

ATLANTIS

THE ANTEDILUVIAN WORLD.

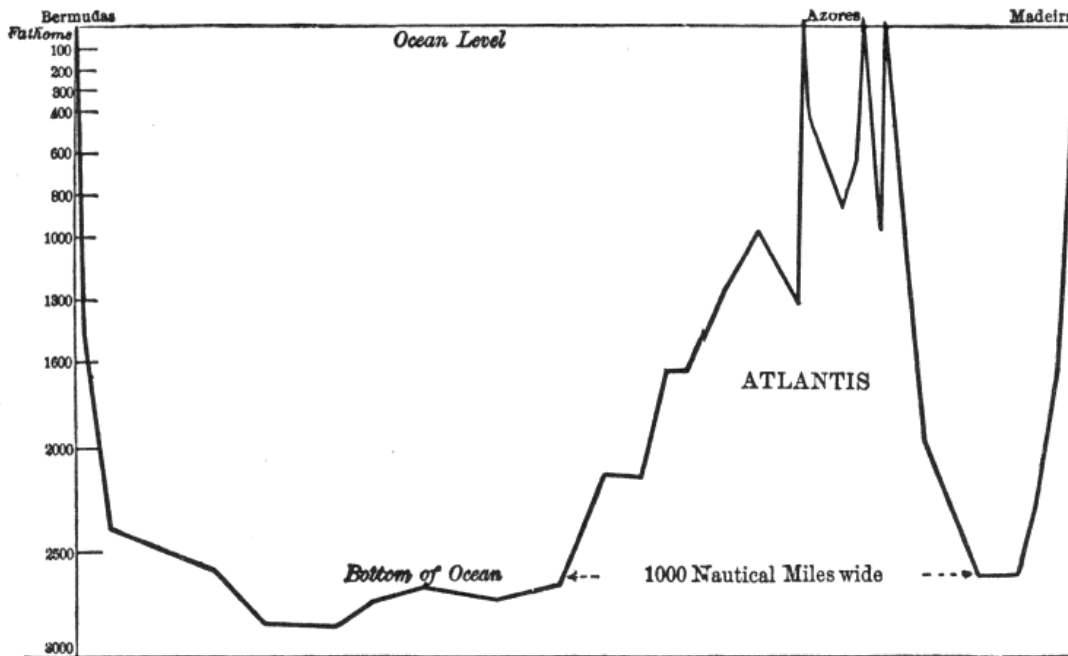
BY

IGNATIUS DONNELLY.

The world has made such comet-like advance
Lately on science, we may almost hope,
Before we die of sheer decay, to learn
Something about our infancy; when lived
That great, original, broad-eyed, sunken race,
Whose knowledge, like the sea-sustaining rocks,
Hath formed the base of this world's fluctuous lore

FESTUS.

{scanned at sacred-texts, November 2000. Notes by transcriber are enclosed in wavy brackets. Transcribed Greek is shown in monospaced font. The system of Greek transcription is described at the sacred-texts website.}



THE PROFILE OF ATLANTIS,

As revealed by the deep-sea soundings of H. M. ship "Challenger," and the U. S. ship "Dolphin."

Frontpiece: The Profile of Atlantis

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ATLANTIS:

THE ANTEDILUVIAN WORLD.

PART I. THE HISTORY OF ATLANTIS.

CHAPTER I.

THE PURPOSE OF THE BOOK.

THIS book is an attempt to demonstrate several distinct and novel propositions. These are:

1. That there once existed in the Atlantic Ocean, opposite the mouth of the Mediterranean Sea, a large island, which was the remnant of an Atlantic continent, and known to the ancient world as Atlantis.
2. That the description of this island given by Plato is not, as has been long supposed, fable, but veritable history.
3. That Atlantis was the region where man first rose from a state of barbarism to civilization.
4. That it became, in the course of ages, a populous and mighty nation, from whose overflowings the shores of the Gulf of Mexico, the Mississippi River, the Amazon, the Pacific coast of South America, the Mediterranean, the west coast of Europe and Africa, the Baltic, the Black Sea, and the Caspian were populated by civilized nations.
5. That it was the true Antediluvian world; the Garden of Eden; the Gardens of the Hesperides; the Elysian Fields; the Gardens of Alcinous; the Mesomphalos; the Olympos; the Asgard of the traditions of the ancient nations; representing a universal memory of a great land, where early mankind dwelt for ages in peace and happiness.
6. That the gods and goddesses of the ancient Greeks, the Phœnicians, the Hindoos, and the Scandinavians were simply the kings, queens, and heroes of Atlantis; and the acts attributed to them in mythology are a confused recollection of real historical events.
7. That the mythology of Egypt and Peru represented the original religion of Atlantis, which was sun-worship.
8. That the oldest colony formed by the Atlanteans was probably in Egypt, whose civilization was a reproduction of that of the Atlantic island.
9. That the implements of the "Bronze Age" of Europe were derived from Atlantis. The Atlanteans were also the first manufacturers of iron.
10. That the Phœnician alphabet, parent of all the European alphabets, was derived from an Atlantis alphabet, which was also conveyed from Atlantis to the Mayas of Central America.
11. That Atlantis was the original seat of the Aryan or Indo-European family of nations, as well as of the Semitic peoples, and possibly also of the Turanian races.

12. That Atlantis perished in a terrible convulsion of nature, in which the whole island sunk into the ocean, with nearly all its inhabitants.

13. That a few persons escaped in ships and on rafts, and, carried to the nations east and west the tidings of the appalling catastrophe, which has survived to our own time in the Flood and Deluge legends of the different nations of the old and new worlds.

If these propositions can be proved, they will solve many problems which now perplex mankind; they will confirm in many respects the statements in the opening chapters of Genesis; they will widen the area of human history; they will explain the remarkable resemblances which exist between the ancient civilizations found upon the opposite shores of the Atlantic Ocean, in the old and new worlds; and they will aid us to rehabilitate the fathers of our civilization, our blood, and our fundamental ideas—the men who lived, loved, and labored ages before the Aryans descended upon India, or the Phœnician had settled in Syria, or the Goth had reached the shores of the Baltic.

The fact that the story of Atlantis was for thousands of years regarded as a fable proves nothing. There is an unbelief which grows out of ignorance, as well as a scepticism which is born of intelligence. The people nearest to the past are not always those who are best informed concerning the past.

For a thousand years it was believed that the legends of the buried cities of Pompeii and Herculaneum were myths: they were spoken of as "the fabulous cities." For a thousand years the educated world did not credit the accounts given by Herodotus of the wonders of the ancient civilizations of the Nile and of Chaldea. He was called "the father of liars." Even Plutarch sneered at him. Now, in the language of Frederick Schlegel, "the deeper and more comprehensive the researches of the moderns have been, the more their regard and esteem for Herodotus has increased." Buckle says, "His minute information about Egypt and Asia Minor is admitted by all geographers."

There was a time when the expedition sent out by Pharaoh Necho to circumnavigate Africa was doubted, because the explorers stated that after they had progressed a certain distance the sun was north of them; this circumstance, which then aroused suspicion, now proves to us that the Egyptian navigators had really passed the equator, and anticipated by 2100 years Vasquez de Gama in his discovery of the Cape of Good Hope.

If I succeed in demonstrating the truth of the somewhat startling propositions with which I commenced this chapter, it will only be by bringing to bear upon the question of Atlantis a thousand converging lines of light from a multitude of researches made by scholars in different fields of modern thought. Further investigations and discoveries will, I trust, confirm the correctness of the conclusions at which I have arrived.

CHAPTER II.

PLATO'S HISTORY OF ATLANTIS.

PLATO has preserved for us the history of Atlantis. If our views are correct, it is one of the most valuable records which have come down to us from antiquity.

Plato lived 400 years before the birth of Christ. His ancestor, Solon, was the great law-giver of Athens 600 years before the Christian era. Solon visited Egypt. Plutarch says, "Solon attempted in verse a large description, or rather fabulous account of the Atlantic Island, which he had learned from the wise men of Sais, and which particularly concerned the Athenians; but by reason of his age, not want of leisure (as Plato would have it), he was apprehensive the work would be too much for him, and therefore did not go through with it. These verses are a proof that business was not the hinderance:

"I grow in learning as I grow in age.'

And again:

"Wine, wit, and beauty still their charms bestow,
Light all the shades of life, and cheer us as we go.'

"Plato, ambitious to cultivate and adorn the subject of the Atlantic Island, as a delightful spot in some fair field unoccupied, to which also he had some claim by reason of his being related to Solon, laid out magnificent courts and enclosures, and erected a grand entrance to it, such as no other story, fable, or Poem ever had. But, as he began it late, he ended his life before the work, so that the more the reader is delighted with the part that is written, the more regret he has to find it unfinished."

There can be no question that Solon visited Egypt. The causes of his departure from Athens, for a period of ten years, are fully explained by Plutarch. He dwelt, he tells us,

"On the Canopian shore, by Nile's deep mouth."

There he conversed upon points of philosophy and history with the most learned of the Egyptian priests. He was a man of extraordinary force and penetration of mind, as his laws and his sayings, which have been preserved to us, testify. There is no improbability in the statement that he commenced in verse a history and description of Atlantis, which he left unfinished at his death; and it requires no great stretch of the imagination to believe that this manuscript reached the hands of his successor and descendant, Plato; a scholar, thinker, and historian like himself, and, like himself, one of the profoundest minds of the ancient world. The Egyptian priest had said to Solon, "You have no antiquity of history, and no history of antiquity;" and Solon doubtless realized fully the vast importance of a record which carried human history back, not only thousands of years before the era of Greek civilization, but many thousands of years before even the establishment of the kingdom of Egypt; and he was anxious to preserve for his half-civilized countrymen this inestimable record of the past.

We know of no better way to commence a book about Atlantis than by giving in full the record preserved by Plato. It is as follows:

Critias. Then listen, Socrates, to a strange tale, which is, however, certainly true, as Solon, who was the wisest of the seven sages, declared. He was a relative and great friend of my great-grandfather, Dropidas, as he himself says in several of his poems; and Dropidas told Critias, my grandfather, who remembered, and told us, that there were of old great and marvellous actions of the Athenians, which have passed into oblivion

through time and the destruction of the human race and one in particular, which was the greatest of them all, the recital of which will be a suitable testimony of our gratitude to you....

Socrates. Very good; and what is this ancient famous action of which Critias spoke, not as a mere legend, but as a veritable action of the Athenian State, which Solon recounted!

