

Reassessing the Durupinar Formation: A Critical Evaluation of Recent Geophysical, Geochemical, Geological, and Archaeological Claims Concerning Noah's Ark

Nate Loper, 1220 N Switzer Canyon Dr, Flagstaff, Arizona 86001.

Abstract

The Durupinar Formation in eastern Turkey has again become the focus of international attention following renewed ground-penetrating radar (GPR), electrical resistivity, light detection and ranging (LiDAR), soil testing, and, in 2026, an officially authorized program of percussion core drilling. The new work is worth following, especially because physical cores can finally test interpretations that have remained largely geophysical or chemical. At the same time, several recent claims have moved faster than the data. Linear radar reflectors have been described as walls or corridors, soil carbon and potassium have been discussed as possible products of decayed timber, and a resistant drilling horizon has been publicly connected with possible petrified wood before the material itself has been identified. This paper evaluates those claims within a young-earth, global-Flood framework and from a position affirming the historicity of Noah and the Ark. It argues that many of the reported observations remain compatible with the known geology, topography, vegetation, and soil development of the site. Special attention is given to the original 1979 Galbraith Laboratories analyses commissioned by Ron Wyatt. Those certificates show a real chemical difference between an exterior control and an interior sample, but the interior sample is strongly enriched in calcium and is chemically much closer to ordinary rock and mixed mineral material than to published siliceous petrified wood. The paper calls for continued drilling, stronger geological controls, independent and blinded analysis, publication of complete datasets, and meaningful participation by qualified researchers who do not begin with the assumption that Durupinar is the Ark.

Keywords: Noah's Ark, Durupinar, Mount Ararat, ground penetrating radar, soil carbon, potassium, limestone, petrified wood, basalt, geoarchaeology.

Introduction

Whenever a new round of Noah's Ark headlines begins, two questions tend to get blended together. The first is whether Noah, the Flood, and the Ark were real. The second is whether a particular modern site is actually the Ark. For me, the first question is not the difficult one. I believe Noah was a real man, the Flood was a real historical event, and the Ark was a real vessel. The harder question is what evidence would be needed before we identify something in the modern landscape as that vessel.

That distinction is especially important at Durupinar. The formation is visually impressive, recent surveys have produced genuinely interesting data, and the 2026 drilling program may finally answer questions that remote sensing alone cannot. I would be thrilled if that work demonstrated the remains of a large ancient vessel. But belief in the biblical event cannot do the work of identifying the modern object. Durupinar has to stand or fall on its own geology and archaeology.

For readers who have not followed the Ark-search discussion closely, three locations usually dominate the modern conversation. The first is the volcanic Mount Ararat, the mountain most people picture

when they hear the phrase "Noah's Ark." The second is Durupinar, a boat-shaped landform about 29km (18mi) south of Greater Ararat and the subject of this paper. The third is Mount Cudi, farther south, which is connected with a different body of ancient and regional tradition. These are not the only proposals, and this paper is not an attempt to rank them. I mention them only to orient the reader. My purpose here is much narrower: to ask whether the recent evidence from Durupinar itself supports identifying it as the Ark.

Genesis 8:4 says the Ark rested in the "mountains of Ararat." The wording is plural and regional. Elsewhere in the Old Testament, Ararat functions as a territorial or political designation associated with ancient Urartu (2 Kings 19:37; Isaiah 37:38; Jeremiah 51:27). That does not settle the broader geographical debate, but it does mean that proximity to the modern volcano cannot substitute for archaeological evidence (Snelling 2017; Younger 2021).

The current work at Durupinar is being carried out under an officially approved research program directed by Prof. Cenker Atila of Sivas Cumhuriyet University's Department of Archaeology in cooperation with Noah's Ark Scans. The American

researcher most closely associated with Noah's Ark Scans is its founder, Andrew Jones. Jones first visited Durupinar in 1997, returned in 2000, and has been involved extensively since 2013. He helped organize and fund the 2019 GPR and LiDAR surveys and now plays a major role in coordinating the international team and the non-invasive survey work. Noah's Ark Scans itself describes him as an independent researcher and software developer, explicitly noting that he is not an archaeologist or historian (Noah's Ark Scans n.d.-a, n.d.-b).

