

Was Atlantis a Bronze Age Metropolis in Northafrica?

U. Hofmann

Independant Researcher, Germany

ABSTRACT

No doubt about Plato's intension: The Atlantis tale was placed to illustrate the *'Ideal State'* developed in his earlier work *'Politea'*. Repeatedly that fact was used to claim the Atlantis tale was pure fiction. But neither Prehistoric Athens nor the description of Atlantis show sufficient correspondence with the Ideal State. Plato admits the Atlantis tale was unperfect but emphasizes the tale's merit: its authenticity. When Plato wrote down *'Critias'* almost any greek might have visited egypt to prove the story either to be right or wrong. None of the critics seems to have taken that point into account. An often neglected detail is, Plato describes Atlantis to have ruled Libya as far as egypt. That means Atlantis must have been located west of Libya and Libya itself must already have been part of the Atlantean territory. That coincides with a statement of Herodotus who tells about a libyan people called *'Atlantioi'* living far in the west of Northafrica. Also greek mythology places Atlas near *Lake Tritonis* in western Northafrica. Plato describes Atlantis as a huge island with a large central plain everywhere surrounded by high mountains. That description matches very well the Maghreb. The Algerian plateau is everywhere surrounded by the chains of the Atlas mountains. The shallow Atlantean sea that should have finally vanished resembles the description of Lake Tritonis which today is identified with Chott el-Djerid. Further details like the elefants of Atlantis correspond very well to the west of Northafrica. Infrared satellite images show a huge sunken

geological structure consisting of several concentric circles recently discovered in the eastern part of the Algerian plateau. For 100 years already egyptology has knowledge of a mighty ancient power that in fact ruled Northafrica from west as far as egypt: *Tehenu*.

1. THE QUESTION OF CREDIBILITY

Frequently the argumentation by critics can be found Plato's only intension was to illustrate the *'Ideal State'* that he had developed earlier in his previous work *'Politea'* and therefore the Atlantis account simply was not more but fiction. — Indeed, the critics are right: In his dialogues *'Timaeus'* and *'Critias'* Plato leaves no doubt about that his intension to place the Atlantis tale exactly was to illustrate the Ideal State of Politea. In *'Timaeus'* Plato lets Socrates say:

'I should like, before proceeding further, to tell you how I feel about the State which we have described [in 'Politea']. I might compare myself to a person who, on beholding beautiful animals either created by the painter's art, or, better still, alive but at rest, is seized with a desire of seeing them in motion or engaged in some struggle or conflict to which their forms appear suited;' (Plato, Timaeus).

Since that passage is part of the introduction to *Critias'* summary of the Atlantis tale it is quite obvious that the Atlantis story in fact was used for illustration of the Ideal State. But the important question is: Does that really imply or prove the Atlantis account needs to be pure fiction? Of course not. There is a number of good reasons to believe that Plato's Atlantis

account refers to a true story: First of all, Plato claims and emphasizes several times the Atlantis account was true. Also Solon's travel to Sais in Egypt is verified by Herodotus and others. We also know the chain of transmission can have taken place in that way Plato described (Welliver, 1977). Furthermore the enormous diversity of details the story presents, for example the Atlantean flora and fauna, can be valued as indication of a true transmission. Even the unbelievably high count of 9,000 years that after Plato should have passed since the time of the Atlantean war is not a fact that reveals Plato as a liar. Quite the reverse, that agrees very well to the fact that also Herodotus tells about an age of Egypt of more than 11,000 years (Herodotus, History). Since also the Egyptian priest Manetho reported such an unbelievably high age of Egypt it must be assumed there was a systematic error in the Egyptian chronicles at that time. That is why Plato's '9000 years' should be regarded as indicating authenticity of the Atlantis story. But in addition to that even the critics should recognize that the Atlantis tale is a hopelessly unperfect illustration of the Ideal State that hardly shows coincidence with the state Plato developed in 'Politeia'. After reading the presentations of the two states Ur-Athens and Atlantis in 'Critias' it does not immediately come clear which of these two states was to represent the Ideal State. This only is assigned by a single explicit statement of Critias:

'The city and citizens, which you yesterday described to us in fiction, we will now transfer to the world of reality. It shall be the ancient city of Athens, and we will suppose that the citizens whom you imagined [in 'Politeia'], were our veritable ancestors, of whom the priest spoke;' (Plato, Timaeus).

So, if Ur-Athens was the Ideal State and not Atlantis, we need to ask why then the description of Atlantis is about twice as large as the description of Ur-Athens? And it is also rather mysterious that in the dialogue 'Critias' the only coincidence of Ur-Athens and the Ideal State which Plato developed in 'Politeia' seems to be the separated class of warriors. Does it make sense to assume the Atlantis tale was a fictive story that was created to illustrate the Ideal State and Plato only forgot to include

and describe the most important characteristic: the philosophers who were to be the head of Plato's Ideal State? Of course, the answer is 'No'. Plato himself was aware of the fact that the Atlantis story was unperfect but the important merit of the story was its authenticity. That is why Plato repeatedly stresses the story was true. That merit was to be put value on in an appropriate way. But there is still another very important reason for why Plato's Atlantis account should not be regarded as a fictive story: At that time when Plato wrote down the dialogues 'Timaeus' and 'Critias' almost any Greek might have visited Egypt to prove the story either to be right or wrong. So the question is: Why Plato should have taken the risk to be revealed as liar? None of the critics seems to have taken that point into account. And does it make sense to believe that Plato wrote down a false and fictive story and then just to continue and worsen his lie he claimed he had got the story from Solon, the probably most famous statesman of Athens? — What a sinner then Plato must have been.

