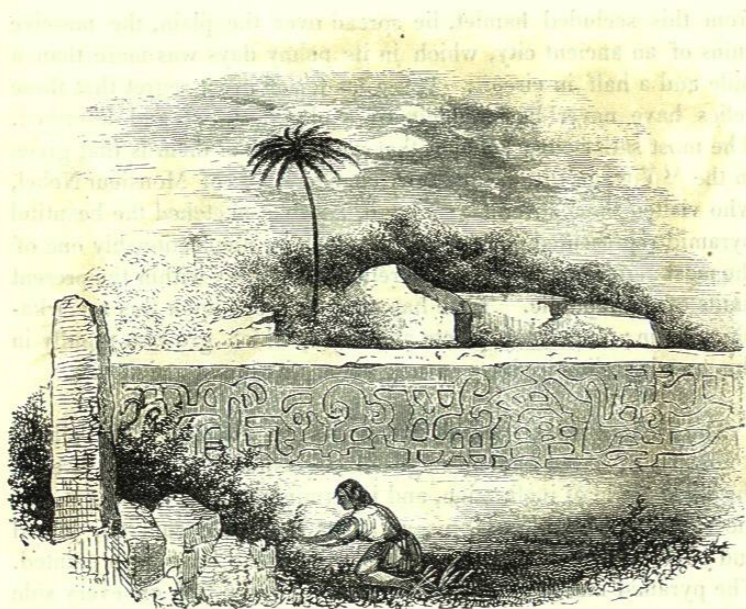
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from this secluded hamlet, lie spread over the plain, the massive ruins of an ancient city, which in its palmy days was more than a mile and a half in circuit. It is a matter of great regret that these relics have never been sufficiently explored, drawn and described. The most satisfactory account that we possess of them is that given in the "Voyage Pittoresque et Archeologique" of Monsieur Nebel, who visited them several years ago, and has sketched the beautiful pyramid represented in the plate, which is unquestionably one of the most perfect and symmetrical relics of antiquity within the present limits of the republic. Time has done its work upon this remarkable remain; and trees, plants and vines, which grow so rapidly in this teeming climate, have sprung among its joints and stories.

The Indians of the neighborhood call this pyramid "El Tajin;" it consists of seven bodies, stages or stories, each of which rises at the same angle of inclination, and is terminated by a frieze and cornice. It is constructed of sand-stone beautifully squared, joined and covered with hard stucco, which appears to have been painted. The pyramid measures one hundred and twenty feet on every side at its base, and is ascended by a stair composed of fifty seven steps, each measuring one foot in height, and terminating at the top of the sixth story. This stairway is divided in three places, by square recesses two feet in depth, resembling those which perforate the friezes on each of the stories. The stair ends at the top of the sixth story, and the seventh, which seems to be in ruins, is hollow, and was probably the shrine wherein sacrifices were offered before the image of the god to whom the pyramid was dedicated. Monsieur Nebel does not state the height of this edifice; but as he gives the elevation of each of the fifty-seven steps, we may calculate that the summit of the shrine is at least sixty-six feet above the base.

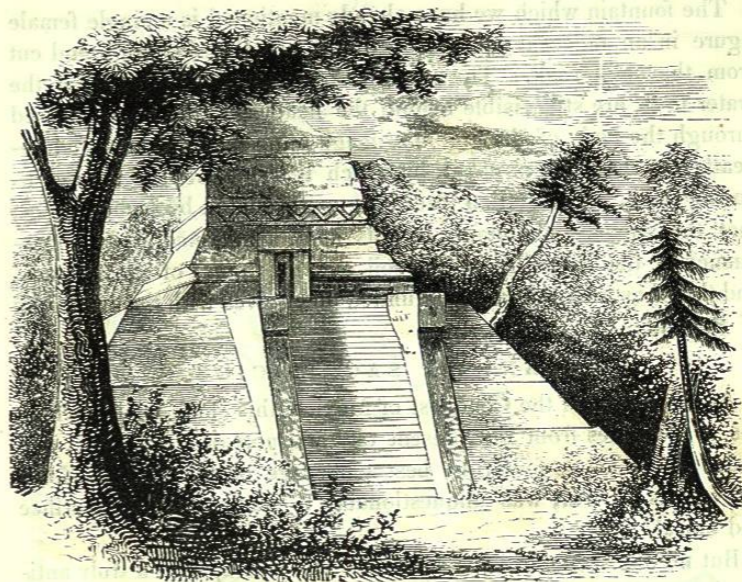


ANCIENT HEADS MADE OF CLAY.



MAPILCA.

A few leagues from Papantla, near an Indian rancho called Mapilca, Mr. Nebel found pyramids, sculptured stones, and the ruins of an extensive city, which it was impossible for him to examine in consequence of the thick vegetation with which they are covered in the dim recesses of the forest. The artist was alone in the wilderness, and unaided except by a few indolent Indians who were indisposed to further his researches. The stone, which is presented in the annexed drawing, is twenty-one feet long, and of a close grained granite; the figures, carved on its surface, differ from the ancient sculptures found on this side of the Cordilleras, and resemble those found in Oajaca, more than any others in Mexico. Mr. Nebel caused an excavation to be made in front of this relic, which he supposed had once formed part of an edifice, and at some distance below the surface he struck upon a road formed of irregular blocks, not unlike the old Roman pavements.



TUSAPAN.

About fifteen leagues west from Papantla, in a small plain at the feet of the eastern Cordillera of Mexico, are the remains of Tusapan, which is supposed to have been a city of the Totonacs. The vestiges of this little Indian city are almost obliterated, and the only very significant relics are the pyramidal edifice exhibited in the annexed plate, and a singular fountain, a drawing of which is given in the work of M. Nebel.

The pyramid, built of stones of unequal size, extends thirty feet on each of its sides at the base, and the summit of its single story is reached by a flight of stairs. Upon the platform of this base a square tower is erected, which is entered by a door whose posts and lintel, as well as the friezes of the edifice, have been elaborately carved. In front of the door, within the tower, stands the pedestal of the ancient divinity, but the idol itself has been destroyed. The interior of this apartment is twelve feet square, and its ceiling, like the external roof, terminates in a point.

Around the pyramid are scattered masses of stones, sculptured into the images of men and various animals; and from the inferior manner in which the carving on these objects is executed, we may judge that this religious temple was not the most celebrated architectural or artistic work of the ancient inhabitants.