A Focus on the Geologic Sciences Related to Atlantis-Bakhu

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ABSTRACT

This unique comprehensive study explores the legend of Plato's lost city of Atlantis and uses compelling observations to support the hypothetical possibility of its existence at a specific site along the eastern edge of the Saharan-Atlas Mountain Steppe. It entertains a series of difficult geomythological questions to show how it is possible that Atlantis did not sink, but rather, only *appeared* to have sunk and actually rose instead in a process similar to epeirogenesis. Although counter intuitive, this paradigm shift--from an apparently sunken island to one uplifted--surprisingly exhibits the ability to still fully comply with Plato's thoroughly detailed descriptions. This analysis uses satellite images, topographies and common maps to provide convincing evidence for satisfying Plato's 10 specific macroscopic geographic measurements as well as his 10 most demanding special features. Several geologic anomalies are also discussed which may demonstrably support this theory of continental uplift. In addition, this research details a rich correlation between Atlantis and the early pre-dynastic Egyptian city known as Bakhu. No other proposed location has ever exhibited the ability to match Plato's descriptions with such exactitude.

1. INTRODUCTION

In our comprehensive geomythology investigation, we will begin by asking a rather provocative question concerning a common interpretation of the most popular and well known of all myths; the myth of a sunken island transcribed by Plato in his Timaeus and Critias dialogues (Greek to English translations of Plato's dialogues used in this study are by Benjamin Jowett, 1871. Excerpts from his works are noted in quotation marks).

What if Plato's Atlantis did not sink, but rather, only appeared to have sunk and actually rose instead? Would this paradigm shift--from an apparently sunken island to one uplifted--still fully comply with Plato's detailed descriptions and might it help to solve the mystery? Can the application of this new geomythological hypothesis provide compelling physical evidence to support not only the prehistoricity of Plato's lost Atlanteans, but reveal the exact location of their legendary seaport, Atlantis, as well? To answer these questions and many more, we must first look at a geophysics model of the general area Plato described to gain an understanding of the tectonic forces that could have been the source of the seismic action associated with the catastrophe. And, with this geophysics model as our template, we will attempt to follow the virtual map Plato left behind to locate the site of a once powerful and influential cultural center known to the Greeks as Atlantis and to the early pre-dynastic Egyptians as Bakhu (Faulkner, 1960). The results from this analysis are intriguing and could inspire constructive debate among scholars from a wide variety of disciplines.

1.1 Did Atlantis sink or was it actually uplifted during the catastrophe?

Plato describes nearly unfathomable destruction from "violent earthquakes" lasting "a single day and night" which, according to his expressed dating, occurred 9,000 years before Solon, or approximately 11,600 years ago. This distant point in time is now known to be consistent with the *end* of the Younger-Dryas (Hughen et al. 2000), a geologic period marked by catastrophic climatological changes accompanying the last glacial retreat of the Pleistocene ice ages and the beginning of the present-day Holocene period. While many scientific teams are actively searching for the cause of this alarming and unprecedented warming, there is general agreement that the disaster was probably initially on a hemispheric scale and, similar to the beginning of the Younger Dryas some 1,300 years earlier, could have resulted from the shock-wave effects associated with some form of Earth impact such as a comet (Kennett et al. 2009), asteroid, or an unknown. Impact dynamics can plausibly account for initiating mechanisms leading to the deduced rapid atmospheric heating and may have caused strong seismic actions detailed by Plato.

This long duration seismic activity could suggest huge upheavals in the Earth's crust, far exceeding mere meters of uplift or subsidence that result from earthquakes in recent centuries which last only a few seconds, but still have horrific effects. With a need to define this dynamic, we look at the geophysics of plate tectonics. First, we find that the plate boundary between the African and Eurasian Plates in the Mediterranean Region is extremely active and seems to provide more than adequate means (Morris et al. 1996); each plate jostling the other for advantage, with the slightest imbalance releasing significant stored energy. The forces along this boundary are comprised of various forms, including but not limited to: uplift and drag of convective hydraulics within the mantle; delamination; orogenic uplift of Atlas Ranges along the Atlas fault; subductive fracture at the Eurasian Plate; isostatic rebound of the Eurasian Plate; and real or apparent minor longitudinal gravitational imbalance between the east and west hemispheres of the African Plate itself. Second, we learn that there is a relatively slow tectonic process known as epeirogenesis, whereby large areas of the Earth's crust gradually heave and subside more or less as a uniform body. Although the known phenomenon is a rather slow process, it can be generally applied to help establish a framework for the sudden unprecedented crustal action suggested by Plato. We only need consider the compounding effect on this known process when catalyzed by the particularly seismically active region *and*, as we've suggested above, the potential down-thrust forces of an unknown cosmic impact, arguably associated with the end of the Younger-Dryas.

The tectonic model shown in Figure 1 is a northwest view of a cross-section of Earth's crust in the Mediterranean region that depicts the catastrophe scenario and demonstrates the principle of an abrupt continental upheaval. This model takes into account that areas of the Sahara were wet during the Pleistocene-Holocene transition and it wasn't until about 7,000 years ago that the region began its most recent aridification. The question is, how wet was it at the time ascribed to the Atlanteans? That question is still under diligent study today (Barnikel et al. 2002), but there is already general agreement that many large lakes and reed filled swamps covered vast areas at the time despite a brief aridification during the Younger-Dryas (Lubell, 2001). If for a moment we assume that the strait at Gibralter was closed, as it had been occasionally throughout the Pleistocene (Duggen et al. 2003), and that the northwestern Sahara desert was actually a former glacial shallow sea, continuous with the Mediterranean Sea of historic times (let's call the unified body the Saharan-Atlantic Sea for discussion purposes as indicated in Figure 1), then the model clearly shows it is possible ATLANTIS DID NOT SINK**;** it only appeared to have sunk and was actually uplifted along with a large portion of north and northwest (NW) Africa.