Critias. I will tell an old-world story which I heard from an aged man; for Critias was, as he said, at that time nearly ninety years of age, and I was about ten years of age. Now the day was that day of the Apaturia which is called the registration of youth; at which, according to custom, our parents gave prizes for recitations, and the poems of several poets were recited by us boys, and many of us sung the poems of Solon, which were new at the time. One of our tribe, either because this was his real opinion, or because he thought that he would please Critias, said that, in his judgment, Solon was not only the wisest of men but the noblest of poets. The old man, I well remember, brightened up at this, and said, smiling: "Yes, Amynander, if Solon had only, like other poets, made poetry the business of his life, and had completed the tale which he brought with him from Egypt, and had not been compelled, by reason of the factions and troubles which he found stirring in this country when he came home, to attend to other matters, in my opinion he would have been as famous as Homer, or Hesiod, or any poet."

"And what was that poem about, Critias?" said the person who addressed him.

"About the greatest action which the Athenians ever did, and which ought to have been most famous, but which, through the lapse of time and the destruction of the actors, has not come down to us."

"Tell us," said the other, "the whole story, and bow and from whom Solon heard this veritable tradition."

He replied: "At the head of the Egyptian Delta, where the river Nile divides, there is a certain district which is called the district of Sais, and the great city of the district is also called Sais, and is the city from which Amasis the king was sprung. And the citizens have a deity who is their foundress: she is called in the Egyptian tongue Neith, which is asserted by them to be the same whom the Hellenes called Athene. Now, the citizens of this city are great lovers of the Athenians, and say that they are in some way related to them. Thither came Solon, who was received by them with great honor; and he asked the priests, who were most skilful in such matters, about antiquity, and made the discovery that neither he nor any other Hellene knew anything worth mentioning about the times of old. On one occasion, when he was drawing them on to speak of antiquity, he began to tell about the most ancient things in our part of the world--about Phoroneus, who is called 'the first,' and about Niobe; and, after the Deluge, to tell of the lives of Deucalion and Pyrrha; and he traced the genealogy of their descendants, and attempted to reckon how many years old were the events of which he was speaking, and to give the dates. Thereupon, one of the priests, who was of very great age; said, 'O Solon, Solon, you Hellenes are but children, and there is never an old man who is an Hellene.' Solon, bearing this, said, 'What do you mean?' 'I mean to say,' he replied, 'that in mind you are all young; there is no old opinion handed down among you by ancient tradition, nor any science which is hoary with age. And I will tell you the reason of this: there have been, and there will be again, many destructions of mankind arising out of many causes. There is a story which even you have preserved, that once upon a time Phaëthon, the son of Helios, having yoked the steeds in his father's chariot, because he was not able to drive them in the path of his father, burnt up all that was upon the earth, and was himself

destroyed by a thunderbolt. Now, this has the form of a myth, but really signifies a declination of the bodies moving around the earth and in the heavens, and a great conflagration of things upon the earth recurring at long intervals of time: when this happens, those who live upon the mountains and in dry and lofty places are more liable to destruction than those who dwell by rivers or on the sea-shore; and from this calamity the Nile, who is our never-failing savior, saves and delivers us. When, on the other hand, the gods purge the earth with a deluge of water, among you herdsmen and shepherds on the mountains are the survivors, whereas those of you who live in cities are carried by the rivers into the sea; but in this country neither at that time nor at any other does the water come from above on the fields, having always a tendency to come up from below, for which reason the things preserved here are said to be the oldest. The fact is, that wherever the extremity of winter frost or of summer sun does not prevent, the human race is always increasing at times, and at other times diminishing in numbers. And whatever happened either in your country or in ours, or in any other region of which we are informed--if any action which is noble or great, or in any other way remarkable has taken place, all that has been written down of old, and is preserved in our temples; whereas you and other nations are just being provided with letters and the other things which States require; and then, at the usual period, the stream from heaven descends like a pestilence, and leaves only those of you who are destitute of letters and education; and thus you have to begin all over again as children, and know nothing of what happened in ancient times, either among us or among yourselves. As for those genealogies of yours which you have recounted to us, Solon, they are no better than the tales of children; for, in the first place, you remember one deluge only, whereas there were many of them; and, in the next place, you do not know that there dwelt in your land the fairest and noblest race of men which ever lived, of whom you and your whole city are but a seed or remnant. And this was unknown to you, because for many generations the survivors of that destruction died and made no sign. For there was a time, Solon, before that great deluge of all, when the city which now is Athens was first in war, and was preeminent for the excellence of her laws, and is said to have performed the noblest deeds, and to have had the fairest constitution of any of which tradition tells, under the face of heaven.' Solon marvelled at this, and earnestly requested the priest to inform him exactly and in order about these former citizens. 'You are welcome to hear about them, Solon,' said the priest, 'both for your own sake and for that of the city; and, above all, for the sake of the goddess who is the common patron and protector and educator of both our cities. She founded your city a thousand years before ours, receiving from the Earth and Hephæstus the seed of your race, and then she founded ours, the constitution of which is set down in our sacred registers as 8000 years old. As touching the citizens of 9000 years ago, I will briefly inform you of their laws and of the noblest of their actions; and the exact particulars of the whole we will hereafter go through at our leisure. in the sacred registers themselves. If you compare these very laws with your own, you will find that many of ours are the counterpart of yours, as they were in the olden time. In the first place, there is the caste of priests, which is separated from all the others; next there are the artificers, who exercise their several crafts by themselves, and without admixture of any other; and also there is the class of shepherds and that of hunters, as well as that of husbandmen; and you will observe, too, that the warriors in Egypt are separated from all the other classes, and are commanded by the law only to engage in war; moreover, the weapons with which they are equipped are shields and spears, and this the goddess taught first among you, and then in Asiatic countries, and we among the Asiatics first adopted.

'''Then, as to wisdom, do you observe what care the law took from the very first, searching out and comprehending the whole order of things down to prophecy and

medicine (the latter with a view to health); and out of these divine elements drawing what was needful for human life, and adding every sort of knowledge which was connected with them. All this order and arrangement the goddess first imparted to you when establishing your city; and she chose the spot of earth in which you were born, because she saw that the happy temperament of the seasons in that land would produce the wisest of men. Wherefore the goddess, who was a lover both of war and of wisdom, selected, and first of all settled that spot which was the most likely to produce men likest herself. And there you dwelt, having such laws as these and still better ones, and excelled all mankind in all virtue, as became the children and disciples of the gods. Many great and wonderful deeds are recorded of your State in our histories; but one of them exceeds all the rest in greatness and valor; for these histories tell of a mighty power which was aggressing wantonly against the whole of Europe and Asia, and to which your city put an end. This power came forth out of the Atlantic Ocean, for in those days the Atlantic was navigable; and there was an island situated in front of the straits which you call the Columns of Heracles: the island was larger than Libya and Asia put together, and was the way to other islands, and from the islands you might pass through the whole of the opposite continent which surrounded the true ocean; for this sea which is within the Straits of Heracles is only a harbor, having a narrow entrance, but that other is a real sea, and the surrounding land may be most truly called a continent. Now, in the island of Atlantis there was a great and wonderful empire, which had rule over the whole island and several others, as well as over parts of the continent; and, besides these, they subjected the parts of Libya within the Columns of Heracles as far as Egypt, and of Europe as far as Tyrrhenia. The vast power thus gathered into one, endeavored to subdue at one blow our country and yours, and the whole of the land which was within the straits; and then, Solon, your country shone forth, in the excellence of her virtue and strength, among all mankind; for she was the first in courage and military skill, and was the leader of the Hellenes. And when the rest fell off from her, being compelled to stand alone, after having undergone the very extremity of danger, she defeated and triumphed over the invaders, and preserved from slavery those who were not yet subjected, and freely liberated all the others who dwelt within the limits of Heracles. But afterward there occurred violent earthquakes and floods, and in a single day and night of rain all your warlike men in a body sunk into the earth, and the island of Atlantis in like manner disappeared, and was sunk beneath the sea. And that is the reason why the sea in those parts is impassable and impenetrable, because there is such a quantity of shallow mud in the way; and this was caused by the subsidence of the island.' ("Plato's Dialogues," ii., 617, Timæus.) . . .

"But in addition to the gods whom you have mentioned, I would specially invoke Mnemosyne; for all the important part of what I have to tell is dependent on her favor, and if I can recollect and recite enough of what was said by the priests, and brought hither by Solon, I doubt not that I shall satisfy the requirements of this theatre. To that task, then, I will at once address myself.

"Let me begin by observing, first of all, that nine thousand was the sum of years which had elapsed since the war which was said to have taken place between all those who dwelt outside the Pillars of Heracles and those who dwelt within them: this war I am now to describe. Of the combatants on the one side the city of Athens was reported to have been the ruler, and to have directed the contest; the combatants on the other side were led by the kings of the islands of Atlantis, which, as I was saying, once had an extent greater than that of Libya and Asia; and, when afterward sunk by an earthquake, became an impassable barrier of mud to voyagers sailing from hence to the ocean. The progress of the history will unfold the various tribes of barbarians and Hellenes which then existed,

as they successively appear on the scene; but I must begin by describing, first of all, the Athenians as they were in that day, and their enemies who fought with them; and I shall have to tell of the power and form of government of both of them. Let us give the precedence to Athens. . . .

Many great deluges have taken place during the nine thousand years, for that is the number of years which have elapsed since the time of which I am speaking; and in all the ages and changes of things there has never been any settlement of the earth flowing down from the mountains, as in other places, which is worth speaking of; it has always been carried round in a circle, and disappeared in the depths below. The consequence is that, in comparison of what then was, there are remaining in small islets only the bones of the wasted body, as they may be called, all the richer and softer parts of the soil having fallen away, and the mere skeleton of the country being left. . . .

"And next, if I have not forgotten what I heard when I was a child, I will impart to you the character and origin of their adversaries; for friends should not keep their stories to themselves, but have them in common. Yet, before proceeding farther in the narrative, I ought to warn you that you must not be surprised if you should bear Hellenic names given to foreigners. I will tell you the reason of this: Solon, who was intending to use the tale for his poem, made an investigation into the meaning of the names, and found that the early Egyptians, in writing them down, had translated them into their own language, and he recovered the meaning of the several names and retranslated them, and copied them out again in our language. My great-grandfather, Dropidas, had the original writing, which is still in my possession, and was carefully studied by me when I was a child. Therefore, if you bear names such as are used in this country, you must not be surprised, for I have told you the reason of them.

