

Atlantis: Lost Kingdom of the Andes

Part II

J.M. Allen

Independent, United Kingdom

ABSTRACT

From the many sites put forward as the location of Atlantis, if any progress is to be made in identifying the true location of Atlantis, then each site has to be examined in turn and either discarded if considered inappropriate as per Plato's description, or investigated further until an adequate solution to the Atlantis mystery is obtained.

1. WHAT CAN BE PROVED

There is no 100% word for word solution which provides a continental landmass opposite the Pillars of Hercules but now sunk beneath the sea and which attempted to enslave Egypt and Athens in 9,600BC. If we accept that Plato's story has a basis in real events as opposed to pure literary invention, then we should look for other solutions to Plato's mystery. At the end of the day we have to consider what can be proved, what is probable but not proved, what might be an embellishment by Plato or what might be borrowed from other histories or legends and incorporated into the Atlantis tale.

Since Plato wanted to use Atlantis as an example of a nation defeated by his earlier version of Athens, he might have built upon the geographic description of Atlantis/South America adding to it the description of the war against Egypt by the Sea Peoples also brought from Egypt, or even including more recent events such as the defeat of the Persians by the Greeks following the invasion of the Greek homeland by the Persian army and navy.

So for the present time, I would be inclined to propose a two-part solution. Firstly that the Geographic description of Atlantis is based on a geographic description of South America and secondly that the war which Plato described is based upon a series of events which began with the Greek conquest of Troy, continued with the invasion of Egypt and the eastern Mediterranean by the Sea Peoples, followed by the repulse of the Greek colonies on the Asian mainland and the invasion of Greece itself by Persian allied forces and ultimately the defeat of the Persians at the hands of the Greeks.

Whether a great city ever existed in the manner Plato described it is impossible to say. Destruction by earthquakes would also include landslides and in the area of Pampa Aullagas in Bolivia,

liquefaction, a process whereby stones are sucked down beneath the ground and fine particles of sand thrown up and the site today remains covered in fine particles of sand.

We can say that all of the geographic description relates to the Altiplano, the rectangular plain and particularly the metals, also the legend of the twins, another feature of the Andes also represented in metallurgy and pottery with “twin” pots being very common. The orichalcum (gold/copper alloy) as tumbaga is a unique feature of the Andes and central America.

Concentric channels exist at Pampa Aullagas as does the red, black and white stones and it was common practice in ancient Peru to plate all the temples in sheets of gold and silver as well as to make golden statues of their ancestors as Plato described. So it does seem probable that there may have been some sort of temples on the site, though the “racecourse for horses” is one of those improbable features probably drawn from other legends or Plato’s embellishments.

Since Plato described in detail the army of Atlantis and the method of the rider “springing from horse to horse”, it may be possible for some reader to analyse the armies of the “Sea Peoples” to see if any of the details of the chariots etc apply to them, or if any other ancient armies used chariots in the configuration mentioned by Plato. Certainly his navy for Atlantis with 1200 ships has reminiscences of Homer’s Trojan War where 1200 ships were sent by the Greeks against Troy but also is found in Herodotus the Greek historian (484BC– 425BC) as the size of the Persian fleet in the Persian wars against Greece. (VII, 89, Herodotus 1966).

And could this great invasion fleet of the Persians be the same that Plato used to base his Atlantis story upon, since they in turn were beaten by the Greeks both on land and by sea, so that was "the finest achievement of the Greeks"?

Although this latter event taking place around 499 to 479BC was later than when Solon visited Egypt it was also before Plato wrote his Atlantis story, so could have inspired him in his description of the war between Atlantis and Athens.

After all, his stated purpose in the Atlantis story was to find a worthy enemy that his ideal state of Athens could be seen to have defeated in war, to show how good his theoretical system of government for Athens would be.

So could this be part of one of those other legends grafted onto the Atlantis story as suggested by Robert Graves (Graves 1955) or even Plutarch in his “Life of Solon”?

“Now Solon, having begun the great work in verse, the history or fable of the Atlantic Island, which he had learned from the wise men in Sais, and thought convenient for the Athenians to know, abandoned it; not, as Plato says, by reason of want of time, but because of his age ...

Plato, willing to improve the story of the Atlantic Island, as if it were a fair estate that wanted an heir and came with some title to him, formed, indeed, stately entrances, noble enclosures, large courts, such as never yet introduced any story, fable, or poetic fiction; but, beginning it late, ended his life before his work; ... so Plato, amongst all his excellent works, left this only piece about the Atlantic Island imperfect.” (Plutarch 75AD)

Did the empire of Atlantis include allies such as the Phoenicians and proto-Persian empire? Herodotus may provide the second part of the solution as mentioned above.