As a result of these arguments it seems to be more likely that Plato transmitted a true story and so scientists and academics are probably faced with a real challenge to at long last reveal the Atlantis mystery.

2. ATTEMPT OF AN OBJECTIVE SEARCH

As a consequence of the preceding discussion and argumentation this chapter now tries to focus on an unbiased search for Atlantis by regarding Plato's Atlantis account as a predominantly unfalsified historic transmission. The base for that latter assumption however can only be Critias' statement of an existing passed on manuscript.

2.1 Geographical references

Plato describes Atlantis as a huge island, larger as Libya and Asia put together, situated in front of the 'Pillars of Heracles'. Commonly this latter expression is regarded as an ancient synonym for the Straits of Gibraltar. Atlantis was either surrounded by or at least bordering on an ocean called 'Atlantic'. Obviously the straight-forward solution then is supposed to be a location of Atlantis on the other side of

Gibraltar in that ocean which still today is called 'Atlantic Ocean'. Most of the published theories about Atlantis therefore locate Atlantis west of Gibraltar. But is that apparently obvious solution really in accordance also with the further details of Plato's description? Geologists have shown that none of the Atlantic islands situated on the other side of Gibraltar can be remnants of a large sunken island as what Plato describes Atlantis. Quite the reverse, most of the Atlantic islands are of volcanic origin and show a continuous uplift (Kukal, 1984). But the most important detail that absolutely contradicts an assumed location of Atlantis west of Gibraltar is found in the description of the ocean that Plato calls 'Atlantic'. In *'Timaeus'* we read at first:

'This power came forth out of the Atlantic Ocean, for in those days the Atlantic was navigable'

and later on the text says:

'because there is a shoal of mud in the way; and this was caused by the subsidence of the island' (Plato, *Timaeus*).

In no way that description matches the ocean that we call 'Atlantic' today. Nobody would characterize the Atlantic Ocean as not navigable or muddy. The 'Atlantic' that Plato describes, however, must be thought of as an ocean that does not even exist any more. But there are still further characteristics in Plato's account that do not match with the Atlantic that we know. In *'Timaeus'* we find these lines: *'for this sea which is within the Straits of Heracles is only a harbour, having a narrow entrance, but that other is a real sea, and the surrounding land may be most truly called a boundless continent'* (Plato, *Timaeus*).

What sea ever the word 'harbour' might have been assigned to, either the Mediterranean or the Atlantic Ocean, none of these can be regarded as harbour and neither do the Straits of Gibraltar represent a narrow entrance. And what does it mean when Plato speaks of *'a real sea'* and of a *'surrounding land'*? That definitely describes Plato's Atlantic as an inland sea, surrounded by land. So obviously it seems as if the 'Atlantic' Plato mentions most likely was not the sea that we today call 'Atlantic Ocean'. What we probably have to look for is an inland sea of ancient times that

today does not exist anymore. But to continue our search it is necessary first to follow an important geographical clue that Plato presents in his dialogues: In *'Timaeus'* Critias tells: *'furthermore, the men of Atlantis had subjected the parts of Libya within the columns of Heracles as far as Egypt, and of Europe as far as Tyrrhenia'* (Plato, *Timaeus*). If Atlantis ruled Europe as far as Tyrrhenia (Southern Italy) and Libya (the land west of Egypt) as far as Egypt then Atlantis must have been situated west of Libya and Libya itself must already have been part of the Atlantean territory. So, without exaggeration, the land west of Egypt can be understood as "entrance" to Atlantis and of course that important trace needs to be followed.



Figure 1: Plato's text not only describes the extension of the Atlantean territory but also the direction of ruling: Atlantis ruled Libya as far as Egypt, that means from West to East. Atlantis must have been situated west of Libya.

It is hence of particular interest that also the Greek historian *Herodotus*, who like Solon had visited the old priests at Sais in Egypt, reports about a libyan people living far in the west of Northafrica that was called *'Atlantioi'* (Atlantes). He gives a detailed description of how to get in a 50-days' journey westwards to these *Atlantes*, starting from Thebes in Egypt. He names all the different libyan peoples along that way, the first of which was the *Ammonians*, inhabitants of the oasis of Siwa in the libyan desert. The next people was the *Nasamones* who after Herodotus were living south of the Syrtis Major in the oasis of Augila, that still exists today. Further to the west, after Herodotus, were living the *Garamantians*. Their capital Garama was

situated in the Fezzan mountains and still today the village of Germa exists at exactly the same place (Ruprechtsberger, 1997). After another ten days' journey, so Herodotus reports, there was a people called 'Ataranteans'. And finally Herodotus tells about a libyan people called 'Atlantes'. They were situated close to a huge mountain called 'Atlas', regarded by the Atlantes as the 'Pillar of Heaven' (Herodotus, History). As far as to the Garamantians there is evidence of the existence and localization of these different libyan peoples. As for the last two peoples Herodotus mentions in his account, however, archeology so far has neither successfully tried to prove their localisation nor their existence. But if we extrapolate the so far verified journey by assuming a further stage distance of about 500km and a continuing course in parallel to the coastline then the Ataranteans were to be localized in about that region where the three countries of Tunisia, Algeria and Libya border. Thus, proceeding another 500km the Atlantes then were supposed to have inhabited the Algerian Atlas. Of course that geographical localisation would make sense also because of the coincidence of that name 'Atlas' Herodotus mentions and that name 'Atlas' what we call these mountains today.