"The tale, which was of great length, began as follows: I have before remarked, in speaking of the allotments of the gods, that they distributed the whole earth into portions differing in extent, and made themselves temples and sacrifices. And Poseidon, receiving for his lot the island of Atlantis, begat children by a mortal woman, and settled them in a part of the island which I will proceed to describe. On the side toward the sea, and in the centre of the whole island, there was a plain which is said to have been the fairest of all plains, and very fertile. Near the plain again, and also in the centre of the island, at a distance of about fifty stadia, there was a mountain, not very high on any side. In this mountain there dwelt one of the earth-born primeval men of that country, whose name was Evenor, and he had a wife named Leucippe, and they had an only daughter, who was named Cleito. The maiden was growing up to womanhood when her father and mother died; Poseidon fell in love with her, and had intercourse with her; and, breaking the ground, enclosed the hill in which she dwelt all round, making alternate zones of sea and land, larger and smaller, encircling one another; there were two of land and three of water, which he turned as with a lathe out of the centre of the island, equidistant every way, so that no man could get to the island, for ships and voyages were not yet heard of. He himself, as he was a god, found no difficulty in making special arrangements for the centre island, bringing two streams of water under the earth, which he caused to ascend as springs, one of warm water and the other of cold, and making every variety of food to spring up abundantly in the earth. He also begat and brought up five pairs of male children, dividing the island of Atlantis into ten portions: he gave to the first-born of the eldest pair his mother's dwelling and the surrounding allotment, which was the largest and best, and made him king over the rest; the others he made princes, and gave them rule over many men and a large territory. And he named them all: the eldest, who was king, he named Atlas, and from him the whole island and the ocean received the name of

Atlantic. To his twin-brother, who was born after him, and obtained as his lot the extremity of the island toward the Pillars of Heracles, as far as the country which is still called the region of Gades in that part of the world, he gave the name which in the Hellenic language is Eumelus, in the language of the country which is named after him, Gadeirus. Of the second pair of twins, he called one Ampheres and the other Evæmon. To the third pair of twins he gave the name Mneseus to the elder, and Autochthon to the one who followed him. Of the fourth pair of twins he called the elder Elasippus and the younger Mestor, and of the fifth pair he gave to the elder the name of Azaes, and to the younger Diaprepes. All these and their descendants were the inhabitants and rulers of divers islands in the open sea; and also, as has been already said, they held sway in the other direction over the country within the Pillars as far as Egypt and Tyrrhenia. Now Atlas had a numerous and honorable family, and his eldest branch always retained the kingdom, which the eldest son handed on to his eldest for many generations; and they had such an amount of wealth as was never before possessed by kings and potentates, and is not likely ever to be again, and they were furnished with everything which they could have, both in city and country. For, because of the greatness of their empire, many things were brought to them from foreign countries, and the island itself provided much of what was required by them for the uses of life. In the first place, they dug out of the earth whatever was to be found there, mineral as well as metal, and that which is now only a name, and was then something more than a name--orichalcum--was dug out of the earth in many parts of the island, and, with the exception of gold, was esteemed the most precious of metals among the men of those days. There was an abundance of wood for carpenters' work, and sufficient maintenance for tame and wild animals. Moreover, there were a great number of elephants in the island, and there was provision for animals of every kind, both for those which live in lakes and marshes and rivers, and also for those which live in mountains and on plains, and therefore for the animal which is the largest and most voracious of them. Also, whatever fragrant things there are in the earth, whether roots, or herbage, or woods, or distilling drops of flowers or fruits, grew and thrived in that land; and again, the cultivated fruit of the earth, both the dry edible fruit and other species of food, which we call by the general name of legumes, and the fruits having a hard rind, affording drinks, and meats, and ointments, and good store of chestnuts and the like, which may be used to play with, and are fruits which spoil with keeping--and the pleasant kinds of dessert which console us after dinner, when we are full and tired of eating--all these that sacred island lying beneath the sun brought forth fair and wondrous in infinite abundance. All these things they received from the earth, and they employed themselves in constructing their temples, and palaces, and harbors, and docks; and they arranged the whole country in the following manner: First of all they bridged over the zones of sea which surrounded the ancient metropolis, and made a passage into and out of they began to build the palace in the royal palace; and then the habitation of the god and of their ancestors. This they continued to ornament in successive generations, every king surpassing the one who came before him to the utmost of his power, until they made the building a marvel to behold for size and for beauty. And, beginning from the sea, they dug a canal three hundred feet in width and one hundred feet in depth, and fifty stadia in length, which they carried through to the outermost zone, making a passage from the sea up to this, which became a harbor, and leaving an opening sufficient to enable the largest vessels to find ingress. Moreover, they divided the zones of land which parted the zones of sea, constructing bridges of such a width as would leave a passage for a single trireme to pass out of one into another, and roofed them over; and there was a way underneath for the ships, for the banks of the zones were raised considerably above the water. Now the largest of the zones into which a passage was cut from the sea was three stadia in breadth, and the zone of land which came next of equal breadth; but the next two, as well the zone

of water as of land, were two stadia, and the one which surrounded the central island was a stadium only in width. The island in which the palace was situated had a diameter of five stadia. This, and the zones and the bridge, which was the sixth part of a stadium in width, they surrounded by a stone wall, on either side placing towers, and gates on the bridges where the sea passed in. The stone which was used in the work they quarried from underneath the centre island and from underneath the zones, on the outer as well as the inner side. One kind of stone was white, another black, and a third red; and, as they quarried, they at the same time hollowed out docks double within, having roofs formed out of the native rock. Some of their buildings were simple, but in others they put together different stones, which they intermingled for the sake of ornament, to be a natural source of delight. The entire circuit of the wall which went round the outermost one they covered with a coating of brass, and the circuit of the next wall they coated with tin, and the third, which encompassed the citadel flashed with the red light of orichalcum. The palaces in the interior of the citadel were constructed in this wise: In the centre was a holy temple dedicated to Cleito and Poseidon, which remained inaccessible, and was surrounded by an enclosure of gold; this was the spot in which they originally begat the race of the ten princes, and thither they annually brought the fruits of the earth in their season from all the ten portions, and performed sacrifices to each of them. Here, too, was Poseidon's own temple, of a stadium in length and half a stadium in width, and of a proportionate height, having a sort of barbaric splendor. All the outside of the temple, with the exception of the pinnacles, they covered with silver, and the pinnacles with gold. In the interior of the temple the roof was of ivory, adorned everywhere with gold and silver and orichalcum; all the other parts of the walls and pillars and floor they lined with orichalcum. In the temple they placed statues of gold: there was the god himself standing in a chariot--the charioteer of six winged horses--and of such a size that he touched the roof of the building with his head; around him there were a hundred Nereids riding on dolphins, for such was thought to be the number of them in that day. There were also in the interior of the temple other images which had been dedicated by private individuals. And around the temple on the outside were placed statues of gold of all the ten kings and of their wives; and there were many other great offerings, both of kings and of private individuals, coming both from the city itself and the foreign cities over which they held sway. There was an altar, too, which in size and workmanship corresponded to the rest of the work, and there were palaces in like manner which answered to the greatness of the kingdom and the glory of the temple.

"In the next place, they used fountains both of cold and hot springs; these were very abundant, and both kinds wonderfully adapted to use by reason of the sweetness and excellence of their waters. They constructed buildings about them, and planted suitable trees; also cisterns, some open to the heaven, other which they roofed over, to be used in winter as warm baths, there were the king's baths, and the baths of private persons, which were kept apart; also separate baths for women, and others again for horses and cattle, and to them they gave as much adornment as was suitable for them. The water which ran off they carried, some to the grove of Poseidon, where were growing all manner of trees of wonderful height and beauty, owing to the excellence of the soil; the remainder was conveyed by aqueducts which passed over the bridges to the outer circles: and there were many temples built and dedicated to many gods; also gardens and places of exercise, some for men, and some set apart for horses, in both of the two islands formed by the zones; and in the centre of the larger of the two there was a race-course of a stadium in width, and in length allowed to extend all round the island, for horses to race in. Also there were guard-houses at intervals for the body-guard, the more trusted of whom had their duties appointed to them in the lesser zone, which was nearer the Acropolis; while

the most trusted of all had houses given them within the citadel, and about the persons of the kings. The docks were full of triremes and naval stores, and all things were quite ready for use. Enough of the plan of the royal palace. Crossing the outer harbors, which were three in number, you would come to a wall which began at the sea and went all round: this was everywhere distant fifty stadia from the largest zone and harbor, and enclosed the whole, meeting at the mouth of the channel toward the sea. The entire area was densely crowded with habitations; and the canal and the largest of the harbors were full of vessels and merchants coming from all parts, who, from their numbers, kept up a multitudinous sound of human voices and din of all sorts night and day. I have repeated his descriptions of the city and the parts about the ancient palace nearly as he gave them, and now I must endeavor to describe the nature and arrangement of the rest of the country. The whole country was described as being very lofty and precipitous on the side of the sea, but the country immediately about and surrounding the city was a level plain, itself surrounded by mountains which descended toward the sea; it was smooth and even, but of an oblong shape, extending in one direction three thousand stadia, and going up the country from the sea through the centre of the island two thousand stadia; the whole region of the island lies toward the south, and is sheltered from the north. The surrounding mountains he celebrated for their number and size and beauty, in which they exceeded all that are now to be seen anywhere; having in them also many wealthy inhabited villages, and rivers and lakes, and meadows supplying food enough for every animal, wild or tame, and wood of various sorts, abundant for every kind of work. I will now describe the plain, which had been cultivated during many ages by many generations of kings. It was rectangular, and for the most part straight and oblong; and what it wanted of the straight line followed the line of the circular ditch. The depth and width and length of this ditch were incredible and gave the impression that such a work, in addition to so many other works, could hardly have been wrought by the hand of man. But I must say what I have heard. It was excavated to the depth of a hundred feet, and its breadth was a stadium everywhere; it was carried round the whole of the plain, and was ten thousand stadia in length. It received the streams which came down from the mountains, and winding round the plain, and touching the city at various points, was there let off into the sea. From above, likewise, straight canals of a hundred feet in width were cut in the plain, and again let off into the ditch, toward the sea; these canals were at intervals of a Hundred stadia, and by them they brought, down the wood from the mountains to the city, and conveyed the fruits of the earth in ships, cutting transverse passages from one canal into another, and to the city. Twice in the year they gathered the fruits of the earth--in winter having the benefit of the rains, and in summer introducing the water of the canals. As to the population, each of the lots in the plain had an appointed chief of men who were fit for military service, and the size of the lot was to be a square of ten stadia each way, and the total number of all the lots was sixty thousand.

"And of the inhabitants of the mountains and of the rest of the country there was also a vast multitude having leaders, to whom they were assigned according to their dwellings and villages. The leader was required to furnish for the war the sixth portion of a war-chariot, so as to make up a total of ten thousand chariots; also two horses and riders upon them, and a light chariot without a seat, accompanied by a fighting man on foot carrying a small shield, and having a charioteer mounted to guide the horses; also, he was bound to furnish two heavy-armed men, two archers, two slingers, three stone-shooters, and three javelin men, who were skirmishers, and four sailors to make up a complement of twelve hundred ships. Such was the order of war in the royal city--that of the other nine governments was different in each of them, and would be wearisome to narrate. As to offices and honors, the following was the arrangement from the first: Each of the ten

kings, in his own division and in his own city, had the absolute control of the citizens, and in many cases of the laws, punishing and slaying whomsoever he would.