The answer is given in the very opening chapter of his collection of Histories, Book I. That the Persian invasion of Greece was a retaliation for the Trojan War is explained by Herodotus on the first

page of his Histories where even he thinks it was unreasonable for the Greeks to have attacked Troy on the pretext of the Trojans having carried off Helen.

“According to the Persians best informed in history, the Phoenicians began the quarrel. This people, who had formerly dwelt on the shores of the Erythraean Sea, having migrated to the Mediterranean and settled in the parts which they now inhabit, began at once, they say, to adventure on long voyages, freighting their vessels with the wares of Egypt and Assyria. ... The women were standing by the stern of the ship intent upon their purchases, (at Argos) when the Phoenicians, with a general shout, rushed upon them. The greater part made their escape, but some were seized and carried off. Io (daughter of the king of Argos) herself was among the captives. The Phoenicians put the women on board their vessel, and set sail for Egypt. Thus did Io pass into Egypt, according to the Persian story, which differs widely from the Phoenician: and thus commenced, according to their authors, the series of outrages.

At a later period, certain Greeks, with whose name they are unacquainted, but who would probably be Cretans, made a landing at Tyre, on the Phoenician coast, and bore off the king's daughter, Europe. In this they only retaliated; but afterwards the Greeks, they say, were guilty of a second violence. They manned a ship of war, and sailed to Aea, a city of Colchis, on the river Phasis; from whence, after despatching the rest of the business on which they had come, they carried off Medea, the daughter of the king of the land.

In the next generation afterwards, according to the same authorities, Alexander the son of Priam, bearing these events in mind, resolved to procure himself a wife out of Greece by violence. Accordingly he made prize of Helen ...

Hitherto the injuries on either side had been mere acts of common violence; but in what followed the Persians consider that the Greeks were greatly to blame, since before any attack had been made on Europe, they led an army into Asia. ... The Asiatics, when the Greeks ran off with their women, never troubled themselves about the matter; but the Greeks, for the sake of a single Lacedaemonian girl, collected a vast armament, invaded Asia, and destroyed the kingdom of Priam. Henceforth they ever looked upon the Greeks as their open enemies. For Asia, with all the various tribes of barbarians that inhabit it, is regarded by the Persians as their own; but Europe and the Greek race they look on as distinct and separate.

Such is the account which the Persians give of these matters. They trace to the attack upon Troy their ancient enmity towards the Greeks.”

It seems probable that the war which Plato described began with the Trojan War when the Greeks crossed over to attack Troy and all the Trojan allies.

After the defeat of Troy, Greek settlements expanded on the coast either side of Troy and according to Herodotus, the original inhabitants of this area set off to found a new colony in what became Tyrennia (Etruria or Tuscany).

Then the war continued with what we might call the counter-attacks and invasions of what are called "The Sea Peoples" but were actually an alliance of various nations.

Then several years later the Persians expanded their empire to the west, and with the aid of their many allies including the Phoenicians, re-conquered the coast around Troy and crossed over to attack Greece.

Athens was burned, but the Persian army was defeated by the Greeks and the Athenians rebuilt their city and re-established their cities on the other side of the Aegian on the coast of what is now Turkey, making for themselves an Athenian empire or league.

In 462BC Egypt rebelled against their Persian overlords and assistance in the form of triremes and men was provided by Athens.

Could this be what Plato meant in Timaeus 25B when he said as related by the Egyptians to Solon, “And then it was, Solon, that the manhood of your State showed itself conspicuous for valor and might in the sight of all the world. For it stood pre-eminent above all [25c] in gallantry and all warlike arts, and acting partly as leader of the Greeks, and partly standing alone by itself when deserted by all others, after encountering the deadliest perils, it defeated the invaders and reared a trophy; whereby it saved from slavery such as were not as yet enslaved, and all the rest of us who dwell within the bounds of Heracles it ungrudgingly set free.”

Whether the Sea Peoples (which was a large confederation of different nations) actually contained contingents from Atlantis/South America at first glance seems improbable, yet with Atlantis we have to think the unthinkable. After all, the Sea Peoples attacked Egypt from Libya and controlled islands in the Mediterranean and Atlantis according to Plato, similarly was a confederacy controlling Libya and Europe up to Tuscany in Italy, with presumably the islands in between.

So the Sea Peoples could have been part of the Asian/proto Persian Alliance and it is very noticeable that some of them wore feathered headdresses similar to South American Indians, whilst the Persians and Medes adopted a hat called a tiara which instead of actual feathers appears to have fluted supports resembling feathers.