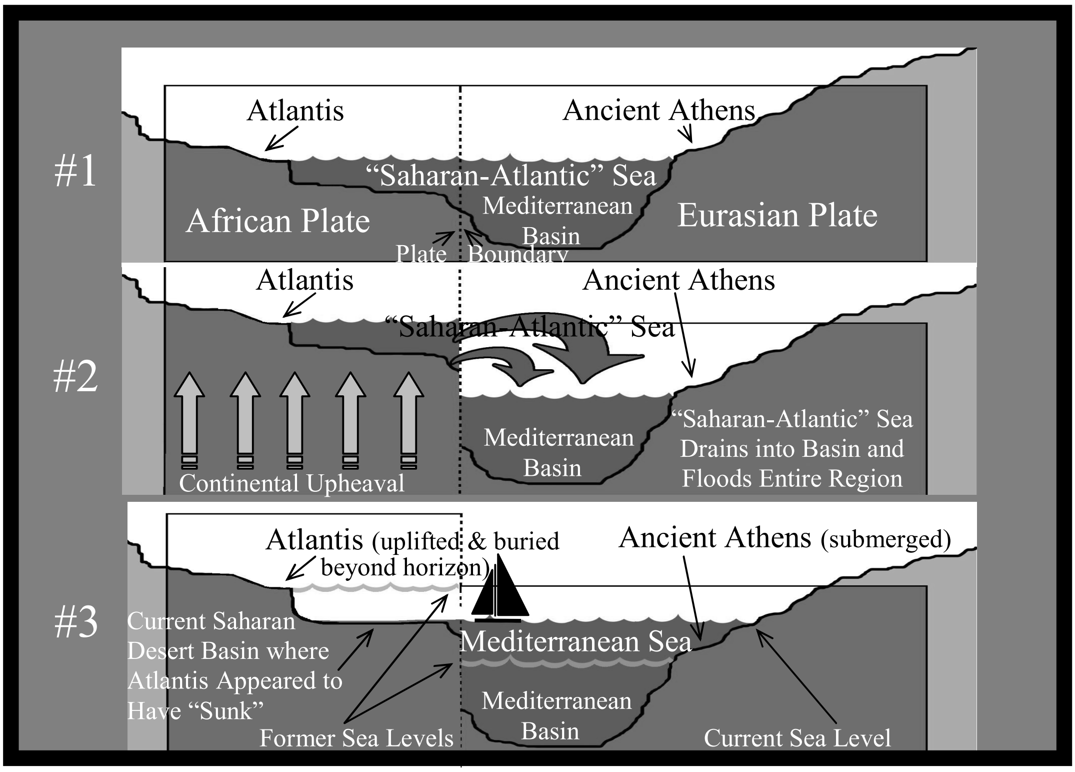


Figure 1: Block Diagram Sequence of Atlantis' Upheaval (northwesterly cross-sectional view), Wells, 2008. This geophysics tectonic model is of a proposed rapid form of epeirogenesis along the north and northwest margins of the African plate. #1 Details the site geography prior to the catastrophe. #2 Details the dynamic actions from the sudden African Plate uplift and resultant "Saharan-Atlantic" sea draining off the continental surface. #3 Details current conditions in the Mediterranean Basin demonstrating that ancient Athens may have been submerged and Atlantis uplifted by the catastrophe.

During a sudden upheaval of this magnitude, which would have coincidently ripped open the closed strait at Gibralter, the expansive Saharan-Atlantic Sea would have drained in frenzied torrents from the top of the uplifted African Plate flooding down into the Mediterranean basin (Fig.1; #2). This uplift would have also caused a powerful tsunami to race northward colliding with the northern coast, inundating and destroying all settlements in its path, including ancient Athens. The tsunamic flooding would have receded with such current into the Mediterranean basin as to denude the fertile soils from much of the northern coast commingling them with drainage from the African plate. These combined soil-laden waters would have flowed through the newly opened strait into the Atlantic basin as the dynamic settled, possibly contributing to the formation of the Spartel mud bank. Simultaneously, ancient Athens would have been left submerged in the newly formed modern Mediterranean Sea (Fig.1; #3). In support of this aspect of our theory, Plato did in fact indicate that ancient Athens was destroyed by the same catastrophe as Atlantis, noting of Athens that "all the richer and softer parts of the soil, having fallen away, and mere skeletons of the land being left" and "the Earth has fallen away all round and sunk out of sight".