"Now the relations of their governments to one another were regulated by the injunctions of Poseidon as the law had handed them down. These were inscribed by the first men on a column of orichalcum, which was situated in the middle of the island, at the temple of Poseidon, whither the people were gathered together every fifth and sixth years alternately, thus giving equal honor to the odd and to the even number. And when they were gathered together they consulted about public affairs, and inquired if any one had transgressed in anything, and passed judgment on him accordingly--and before they passed judgment they gave their pledges to one another in this wise: There were bulls who had the range of the temple of Poseidon; and the ten who were left alone in the temple, after they had offered prayers to the gods that they might take the sacrifices which were acceptable to them, hunted the bulls without weapons, but with staves and nooses; and the bull which they caught they led up to the column; the victim was then struck on the head by them, and slain over the sacred inscription, Now on the column, besides the law, there was inscribed an oath invoking mighty curses on the disobedient. When, therefore, after offering sacrifice according to their customs, they had burnt the limbs of the bull, they mingled a cup and cast in a clot of blood for each of them; the rest of the victim they took to the fire, after having made a purification of the column all round. Then they drew from the cup in golden vessels, and, pouring a libation on the fire, they swore that they would judge according to the laws on the column, and would punish any one who had previously transgressed, and that for the future they would not, if they could help, transgress any of the inscriptions, and would not command or obey any ruler who commanded them to act otherwise than according to the laws of their father Poseidon. This was the prayer which each of them offered up for himself and for his family, at the same time drinking, and dedicating the vessel in the temple of the god; and, after spending some necessary time at supper, when darkness came on and the fire about the sacrifice was cool, all of them put on most beautiful azure robes, and, sitting on the ground at night near the embers of the sacrifices on which they had sworn, and extinguishing all the fire about the temple, they received and gave judgement, if any of them had any accusation to bring against any one; and, when they had given judgment, at daybreak they wrote down their sentences on a golden tablet, and deposited them as memorials with their robes. There were many special laws which the several kings had inscribed about the temples, but the most important was the following: That they were not to take up arms against one another, and they were all to come to the rescue if any one in any city attempted to overthrow the royal house. Like their ancestors, they were to deliberate in common about war and other matters, giving the supremacy to the family of Atlas; and the king was not to have the power of life and death over any of his kinsmen, unless he had the assent of the majority of the ten kings.

"Such was the vast power which the god settled in the lost island of Atlantis; and this he afterward directed against our land on the following pretext, as traditions tell: For many generations, as long as the divine nature lasted in them, they were obedient to the laws, and well-affectioned toward the gods, who were their kinsmen; for they possessed true and in every way great spirits, practising gentleness and wisdom in the various chances of life, and in their intercourse with one another. They despised everything but virtue, not caring for their present state of life, and thinking lightly on the possession of gold and other property, which seemed only a burden to them; neither were they intoxicated by luxury; nor did wealth deprive them of their self-control; but they were sober, and saw clearly that all these goods are increased by virtuous friendship with one another, and that

by excessive zeal for them, and honor of them, the good of them is lost, and friendship perishes with them.

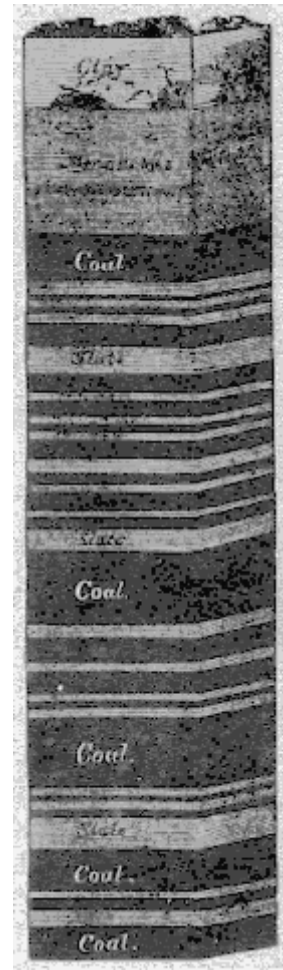
"By such reflections, and by the continuance in them of a divine nature, all that which we have described waxed and increased in them; but when this divine portion began to fade away in them, and became diluted too often, and with too much of the mortal admixture, and the human nature got the upper-hand, then, they being unable to bear their fortune, became unseemly, and to him who had an eye to see, they began to appear base, and had lost the fairest of their precious gifts; but to those who had no eye to see the true happiness, they still appeared glorious and blessed at the very time when they were filled with unrighteous avarice and power. Zeus, the god of gods, who rules with law, and is able to see into such things, perceiving that an honorable race was in a most wretched state, and wanting to inflict punishment on them, that they might be chastened and improved, collected all the gods into his most holy habitation, which, being placed in the centre of the world, sees all things that partake of generation. And when he had called them together he spake as follows:"

[Here Plato's story abruptly ends.]

CHAPTER IV.

WAS SUCH A CATASTROPHE POSSIBLE?

ALL that is needed to answer this question is to briefly refer to some of the facts revealed by the study of geology.



In the first place, the earth's surface is a record of successive risings and fallings of the land. The accompanying picture represents a section of the anthracite coal-measures of Pennsylvania. Each of the coal deposits here shown, indicated by the black lines, was created when the land had risen sufficiently above the sea to maintain vegetation; each of the strata of rock, many of them hundreds of feet in thickness, was deposited under water. Here we have twenty-three different changes of the level of the land during the formation of 2000 feet of rock and coal; and these changes took place over vast areas, embracing thousands of square miles.

All the continents which now exist were, it is well understood, once, under water, and the rocks of which they are composed were deposited beneath the water; more than this, most of the rocks so deposited were the detritus or washings of other continents, which then stood where the oceans now roll, and whose mountains and plains were ground down by the action of volcanoes and earthquakes, and frost, ice, wind, and rain, and washed into the sea, to form the rocks upon which the nations now dwell; so that we have changed the conditions of land and water: that which is now continent was once sea, and that which is now sea was formerly continent. There can be no question that the Australian Archipelago is simply the mountain-tops of a drowned continent, which once reached from India to South America. Science has gone so far as to even give it a name; it is called "Lemuria," and here, it is claimed, the human race originated. An examination of the geological formation of our Atlantic States proves beyond a doubt, from the manner in which the sedimentary rocks, the sand, gravel, and mud--aggregating a thickness of 45,000 feet--are deposited, that they came from the north and east. "They represent the detritus of pre-existing lands, the washings of rain, rivers, coast-currents, and other agencies of erosion; and since the areas supplying the waste could scarcely have been of less extent than the new strata it formed, it is reasonably inferred that land masses of continental magnitude must have occupied the region now covered by the North Atlantic before America began to be, and onward at least through the palæozoic ages of American history. The proof of this fact is that the great strata of rocks are thicker the nearer we approach their source in the east: the maximum thickness of the palæozoic rocks of the Appalachian formation is 25,000 to 35,000 feet in Pennsylvania and Virginia, while their minimum thickness in Illinois and Missouri is from 3000 to 4000 feet; the rougher and grosser-textured rocks predominate in the east, while the farther west we go the finer the deposits were of which the rocks are composed; the finer materials were carried farther west by the water." ("New Amer. Cyclop.," art. *Coal*.)



DESTRUCTION OF POMPEII

The history of the growth of the European Continent, as recounted by Professor Geikie, gives an instructive illustration of the relations of geology to geography. The earliest

European land, he says, appears to have existed in the north and north-west, comprising Scandinavia, Finland, and the northwest of the British area, and to have extended thence through boreal and arctic latitudes into North America. Of the height and mass of this primeval land some idea may be formed by considering the enormous bulk of the material derived from its disintegration. In the Silurian formations of the British Islands alone there is a mass of rock, worn from the land, which would form a mountain-chain extending from Marseilles to the North Cape (1800 miles), with a mean breadth of over thirty-three miles, and an average height of 16,000 feet.

As the great continent which stood where the Atlantic Ocean now is wore away, the continents of America and Europe were formed; and there seems to have been from remote times a continuous rising, still going on, of the new lands, and a sinking of the old ones. Within five thousand years, or since the age of the "polished stone," the shores of Sweden, Denmark, and Norway have risen from 200 to 600 feet.

Professor Winchell says ("The Preadamites," p. 437):

We are in the midst of great changes, and are scarcely conscious of it. We have seen worlds in flames, and have felt a cornet strike the earth. We have seen the whole coast of South America lifted up bodily ten or fifteen feet and let down again in an hour. We have seen the Andes sink 220 feet in seventy years. . . . Vast transpositions have taken place in the coast-line of China. The ancient capital, located, in all probability, in an accessible position near the centre of the empire, has now become nearly surrounded by water, and its site is on the peninsula of Corea. . . . There was a time when the rocky barriers of the Thracian Bosphorus gave way and the Black Sea subsided. It had covered a vast area in the north and east. Now this area became drained, and was known as the ancient Lectonia: it is now the prairie region of Russia, and the granary of Europe."

There is ample geological evidence that at one time the entire area of Great Britain was *submerged to the depth of at least seventeen hundred feet*. Over the face of the submerged land was strewn thick beds of sand, gravel, and clay, termed by geologists "the Northern Drift." The British Islands rose again from the sea, bearing these water-deposits on their bosom. What is now Sicily once lay deep beneath the sea: A subsequently rose 3000 feet above the sea-level. The Desert of Sahara was once under water, and its now burning sands are a deposit of the sea.

Geologically speaking, the submergence of Atlantis, within the historical period, was simply the last of a number of vast changes, by which the continent which once occupied the greater part of the Atlantic had gradually sunk under the ocean, while the new lands were rising on both sides of it.

We come now to the second question, Is it possible that Atlantis could have been suddenly destroyed by such a convulsion of nature as is described by Plato? The ancients regarded this part of his story as a fable. With the wider knowledge which scientific research has afforded the modern world, we can affirm that such an event is not only possible, but that the history of even the last two centuries has furnished us with striking parallels for it. We now possess the record of numerous islands lifted above the waters, and others sunk beneath the waves, accompanied by storms and earthquakes similar to those which marked the destruction of Atlantis.

In 1783 Iceland was visited by convulsions more tremendous than any recorded in the modern annals of that country. About a month previous to the eruption on the main-land a submarine volcano burst forth in the sea, at a distance of thirty miles from the shore. It

ejected so much pumice that the sea was covered with it for a distance of 150 miles, and ships were considerably impeded in their course. A new island was thrown up, consisting of high cliffs, which was claimed by his Danish Majesty, and named "Nyöe," or the New Island; but before a year had elapsed it sunk beneath the sea, leaving a reef of rocks thirty fathoms under water.

The earthquake of 1783 in Iceland destroyed 9000 people out of a population of 50,000; twenty villages were consumed by fire or inundated by water, and a mass of lava thrown out greater than the entire bulk of Mont Blanc."