Figure 1. From the left, Assyrian god with eagle head and feathered headdress, Aztec warrior with eagle head mask, Elamite headdress 1000BC, Persian headgear, South American Indian headdress

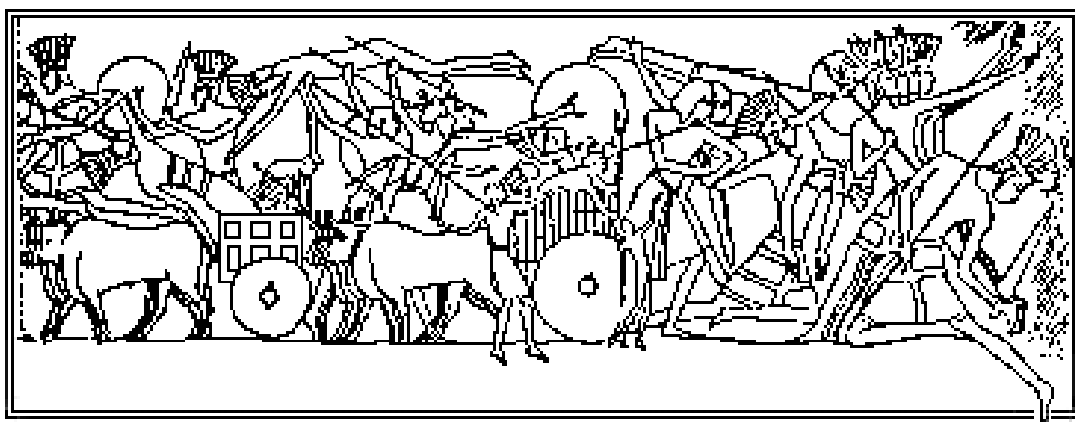


Figure 2. Sea Peoples with high feathered headdresses, the similarity to the South American headdress in the previous illustration is striking.

Herodotus also mentions another interesting feature of the Medes and Persians which may relate to Atlantis. He tells us that when the first capital of the Medes was established at Ecbatana, it had "*circles one within the other. And this wall is so contrived that one circle is higher than the next by the height of the battlements alone. And to some extent, I suppose, the nature of the ground, seeing that it is on a hill, assists towards this end; but much more was it produced by art, since the circles are in all seven in number. And within the last circle are the royal palace and the treasure-houses. The largest of these walls is in size about equal to the circuit of the wall round Athens; and of the first circle the battlements are white, of the second black, of the third crimson, of the fourth blue, of the fifth red: thus are the battlements of all the circles coloured with various tints, and the two last have their battlements one of them overlaid with silver and the other with gold.*" (Herodotus Book 1, 98)

It seems that there may have been more than one city with circular defensive walls in ancient Persia, but so far the circular walls have not been found at Ecbatana.

Circular defensive walls do however exist at the ancient Persian city of Susa, where the site has a remarkable resemblance to that at Pampa Aullagas, being "open" on the south and with a bastion-like feature on the south-east.



Figure 3. Concentric circular fortifications and site of palace in Susa, Iran.

Further research tells us that king Memnon (Memnon 2009) built the circular walls at Ecbatana and also at Susa, but, here is another interesting part, that King Memnon was a nephew of King Priam of Troy, he is said to have ruled all the way from Susa to Troy and came to the aid of the Trojans with a large army until being killed on the battlefield by Achilles. Since both the fortifications at Ecbatana and Susa had the same form, they may possibly have been modelled on earlier fortifications such as those of Atlantis which Memnon may have heard of through his mother, Eos - which means "titan of the dawn" and said to have dwelt originally on the edge of Oceanus.

It is sometimes said that the early founders of Susa were Ethiopians and Herodotus lists (book VII, 69) Ethiopians as amongst the allies of the Persians in the Persian Wars lead by Xerxes invading Greece in 480-478BC. Herodotus also considered there to be two Ethiopias, one where the sun rose and the other where the sun set by the streams of Ocean, that is an eastern and a western Ethiopia which in book VII, 70, was identified with Libya.

So again we have a link with Atlantis which was said to have ruled Libya up to the frontier of Egypt, or with the “Ethiopians” or Libyans as part of an alliance coming to the aid of the Trojans.

2. VERIFYING ATLANTIS CLAIMS

There are so many unsubstantiated claims to have “discovered Atlantis” that these can only serve to give the subject a bad press.

Plato left quite a long and detailed geographic description of Atlantis and these days, with the available cartographic and other resources, it is fairly simple for anyone to verify or discredit any of the claims made.