I have known Jones for years and speak with him on a regular basis. That matters to say plainly because what follows is critical in places. I do not question his sincerity, his faith, or his genuine conviction that Durupinar may be Noah's Ark. I do not question the motives of Prof. Atila or the other researchers either. Scientific disagreement should not require us to assign motives to people we disagree with. My concern is with interpretation, method, and the way some claims have been communicated before the underlying data have been fully tested.

The central issue is simple. An observation and an identification are not the same thing. A radar reflector can be real without being a wall. A cavity can be real without being a room. Higher carbon can be real without coming from wood. A hard layer can break a drill bit without being petrified timber. Those are not dismissive statements. They are the normal questions we should ask before moving from an interesting measurement to an archaeological conclusion.

Durupinar and the Current Project

Durupinar first came to wider attention after Turkish Army Captain İlhan Durupinar recognized the unusual boat-shaped feature in aerial imagery in 1959. The shape kept the site in public view, but the strongest modern claims came later, especially through the work of Ron Wyatt beginning in the late 1970s. Wyatt argued that the formation preserved the remains or mineralized imprint of the Ark and used metal detection, chemical testing, surface features, and later radar work to support that conclusion (Snelling 1992). David Fasold became another prominent advocate in the 1980s, although he later changed his mind and coauthored a geological reassessment with Lorence Collins arguing that the formation was natural (Collins and Fasold 1996).

The important point for the present paper is not to retell every stage of that history. It is that Durupinar has already been tested in several ways. Four core holes were drilled in 1988. The recovered cores contained no identified wood, petrified or otherwise, and two holes reportedly changed from mudflow material into layered bedrock at roughly 5 m depth,

identified by geologist Salih Bayraktutan as ophiolite (serpentinized basalt) similar to that in nearby outcrops (Baumgardner 1988). Those results do not prove that every part of the formation is natural, but they are direct subsurface observations and should remain part of the discussion as new drilling is interpreted.

The present project is broader than those earlier efforts. Modern GPR and electrical surveys were carried out in 2014, 2019, and 2021. Soil sampling followed. In 2026 the university-led program established a GPS grid, expanded two- and three-dimensional mapping, gathered additional geophysical data, collected a much larger soil sample set, and began deep dry percussion core drilling. Sivas Cumhuriyet University reported roughly 20 researchers and students from five countries taking part, with laboratory work continuing after the field season (Sivas Cumhuriyet University 2026a, 2026b).

That shift from scans to physical cores is the part I find most encouraging. For years the debate has often centered on what an image looks like. A core can tell us what the material actually is. If a feature interpreted as a wall is drilled, we can ask whether the drill encounters worked wood, mineral-replaced wood, a limestone contact, a fracture, clay, volcanic rock, or something else. That is a much better question than arguing from ambiguous radar data alone.

Start with the Geology, Not the Shape

Durupinar is dramatic from the air. That is why people keep looking at it. But the formation sits in a geologically complicated landscape, and the shape cannot be separated from that setting. Published natural models include deformed sedimentary material, mineralization, faulting and fracturing, mass movement, resistant limestone, weathering, dissolution, and erosion. Collins and Fasold (1996) emphasized natural geological structure and mineralization. Avci (2007) interpreted the boat-like feature in relation to the Telçeker earthflow, with a resistant limestone block moving downslope over weaker material and then being modified by earthflow, weathering, and dissolution.