Figure 2: Herodotus describes a journey to the *Atlantes* that leads to the farthest west of Northafrica.

2.2 Parallels in Greek Mythology

In addition to that geographical hint which Herodotus presents further details of interest can be found in Greek mythology. Also these myths assign the farthest west of Northafrica an extraordinary role and show some interesting parallels to Plato's description of Atlantis. In one of the most famous myths *Heracles* searching for the *Golden Apples of*

the Hesperides reaches Libya. On his way to the west he first beats in a battle the libyan king Antaios, a son of *Poseidon*. Then after proceeding further to the west he reaches the region where *Atlas* was taking the heaven on his shoulders, close to the gardens with the golden apples.

In another famous myth *Perseus* reaches Libya and beheads the Gorgon Medusa. Some strong winds then carry him westwards into the realm of *king Atlas*. Atlas there was tending a grove of golden fruits. When Perseus asked Atlas for shelter he was refused, so Perseus took the head of Medusa and Atlas was instantaneously turned to stone and changed into a high mountain.

So also in these Greek myths Atlas was located in the farthest west of Northafrica (Libya). From these myths we are also informed that these western parts of Libya belonged to the realm of *Poseidon* corresponding to what Plato says about *Atlantis*. And further coincidence exists also with respect to the fertile but also mountaineous landscape. So the assumption is obvious that Plato, Herodotus and the Greek myths all might refer to the same mountaineous northafrican region that even today is called *Atlas*. The question is: Was Plato's island Atlantis almost identical with what we today call '*Maghreb*'? Even if the word '*Maghreb*' deduces from the Arabian expression '*Maghreb al-Jazair*' which means '*Island of the West*' it is not an island in the normal sense of the word. But a few thousand years ago that situation might have been different. South of the Maghreb once existed a large inland sea the remains of which are still visible. South of the Sahara-Atlas mountains there is a chain of huge salt-lakes that are in large parts laying below sea-level: *Chott el-Fedjadj*, *Chott el-Djerid* and *Chott el-Gharsa* in southern Tunisia and *Chott Melrhir* in Algeria. These lakes still become dryer and dryer but even today within the winter months extensive rainfall lets the water level rise and a large shallow inland sea becomes existent again. In summer these huge lakes are in large parts covered by a salt-sand-crust. Among these salt-lakes Chott el-Djerid with a size of 7700km² is the largest. That is about eight times the size of the so-called '*Dead Sea*' at

Israel's border. The whole chain of salt-lakes extends about 400km eastward from Algeria to the Mediterranean sea.

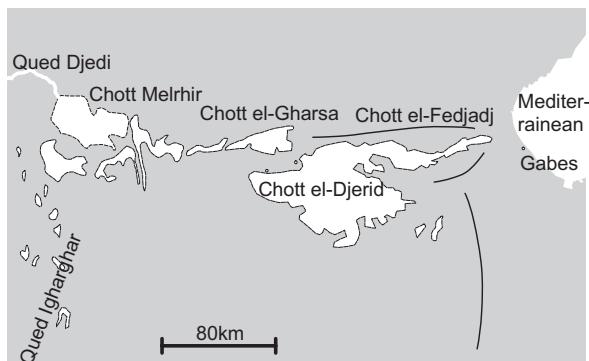


Figure 3: The chain of salt-lakes in southern Tunisia and Algeria once must have built a huge inland sea.

It should now have become visible for almost everyone that Plato's description of the *Atlantic sea* that finally disappeared does not need to be fictive at all.

More than 2,400 years ago the region of the chotts south of the Maghreb still must have been a large navigable inland sea that was accessible from the Mediterranean through a narrow entrance. This is verified by an old navigation manual, the *Periplus of Skylax of Caryanda*, that dates back to the 5th century B.C.. That inland sea was called '*Lake Triton(is)*' in ancient times. The *Periplus of Skylax* says: '*In this Syrtis there are an island (and a lake), called Triton, and a river Triton, and there is a temple of Athene Tritonis. The lake has a narrow mouth, and an island is close to the mouth, and at times, when the water is low, the lake seems not to have any navigable inlet. But this lake is large, having a circumference of about one thousand stadia.*' (Nordenskiöld, 1897)

Also Herodotus reports several times about that Lake Tritonis. Especially interesting information is linked with a story that Herodotus tells about Jason and the Argonauts: '*The voyage was prosperous as far as Malea; but at that point a gale of wind from the north came on suddenly, and carried him out of his course to the coast of Libya; where, before he discovered the land, he got among the shallows of Lake Tritonis. As he was turning it in his mind how he should find his*

way out, Triton (they say) appeared to him, and offered to show him the channel, and secure him a safe retreat, if he would give him the tripod. Jason complying, was shown by Triton the passage through the shallows' (Herodotus, Book IV)