For example, my editor just forwarded to me a copy of an article published in the Spanish newspaper “El Mundo” on 8th August 2004. This article by Beatriz Elola (Elola 2004) is about Atlantis and informs us that according to Ulf Erlingsson, “Atlantis is Ireland”. (Erlingsson 2005).

According to this report, “Erlingsson states that Atlantis, flat in the centre and surrounded by mountains, could only correspond to Ireland. Besides, he adds the dimensions of both Atlantis and Ireland coincide exactly, 300 miles long by 200 miles wide, being wider in the centre.”

Well, that should be easy to verify so I pulled out my handy world Atlas and a ruler. Firstly, in the centre of Atlantis was said to be a flat, rectangular plain, surrounded by mountains. It was this plain which measured 3,000 x 2,000 stades (300 nautical miles x 200 nautical miles or 556 kilometres x 370 kilometres) not the whole island which must have been considerably larger since the plain of Atlantis was only one of 10 kingdoms.

From my atlas, I could verify that in reality Ireland measures 260 miles from north to south and 180 from west to east, which in nautical miles necessary to correspond to stades, would be 225 long by 156 miles ... hardly the exact correspondence claimed by Erlingsson.

This is a process which can be repeated for any site claiming to be Atlantis. If it does not have a rectangular level plain in the dimensions of 3,000 x 2,000 stades or the ratio of 3,000 x 2,000 units depending on the interpretation of the stade, then it is not Atlantis.

Some examples. At the 2008 Atlantis conference in Athens, it was claimed that the island of Sicily was Atlantis. (Franke 2008). According to this claim, the level rectangular plain of Atlantis is to be found on the east side of the island and an illustration was provided both in the conference and also, fortunately, on his webpage, which means it can be checked geographically.

The Internet provides an excellent tool for this purpose in Google Earth. With this satellite-image viewing program any site in the world can be visited and viewed from space, with varying degrees of magnification. It doesn't take long to find Sicily, then to zoom in on the supposed Atlantis plain on the eastern side.

Google Earth provides a measuring tool. Go to “tools”, click on “ruler”, then choose between nautical miles, kilometres or feet or metres. In this case, the area claimed by Franke measures 20 nautical miles long by 9.7 nautical miles wide (38 kilometres long by 18 kilometres wide). Hardly the great plain of Atlantis which Plato described.

The same process can be followed for other claimants, such as the south of Spain, namely Andalusia. There is no level rectangular plain in the dimensions Plato gave or in the ratio Plato gave in Andalusia.

Then there is my favourite, Crete. In order to make Atlantis fit on Thera, some people claim that the level plain was therefore on Crete and you supposedly divide the dimensions by 10 to make it fit on

Crete. I wonder if they actually tried it? I have, I also built a model. There is no perfectly level, rectangular plain on Crete, and in any case if you take Plato's dimensions and divide them by 10, the plain would still be too large to fit on Crete.