For the sailors who later ventured toward Atlantis and witnessed the aftermath, the exposed seafloor of the formerly navigable shallow sea on top of the African Plate would have caused an unavoidable *illusion* suggesting the island sank--depositing its dissolved soils into the sea rendering it forever closed to sailed passage. They would have only found "a shoal of mud…impassable and impenetrable" which they could have assumed "was caused by the subsidence of the island" since the illusion was entirely convincing. These ancient mariners would have had no way of knowing that the former island was actually uplifted by an extraordinarily rare rolling and tilting adjustment of the African Plate, exposing the sea-floor of the drained Saharan-Atlantic Sea; and that the city itself was beyond the horizon rendering invisible its existence in the distance (Fig. 1; #3). So, these sailors would have reported to others what they believed they saw, which was much later chronicled by Plato. Although somewhat counter intuitive, this model shows that it is possible for Atlantis to have been uplifted and still fully comply with Plato's descriptive requirements. The model also could help explain why Atlantis hasn't already been found--no one was looking in this location and accidental discovery would have been hindered since, over thousands of years, ruins in this area would have naturally been covered by many meters of sand as the arid conditions began to prevail.

2. TOPOGRAPHIC CONFIRMATION OF ATLANTIC ISLAND IN ALGERIA, MOROCCO & TUNISIA?

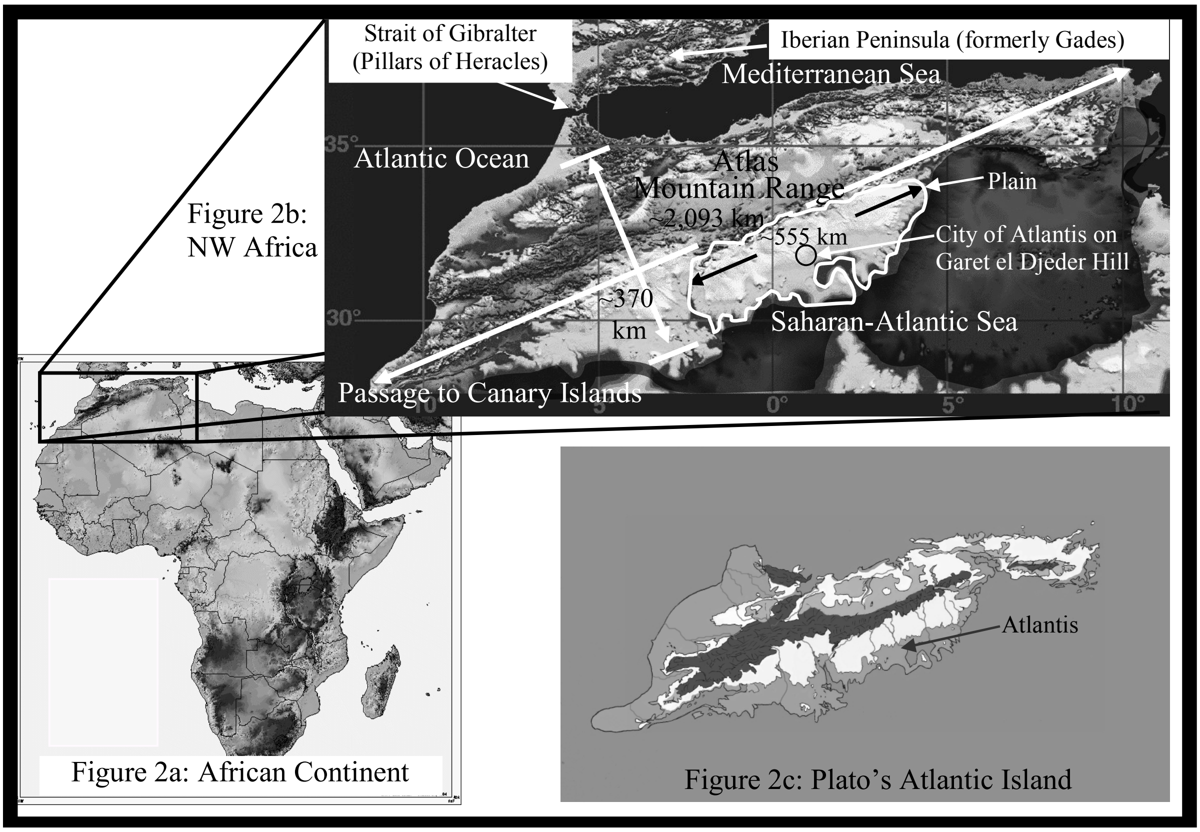
In the quest to identify a scientifically plausible and physically tangible site for Plato's lost island, it is imperative that researchers uphold his descriptions without alteration and they thoroughly scrutinize his words in an effort to glean every minute detail. Though all previous claims of the island's discovery have come replete with requisite adjustment factors necessary to mold Plato's work to fit those hypotheses, ours is unique in that we take Plato at his word. Therefore, in the following few paragraphs, we cannot emphasize enough how important it is that our Saharan-Atlas site has the ability to act as testament to Plato's descriptive accuracies.

By following Plato's detailed descriptions, along with Egyptian cosmogonies (Ions, 1983) and various Greek myths relating to Atlas (Graves, 1957), much as prehistoric travel guides, we find that the lost Atlantic Island should be one and the same as the Atlas Mountain Ranges of Algeria, Morocco and Tunisia *prior* to the continental uplift discussed in the previous section. Indeed, in this argument, the capitol city of Atlantis should be located on the western edge of the Great Occidental Erg of the Sahara Desert directly adjacent the peak of a large hypsographic hill named Garet el Djeder in El Bayadh province of modern Algeria situated at approximately 31.84° North Latitude and 1.03° East Longitude, at an elevation of nearly 460 meters above current sea level.