The *Periplus of Skylax* and the story of the Argonauts that Herodotus transmits describe lake Tritonis as a shallow but navigable inland lake with a narrow channel to the Mediterranean sea. I think, this is really exactly, what also Plato's Atlantis account originally reported but there seems to have happened at least one misinterpretation or wrong translation. The relevant lines are those of the *Timaeus* where Critias says: '*for this sea which is within the Straits of Heracles is only a harbour, having a narrow entrance, but that other is a real sea, and the surrounding land may be most truly called a boundless continent'* (Plato, *Timaeus*). The error is most likely as follows: One can be sure the original excerpt did *not* compare two different oceans, a huge Atlantic and a small Mediterranean, as it is nearly always understood. Instead it only explained as what the entrance of the Atlantic appeared: from within the Straits of Heracles the Atlantic simply looked like a harbour with a narrow entrance. But in reality on the other side of the Straits of Heracles there was not a harbour but a real sea and the surrounding land built a boundless continent. Only then this text makes sense. One should recognize that the reports transmitted by Herodotus and Skylax in the same way put special emphasize on the description of the narrow channel. That is not only pure chance. The *Atlantic* that Plato referred to and *Lake Tritonis* that was mentioned by Herodotus, Skylax and others were most likely one and the same sea. This can be further supported by information transmitted by *Diodorus Siculus*. He tells us that Lake Tritonis disappeared in the course of an earthquake, which again shows a close correspondence to what Plato says about the disappearance of the Atlantic. And Diodorus also mentions that Heracles set up his pillars in Libya after a successful battle against the Amazons and Gorgons which were situated

close to Lake Tritonis. So the original *Pillars of Heracles* were once most likely situated in that region that today is called *Gulf of Gabes* in southern Tunisia. But if an earthquake let this inland sea disappear it let of course also disappear these original Pillars of Heracles. The recollection of such a straits however, maybe was maintained and so it might have happened that the Pillars of Heracles lateron 'moved' to another entrance to another sea that was situated farther to the west.



Figure 4: The supposition: Plato's Atlantis was identical with what today is called Maghreb. The Atlantic was an inland sea the remnants of which are the Chotts. The original Pillars of Heracles were situated at the entrance to Lake Tritonis (the Atlantic).

As figure 4 tries to visualize the inland sea in ancient times must have been much larger than the chotts extend today. Due to that inland sea large parts of the Maghreb must have got the character of an island (penninsula). So it does not seem unlikely that Plato's island Atlantis was identical with what we today call Maghreb.

2.3 Is there further support of this hypothesis?

As a very special consequence of the just described geography of the Atlantic and the island of Atlantis it becomes clear that the straits that was called *Pillars of Heracles* to one half must have belonged to Atlantis and to the other half was part of Libya. We must ask whether this is consistent with Plato's Atlantis tale? There is a part of the *Critias* that shows it is consistent: *'To his twin brother, who was born after him, and obtained as his lot the extremity of the island towards the Pillars of Heracles,'* (Plato, *Critias*). The Pillars of

Heracles were a part of Atlantis and not to be thought of as a straits far apart.

What the dialogue *Critias* tells about the flora and fauna of Atlantis is also verified to be correct even in roman times. The elephants for example are an important hint in the Atlantis tale. That animal was still existent in the Maghreb in the second century B.C. as ancient numidian coins show.



Figure 5: Numidian coins from the 2nd century B.C. indicate that elephants were still existent in the Maghreb

Plato describes Atlantis as a huge lofty island with a large central nearly rectangular plain that had a length of 3000 stadions, which is about 560km, and a width of 2000 stadions, which is about 370km. That plain he reports was to all sides surrounded by high mountains. That is a description which largely fits to the central plateau of the Maghreb. In the north there are the chains of the Tell-Atlas mountains with a height of up to 1800m. In the West there are the foothills of the Moroccan High-Atlas rising up to 2600m. South of the Algerian plateau there are the chains of the Sahara-Atlas mountains with a height up to 2200m and to the east this plateau is bordered by the Aures mountains. The length of the Algerian plateau is actually about 560km. The width however is only about 120km which is less than half the width that Plato reports.

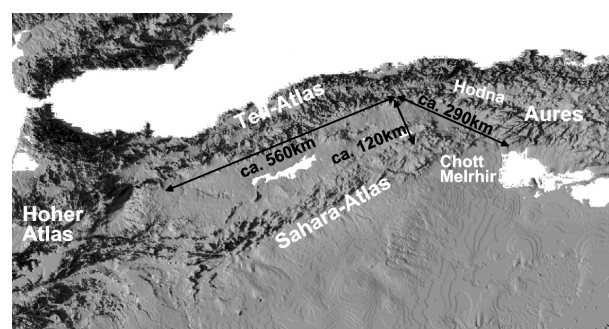


Figure 6: The Algerian high-plain is to all sides surrounded by chains of the Atlas mountains

2.4 Where to search the Atlantean Metropolis?

Plato tells the Metropolis of Atlantis was located at such part of the central plain where all the water currents and artificial channels met, naturally that part of the plateau with the lowest elevation:

'It [the ditch] received the streams which came down from the mountains, and winding round the plain and meeting at the city, was there let off into the sea' (Plato, Critias).