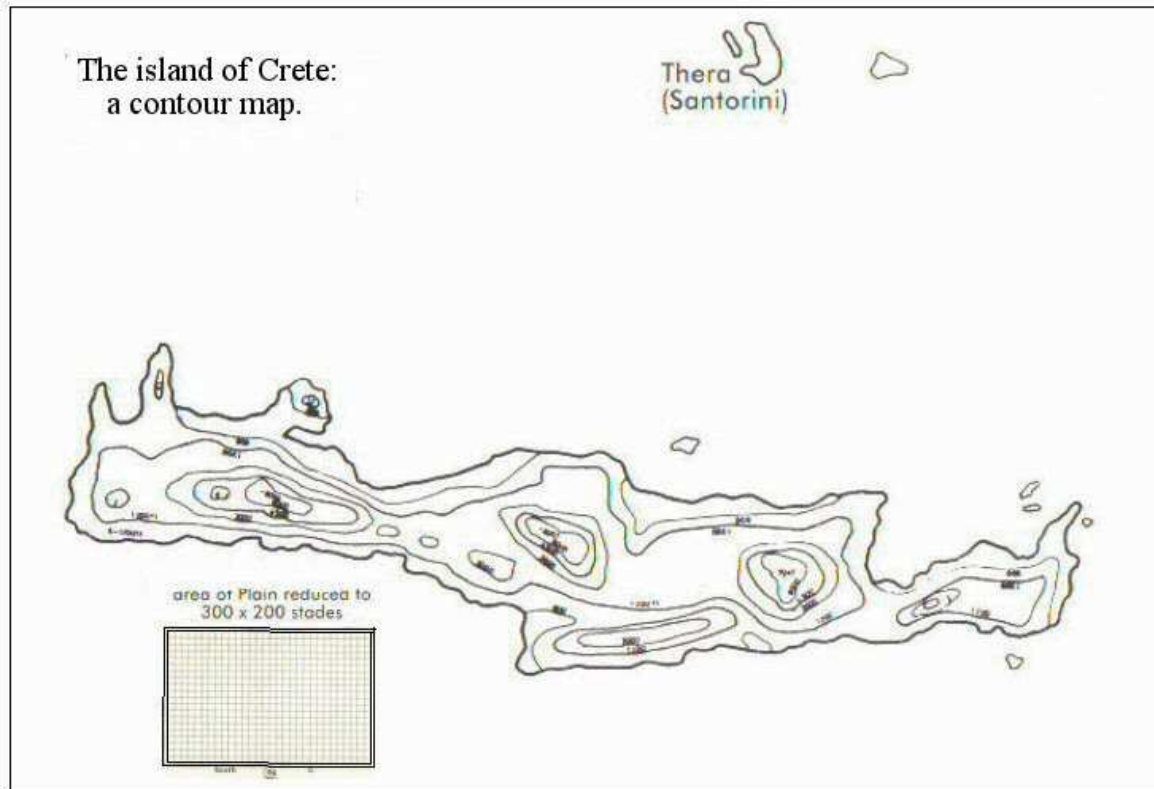


Figure 4. Contour map showing the plain reduced in size by dividing by 10, - it would still be too large to fit on Crete.

In all these cases of trying to fit Atlantis into a Mediterranean location, the claimants usually state that the Pillars of Hercules were not at Gibraltar, but either at the Straits of Messina (Franke) or even further east in the Mediterranean, ignoring the statement by the Greek geographer Strabo (18AD) who tells us specifically that the Pillars were the mountains of Calpe on the Gibraltar side and Abilyx, the mountain in Libya on the opposite side whilst others had the opinion that the pillars were actual pillars set up in the temple of Hercules on the island of Gades (modern Cadiz) or other locations nearby.

In any case, no matter where you wish to place the Pillars, Plato (Timaeus 24E) tells us that Atlantis was at “a distant point in the Atlantic Ocean” (Bury [1929] translation) or “they came forth out of the Atlantic ocean” (Jowett [1893] translation) – it “advanced from its base in the Atlantic Ocean” (Desmond Lee [1995] translation) and was “larger than Libya and Asia combined”.

So that, at the outset, rules out most locations in the Mediterranean.

3. VALUE OF THE STADE

Plato tells us that throughout his story of Atlantis, Greek names have been used to make it agreeable to his readers. Examples of these could be trireme for ship, hoplite for warrior, bulls for the animal used for sacrifice and the stade, which was a Greek unit of measurement intended to be a 1/10th of a minute of latitude. So the stade correspondingly measured according to Berriman (1953) 607.5

English feet or 185.166 metres. Since this distance was divided into 600 Greek feet, each Greek foot would have been 12.15 English inches (308.61 mm).

There is a difference in the length of a foot between “Egyptian” feet, “Greek” feet and “Babylonian” feet because in each case they were derived from the latitude of the observer, Athens, Alexandria and Babylonia being at different latitudes would have slight differences in the length of the foot, whereas the English foot is based on a different system namely the division of the polar diameter of the planet which gives an invariable unit of 12 inches (304.8 mm) to the English foot.

If we could locate the actual plain of Atlantis, we could then measure it to see what size stade might have been used in comparison to Plato’s Greek stade.

Ulf Richter (2005) wrote an excellent paper on Atlantis which he presented to the 2005 Milos conference and which I found on the Internet. In it he speculates that the stade used in Atlantis might be the Egyptian unit called a “khet” of 172 feet (52.4 metres) which was 100 Egyptian Royal Cubits.

It is also clear however, that the word “stade” has been inserted inconsistently where different units have actually have been used.

From the dimensions of the rectangular plain found in Bolivia called the Altiplano, it is possible to measure it in the way Plato described - upwards from the sea (meaning Lake Poopo) and it measures 3,000 x 2,000 “stadestades” of about 300 feet (92.5 metres), that is, half a Greek stade and would be consistent with a unit which was a 1/20th of a minute of latitude. This would also fit in with South American systems of measurement since both the Mayans and Aztecs counted in 20’s and the calendar at Tiwanaku (Bolivia) is also based on divisions of 20. The 300 foot stade is also the length of the base of the tower of Babylon, called a “furlong” by Herodotus, but today a furlong is 660 feet so what Herodotus found was a “half-furlong” or “half-stade”. (book I, 181, Herodotus, 1966).

If the Bolivian plain had been measured in Sumerian cubits, then it could equally well have been in units 297 ft long, since that would have been stades of 180 Sumerian cubits.