This premise can be tested by comparing the macroscopic geographic and dimensional descriptions from Plato for Atlantis to the environs of the Atlas Mountain Range when it was physically a little deeper in the Earth's mantle prior to the sudden catastrophic tilting-uplift. Fortunately, the natural history of the Atlas Ranges has been studied extensively, so we can use this reservoir of data to compare it to detailed characterizations by Plato.

We will begin by reviewing the topography of NW Africa using the collage of images Figures 2a-2c to determine how the island would have appeared. Figure 2a (USGS, 1984) outlines the African region of interest and Figure 2b (Beauchamp, 1997) is a digital topography of this NW region with captions and arrows to demonstrate the proposed general outline of Plato's isle. Figure 2c is our reconstructed image of Plato's Atlantic Island which compensates for lower ocean levels during the Younger-Dryas. In concert, these images can be used as a helpful visual aid in comprehending this seemingly complicated idea.

Figure 2b shows the digital topography with lower elevations (sea level to ~460 meters) of the Atlas region depicted in black. As we've explained, prior to the catastrophe that caused the continental uplift and ultimate abandonment of Atlantis, NW Africa would have been tipped slightly westward and positioned deeper in the Earth's mantle. So, in applying our hypothesis, the lowest elevations in this region would have been even lower and thus covered by waters merging with the modern day Mediterranean. Therefore, in Figure 2b, we need to simply consider that black represents



Figures 2a-c: Topographic Maps of Africa Detailing Atlantic Island. Figure 2a: Elevation map of Africa, after US Geologic Survey, 1984. Figure 2b: Atlantic Island Detail after Digital Topography of North Africa, Beauchamp, Cornell University 1997. This is a general approximation of the Saharan-Atlantic's sea-level prior to its destruction along with Atlantis 11,600 years ago. At that time, the Atlas mountain range was positioned deeper in the asthenosphere. Figure 2c: Reconstructed Image of Plato's Atlantic Island adjusting for reduced sea level during Younger-Dryas, Wells, 2008.

the ancient sea and ocean levels and the transition to light gray is indicative of the coastline of the former Atlantic Island. Then you can see the enormous island becomes visible revealing an outline that is easily subjected to a multitude of exacting measurements. Focusing on Figure 2b, the arrows and captions help emphasize 10 major macroscopic features Plato has attributed to his island that seem to consistently mirror the physical geography and gross dimensions of NW Africa.

Macro-Feature#1: Plato said the Atlantean kings came from an island home on the Atlantic Ocean in front of, or beyond, the Pillars of Heracles which are widely recognized as the Strait of Gibralter in modern times. Notably, our proposed site for Atlantic Island has a coastline on the Atlantic Ocean and encompasses the entire area up to and beyond the Pillars of Heracles, just as Plato said.

Macro-Feature#2: Plato describes from around the great island "…was the way to other islands, and from these you might pass to the whole of the opposite continent". We can see in Figure 2b that sailing SW from the harbor of Atlantis via the proposed Saharan-Atlantic Sea and through the Draa River Valley leads to the Canary Islands, from which west flowing equatorial currents could carry sailors to the Caribbean Islands and the Americas. Or, alternatively, they could sail north from the Canary Islands toward the Celtic Isles and Europe. Both sailing routes satisfy Plato's description.

Macro-Feature#3: Plato said, "… for this sea which is within the Straits of Heracles is only a harbour, having a narrow entrance, but the other is a real sea". We have proposed that when NW

Africa was positioned deeper in the mantle, a large shallow sea covered the northwestern Sahara and was continuous with the modern Mediterranean Sea. As Plato indicates, even in this sea's entirety, the Atlantic Sea (Ocean) was significantly larger only accessible by a relatively narrow passage.

Macro-Feature#4: As Plato required, our Saharan-Atlas site has the northern extremity of the proposed island looking north across the Pillars of Heracles toward the country that was formerly called Gades (today's Iberian Peninsula). Also observe, just as Plato said, the towering Atlas Mountains on the lengthy north shore are precipitous and descend rapidly down to the sea and on the southern half of the island there is a generally level plain protected by the ranges on the northern half of the island.

Macro-Feature#5: An integral and inseparable element of the legend involves the generally rectangular and oblong fertile garden plain which Plato has indicated is situated centrally along the southern shore of the island. On the topographic image of NW Africa in Figure 2b, we have identified that the Saharan-Atlas Steppe region is entirely consistent with Plato's description of this plain.

Macro-Feature#6: Plato has told us that at the center of the southern shore of the plain about 9.25 kilometers (km) from the coast, there must be a small mountain that is not very high on any side. Located in the exact center of our proposed island's plain, approximately 9.25 km from the former coast, geographers have identified a large hypsographic hill, named Garet el Djeder; surely, in ancient times, this big hypsographic hill could have been viewed as a "mountain not very high on any side".

Macro-Feature#7: One of Plato's rarely referenced, yet most exacting, macroscopic specifications is the amount of useable land capable of some kind of production after discounting for generally unusable terrain, such as the mountain ranges and high plateaus. This measure is presented in terms of total square area where Plato tells us, "…and the size of the lots was a square of ten stadia each way, and the total number of all the [habitable and productive] lots was sixty thousand". Since 10 stadia equals 1.85 km, then the area of all the countryside capable of any form of farming or engineering production (excluding unusable rough lands) would be ~205,350 km^2. This is a rather large number that is difficult to match, but our proposed island, unlike others, uniquely matches with ~206,000 km^2 of countryside excluding the mountain ranges and wasteland.