The Algerian plateau has an elevation of 400m in its eastern parts and rises up to a height of 1000m in the far west. All the precipitation that comes down from the slopes of the hills is collected in seasonal large rivers at the fringes of the plateau. These rivers bring the waters eastwards and empty into the huge *Hodna-basin*, the central part of which constitutes a nearly 100km long saltlake, the *chott el-Hodna*. In case the already described identification of Atlantis and its central plain was correct then the Metropolis could only have been located in the Hodna-basin in the eastern part of the Algerian plateau. In the first moment that encircled localisation appears as a contradiction to the fact that Plato states the ditch emptied into the sea. The Hodna-basin at least is about 400m above sea-level. How could that match? Plato however also describes the whole land as lofty, and he speaks of the plain and mountains that descended towards the sea. That indicates it could have been an elevated plain considerably above sea-level. When the Metropolis was located at close distance to the sea then it might have been a large inland sea on the plateau, within the Hodna-basin.

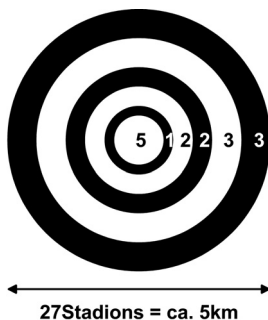


Figure 7: The circular concentric geometry of the metropolis as Plato reports

As Plato tells the Metropolis was an arrangement of several concentric circular zones of land. These were separated by circular zones of water (see fig. 7). In the centre of these zones was an island with a diameter of about 1km.

Since Plato tells it was the god Poseidon who created that ringstructure it seems likely that it was originated from natural geological processes, probably tectonic elevation followed by erosion. An example for such a circular concentric zone structure is the so-called 'bull's eye' at Richat in Mauritania.

As was explained above in detail Plato's description of Atlantis matches very well what we today call Maghreb. Corresponding with Plato's account the central part of the Maghreb constitutes a large plateau that is to all sides surrounded by mountains. Now following Plato's further topographic description the Metropolis has to be searched in the eastern part of the Algerian plateau. There the plateau descends towards the region of the chotts, which were supposed to be the Atlantic in ancient times.



Figure 8: A huge circular concentric structure discovered on a AVHRR-satellite image (courtesy of DLR)

Actually, a blurred concentric circular geological structure was recently discovered within the targeted area (the Hodna-basin) on a low resolution NOAA-AVHRR-Satellite image (fig.8). Because of the poor spatial resolution of that AVHRR-sensor of not better than 1km no further interpretation of that structure was possible. That's why a multispectral Landsat 5TM scene was used for a more detailed investigation (Hofmann, 2004). The sensor of the Landsat5TM satellite has a spatial resolution of 28.5m and provides

image data in 7 different spectral channels, ranging from the visible spectrum via the near infrared to thermal infrared.

Figure 9 shows the relevant part of the Landsat scene in a nearly true-colour image (spectral channels 1,2,3). The circular structure is only poorly visible in that spectral range.

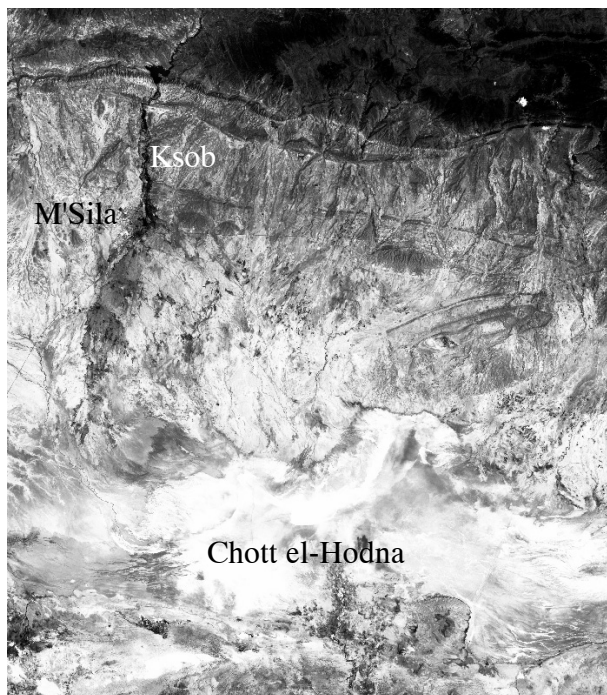


Figure 9: Part of the Landsat 5TM scene (channels 1,2,3). The picture shows a nearly 60km wide aspect. Large water currents coming from west and north empty into the chott el-Hodna (the white area). The river Ksob follows in two parallel paths a circular course into the Chott. At the upper part of this image from left to right there can be seen some broad white, black and red coloured bands representing different geological layers (limestone, marl and sandstone). Plato mentions that quarries of such coloured stones were in the immediate vicinity to the city.

Having a closer look onto the surrounding mountains one can see that in the past large and numerous avalanches of mud must have come down the slopes (fig. 10).

Using the near infrared spectral channels (4,5,7) of the Landsat 5TM data set it is possible to have a look through the salt crust of chott el-Hodna. The circular course of the covered geological structure seems to be continued under water. It is supposed there is a

huge concentric ring structure laying under deep alluvial deposits. In order to get more information on it the thermal infrared band can also be used. However, the spatial resolution of the thermal infrared channel is only 60m. In combination with the near infrared bands an image classification lead to an interesting result (see fig.12). Several more or less concentric circles become clearly visible and support the supposition of a huge ring structure laying under thick alluvial deposits.