In the case of the circular formation found at Pampa Aullagas, the “best fit” for the zones of canals has been found to be a stade of 165 feet (50.3 metres) which is also an ancient Sumerian unit of measurement of 100 Sumerian cubits and not far from the 172 ft (52.4 metre) stade called the khet proposed by Ulf Richter.

The whole area south of Oruro is covered in parallel straight canals which measure about 5 feet (1.5 metres) wide.

A similar network of straight canals about this width has also been found covering a vast area of the Beni, another region of Bolivia at a lower altitude to the east of the Altiplano. Satellite images also show ancient canals in parallel straight lines along both sides of the rio Parana extending into the swamp area of the Pantanal bordering Paraguay and Bolivia and an analysis by satellite imagery of ancient canals and plots in the Olmec territory of Vera Cruz in Mexico provides a key to Plato’s stade and the plots of Atlantis. See <http://www.atlantisbolivia.org/atlantisstade.htm> for photos.

These plots seem to be set out on average in blocks of 1650 feet (502.92 metres). This means that each side would be 10 Sumerian "stadestades" or “khet” of 165 feet such as found for the circular complex of the Atlantis site at Pampa Aullagas. Each side would also measure 1,000 "Sumerian" cubits of 19.8" (502.92 mm).

This is consistent with Plato's description that in Atlantis, the size of the allotment was 10 x 10 stades, but here we have the same problem that perhaps the ancient translators had – what to actually

call the units because “Stade” was used to describe the unit measuring the plain of Atlantis which in fact was a unit of 297 feet, whereas this smaller “stade” of 165 feet is similar to the Egyptian unit called “khet” except that it measured 100 *Sumerian* cubits instead of Egyptian cubits. (150 Sumerian feet) [50.292 metres].

This is additionally consistent with the size of a plot of land in ancient Egyptian times which was based on the Egyptian unit called "khet" which measured 100 cubits long and a square area called "setat" which was 1 khet x 1 khet making 100 x 100 cubits.

In Egypt the standard award of a plot of land consisted in 10 "setat" usually in the form of a strip of land 100 cubits wide by 1,000 cubits long called "a thousand of land" whereas warriors were usually awarded 12 “setat” which Herodotus (II, 168) called 12 “arurae”.

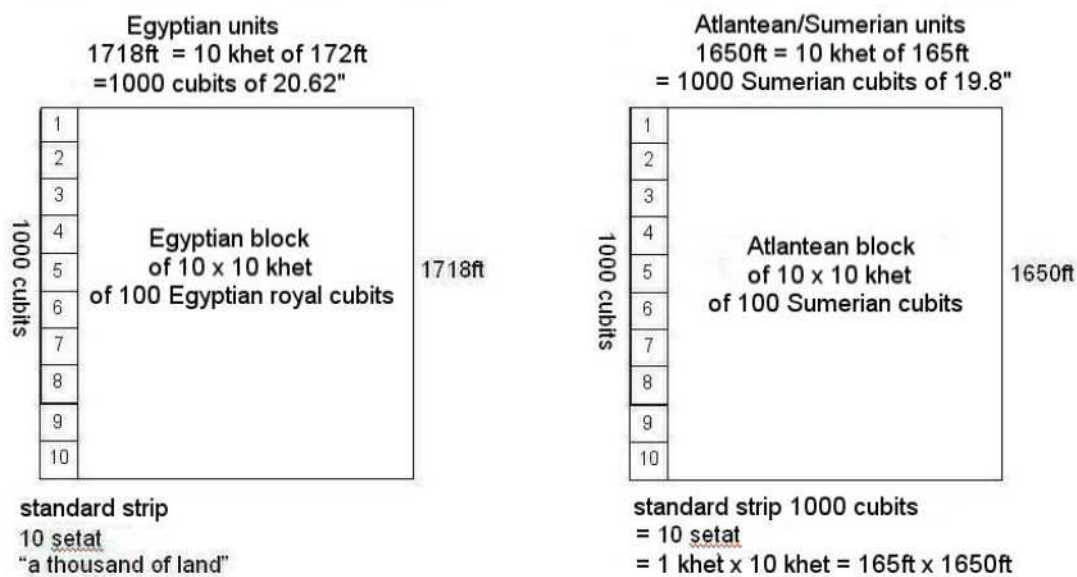


Figure 5. Comparison of Egyptian plot and Atlantean plot as found in Olmec territory

According to Plato, the Atlantean plain measured 3,000 x 2,000 stades: the distance between the principal canals on the plain was 100 stades, and the allotments were 10 x 10 stades so if each “stade” were 297 ft the distance between canals would be 29,700 ft forming divisions which each contain 100 allotments making 60,000 allotments all told.