Macro-Feature#8: Plato stated, "[Atlantic] island was larger than Libya and Asia put together…" which we have reasoned refers to a measurement consistent with the nautical distance used by sailors, that is, the lineal sailing distance from the western reaches of Libya to the coast of ancient Asia (region of modern Israel). This lineal distance is approximately 2,100 km and is consistent with the length of our proposed island which from tip to tip is also about 2,100 km.

Macro-Feature#9: From the geographic descriptions and gross dimensions provided in the Platonic dialogues, we are told that "… [the plain] extending in one direction 3,000 stadia…" (3,000 stadia = 555 km) and "…across the centre [of the] island it was 2,000 stadia" (2,000 stadia = 370 km). These dimensions are entirely consistent with our island as shown in Figure 2b.

Macro-Feature#10: Plato further describes an irrigation ditch 1,850 km long that completely surrounds the garden plains. We can use the ditch dimension to generally determine that the width of the garden plain may be ~185 km when you account for the serpentine curvature of the ditch (i.e. 2 x 185 km of island width plus 2 x 555 km of plain length plus a 370 km adjustment for extra curvature added to account for non-linearity equals ~1,850 km around the plain). We recognize that some research teams have interpreted Plato to be indicating his 370 km dimension is actually the width of plain instead of the total width of the island; but, as we've just shown with a little logic, our interpretation is stronger when you account for the non-linear element of the ditch and the necessity of a large mountain range stretching generally east-west separating the island.

Now, with the apparent match of this geographic location to Plato's 10 major geographic and topographic specifications for Atlantic Island, it warrants a closer look at his plethora of special features to determine if any other correlations are evident to help bolster the hypothesis that Atlantis-Bakhu exists at this site and its environs were uplifted instead of sinking as the illusion implied.

3. RINGS OF ATLANTIS FORMED BY 3 ALIGNED METEORITE CRATERS?

In Figure 3, a drawing derived from a common road map of the Algerian Saharan-Atlas Steppe region details the apparent Rings of Atlantis near the small mountain on the south-central shore of the Atlas Island's plain identified in Figure 2b. However, the rings are not the popularized concentric circles of the archer's target, but rather another geometric arrangement that still complies with Plato's description. These rings are apparently composed of three un-catalogued presumably complex meteorite craters arranged along a straight line connecting their centers--hence, just as Plato indicated, "alternate zones of sea and land larger and smaller … two of land and three of water, which he [Poseidon] turned as with a lathe, each having its circumference equidistant every way from the center", where their shared focus is here along a common central line rather than superimposed as concentric rings. Ours is the first hypothesis ever to physically identify a visible and measurable natural three-ring geometry consistent with Plato's complicated description.