Those models matter because they make predictions. Bedding produces long reflectors. Joint and fracture sets can create straight lines and near-right angles. Limestone can dissolve and form cavities. Different rock units change electrical resistance, moisture, and soil chemistry. A moving earthflow can juxtapose materials that did not begin together. In other words, a complicated subsurface is not unexpected if the formation is geological.

The external shape also needs to be kept in perspective. Durupinar is the most visually

compelling boat-shaped feature in the immediate discussion, but it is not the only streamlined or canoe-like form reported in the wider Ararat region. Photographic archives include other boat-shaped outcrops around Little Ararat and similar forms near Durupinar itself (Noah's Ark Search n.d.; Thomas 2026). Their existence does not prove Durupinar is natural. It does show that erosion, resistant blocks, and slope processes in this landscape can make shapes that catch the human eye.

The same landscape context may also help explain some of the chemistry now being discussed. One thing that is obvious in many photographs is that the formation often supports more vegetation than the flatter ground around it. The central mass rises above parts of the surrounding surface and can function almost like a natural planter box or mound. It can trap soil and fine sediment. Water can infiltrate and drain differently. Roots can develop in thicker soil. Plant litter can accumulate. By contrast, adjacent ground can be more compacted, more exposed to runoff, or more frequently washed and eroded. That difference alone gives us a natural mechanism for higher organic matter and plant-derived nutrients inside the outline.

This is not speculation without precedent. Soil carbon is strongly controlled by topography, vegetation, soil thickness, erosion, and water redistribution. Studies in semiarid landscapes show that substantial carbon differences can occur over short distances simply because one part of a slope stores more water, soil, and plant material than another (Jackson et al. 2017; Patton et al. 2019; Roman-Sanchez et al. 2018). At Durupinar, that means an "inside" sample and an "outside" sample are not automatically matched controls just because they are close together.

What the Recent Scans Actually Show

The modern geophysical work has produced some of the most eye-catching claims. The 2019 campaign combined GPR with LiDAR, photogrammetry, and other imaging. Jones (2024) reports linear and angular radar responses at several depths, including rectangular or angular features in parts of the interior and a broader shallow reflector across much of the formation. In project media these have sometimes been described as walls, corridors, rooms, or decks.

Here it helps to slow down and explain what GPR actually does. Ground-penetrating radar does not take a photograph of something underground. It sends electromagnetic energy into the ground and records reflections where physical properties change, especially where moisture, porosity, density, or material composition change. An archaeological wall can create that contrast. So can bedding, a fracture,

a lithologic contact, a cavity, a change in saturation, or a processing artifact. That is why archaeological GPR is powerful, but also why interpretation is non-unique (Berard and Maillol 2007; Brown et al. 2009; Manataki, Vafidis, and Sarris 2021).

The distinction becomes important the moment we give a reflector an architectural name. If we call a line a "wall" and then cite the presence of a wall as evidence for a ship, we have quietly placed the conclusion inside the description. A better approach is to keep the observation and the interpretation separate. The observation is a linear reflector at a given coordinate and depth. The hypothesis is that it represents a wall. The drill should then be used to test that hypothesis.

A claimed wall should have a predicted location, depth, thickness, and material signature before a borehole is placed. A claimed deck should appear coherently across more than one transect and should be encountered at corresponding elevations in multiple cores. A claimed corridor should have physical boundaries different from the material inside it. If drilling shows uninterrupted bedding, a fracture zone, or a natural contact, the architectural label should be dropped rather than moved to the next anomaly.

This is one place where outside analysis could help immediately. The raw Ground Penetrating Radar and Electrical Resistivity Tomography data could be given to several experienced geophysicists who have not first seen the Ark overlays or been told where the project believes the walls and rooms are. If independent analysts map the same unusual geometry, those targets become much stronger. If the pattern becomes architectural only after an Ark-shaped model is supplied, that is important to know too.