Alternatively, each division could also contain 18 x 18 blocks of the smaller stade called khet i.e. 18 x 18 blocks of 10 x 10 khet of 165 ft and each block of 10 x 10 khet (1000 x 1000 cubits) supported 10 x landholder strips of 10 setat.

Proportionately, each of Plato’s allotments of 10 x 10 stades of 297 ft would enclose 18 x 18 setat of 100 x 100 cubits with divisions into landholder’s strips of 10 “Atlantean” setat making 6.25 acres (2.75 hectares) per landholder or “warriors” strips of 12 setat making 7.5 acres or 3 hectares per warrior. With each allotment containing 18 x 18 or 324 setat, they could be conveniently divided into 18 landholder’s strips of 10 setat plus 12 warriors strips of 12 setat, though in practice land was usually allocated on the basis of needs per family with multiples of the fundamental unit of 1 setat of 100 x 100 cubits being a useful basic measure for allocation.

The division of land into blocks of 10 x 10 khet with further divisions into strips of 1 khet x 10 khet making 10 setat per landholder would have been consistent with Inca numerical systems since they also used the decimal system.

The Inca political system was also organised by tens. Each governor of an area had 10 district governors who controlled 10,000 peasants. The chief of a village might control 10 foremen who each controlled 10 groups containing bosses who at the lowest level controlled 10 peasants.

Since the Spanish Conquistadors also brought with them to the Americas a yard or 'vara' of 33.0" which obviously had its origin in the Sumerian yard, it might be difficult to identify some irrigation channels or plots which could have been constructed post conquest as compared to those which were pre-conquest in origin. Consequently I thought it may be worthwhile to look at the pre-Conquest city of Teotihuacan in Mexico which dates to 150 AD to see if any evidence of the 33.0" yard and other "Sumerian" measurements existed there.

Other investigators such as Hugh Harleston jnr considered Teotihuacan to be built in measures of 1.059 metres which would be 2 x cubits of 20.85" making what he called one *hunab* (compare to 2 x Egyptian Royal cubits of 20.625" making 1 *hunab*)

A study by Saburo Sugiyama, (Sugiyama 2005), professor at Aichi Prefectural University in Japan and research professor at Arizona State University, highlights the difficulties of establishing a fixed unit of measurement for Teotihuacan. The ruined state of the monuments has been a factor, also the fact that reconstruction has taken place and is still taking place etc.

Prof Sugiyama proposed a unit of 830 mm for Teotihuacan. This would be a yard of 32.68" and very close to the "megalithic yard" of 32.64" found by Prof A. Thom for the megalithic sites in Britain. (Thom 1967).

Prof Sugiyama quotes a study by Drewitt and Drucker (Drucker 1971) which found a unit of 805 mm (31.692").

The Sumerian basic units were a "shusi" of 0.66", link of 12 shusi (7.92"), foot of 20 shusi (13.2") cubit of 30 shusi (19.8"), yard of 50 shusi (33.0") and double yard of 100 shusi (66.0").

For larger distances, the pole of 16.5 feet (15 Sumerian feet) was used, along with a chain of 66 feet (60 Sumerian feet which was 100 links) and furlong of 660 feet (600 Sumerian feet).

Looking back to Drewitt and Druckers figure of 805 mm (31.692") we can readily see that in place of a yard of 50 shusi, they have been calculating in yards of 48 shusi (4 x links) since $48 \times 0.66" = 31.68" = 804.7$ mm and their study in itself provides evidence of the use of "Sumerian" measurement units at Teotihuacan.

It seems more probable that the site would be set out in multiples of units called Sumerian feet (of 13.2"), Sumerian cubits of 19.8" and Sumerian yards of 33.0" but it seems these Sumerian units were unknown to Drewitt and Drucker.

It had also been noticed, that some of the measurements in Teotihuacan appeared to be in round numbers of metres. This is because the Sumerian measurements in some instances are indeed very close to round numbers of metres, for example 10 metres would be 19.88 Sumerian cubits – virtually 20 Sumerian cubits. And both the metre and the Sumerian cubits had as their origin the circumference of the Earth. Dividing the circumference of the Earth by 360 then by 60 gives a mean

geographic mile of 6076.824 ft (1,852.216 metres) which can then be divided by 6,000 to give a geographic foot of 12.15” (308.7 mm) and geographic cubit of 18.23” (463 mm).