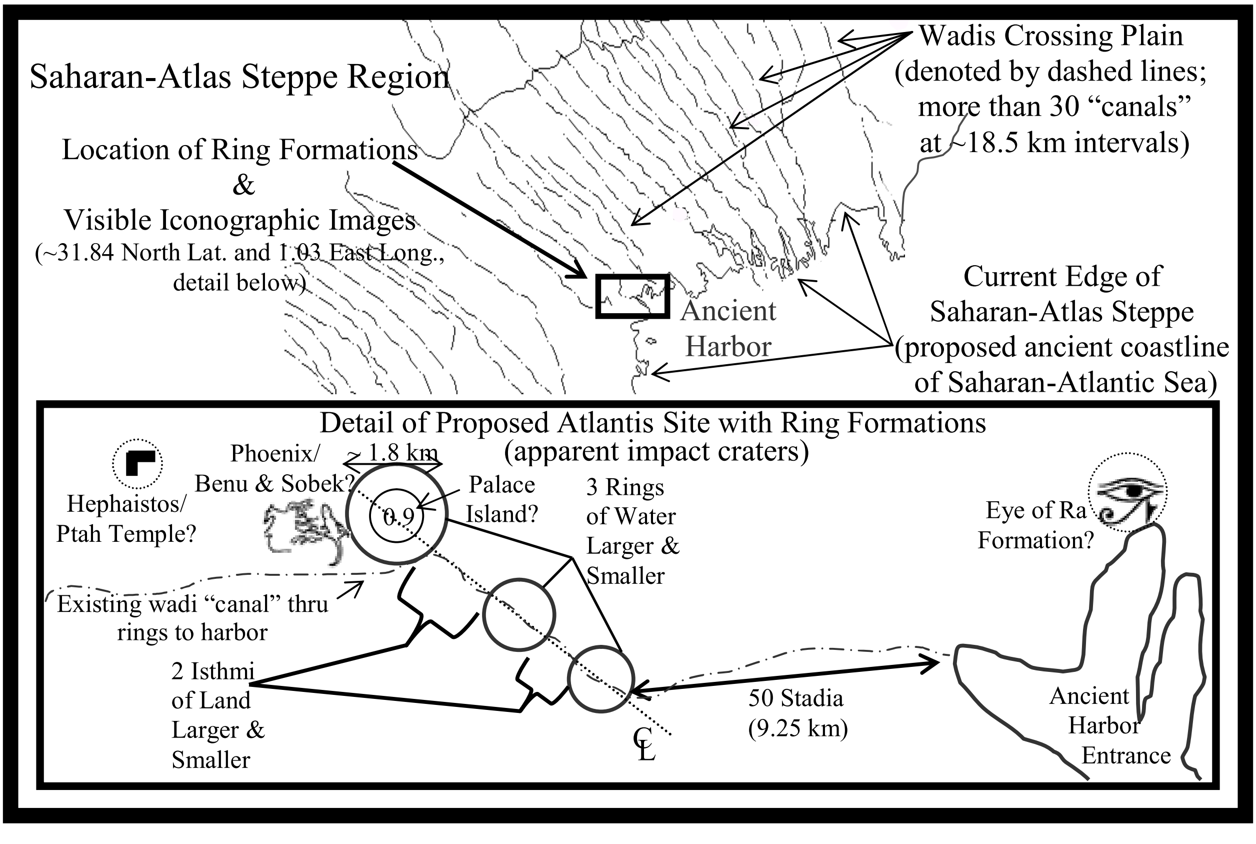


Figure 3: Saharan-Atlas Steppe with Proposed Atlantis Site Map. Upper image is a tracing by author from an Algerian road map (by Collins Bartholomew LTD 2004 MapMart) which highlights the wadi drainage "canals" that cross the plains of the Saharan-Atlas Steppe. Lower image is an enlarged detail indicating the relative geographic positions of apparent meteorite impact craters (possible rings of Atlantis) and natural formations matching Greek & Egyptian iconographic symbology which are all visible on LANDSAT5-TM color satellite imagery, Wells, 2008.

3.1 Meteorite impacts offer potential explanation for special features of Atlantis

Many scholars have repeatedly expressed disbelief that the Atlanteans could have produced the special attributes described by Plato such as the orichalcum metal and massive canals that cross the plain. It does seem a bit far-fetched unless the Atlanteans didn't produce all of these characteristics themselves; but rather, simply adapted for their own use the naturally occurring geography that preceded their occupation. If the ring formations are meteorite craters (Schultz, 2007), then they can actually play a profound role in providing a measurable basis for at least 5 of the special features.

Special Feature#1: The triple rings themselves as described above and shown in Figure 3 are the first special feature that can be attributed to the meteorite craters.

Special Feature#2: The Palace Island within the largest of the Atlantean rings depicted in the detail of Figure 3 is the second applicable feature. Figure 4 explains the rationale by showing the presumed geology of the largest crater at the Saharan-Atlas site. This crater is considered complex (French, 1998) because it may have a central uplifted area consistent with one form of impact (note: over the millennia, the craters have filled with sand, so excavation is required to verify the complex form). The resultant central uplifted area in the largest crater would have yielded an easily leveled surface for the palace to be built. Based on the size of the largest crater (~1.8 km in diameter), a complex crater could have created a raised central area of ~0.9 km diameter (Fig. 3 & 4) which again matches the size Plato described, "The island in which the palace was situated had a diameter of five stadia."(5 stadia=0.925 km).

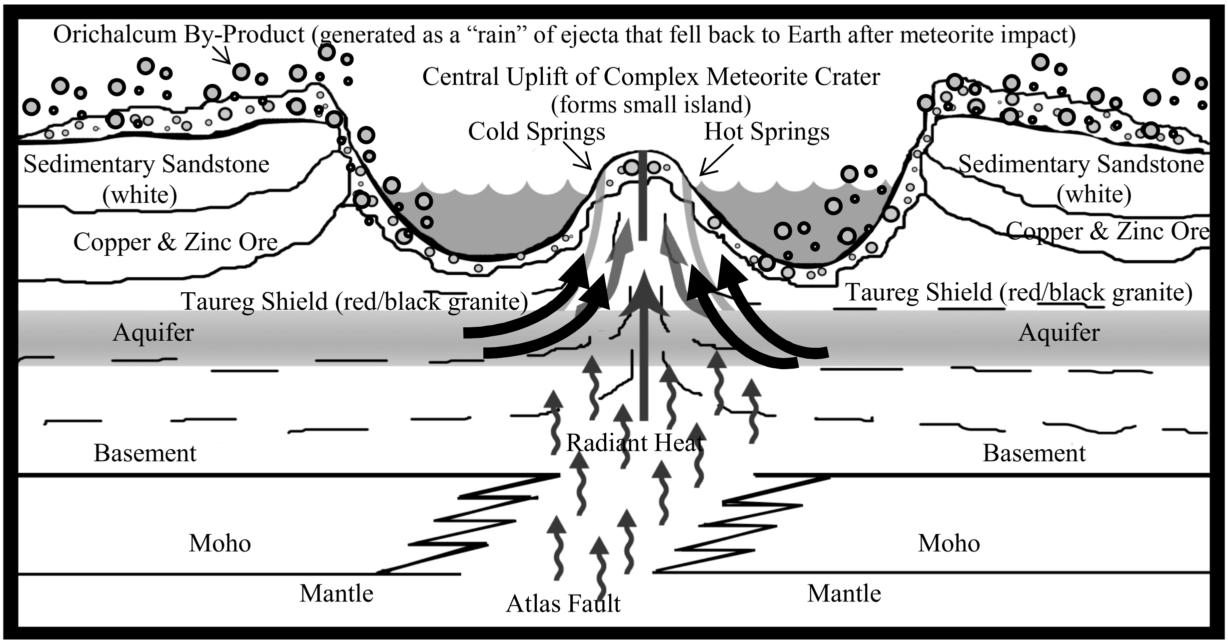


Figure 4: Presumed Atlantis Site Geology (cross-sectional view of largest crater from triple-ring formation), Wells, 2008. The meteorite impacts preceding Atlanteans provided means for several special features Plato described; orichalcum, hot/cold springs, red/black/white stone, raised central area of complex crater to accommodate palace of Poseidon, and the formation of the triple-ring structure itself.