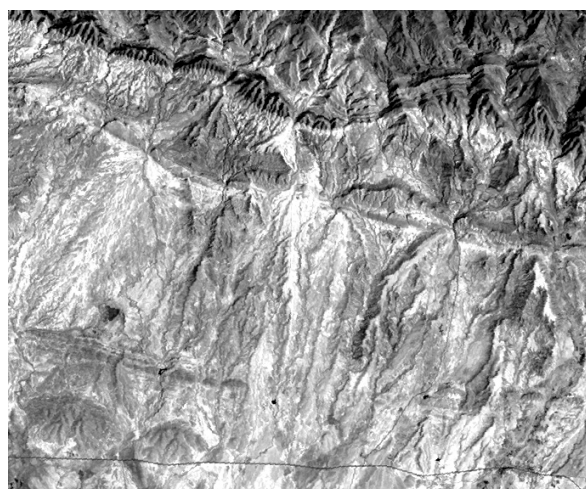


Figure 10: Avalanches of mud of enormous dimension have come down the slopes of the Hodna mountains. The fine black horizontal line represents a road.

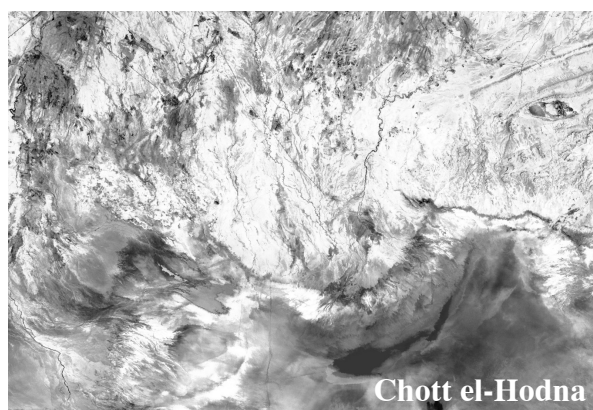


Figure 11: Enormous alluvial deposits seem to cover a huge circular concentric geological structure. The near infrared bands (4,5,7) of the Landsat scene enable a look through the salt crust of chott el-Hodna (part at right bottom). It becomes visible that also under the salt crust the circular course of the geological structure continues.



Figure 12: A concentric ringstructure becomes visible when including the thermal channel of the Landsat dataset into the classification.

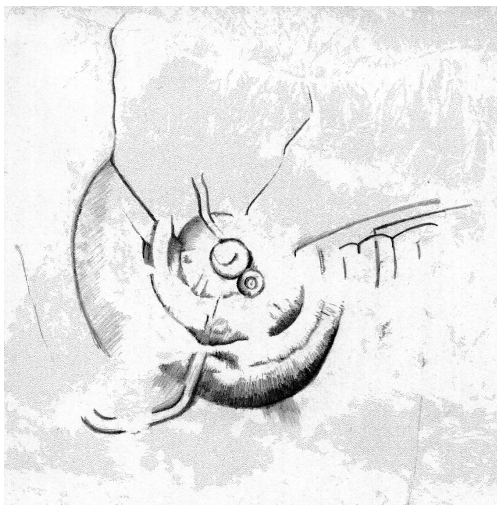


Figure 13: The relevant structures of several different data set evaluations were all included and intensified (hand-drawn) in this image.

This ringstructure consists of circles with diameters of 4km, 14km, 22km and 34km. Of course these results do not prove the existence of Atlantis and its metropolis but they can be used as starting point of a more intensive and detailed study based on remote sensing, geological and archeological investigations. The Hodna-basin belongs to an

area of active seismicity (Harbi, 1999). On 21 August 1856 an earthquake destroyed Jijeli town and its surroundings. Several earthquakes in the past also had its epicentres within the Hodna basin. When Plato reports the whole island of Atlantis sunk within one day and one night into the sea it is impossible to think of an island of continental size. But the Atlantis tale mentions two islands, the one of continental size and the Metropolis of Atlantis. It is possible that an earthquake and a flood destroyed the Metropolis and let it sink into the sea and maybe that was what the text originally recorded. Thus it is to be verified by experts if the huge concentric ringstructure of Chott el-Hodna that is so extensively covered by alluvial deposits really covers the sunken Metropolis of Atlantis or not.

2.5 Who were the Atlantians ?

As far as we know today the Maghreb enters history not earlier than the 11th century BC with the first Phenician settlements. This western part of Northafrica becomes historically important with the rise of Carthago but not until the 5th century BC. Hence, there seems to be a huge discrepancy concerning what we already know about the Maghreb and that what is supposed in this paper, i.e. identification of the Maghreb with Atlantis. Despite the fact that early written sources are missing one should nevertheless try to see if there are still any other sources or facts that can provide information about the early inhabitants of the Maghreb. In 1847 numerous rock engravings showing elephants, rhinoceroses, lions, gazelles, giraffes, ostriches, etc. were discovered in the eastern parts of the Sahara-Atlas mountains. Since there was also engravings showing already extinct animals like the classic buffalo (*bubalus antiquus*), one could conclude these pictures had to be at least eight thousand years old (Kuper). Other engravings of similar age repeatedly represented a ram that was decorated with a disk on his head and a collar around his neck. The collar can be valued as indication of early domestication of animals in the Atlas mountains. But even more interesting was the striking resemblance of the ram decorated by a disk with the well-known

Amon-ram of ancient Egypt that wears the sundisk. Scholars therefore tried to explain the sundisk of the Atlas-ram as being copied from Egypt. But that was impossible since the rock engravings representing the *sundisk-ram* were several thousand years older than the Egyptian *Amon-ram*. So it must have been quite the reverse situation. The worship of the sundisk-ram originated in the Maghreb and expanded eastwards and finally reached the Nile valley (Resch, 1967).