Alternatively, the mean geographic mile can be divided by 5,000 to give an Egyptian “remen” of 14.584” (370.44 mm). When used as the sides of a square, the Egyptian remen of 14.58” gave rise to a diagonal of 20.625” which was the Egyptian Royal Cubit (sometimes known as the 525 mm cubit).

In turn, the Sumerian cubit of 19.8” was 24/25th of the Egyptian royal cubit and although known as “Egyptian” or “Sumerian” units, in fact they all belong to the same measuring system which can be seen in the Olmec plot of 100 Sumerian cubits, which was also 150 Sumerian feet, 60 Sumerian yards, 48 Mayan hunabs of 41.25” or 96 Egyptian royal cubits of 20.625”. It could thus be divided by tens, halves, eighths, quarters or thirds and it was this division which determined whether the result came out in “Egyptian” or “Sumerian” cubits etc.

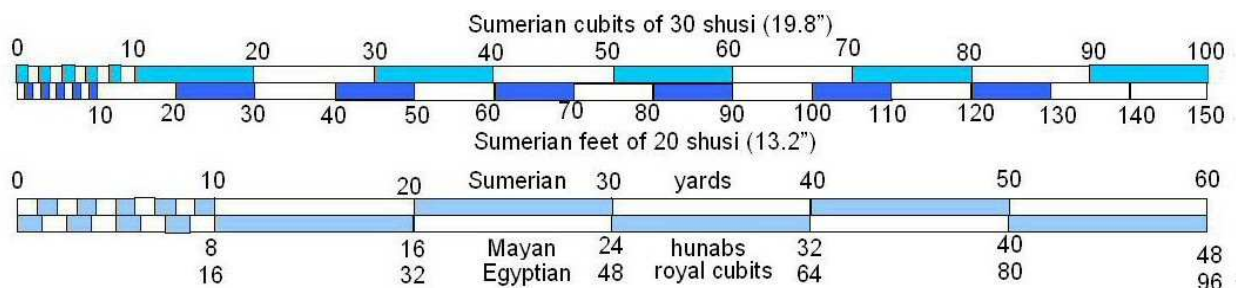


Figure 6. Scalebar showing the relationship between “Egyptian” and “Sumerian” cubits and how they originally belonged to the same system.

Using satellite imagery, in Sumerian feet, from the front of the Moon pyramid at Teotihuacan to the nearside of the “Citadel” is 5,000 Sumerian feet, which would also be 2,000 Sumerian yards, 1,000 double-Sumerian yards of 100 shusi, 3,200 Egyptian royal cubits or 1600 Mayan hunabs.

From the southern side of the Sun pyramid enclosure to the near side of the citadel enclosure would be 2,400 Sumerian feet, 1,600 Sumerian cubits, 960 Sumerian yards, 480 Sumerian double-yards, 1,536 Egyptian royal cubits or 768 Mayan hunabs. So if the plan were set out in round numbers it looks like there is a greater preponderance of round numbers in "Sumerian" feet than in "Mayan hunabs", but in the end, they are all part of the same measuring system.

The satellite measured the intended distance between the Pyramid of the Sun and the Pyramid of the Moon as 2,640 feet which would be 2400 Sumerian feet. In Sumerian units, it would also be 1600 cubits, 4000 links or 4800 shusi. In the units of Drewitt and Drucker which was 4 x links or 48 shusi, it would be 1,000 of these units, confirming that Drewitt and Drucker had made a correct assessment, but using different multiples of *shusi*. (Teotihuacan 2009)

Since measurements made by satellite image are not as accurate as those made on the ground, reference was also made to a detailed survey made by a company called CyArk (CyArk 2009) using the latest laser technology, particularly at a site called Chichen Itza in Yukatan where the pyramid called the pyramid of Kukulcan or Quetzalcoatl is to be found.

CyArk provided accurate dimensional drawings of this pyramid as well as actual measurements established on site. From the site measurements, the width of the temple on top of the pyramid at El Castillo using measurements provided by CyArk came to 15.11 metres = 45.06 Sumerian feet of 13.2” which is 30.04 Sumerian cubits of 19.2” or 18.02 Sumerian yards of 33.0” (El Castillo 2009).

Additionally, scaled measurements from the drawings showed the width of the temple in plan view to be 200 Sumerian feet and the sloping stepped sides of the temple as 100 Sumerian feet, or if you prefer, 96 Egyptian Royal cubits or 48 Mayan hunabs.

These figures seem to confirm that all the above measurements although attributed to varying countries as far apart as Sumeria, Egypt and Mexico, were originally part of a unified system as seen at Teotihuacan and explains why sometimes “Egyptian” and sometimes “Sumerian” measurements are found at the same site.

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also <http://www.atlantisbolivia.org> for further photos and text.