On the 8th of October, 1822, a great earthquake occurred on the island of Java, near the mountain of Galung Gung. "A loud explosion was heard, the earth shook, and immense columns of hot water and boiling mud, mixed with burning brimstone, ashes, and lapilli, of the size of nuts, were projected from the mountain like a water-spout, with such prodigious violence that large quantities fell beyond the river Tandoi, which is forty miles distant. . . . The first eruption lasted nearly five hours; and on the following days the rain fell in torrents, and the rivers, densely charged with mud, deluged the country far and wide. At the end of four days (October 12th), a second eruption occurred, more violent than the first, in which hot water and mud were again vomited, and great blocks of basalt were thrown to the distance of seven miles from the volcano. There was at the same time a violent earthquake, the face of the mountain was utterly changed, its summits broken down, and one side, which had been covered with trees, became an enormous gulf in the form of a semicircle. Over 4000 persons were killed and 114 villages destroyed." (Lyell's "Principles of Geology," p. 430.)

In 1831 a new island was born in the Mediterranean, near the coast of Sicily. It was called Graham's Island. It came up with an earthquake, and "a water-spout sixty feet high and eight hundred yards in circumference rising from the sea." In about a month the island was two hundred feet high and three miles in circumference; it soon, however, sunk beneath the sea.

The Canary Islands were probably a part of the original empire of Atlantis. On the 1st of September, 1730, the earth split open near Year, in the island of Lancerota. In one night a considerable hill of ejected matter was thrown up; in a few days another vent opened and gave out a lava stream which overran several villages. It flowed at first rapidly, like water, but became afterward heavy and slow, like honey. On the 11th of September more lava flowed out, covering up a village, and precipitating itself with a horrible roar into the sea. Dead fish floated on the waters in indescribable multitudes, or were thrown dying on the shore; the cattle throughout the country dropped lifeless to the ground, suffocated by putrid vapors, which condensed and fell down in drops. These manifestations were accompanied by a storm such as the people of the country had never known before. These dreadful commotions lasted for *five years*. The lavas thrown out covered *one-third of the whole island of Lancerota*.



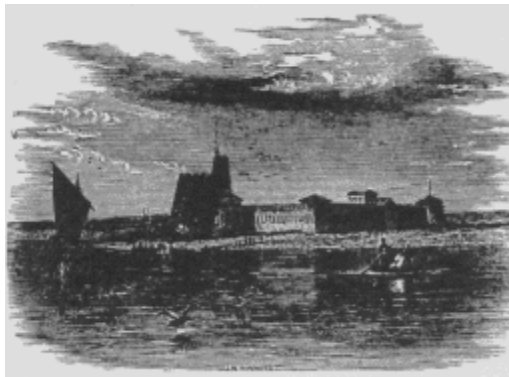
CALABRIAN PEASANTS INGULFED BY CREVASSES (1783).

The Gulf of Santorin, in the Grecian Archipelago, has been for two thousand years a scene of active volcanic operations. Pliny informs us that in the year 186 B.C. the island of "Old Kaimeni," or the Sacred Isle, was lifted up from the sea; and in A.D. 19 the island of "Thia" (the Divine) made its appearance. In A.D. 1573 another island was created, called "the small sunburnt island." In 1848 a volcanic convulsion of three months' duration created a great shoal; an earthquake destroyed many houses in Thera, and the sulphur and hydrogen issuing from the sea killed 50 persons and 1000 domestic animals. A recent examination of these islands shows that the whole mass of Santorin *has sunk, since its projection from the sea, over 1200 feet.*

The fort and village of Sindree, on the eastern arm of the Indus, above Luckput, was submerged in 1819 by an earthquake, together with a tract of country 2000 square miles in extent.

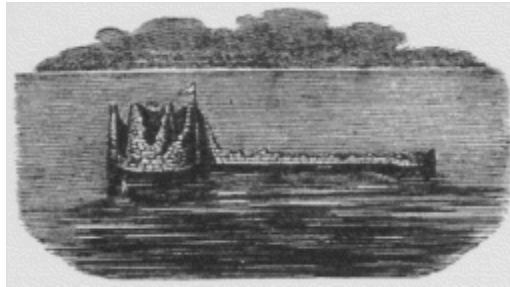
"In 1828 Sir A. Burnes went in a boat to the ruins of Sindree, where a single remaining tower was seen in the midst of a wide expanse of sea. The tops of the ruined walls still rose two or three feet above the level of the water; and, standing on one of these, he could behold nothing in the horizon but water, except in one direction, where a blue streak of land to the north indicated the Ullah Bund. This scene," says Lyell ("Principles of Geology," p. 462), "presents to the imagination a lively picture of the revolutions now in progress on the earth—a waste of waters where a few years before all was land, and the only land visible consisting of ground uplifted by a recent earthquake."

We give from Lyell's great work the following curious pictures of the appearance of the Fort of Sindree before and after the inundation.



FORT OF SINDEE, ON THE EASTERN BRANCH OF THE INDUS, BEFORE IT WAS SUBMERGED BY THE EARTHQUAKE OF 1819.

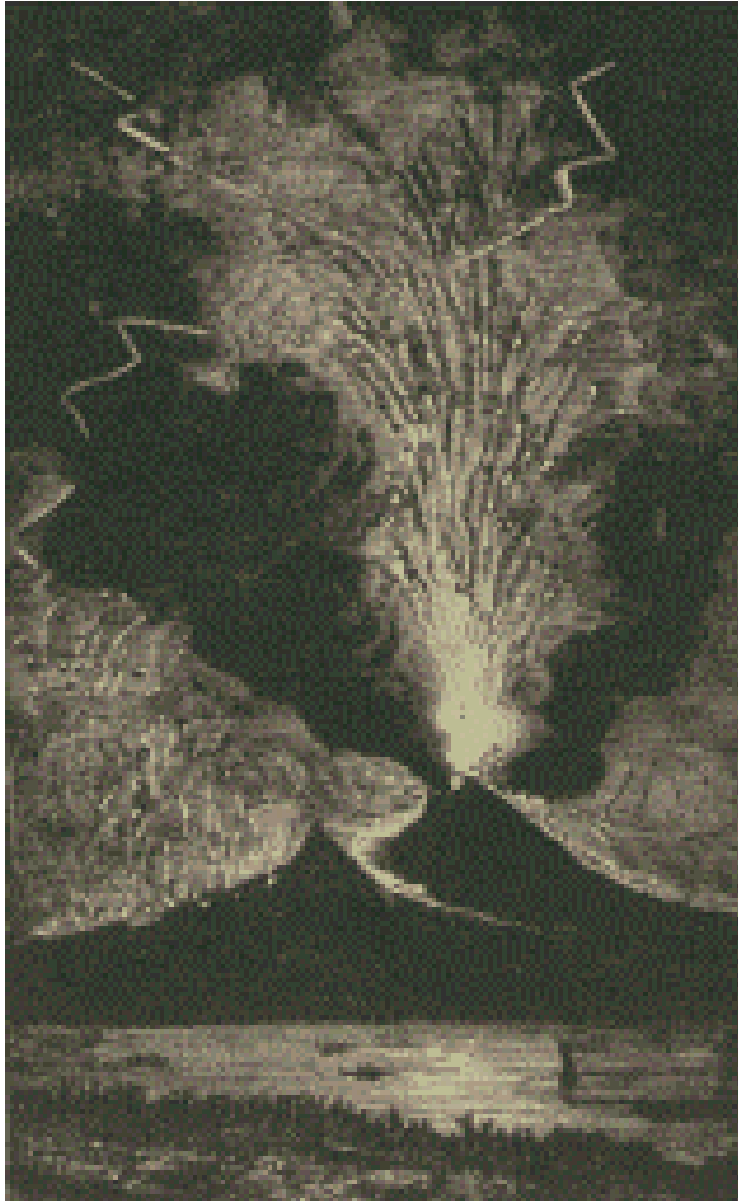
In April, 1815, one of the most frightful eruptions recorded in history occurred in the province of Tomboro, in the island of Sumbawa, about two hundred miles from the eastern extremity of Java. It lasted from April 5th to July of that year; but was most violent on the 11th and 12th of July. The sound of the explosions was heard for nearly one thousand miles. *Out of a population of 12,000, in the province of Tombora, only twenty-six individuals escaped.* "Violent whirlwinds carried up men, horses, and cattle into the air, tore tip the largest trees by the roots, and covered the whole sea with floating timber." (Raffles's "History of Java," vol. i., p. 28.) *The ashes darkened the air;* "the floating cinders to the westward of Sumatra formed, on the 12th of April, a mass two feet thick and several miles in extent, *through which ships with difficulty forced their way.*" The darkness in daytime was more profound than the blackest night. "The town called Tomboro, on the west side of Sumbawa, was overflowed by the sea, which encroached upon the shore, *so that the water remained permanently eighteen feet deep in places where there was land before.* The area covered by the convulsion was 1000 English miles in circumference. *In the island of Amboyna, in the same month and year, the ground opened, threw out water and then closed again.*" (Raffles's "History of Java," vol. i., p. 25.)



VIEW OF THE FORT OF SINDREE FROM THE WEST IN MARCH, 1839.

But it is at that point of the European coast nearest to the site of Atlantis at Lisbon that the most tremendous earthquake of modern times has occurred. On the 1st of November, 1775, a sound of thunder was heard underground, and immediately afterward a violent shock threw down the greater part of the city. *In six minutes 60,000 persons perished.* A great concourse of people had collected for safety upon a new quay, built entirely of marble; but suddenly it sunk down with all the people on it, and not one of the dead bodies ever floated to the surface. A great number of small boats and vessels anchored near it, and, full of people, were swallowed up as in a whirlpool. No fragments of these wrecks ever rose again to the surface; the water where the quay went down is now 600 feet deep. The area covered by this earthquake was very great. Humboldt says that a portion of *the earth's surface, four times as great as the size of Europe, was simultaneously shaken.* It extended from the Baltic to the West Indies, and from Canada to Algiers. At eight leagues from Morocco the ground opened and swallowed a village of 10,000 inhabitants, and closed again over them.

It is very probable that the centre of the convulsion was in the bed of the Atlantic, at or near the buried island of Atlantis, and that it was a successor of the great earth throes which, thousands of years before, had brought destruction upon that land.



ERUPTION OF VESUVIUS IN 1737.

Ireland also lies near the axis of this great volcanic area, reaching from the Canaries to Iceland, and it has been many times in the past the seat of disturbance. The ancient annals contain numerous accounts of eruptions, preceded by volcanic action. In 1490, at the Ox Mountains, Sligo, one occurred by which one hundred persons and numbers of cattle were destroyed; and a volcanic eruption in May, 1788, on the hill of Knocklade, Antrim, poured a stream of lava sixty yards wide for thirty-nine hours, and destroyed the village of Ballyowen and all the inhabitants, save a man and his wife and two children. ("Amer. Cyclop.," art. *Ireland*.)