Soil Chemistry, Vegetation, and the 1979 Galbraith Analyses

Recent soil testing has become one of the strongest public arguments for the site. Noah's Ark Scans reported that 2024 samples from inside the formation averaged about 2.93% organic matter compared with about 0.98% outside, together with higher potassium and lower pH. During the 2026 university field season, Atila reported a different preliminary result, roughly 40% more carbon in interior samples, while about one thousand samples were still under analysis (Noah's Ark Scans 2026b; Sivas Cumhuriyet University 2026b).

Those numbers are worth studying, but the first question is still what the controls represent. A soil containing around 3% organic matter is not extraordinary by itself. USDA guidance places ordinary mineral surface soils across a broad range that includes these values (USDA Natural Resources

Conservation Service 2017). What is interesting is the difference between inside and outside. The problem is that the formation itself creates a different growing environment. If the raised interior holds deeper soil, more moisture, more roots, and more seasonal plant growth, then more decaying plant material could naturally raise carbon and potassium without any buried timber at all.

That natural “planter box” effect is testable. Instead of sampling only by whether a point lies inside or outside the boat-shaped outline, the project could match samples by slope, aspect, vegetation cover, soil depth, moisture, drainage, and parent material. If the chemical difference remains after those variables are matched, the buried-wood hypothesis becomes more interesting. If the difference tracks vegetation and soil development, the explanation becomes much more ordinary.

There is also an older set of chemical data that deserves to be brought back into this discussion because it is often cited in support of Wyatt’s interpretation. After the 1978 earthquake opened a long crack through the formation, Ron Wyatt returned in 1979 and collected material from inside the feature and from surrounding ground. Two original certificates dated October 9, 1979, were issued by Galbraith Laboratories in Knoxville, Tennessee. Sample No. 1 was the exterior control, and Sample No. 2 came from inside the formation. The laboratory values are transcribed in table 1 (Galbraith Laboratories 1979a, 1979b).

It is important to separate what the laboratory reported from what Wyatt later concluded. Galbraith provided chemical numbers. The report does not say, ‘petrified wood,’ ‘decayed timber,’ or even ‘organic carbon.’ It simply states ‘% Carbon’ along with an element oxide analysis. Wyatt and later advocates interpreted the higher carbon inside the formation as evidence of former living material and therefore wood. That interpretation did not come from the laboratory results.

The carbon result is the number most often quoted. Sample No. 1 contained 1.88% carbon, while Sample No. 2 contained 4.95%. That is a large relative increase. But once the rest of the chemistry is placed beside it, the result becomes much harder to read as simply “more wood.” The interior sample is not merely the control sample plus extra carbon. Its element oxide chemistry is different across the board.

Table 1 compares the two 1979 Galbraith analyses directly.

The most striking chemical difference is calcium oxide. CaO rises from 9.35% in the control to 17.41% in the interior sample, an increase of about 86%. At the same time, iron, titanium, magnesium, and sodium oxides, silica, and alumina all decrease to varying degrees. Potassium oxide rises by about 34%. That pattern looks less like a single biological ingredient added to otherwise identical soil and more like a change in the mineral mixture of the material being sampled.

The calcium oxide result is especially relevant to the natural geological models. Avci’s model includes a large resistant limestone block within the Telçeker earthflow. Limestone is dominated by calcium carbonate. A sample with a greater carbonate contribution can therefore show both more calcium oxide and more total carbon. The 1979 report lists only “% Carbon.” It does not distinguish organic carbon from inorganic carbonate carbon. That distinction is crucial. Without separating the two, the 4.95% value cannot be treated as 4.95% wood-derived carbon.

There is a technical caution here. The element oxide column on the Galbraith report is given on an ignited basis, which means volatiles such as carbon dioxide have been driven off before the oxides are normalized. The carbon number was determined separately. For that reason, it would be wrong to perform a strict one-to-one mass balance from the printed CaO and carbon percentages. Even so, the strong CaO enrichment shows why carbonate carbon has to be measured before the excess carbon is attributed to decayed timber.