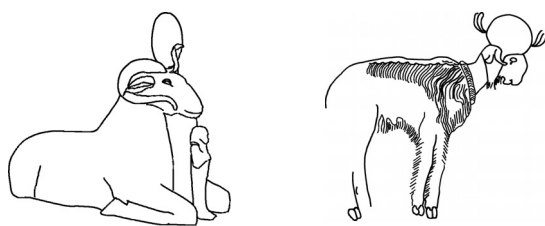


Figure 14: Striking resemblance of the Egyptian *Amon-ram* (left) and the *sundisk-ram* of the Atlas (right).

Numerous coloured rock paintings discovered also in the southern Algerian mountains, the Tassili and the Hoggar, showed that the Sahara some thousand years ago was a green and fertile country. People inhabiting western Northafrica at that time were of light skin colour and had European features. These were the ancestors of that people of Northafrica which we today call 'Berbers'. The Berbers are the original inhabitants of the Maghreb. Especially in the northern parts of Algeria and Morocco these Berbers frequently have blond or red hair, light skin and European features. The northafrican rock paintings give report about many different epochs: The first one is a period when people were hunters. Then in the next period first domestication became visible. In the following epoch of rock paintings people were depicted together with large herds of goats and cattle. Again one period later rock paintings report of the time when the horse was domesticated. Paintings of this period are of extraordinary importance for the focus of this paper. More than 300 paintings and engravings of *chariots* have been discovered in western Northafrica. Most of them show the car pulled by two horses in flying galopp. Till today no scholar is able to explain these numerous chariot paintings. And nobody

knows which people was depicted there (Camps,1982). The regions for which existence of the chariot is verified do not at all correspond to the far distribution of paintings representing the chariot. Fact is, these paintings of the chariot cover an area of more than 2000km in north-south extension and more than 2500km in its west-to-east extension (fig. 16). There must have been numerous chariots and there also must have existed a high degree of organisation to enable the use of an animal that can not adapt to dryness. One should imagine, they actually reached south as far as the Niger.

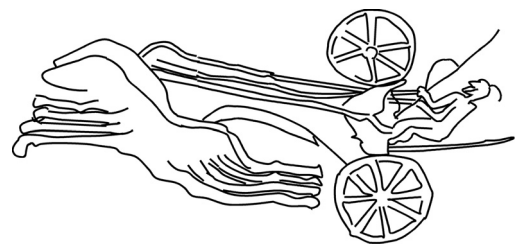


Figure 15: A car with two horses in flying galopp, armed with spears (after (Hugot, 1984))

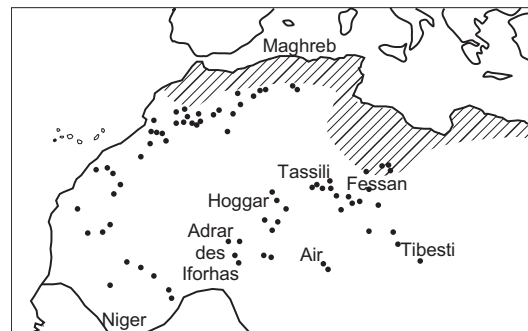


Figure 16: Historically verified existence of horse car (hatched area) versus unexplained distribution of horse car rock paintings (dots). (After (Camps, 1982))

The geographic distribution of rock paintings depicting the chariot shows clearly that the chariot was a western achievement. Traditional thought however, tries to explain these representations of chariots with the arrival of horse and car in Egypt at the beginning of the 13th century BC. But at that time the Sahara should already have become almost as dry as it is today and thus it does not

seem reasonable to think of such a late introduction of an animal that is not adapted to dryness. The broad and extensive use of the horse and chariot as is reflected by the rock paintings can only have been possible by a continuous development process that must have lasted at least many hundred years. Furtheron, the distribution of chariot paintings itself clearly indicates that horse and chariot did not arrive from Egypt since such paintings depicting the chariot are not found in the eastern parts of the Sahara. But the most important point is, these paintings of the chariots are in perfect correspondence to what Plato reports in his description of Atlantis: *'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 for them, and a pair of chariot-horses without a seat, accompanied by a horseman who could fight on foot carrying a small shield, and having a charioteer who stood behind the man-at-arms to guide the two horses;'* (Plato, Critias). It is therefore of particular interest that the Algerian rock paintings show chariots with a seat and those without, those with only one person and those with up to three, exactly as Plato describes.

2.6 Information from ancient Egyptian sources

Plato describes Atlantis with attributes, that let us classify it as an empire of the Bronze Age. So it does not make sense to stick to the 9000 years he mentions. That unbelievable high age of Egypt appears several times in ancient sources but can only refer to a different way to count years. Plato also transmits that it was the high priest of Sais who used an additional source, obviously *not* the Atlantis-text, to *indirectly* calculate the time that had to have passed since then. The 9000 years most likely did not belong to the original Atlantis account. So one should therefore concentrate the further search mainly onto historic times. Since Plato reports Atlantis had ruled Libya as far as Egypt we must conclude that both peoples must have been in contact and this contact should in some way have become visible in ancient Egyptian sources. So, if Plato's tale was true then there *must* have been a mighty power that ruled from west as far as Egypt. We

therefore now have to check if the ancient Egyptian sources verify this or not.