While we find Lisbon and Ireland, east of Atlantis, subjected to these great earthquake shocks, the West India Islands, west of the same centre, have been repeatedly visited in a similar manner. In 1692 Jamaica suffered from a violent earthquake. The earth opened, and great quantities of water were cast out; many people were swallowed up in these rents; the earth caught some of them by the middle and squeezed them to death; the heads of others only appeared above-ground. A tract of land near the town of Port Royal, about a thousand acres in extent, sunk down in less than one minute, and the sea immediately rolled in.

The Azore Islands are undoubtedly the peaks of the mountains of Atlantis. They are even yet the centre of great volcanic activity. They have suffered severely from eruptions and earthquakes. In 1808 a volcano rose suddenly in San Jorge to the height of 3500 feet, and burnt for six days, desolating the entire island. In 1811 a volcano rose from the sea, near San Miguel, creating an island 300 feet high, which was named Sambrina, but which soon sunk beneath the sea. Similar volcanic eruptions occurred in the Azores in 1691 and 1720.

Along a great line, a mighty fracture in the surface of the globe, stretching north and south through the Atlantic, we find a continuous series of active or extinct volcanoes. In Iceland we have Oerafa, Hecla, and Rauda Kamba; another in Pico, in the Azores; the peak of Teneriffe; Fogo, in one of the Cape de Verde Islands: while of extinct volcanoes we have several in Iceland, and two in Madeira; while Fernando de Noronha, the island of Ascension, St. Helena, and Tristan d'Acunha are all of volcanic origin. ("Cosmos," vol. v., p. 331.)

The following singular passage we quote entire from Lyell's Principles of Geology," p. 436:

"In the *Nautical Magazine* for 1835, p. 642, and for 1838, p. 361, and in the *Comptes Rendus*, April, 1838, accounts are given of a series of volcanic phenomena, earthquakes, troubled water, floating scoria, and columns of smoke, which have been observed at intervals since the middle of the last century, in a space of open sea between longitudes 20° and 22' W., about half a degree south of the equator. These facts, says Mr. Darwin, seem to show that an island or archipelago is in process of formation in the middle of the Atlantic. A line joining St. Helena and Ascension would, if prolonged, intersect this slowly nascent focus of volcanic action. Should land be eventually formed here, it will not be the first that has been produced by igneous action in this ocean since it was inhabited by the existing species of testacea. At Porto Praya, in St. Jago, one of the Azores, a horizontal, calcareous stratum occurs, containing shells of recent marine species, covered by a great sheet of basalt eighty feet thick. It would be difficult to estimate too highly the commercial and political importance which a group of islands might acquire if, in the next two or three thousand years, they should rise in mid-ocean between St. Helena and Ascension."

These facts would seem to show that the great fires which destroyed Atlantis are still smouldering in the depths of the ocean; that the vast oscillations which carried Plato's continent beneath the sea may again bring it, with all its buried treasures, to the light; and that even the wild imagination of Jules Verne, when he described Captain Nemo, in his diving armor, looking down upon the temples and towers of the lost island, lit by the fires of submarine volcanoes, had some groundwork of possibility to build upon.

But who will say, in the presence of all the facts here enumerated, that the submergence of Atlantis, in some great world-shaking cataclysm, is either impossible or improbable? As will be shown hereafter, when we come to discuss the Flood legends, every particular which has come down to us of the destruction of Atlantis has been duplicated in some of the accounts just given.

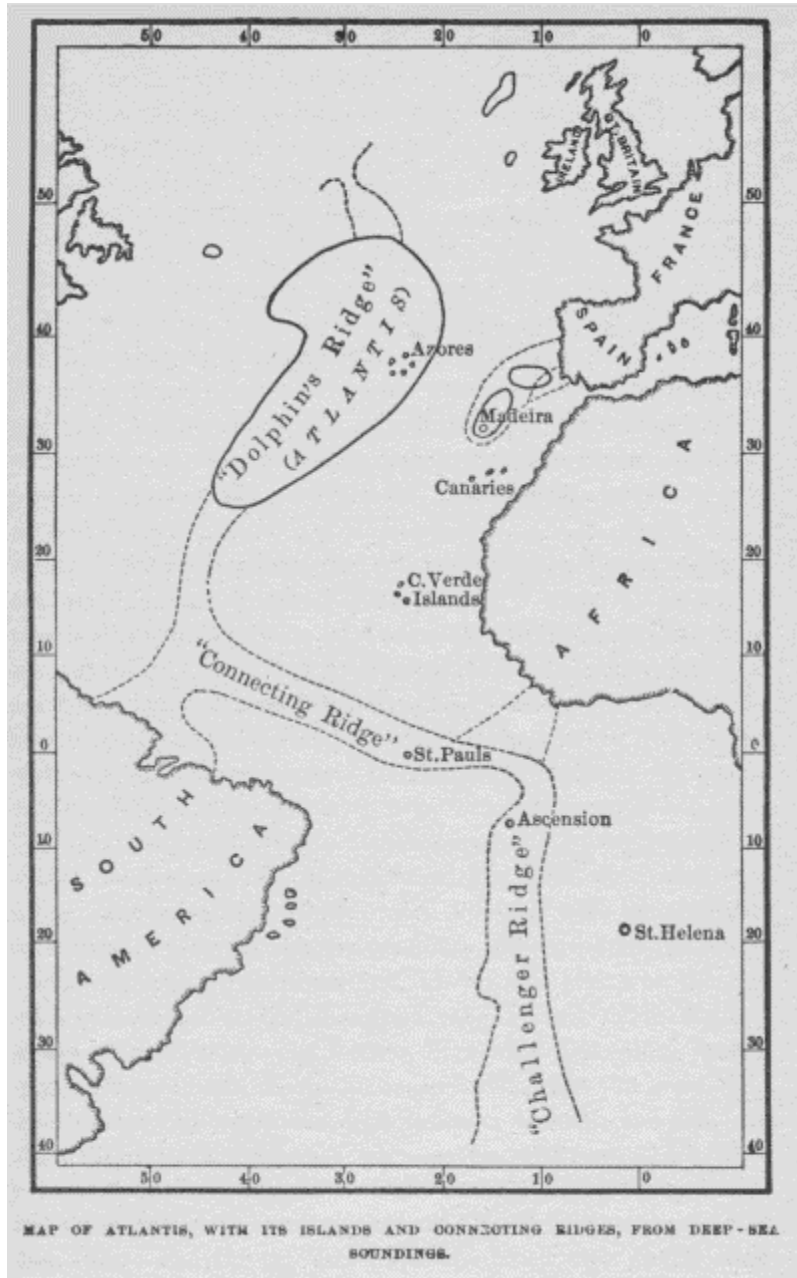
We conclude, therefore: 1. That it is proven beyond question, by geological evidence, that vast masses of land once existed in the region where Atlantis is located by Plato, and that therefore such an island must have existed; 2. That there is nothing improbable or impossible in the statement that it was destroyed suddenly by an earthquake "in one dreadful night and day."

CHAPTER. V.

THE TESTIMONY OF THE SEA.

SUPPOSE we were to find in mid-Atlantic, in front of the Mediterranean, in the neighborhood of the Azores, the remains of an immense island, sunk beneath the sea--one

thousand miles in width, and two or three thousand miles long--would it not go far to confirm the statement of Plato that, "beyond the strait where you place the Pillars of Hercules, there was an island larger than Asia (Minor) and Libya combined," called Atlantis? And suppose we found that the Azores were the mountain peaks of this drowned island, and were torn and rent by tremendous volcanic convulsions; while around them, descending into the sea, were found great strata of lava; and the whole face of the sunken land was covered for thousands of miles with volcanic débris, would we not be obliged to confess that these facts furnished strong corroborative proofs of the truth of Plato's statement, that "in one day and one fatal night there came mighty earthquakes and inundations which engulfed that mighty people? Atlantis disappeared beneath the sea; and then that sea became inaccessible on account of the quantity of mud which the engulfed island left in its place."



MAP OF ATLANTIS, WITH ITS ISLANDS AND CONNECTING RIDGES, FROM DEEP-SEA SOUNDINGS

And all these things recent investigation has proved conclusively. Deep-sea soundings have been made by ships of different nations; the United States ship *Dolphin*, the German frigate *Gazelle*, and the British ships *Hydra*, *Porcupine*, and *Challenger* have mapped out

the bottom of the Atlantic, and the result is the revelation of a great elevation, reaching from a point on the coast of the British Islands southwardly to the coast of South America, at Cape Orange, thence south-eastwardly to the coast of Africa, and thence southwardly to Tristan d'Acunha. I give one map showing the profile of this elevation in the frontispiece, and another map, showing the outlines of the submerged land, on page 47. It rises about 9000 feet above the great Atlantic depths around it, and in the Azores, St. Paul's Rocks, Ascension, and Tristan d'Acunha it reaches the surface of the ocean.

Evidence that this elevation was once dry land is found in the fact that "the inequalities, the mountains and valleys of its surface, could never have been produced in accordance with any laws for the deposition of sediment, nor by submarine elevation; but, on the contrary, must have been carved by agencies *acting above the water level.*" (*Scientific American*, July 28th, 1877.)

Mr. J. Starke Gardner, the eminent English geologist, is of the opinion that in the Eocene Period a great extension of land existed to the west of Cornwall. Referring to the location of the "Dolphin" and "Challenger" ridges, he asserts that "a great tract of land formerly existed where the sea now is, and that Cornwall, the Scilly and Channel Islands, Ireland and Brittany, are the remains of its highest summits." (*Popular Science Review*, July, 1878.)