Table 1. Chemical composition of the two 1979 Galbraith samples.

Component	Sample 1 control	Sample 2 interior	Change inside
SiO ₂	51.29%	48.02%	–6%
Fe ₂ O ₃	9.71%	6.56%	–32%
Al ₂ O ₃	15.27%	14.01%	–8%
TiO ₂	1.33%	0.44%	–67%
CaO	9.35%	17.41%	+86%
MgO	3.94%	3.02%	–23%
K ₂ O	2.30%	3.09%	+34%
Na ₂ O	2.43%	0.94%	–61%
Carbon	1.88%	4.95%	+163%

Source: Galbraith Laboratories (1979a, 1979b). Major oxides reported on an ignited basis; carbon determined separately.

The same concern applies to potassium oxide. Wood and living plants contain potassium, but potassium is also a normal rock-forming element. More importantly, local Tendurek volcanic rocks are chemically diverse. Lebedev and colleagues report SiO_2 from about 45 to 67 wt.% and K_2O from about 0.8 to 5.5 wt.% across the Tendurek volcanic series (Lebedev et al. 2016). A value of 3.09% K_2O in the interior sample is therefore not, by itself, chemically exotic for the local volcanic environment.

What does petrified wood look like chemically?

Bulk chemistry alone cannot identify petrified wood because wood can be mineralized by different minerals. Silica is the most common, but calcite, iron minerals, and other replacements occur. The decisive evidence is usually preserved biological structure under microscopy. Still, a published regional comparison is useful because it shows what known silicified wood from the Middle East actually looks like chemically. Table 2 presents the published New Cairo comparison used here.

Hassan's six New Cairo samples contain 77.89–97.37% SiO_2 . Their Al_2O_3 is only 0.21–0.92%, CaO only 0.14–0.39%, and K_2O only 0.03–0.06%. Organic carbon is reported at only 0.005–0.012%. Wyatt's interior Sample No. 2 is very different: 48.02% SiO_2 , 14.01% Al_2O_3 , 17.41% CaO, 3.09% K_2O , and 4.95% total carbon. This does not prove that no petrified wood could ever have a different composition. It does show that the 1979 sample does not chemically resemble these known siliceous petrified woods. If Sample No. 2 is to be called petrified wood, the case needs microscopic wood anatomy, not just the bulk element oxide numbers.

How does the sample compare with basalt?

The basalt comparison tells a different story. The

two basalt analyses presented in table 3 come from Tendürek Volcano and its vicinity in eastern Turkey, providing a geographically relevant comparison with the Durupinar formation (Lebedev et al. 2016). Basalt chemistry varies between volcanic provinces, making these regional samples more useful than a general basaltic reference. The comparison is helpful because it shows that Wyatt's interior sample has a silica concentration within the range of the local basalts, although its alumina concentration is somewhat lower.

In these basalt samples, SiO_2 ranges from 47.06 to 50.18% and Al_2O_3 from 16.91 to 17.28%. Wyatt's interior sample contains 48.02% SiO_2 and 14.01% Al_2O_3 , showing a close correspondence in silica but a lower alumina concentration. However, it is not a clean match overall. The Durupinar sample has considerably more CaO and K_2O and less TiO_2 , MgO, and Na_2O than the comparison basalts. That is why I would not call the sample basalt. The better description is that it looks much more like a mixed or altered geological material, with a strong silicate or aluminosilicate component and a substantial carbonate contribution, than like published compositions of petrified wood.

Table 4 summarizes the major chemical differences between Wyatt Sample No. 2, the published New Cairo petrified-wood samples, and the regional Tendürek basalt samples.

Taken together, the 1979 chemical analyses do not demonstrate decayed wood or petrified wood. They demonstrate that the inside sample is chemically different from the outside control. The difference is real, but the direction of that difference points strongly toward mineralogical variation. The very high calcium oxide makes carbonate material an obvious confounding factor for the carbon result. The silica and alumina look more rock-like than

Table 2. Whole-sample chemistry of six petrified-wood samples from the New Cairo Petrified Forest in Egypt. Data from Hassan (2015).