More than 1000 years before the beginning of dynastic Egypt the early predynastic cultures in the Nile valley show distinct western characteristics. The dead are buried in contracted position laying on the side. Painted pottery of the important *Naqada-culture* repeatedly shows depictions of people in a characteristic adoring posture that is identical to early rock engravings and paintings discovered in Algeria. Several times these drawings also show that these people were wearing a *phallus sheath* which is a typical 'libyan' characteristic. The oldest images of men wearing the phallus sheath are supposed to be the rock engravings in the Sahara-Atlas (Algeria). Another typical 'libyan' characteristic is also seen on Naqada-pottery: Several times the decorated pottery depicts men wearing feathers in their hair. The later Egyptians of dynastic times did neither wear the phallus sheath nor the feather in their hair nor did they bury their dead in an contracted position. So these were clearly western characteristics. The people of Naqada were of light skin colour and many of them seem to have had red or blond hair. Best example is the natural mummy of a man of Naqada, called '*Ginger*' that is exhibited in the British Museum. '*Ginger*' has light yellow skin colour and red wavy hair which still today is typical for Berbers of the Maghreb. Interestingly, it is not unlikely that these early predynastic settlers belonged to an already highly developed culture that may have arrived the Nile valley by ships with numerous oars. Rock engravings in the Wadi Hamamat in the eastern Egyptian desert show numerous large ships that can be associated to the Naqada-culture because of the same portrayals of adoring posture and of men wearing feathers and phallus sheaths. Archeology and Egyptology both can not offer any explanation for these large ships with up to fifty oars. And unfortunately it does not even seem to be a research topic.

In very close connection with the beginning of dynastic Egypt an important but unknown people appears in the earliest Egyptian sources: *Tehenu*. The so-called *Tehenu-palette* describes *Tehenu* as an fertile island with large

herds of cattle, donkeys and sheep and in possession of a characteristic plant: the olive tree. Another palette of the same time, the so-called '*Narmer-palette*' shows how the upper egyptian king *Narmer* defeats the *Tehenu* and thus gains control over all over egypt. That occurrence was of such fundamental importance for egypt's existence that it appeared several times again under king *Sahure*, king *Niuserre* and king *Pepi II*.

The *Tehenu* therefore must have been the most important foreign power from the Late Predynastic (ca. 3200 B.C.) on at least till the end of the Old Kingdom (ca. 2134 B.C.). From the *Sahure relief* it becomes quite clear that *Tehenu* was a power that was situated in the west since it was the goddess of the west who handed over the captured *Tehenu* king. That also can be concluded from the fact that the depicted *Tehenu* people were all wearing the phallus sheath. *Tehenu* later became a synonym for the whole country laying to the west of egypt (Hölscher, 1934). So it already becomes more and more clear that *Tehenu* actually was that important power that ruled Libya as far as egypt. Several hundred years then the *Tehenu* probably did not play such a predominant role. However, that situation changed in the 13th century B.C.. Another libyan people called the '*Lebu*' that probably was a subgroup of the *Tehenu* built a coalition together with the *Sherden*, *Shekelesh*, *Ekwesh*, *Luka*, *Teresh* and others. The *Sherden* have been associated with Sardinia, the *Shekelesh* were associated with Sicilia and the *Turesh* were supposed as to be the *Tyrrhenians*. The *Ekwesh* were also called the '*people of the sea*'. During the reign of the egyptian king *Merenptah* (1213 B.C.) that coalition starts invading egypt from the west but *Merenptah* finally beats them. Even the critics should see the close correspondence to Plato's account of Atlantis and the war. Plato mentions Libya as well as Tyrrhenia, and both people were actually involved in the campaign against egypt during the reign of king *Merenptah*. But this probably was not more than the begin of the war that Plato transmitted. The ancient egyptian sources tell of another campaign against egypt during the reign of *Ramses III* (1187 B.C.). Another coalition of different libyan peoples (*Temehu*, *Tehenu*, *Seped*, *Lebu*,

Meshwesh) and a coalition of the *peoples of the sea* (*Peleset*, *Tjeker*, *Shekelesh*, *Danuna*, *Weshesh*) seems to have made the attempt to subdue all the countries of the eastern mediterranean in a single attack. As a result of that occurrence many bronze age civilizations were extinct. Among these were the Myceneans, the Hittite Empire, Troy, Cyprus and Ugarit. As Plato correctly transmitted the Greeks lost their writing and the surviving Mediterranean cultures fell into the so-called '*dark ages*'.

3. CONCLUSIONS

Plato's Atlantis tale is supposed to be true. The war he mentions most probably was a well organised coalition campaign of the so-called *sea peoples* and the peoples of *Tehenu* at about 1200 B.C.. That war led to the collapse of numerous bronze age civilizations. It was shown that *Tehenu* was a mighty power that ruled Libya (Northafrica) as far as Egypt. That's also what Plato told about Atlantis. Based on Plato's detailed description it can be concluded that Atlantis was most likely identical with the Maghreb. Satellite images show a huge concentric ringstructure in the Algerian chott el-Hodna covered under thick alluvial deposits. It will be the task of experts to verify if this ringstructure covers the Metropolis of Atlantis or not.

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