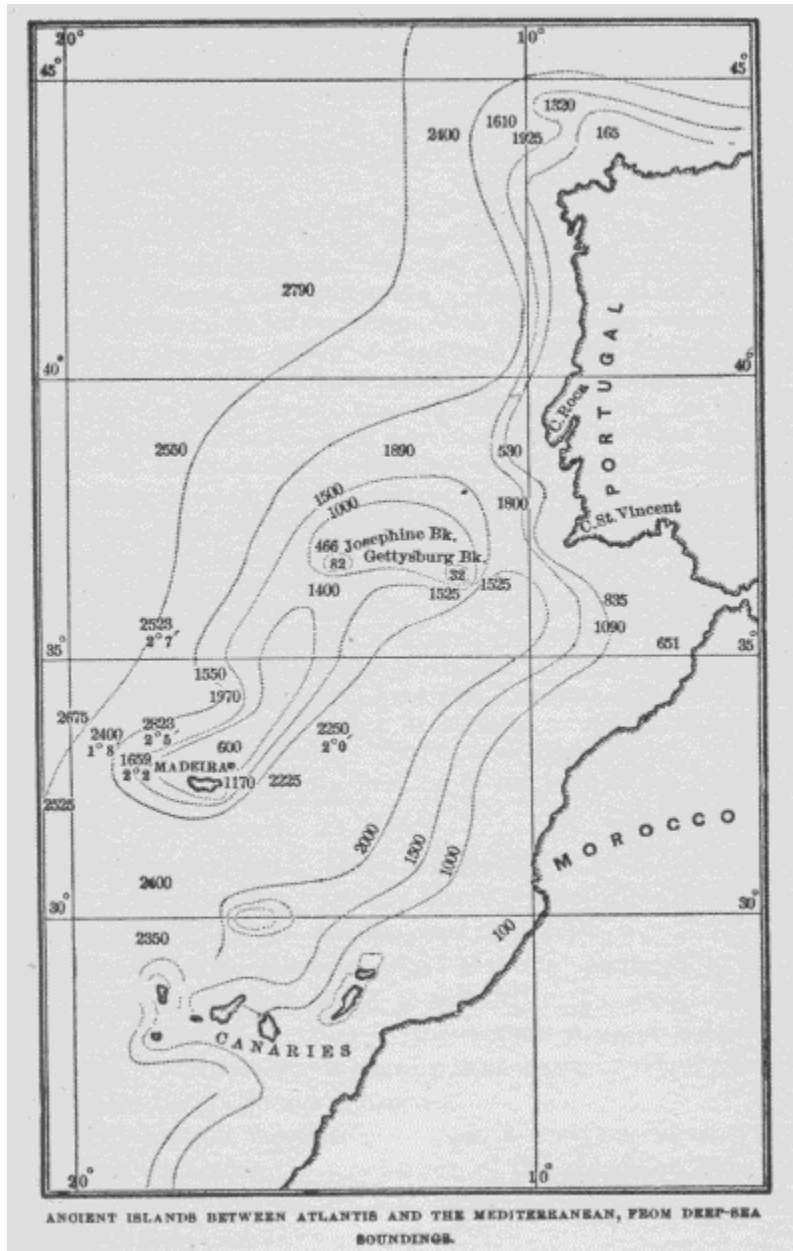
Here, then, we have the backbone of the ancient continent which once occupied the whole of the Atlantic Ocean, and from whose washings Europe and America were constructed; the deepest parts of the ocean, 3500 fathoms deep, represent those portions which sunk first, to wit, the plains to the east and west of the central mountain range; some of the loftiest peaks of this range--the Azores, St. Paul's, Ascension, Tristan d'Acunba--are still above the ocean level; while the great body of Atlantis lies a few hundred fathoms beneath the sea. In these "connecting ridges" we see the pathway which once extended between the New World and the Old, and by means of which the plants and animals of one continent travelled to the other; and by the same avenues black men found their way, as we will show hereafter, from Africa to America, and red men from America to Africa.

And, as I have shown, the same great law which gradually depressed the Atlantic continent, and raised the lands east and west of it, is still at work: the coast of Greenland, which may be regarded as the northern extremity of the Atlantic continent, is still sinking "so rapidly that ancient buildings on low rock-islands are now submerged, and the Greenlander has learned by experience never to build near the water's edge," ("North Amer. of Antiq.," p. 504.) The same subsidence is going on along the shore of South Carolina and Georgia, while the north of Europe and the Atlantic coast of South America are rising rapidly. Along the latter raised beaches, 1180 miles long and from 100 to 1300 feet high, have been traced.

When these connecting ridges extended from America to Europe and Africa, they shut off the flow of the tropical waters of the ocean to the north: there was then no "Gulf Stream;" the land-locked ocean that laved the shores of Northern Europe was then intensely cold; and the result was the Glacial Period. When the barriers of Atlantis sunk sufficiently to permit the natural expansion of the heated water of the tropics to the north, the ice and snow which covered Europe gradually disappeared; the Gulf Stream flowed around Atlantis, and it still retains the circular motion first imparted to it by the presence of that island.

The officers of the Challenger found the entire ridge of Atlantis covered with volcanic deposits; these are the subsided mud which, as Plato tells us, rendered the sea impassable after the destruction of the island.

It does not follow that, at the time Atlantis was finally engulfed, the ridges connecting it with America and Africa rose above the water-level; these may have gradually subsided into the sea, or have gone down in cataclysms such as are described in the Central American books. The Atlantis of Plato may have been confined to the "Dolphin Ridge" of our map.



ANCIENT ISLANDS BETWEEN ATLANTIS AND THE MEDITERRANEAN, FROM DEEP-SEA SOUNDINGS

The United States sloop *Gettysburg* has also made some remarkable discoveries in a neighboring field. I quote from John James Wild (in *Nature*, March 1st, 1877, p. 377):

"The recently announced discovery by Commander Gorringe, of the United States sloop *Gettysburg*, of a bank of soundings bearing N. 85° W., and distant 130 miles from Cape St. Vincent, during the last voyage of the vessel across the Atlantic, taken in connection with previous soundings obtained in the same region of the North Atlantic, suggests the

probable existence of a submarine ridge or plateau connecting the island of Madeira with the coast of Portugal, and the probable subaerial connection in prehistoric times of that island with the south-western extremity of Europe." . . . "These soundings reveal the existence of a channel of an average depth of from 2000 to 3000 fathoms, extending in a northeasterly direction from its entrance between Madeira and the Canary Islands toward Cape St. Vincent. . . . Commander Gorringe, when about 150 miles from the Strait of Gibraltar, found that the soundings decreased from 2700 fathoms to 1600 fathoms in the distance of a few miles. The subsequent soundings (five miles apart) gave 900, 500, 400, and 100 fathoms; and eventually a depth of 32 fathoms was obtained, in which the vessel anchored. The bottom was found to consist of live pink coral, and the position of the bank in lat. 36° 29' N., long. 11° 33' W."

The map on page 51 shows the position of these elevations. They must have been originally islands;--stepping-stones, as it were, between Atlantis and the coast of Europe.

Sir C. Wyville Thomson found that the specimens of the fauna of the coast of Brazil, brought up in his dredging-machine, are similar to those of the western coast of Southern Europe. This is accounted for by the connecting ridges reaching from Europe to South America.

A member of the *Challenger* staff, in a lecture delivered in London, soon after the termination of the expedition, gave it as his opinion that the great submarine plateau is the remains of "the lost Atlantis."

CHAPTER VI.

THE TESTIMONY OF THE FLORA AND FAUNA.

PROOFS are abundant that there must have been at one time uninterrupted land communication between Europe and America. In the words of a writer upon this subject,

"When the animals and plants of the Old and New World are compared, one cannot but be struck with their identity; all or nearly all belong to the same genera, while many, even of the species, are common to both continents. This is most important in its bearing on our theory, as indicating that they radiated from a common centre *after the Glacial Period*. . . . The hairy mammoth, woolly-haired rhinoceros, the Irish elk, the musk-ox, the reindeer, the glutton, the lemming, etc., more or less accompanied this flora, and their remains are always found in the post-glacial deposits of Europe as low down as the South of France. In the New World beds of the same age contain similar remains, indicating that they came from a common centre, and were spread out over both continents alike." (*Westminster Review*, January, 1872, p. 19.)

Recent discoveries in the fossil beds of the Bad Lands of Nebraska prove that the horse originated in America. Professor Marsh, of Yale College, has identified the several preceding forms from which it was developed, rising, in the course of ages, from a creature not larger than a fox until, by successive steps, it developed into the true horse. How did the wild horse pass from America to Europe and Asia if there was not continuous land communication between the two continents? He seems to have existed in Europe in a wild state prior to his domestication by man.

The fossil remains of the camel are found in India, Africa, South America, and in Kansas. The existing alpacas and llamas of South America are but varieties of the camel family.

The cave bear, whose remains are found associated with the hones of the mammoth and the bones and works of man in the caves of Europe, was identical with the grizzly bear of our Rocky Mountains. The musk-ox, whose relics are found in the same deposits, now roams the wilds of Arctic America. The glutton of Northern Europe, in the Stone Age, is identical with the wolverine of the United States. According to Rutimeyer, the ancient bison (*Bos priscus*) of Europe was identical with the existing American buffalo. "Every stage between the ancient cave bison and the European aurochs can be traced." The Norway elk, now nearly extinct, is identical with the American moose. The *Cervus Americanus* found in Kentucky was as large as the Irish elk, which it greatly resembled. The lagomys, or tailless hare, of the European eaves, is now found in the colder regions of North America. The reindeer, which once occupied Europe as far down as France, was the same as the reindeer of America. Remains of the cave lion of Europe (*Felix spelœ*),

a larger beast than the largest of the existing species, have been found at Natchez, Mississippi. The European cave wolf was identical with the American wolf.

Cattle were domesticated among the people of Switzerland during the earliest part of the Stone Period (Darwin's "Animals Under Domestication," vol. i., p. 103), that is to say, before the Bronze Age and the Age of Iron. Even at that remote period they had already, by long-continued selection, been developed out of wild forms akin to the American buffalo. M. Gervais ("Hist. Nat. des Mammifères," vol. xi., p. 191) concludes that the wild race from which our domestic sheep was derived is now extinct. The remains of domestic sheep are found in the debris of the Swiss lake-dwellings during the Stone Age. The domestic horse, ass, lion, and goat also date back to a like great antiquity. We have historical records 7000 years old, and during that time no similar domestication of a wild animal has been made. This fact speaks volumes as to the vast period, of time during which man must have lived in a civilized state to effect the domestication of so many and such useful animals.

And when we turn from the fauna to the flora, we find the same state of things.

An examination of the fossil beds of Switzerland of the Miocene Age reveals the remains of more than eight hundred different species of flower-bearing plants, besides mosses, ferns, etc. The total number of fossil plants catalogued from those beds, cryptogamous as well as phænogamous, is upward of three thousand. *The majority of these species have migrated to America.* There were others that passed into Asia, Africa, and even to Australia. The American types are, however, in the largest proportion. The analogues of the flora of the Miocene Age of Europe now grow in the forests of Virginia, North and South Carolina, and Florida; they include such familiar examples as magnolias, tulip-trees, evergreen oaks, maples, plane-trees, robins, sequoias, etc. It would seem to be impossible that these trees could have migrated from Switzerland to America unless there was unbroken land communication between the two continents.

It is a still more remarkable fact that a comparison of the flora of the Old World and New goes to show that not only was there communication by land, over which the plants of one continent could extend to another, but that man must have existed, and have helped this transmigration, in the case of certain plants that were incapable of making the journey unaided.

Otto Kuntze, a distinguished German botanist, who has spent many years in the tropics, announces his conclusion that "In America and in Asia the principal domesticated tropical plants *are represented by the same species.*" He instances the *Manihot utilissima*, whose roots yield a fine flour; the taro (*Colocasia esculenta*), the Spanish or red pepper, the tomato, the bamboo, the guava, the mango-fruit, and especially the banana. He denies that the American origin of tobacco, maize, and the cocoa-nut is proved. He refers to the *Paritium tiliaceum*, a malvaceous plant, hardly noticed by Europeans, but very highly prized by the natives of the tropics, and cultivated everywhere in the East and West Indies; it supplies to the natives of these regions so far apart their ropes and cordage. It is always seedless in a cultivated state. It existed in America before the arrival of Columbus.