Component	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
SiO_2	80.87	77.89	83.75	89.25	97.37	96.68
Al_2O_3	0.33	0.92	0.23	0.38	0.58	0.21
TiO_2	0.004	<0.001	<0.001	0.002	0.002	0.001
Fe_2O_3 (total)	14.38	16.66	11.72	7.39	1.16	1.63
MgO	0.10	0.13	0.12	0.03	0.02	0.02
MnO	0.017	0.017	0.014	0.71	0.004	0.001
CaO	0.24	0.23	0.30	0.17	0.14	0.39
Na_2O	0.04	0.14	0.07	0.14	0.02	0.03
K_2O	0.06	0.04	0.05	0.04	0.05	0.03
P_2O_5	0.06	0.08	0.05	0.15	0.01	0.01
LOI	3.90	3.90	3.70	1.90	0.65	1.0
Organic carbon	0.008	0.009	0.007	0.012	0.005	0.005

Source: Hassan (2015). Oxides and LOI in weight percent; organic carbon values as reported.

Table 3. Major-oxide chemical composition of two basalt samples from Tendürek Volcano and its vicinity in eastern Turkey. Data from Lebedev et al. (2016).

Component	08-94	09-TND-59
SiO ₂	50.18	47.06
TiO ₂	1.46	2.29
Al ₂ O ₃	17.28	16.91
Fe ₂ O ₃ (total Fe)	9.49	12.92
MnO	0.15	0.19
MgO	5.64	6.27
CaO	9.37	8.53
Na ₂ O	3.86	4.14
K ₂ O	1.07	0.83
P ₂ O ₅	0.35	0.50
LOI	0.90	0.10
Reported total	99.73	99.73

Source: Lebedev et al. (2016), Table 1, Phase I. Fe₂O₃ expresses total iron as ferric oxide equivalent. LOI = loss on ignition. Published totals retained.

wood-like. The potassium oxide is fully compatible with local volcanic chemistry. None of that rules out archaeological material somewhere in the formation. It does mean that the old chemical argument has been asked to carry more weight than the original laboratory results justify.

The old dataset also gives the present team a very clear test. Modern samples should separate total carbon, total organic carbon, and inorganic carbonate carbon. They should measure CaCO₃ directly, characterize mineralogy with XRD and petrography, and test whether carbon tracks the proposed structural horizons or simply tracks vegetation, soil depth, moisture, and carbonate-rich parent material. That would turn a 47-year-old argument into a question we can actually resolve.

The Hard Layer and the Question of Petrified Wood

The newest drilling claim is easier to understand

because it involves something physical. In September 2026 Noah's Ark Scans reported that one interior borehole encountered a very resistant layer at roughly 4–5m depth and that the drill bit broke. Petrified or highly mineralized wood was raised publicly as one possibility, while the same announcement acknowledged that third-party laboratory testing was still needed (Noah's Ark Scans 2026a).

A broken bit is interesting, but it identifies hardness, not material. Basalt and andesite can be difficult and abrasive to drill. Dense limestone, chert, silicified sediment, cemented horizons, and mineralized veins can also be extremely resistant. Drilling studies on basalt document high cutting forces and severe tool wear (Hamade et al. 2010). The earlier 1988 cores also reportedly encountered layered bedrock at roughly 5m in two drillholes, identified by geologist Salih Bayraktutan as ophiolite (serpentinized basalt) similar to that in nearby outcrops, so a resistant geological unit at a similar

Table 4. Comparison of Wyatt Sample No. 2 with published New Cairo petrified wood and regional Tendürek basalt samples.