Special Feature#3: The meteorite impact would have also caused fissures in the Earth's crust that could have accounted for the artesian wells and hydrothermal springs as shown in Figure 4.

Special Feature#4: The impact sites are in sedimentary sandstone that over-lies the red and black granitic Taureg-shield (Schlüter et al. 2008). Both the sandstone and granite layers were likely uplifted by the meteorite impact when the central Palace Island area was formed as detailed above, thereby making the red, black and white stone described by Plato readily available to quarry.

Special Feature#5: The rare metal orichalcum, an alloy from copper and zinc ore similar to brass, can also be attributed to the meteorite craters. All we need to consider is that the Atlas Mountains region has reserves of zinc and copper ore (Schlüter et al. 2008); the meteorite itself introduced unknown metals; and the meteorite impact would have introduced enough roasting heat into the ore to naturally produce the alloy in a *rain of ejecta* that fell back to Earth in a manner similar to that depicted in Figure 4. Remember, Plato specifically said, "…they dug out of the Earth…orichalcum", clearly suggesting the metal was already formed.

Special Feature#6: Plato indicated "…beginning from the sea they bored a canal of three hundred feet in width and one hundred feet in depth and fifty stadia in length", (50 stadia = 9.25 km). When measured from the outer most meteorite crater, the distance to the harbor is exactly 9.25 km (Fig. 3).

4. L-WAVE EARTHQUAKE REMNANTS PROVIDE MEANS FOR ATLANTIS CANALS?

Special Feature#7: The massive canals described by Plato are evident at this location as well and can be readily seen on essentially any map of the Saharan-Atlas region (Fig. 3). These maps show numerous extinct or ephemeral watercourse beds called wadis visible across the inland plain. These natural wadis are possibly the result of a powerful L-wave earthquake along the Atlas fault-line that *preceded* Atlantean occupation of the site and which may have been induced by the forces released during the meteorite impacts. If so, the harmonic waves from the earthquake were propagated across the plain much as a pebble thrown in a pond creates ripples across the surface, only here, once the rolling earthquake stopped, the footprint of the repeating vibration was left behind in the soil as if flash frozen. Regardless of origin, across the entire plain, more than thirty approximately 160 km long "canals" can still easily be seen today on a common road map. Most of these wadis are essentially 18.5 km apart as Plato described and from the ground would have appeared as gigantic straight canals that could have been readily adapted for irrigation and transport.

5. EVIDENCE FOR FAUNA AND FLORA ON ATLANTIC ISLAND

Special Features#8 & #9: Based on fossil remains and prehistoric cave art found in the area, the fauna and flora Plato described as diverse and plentiful including elephants and bulls along with abundant woods, marshes and rivers were also present at the Saharan-Atlas site. This art has been discovered throughout the Sahara ranging from Tassili-n-Ajer to Bardai dating as far back as 8,500 years ago. Some scholars even estimate the cave drawings occurred as early as 12,000 years ago, but unfortunately that imagery did not endure the test of time. The surviving paintings and etchings depict elephants, bulls, giraffe, and even catfish, indicating this type of fauna was prevalent in the region at the end of the ice age. Similarly, as mentioned earlier, this extreme northwestern area of the Sahara appears to have remained relatively moist during the Younger-Dryas compared to the central regions, apparently fed by Atlas rivers which crossed the steppe and pooled in lakes surrounded by verdant grass and reeds. The region of Atlantis was located in semi-desert soils which are sufficiently fertile to support abundant vegetation when irrigated as readily evidenced by oases. In addition, researchers have discovered that numerous types of vegetation were prolific in the Atlas Mountains at the Pleistocene-Holocene transition including deciduous, sclerophyllous and coniferous trees (Schulz, 1991). As we noted above, the Atlanteans would have been ideally situated with the naturally occurring irrigation canals that were fed by "streams that came down from the mountains."

6. THE EGYPTIAN CONNECTION

Plato said the original Atlantis story came from an Egyptian source, but due to a steep language barrier the names were almost unrecognizably different in the individual cultures. In again trusting Plato, our investigation has found reasonable Egyptian parallels which closely match the Atlantis legend. According to accepted research, the predynastic creation (Hart, 1990) and destruction myths or legends, some recorded in the ancient Egyptian Book of the Heavenly Cow (Hornung, 1999), originated in prehistoric times and were transmitted through oral traditions until about 5,200 years ago. Here is where we find many correlations between Plato's city of Atlantis and the fabled Egyptian city of Bakhu (Faulkner, 1985). Some of the most notable similarities include: 1.) Both were located on a large island raised from the deep and formless primeval waters of Earth by a group of creation gods; 2.) Each city was described as being situated on an average-sized mountain near an eastern sunrise shore; 3.) Each city appeared luminescent in the morning light, emitting a distinguished yellow-orange-reddish glow; 4.) They were associated with multiple sets of twins created by the gods with the first born taking precedence and dominion over the others; and 5.) In both stories, almost verbatim, the reigning gods, Zeus and Ra, called together the elder gods and asked for their advice on how to punish the insubordinate humans which then led to the end of these cultures by an unprecedented, catastrophic destruction and abandonment of the cities.

With this apparent connection, let's take a closer look to determine if any other attributes associated with the Greco-Egyptian city, Atlantis-Bakhu, are evident on-site.