But Professor Kuntze pays especial attention to the banana, or plantain. The banana is seedless. It is found throughout tropical Asia and Africa. Professor Kuntze asks, "In what way was this plant, which cannot stand a voyage through the temperate zone, carried to America?" And yet it was generally cultivated in America before 1492. Says Professor Kuntze, "It must be remembered that the plantain is a tree-like, herbaceous plant,

possessing no easily transportable bulbs, like the potato or the dahlia, nor propagable by cuttings, like the willow or the poplar. It has only a perennial root, which, once planted, needs hardly any care, and yet produces the most abundant crop of any known tropical plant." He then proceeds to discuss how it could have passed from Asia to America. He admits that the roots must have been transported from one country to the other by civilized man. He argues that it could not have crossed the Pacific from Asia to America, because the Pacific is nearly thrice or four times as wide as the Atlantic. The only way he can account for the plantain reaching America is to suppose that it was carried there when the North Pole had a tropical climate! Is there any proof that civilized man existed at the North Pole when it possessed the climate of Africa?

Is it not more reasonable to suppose that the plantain, or banana, was cultivated by the people of Atlantis, and carried by their civilized agricultural colonies to the east and the west? Do we not find a confirmation of this view in the fact alluded to by Professor Kuntze in these words: "A cultivated plant which does not possess seeds must have been under culture for a very long period--we have not in Europe a single exclusively seedless, berry-bearing, cultivated plant--and hence it is perhaps fair to infer that these plants *were cultivated as early as the beginning of the middle of the Diluvial Period.*"

Is it possible that a plant of this kind could have been cultivated for this immense period of time in both Asia and America? Where are the two nations, agricultural and highly civilized, on those continents by whom it was so cultivated? What has become of them? Where are the traces of their civilization? All the civilizations of Europe, Asia, and Africa radiated from the Mediterranean; the Hindoo-Aryans advanced from the northwest; they were kindred to the Persians, who were next-door neighbors to the Arabians (cousins of the Phœnicians), and who lived along-side of the Egyptians, who had in turn derived their civilization from the Phœnicians.

It would be a marvel of marvels if *one* nation, on *one* continent, had cultivated the banana for such a vast period of time until it became seedless; the nation retaining a peaceful, continuous, agricultural civilization during all that time. But to suppose that two nations could have cultivated the same plant, under the same circumstances, on two different continents, for the same unparalleled lapse of time, is supposing an impossibility.

We find just such a civilization as was necessary, according to Plato, and under just such a climate, in Atlantis and nowhere else. We have found it reaching, by its contiguous islands, within one hundred and fifty miles of the coast of Europe on the one side, and almost touching the West India Islands on the other, while, by its connecting ridges, it bound together Brazil and Africa.

But it may be said these animals and plants may have passed from Asia to America across the Pacific by the continent of Lemuria; or there may have been continuous land communication at one time at Behring's Strait. True; but an examination of the flora of the Pacific States shows that very many of the trees and plants common to Europe and the Atlantic States are not to be seen west of the Rocky Mountains. The magnificent magnolias, the tulip-trees, the plane-trees, etc., which were found existing in the Miocene Age in Switzerland, and are found at the present day in the United States, are altogether lacking on the Pacific coast. The sources of supply of that region seem to have been far inferior to the sources of supply of the Atlantic States. Professor Asa Gray tells us that, out of sixty-six genera and one hundred and fifty-five species found in the forests east of the Rocky Mountains, only thirty-one genera and seventy-eight species are found west of the mountains. The Pacific coast possesses no papaw, no linden or basswood, no locust-

trees, no cherry-tree large enough for a timber tree, no gum-trees, no sorrel-tree, nor kalmia; no persimmon-trees, not a holly, only one ash that may be called a timber tree, no catalpa or sassafras, not a single elm or hackberry, not a mulberry, not a hickory, or a beech, or a true chestnut. These facts would seem to indicate that the forest flora of North America entered it from the east, and that the Pacific States possess only those fragments of it that were able to struggle over or around the great dividing mountain-chain.

We thus see that the flora and fauna of America and Europe testify not only to the existence of Atlantis, but to the fact that in an earlier age it must have extended from the shores of one continent to those of the other; and by this bridge of land the plants and animals of one region passed to the other.

The cultivation of the cotton-plant and the manufacture of its product was known to both the Old and New World. Herodotus describes it (450 B.C.) as the tree of India that bears a fleece more beautiful than that of the sheep. Columbus found the natives of the West Indies using cotton cloth. It was also found in Mexico and Peru. It is a significant fact that the cotton-plant has been found growing wild in many parts of America, but never in the Old World. This would seem to indicate that the plant was a native of America; and this is confirmed by the superiority of American cotton, and the further fact that the plants taken from America to India constantly degenerate, while those taken from India to America as constantly improve.

There is a question whether the potato, maize, and tobacco were not cultivated in China ages before Columbus discovered America. A recent traveller says, "The interior of China, along the course of the Yang-tse-Kiang, is a land full of wonders. In one place piscicultural nurseries line the banks for nearly fifty miles. All sorts of inventions, the cotton-gin included, claimed by Europeans and Americans, are to be found there forty centuries old. Plants, yielding drugs of great value, without number, the familiar tobacco and potato, maize, white and yellow corn, and other plants *believed to be indigenous to America, have been cultivated there from time immemorial.*"



Bonafous ("Histoire Naturelle du Mais," Paris, 1826) attributes a European or Asiatic origin to maize. The word maize, (Indian corn) is derived from *mahiz* or *mahis*, the name of the plant in the language of the Island of Hayti. And yet, strange to say, in the Lettish and Livonian languages, in the north of Europe, *mayse* signifies bread; in Irish, *maise* is food, and in the Old High German, *maz* is meat. May not likewise the Spanish *maiz* have antedated the time of Columbus, and borne testimony to early intercommunication between the people of the Old and New Worlds?

It is to Atlantis we must look for the origin of nearly all our valuable plants. Darwin says ("Animals and Plants under Domestication," vol. i., p. 374), "It has often been remarked that we do not owe a single useful plant to Australia, or the Cape of Good Hope--countries abounding to an unparalleled degree with endemic species--or to New Zealand, or to America south of the Plata; and, according to some authors, not to America north of Mexico." In other words, the domesticated plants are only found within the limits of what I shall show hereafter was the Empire of Atlantis and its colonies; for only here was to be found an ancient, long-continuing civilization, capable of developing from a wild state those plants which were valuable to man, including all the cereals on which to-day civilized man depends for subsistence. M. Alphonse de Candolle tells us that we owe 33 useful plants to Mexico, Peru, and Chili. According to the same high authority, of 157

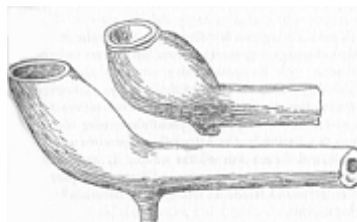
valuable cultivated plants 85 can be traced back to their wild state; as to 40, there is doubt as to their origin; while 32 are utterly unknown in their aboriginal condition. ("Geograph. Botan. Raisonnée," 1855, pp. 810-991.) Certain roses--the imperial lily, the tuberose and the lilac--are said to have been cultivated from such a vast antiquity that they are not known in their wild state. (Darwin, "Animals and Plants," vol. i., p. 370.) And these facts are the more remarkable because, as De Candolle has shown, all the plants historically known to have been first cultivated in Europe still exist there in the wild state. (*Ibid.*) The inference is strong that the great cereals--wheat, oats, barley, rye, and maize--must have been first domesticated in a vast antiquity, or in some continent which has since disappeared, carrying the original wild plants with it.



CEREALS OF THE AGE OF STONE IN EUROPE

Darwin quotes approvingly the opinion of Mr. Bentham (Hist. Notes Cult. Plants"), "as the result of all the most reliable evidence that none of the Cerialia--wheat, rye, barley, and oats--exist or have existed truly wild in their present state." In the Stone Age of Europe five varieties of wheat and three of barley were cultivated. (Darwin, "Animals and Plants," vol. i., p. 382.) He says that it may be inferred, from the presence in the lake habitations of Switzerland of a variety of wheat known as the Egyptian wheat, and from the nature of the weeds that grew among their crops, "that the lake inhabitants either still kept up commercial intercourse with some southern people, or had originally proceeded as colonists from the south." I should argue that they were colonists from the land where wheat and barley were first domesticated, to wit, Atlantis. And when the Bronze Age came, we find oats and rye making their appearance with the weapons of bronze, together with a peculiar kind of pea. Darwin concludes (*Ibid.*, vol. i., p. 385) that wheat, barley, rye, and oats were either descended from ten or fifteen distinct species, "most of which are now unknown or extinct," or from four or eight species closely resembling our present forms, or so "widely different as to escape identification;" in which latter case, he says, "man must have cultivated the cereals at an *enormously remote period*," and at that time practised "some degree of selection."

Rawlinson ("Ancient Monarchies," vol. i., p. 578) expresses the opinion that the ancient Assyrians possessed the pineapple. "The representation on the monuments is so exact that I can scarce] doubt the pineapple being intended." (See Layard's "Nineveh and Babylon," p. 338.) The pineapple (*Bromelia ananassa*) is supposed to be of American origin, and unknown to Europe before the time of Columbus; and yet, apart from the revelations of the Assyrian monuments, there has been some dispute upon this point. ("Amer. Cyclop.," vol. xiii., p. .528.)



ANCIENT IRISH PIPES

It is not even certain that the use of tobacco was not known to the colonists from Atlantis settled in Ireland in an age long prior to Sir Walter Raleigh. Great numbers of pipes have been found in the raths and tumuli of Ireland, which, there is every reason to believe, were placed there by men of the Prehistoric Period. The illustration on p. 63 represents some of the so-called "Danes' pipes" now in the collection of the Royal Irish Academy. The Danes entered Ireland many centuries before the time of Columbus, and if the pipes are theirs, they must have used tobacco, or some substitute for it, at that early period. It is probable, however, that the tumuli of Ireland antedate the Danes thousands of years.



ANCIENT INDIAN PIPE, NEW JERSEY

Compare these pipes from the ancient mounds of Ireland with the accompanying picture of an Indian pipe of the Stone Age of New Jersey. ("Smithsonian Rep.," 1875, p. 342.)

Recent Portuguese travellers have found the most remote tribes of savage negroes in Africa, holding no commercial intercourse with Europeans, using strangely shaped pipes, in which they smoked a plant of the country. Investigations in America lead to the conclusion that tobacco was first burnt as an incense to the gods, the priest alone using the pipe; and from this beginning the extraordinary practice spread to the people, and thence over all the world. It may have crossed the Atlantic in a remote age, and have subsequently disappeared with the failure of retrograding colonists to raise the tobacco-plant.