7. TEMPLES OF ATLANTIS-BAKHU

Special Feature#10: Since Plato never finished writing Critias, he didn't describe in great detail what all of the temples looked like, but he did indicate that "there were many temples built and dedicated to the many gods." So, it seemed plausible that if this location has merit, some of these megalithic temple structures might be present at the Saharan-Atlas site. And, since the Atlantean history was shared by the Greeks and the Egyptians, it's reasonable to assume that even if the names were different in the individual cultures as Plato indicated they were, both may have referenced formations, structures and images in their legends that dated back to the Atlantean reign.

The immediate area surrounding the apparent meteorite craters (Fig. 3) does indeed appear to yield several distinctly visible formations (partially buried under the sand, but visible via satellite imagery) that closely resemble iconic symbology found in Greek and Egyptian culture. These appear to be natural forms that the Atlanteans incorporated or adapted for their beliefs, including: 1.) An L-shaped formation that could represent the architectural square which is a symbol associated with the Greek god Hephaistos and the Egyptian god Ptah; 2 & 3.) A crocodilian shape along with the upper body of a bird-like formation seemingly sitting on an earthen feature resembling the twisted-twigs of a nest that appears to be in flames. These could symbolically represent Greek Poseidon and Phoenix or the Egyptian Sobek and immortal Benu bird; 4.) A natural formation of hills resembling the udjat, or the Eye of Ra; and 5.) The triple crater rings themselves also appear to match several Egyptian hieroglyphs associated with Sun god Ra (Gardiner, 1957).

The chance of all five of these possibly related formations occurring randomly in this exceedingly small area of the entire Earth's surface, including the seafloor--remember, an area that was identified by following Plato's descriptions--is seemingly beyond astronomical. Therefore, it appears highly unlikely that the presence of these natural formations and earthen sculptures is random, but rather, it seems much more likely they are indeed intrinsic parts of an ancient culture consistent with what we know from both Greek and Egyptian sources about the Atlanteans.

8. GEOLOGIC ANOMALIES

The proposed sudden rapid epeirogenic-like continental uplift of NW Africa may have been a manifestation of a much larger uniform easterly roll of the northern aspects of the African Plate itself. This can be envisioned by considering an iceberg in the ocean at a critical gravitational tipping-point where, with speed and violence, the massive body rolls. A diastrophic dynamic sufficient in magnitude to cause major deformations in the Earth's crust would likely leave widespread physical evidence in its wake in a variety of scientifically measurable forms.

Based on our hypothesis, after the seismic activity and tectonic forces waned, the sudden massive shifting, tilting movement of the Earth's crust (similar to a lever on a fulcrum effect) would have left the northwestern margin of the African continent at the Atlas mountains uplifted, as we find today, explaining the seemingly confounding ~460 meters in elevation of the proposed Saharan-Atlas site for Atlantis-Bakhu. This broad redistribution of forces in an area spanning tectonic boundaries connecting the African, North American, Eurasian and Arabian Plates, would have left many measurable regional crustal deformation effects stretching from about the 28th to the 38th Latitude North and from the Mid-Atlantic Ridge (MAR) in the west to the Zagros Mountains in the east. A review of geologic data in this expansive area has identified studies that are investigating anomalies which may be associated with uniform plate movement. Our theory of sudden continental tilting and regional uplift could help explain these interesting geologic anomalies, thereby presumably strengthening its merit. Some of these anomalies have been under international investigation by scientists and scholars for decades, including uplifts of the seafloor along the MAR at fracture zones, transform and non-transform faults, and even massif uplift at the ridge (Blackman et al. 2002). And, at the Arabian Plate margin in the east near the Zagros, deep seismic activity and a Bouguer gravity irregularity (Snyder et al. 1986) may be linked to the rare crust movement. Even the Great Bend of the Nile is attributed to a recent uplift of the Nubian Swell (Stern et al. 1996) thought to have possibly occurred at the same time as the catastrophe connected to Plato's timeline.

9. IN CONCLUSION, IS THIS HYPOTHESIS COMPELLING?

The prevailing paradigm for Plato's Atlantis insists the island sank…if it ever really existed at all. However, we have presented geophysics models in this investigation which reveal that it is plausible Atlantis-Bakhu only *appeared* to have sunk and was actually uplifted, in an expansive plate-wide tectonic phenomenon similar to smaller epeirogenic models, which formed an illusory image in the mind of witnessing sailors.

It's notable that by adopting our paradigm shift of an island uplifted and following the map of Plato's 10 major geographic measurements for his Atlantic Island, we have identified strong physical correlations with the Atlas Mountain Ranges of NW Africa. And that we have also identified a specific site on the Saharan-Atlas Steppe which seems to comply with the 10 special features detailed by Plato. Even the most demanding of Plato's details are satisfied by our hypothesis, including: the three unique rings, an oblong plain with expansive canals that cross it, and natural means for the formation of the metal orichalcum. No other proposed location has ever matched these details with such exactitude--none.

It is our sincere hope that the broad spectrum of observations detailed in this paper will sufficiently stimulate the necessary debate among academic circles to ultimately provide personnel and means for future exploration of the Saharan-Atlas Steppe site. Indeed, with the legends of Atlantis-Bakhu, events are not always as they appear, and truth is often stranger than fiction!

For a more in-depth discussion along with full-color satellite images and topographies, please visit the website Atlantis-Bakhu.com.

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