Component	Wyatt Sample 2	New Cairo petrified wood	Tendürek basalt
SiO ₂	48.02%	77.89–97.37%	47.06–50.18%
Al ₂ O ₃	14.01%	0.21–0.92%	16.91–17.28%
TiO ₂	0.44%	<0.001–0.004%	1.46–2.29%
Fe ₂ O ₃	6.56%	1.16–16.66%	9.49–12.92% (total Fe)
MgO	3.02%	0.02–0.13%	5.64–6.27%
CaO	17.41%	0.14–0.39%	8.53–9.37%
Na ₂ O	0.94%	0.02–0.14%	3.86–4.14%
K ₂ O	3.09%	0.03–0.06%	0.83–1.07%
Carbon	4.95% total	0.005–0.012% organic	Not reported

Sources: Galbraith Laboratories (1979b); Hassan (2015); Lebedev et al. (2016). Galbraith oxide figures are on an ignited basis and are not strictly mass-equivalent to the other analyses. Total carbon in the Galbraith sample is not directly equivalent to organic carbon reported for the New Cairo specimens.

depth is an obvious alternative that should be tested before the new horizon is given a biological label (Baumgardner 1988).

Fortunately, the material itself can settle much of this. Thin-section petrography, XRD, XRF, SEM-EDS, and micro-CT can show whether the specimen is igneous rock, carbonate, silicified sediment, or mineral-replaced plant tissue. Petrified wood should preserve biological organization such as cell walls, tracheids, vessels, rays, or growth structure even if very little original organic carbon remains (Hassan 2015; Mustoe 2017).

And even then, identified wood would only be the beginning of the archaeological argument. Naturally buried wood is not a ship. A constructed vessel should show repeated worked members in coherent positions, shaped surfaces, joinery or tool modification, consistent structural orientation, and perhaps pitch or other residues attached directly to built surfaces. Material, workmanship, and architecture have to converge before the historical identification can begin.

The So-Called Anchor or Drogue Stones

Another part of the Durupinar case often discussed alongside the formation itself is the group of large, pierced stones near Arzap, also spelled Artsap. Advocates commonly call them anchor stones or drogue stones and propose that they were suspended from the Ark to create drag and stabilize the vessel in rough water. Stone anchors and sea anchors are real ancient technologies, so the idea should not be rejected simply because it sounds unusual. The archaeological question is whether these particular stones were actually maritime equipment.

The regional evidence gives good reason for caution. The 2001 Mount Ararat Archaeological Survey documented pierced standing stones in the Arzap area, similar examples at Toklucak southeast of Ararat, and others at the Ahora cemetery. Many Arzap examples have clearly been moved or reused as khachkars, gravestones, monuments, or building material (Başaran, Keleş, and Geissler 2008). Once a stone has been moved and repurposed, its original context becomes much harder to reconstruct.

Pierced standing stones are also not unique to the immediate Durupinar area. Zorats Karer in southern Armenia contains more than two hundred standing stones, with roughly eighty pierced by circular holes (Farmanyan and Mickaelian 2019).

Proposed functions for those holes have included movement of the stones, ritual use, and sighting or observational functions. The purpose remains debated, but the broader archaeological point is clear: a round hole in a large standing stone is a regional phenomenon, not something uniquely tied to ships.

The Arzap stones themselves may also preserve clues to later use. Several occur in cemetery settings and carry crosses or inscriptions. The archaeological survey proposed that older stones were Christianized and reused as grave markers. One of the best-known pierced stones is positioned so that the Mount Ararat horizon can be viewed through its opening, and the survey discussed the possibility that at least some holes served observational or sighting functions. That interpretation is not proven either, but it is a real alternative that deserves the same consideration as the drogue-stone hypothesis.

For now, I do not think these stones can be counted as independent proof for Durupinar. They are interesting archaeological objects and deserve careful mapping, petrography, wear analysis, and documentation of original versus secondary placement. But calling them drogue stones assumes the connection that still needs to be demonstrated.

How the Project Can Become Stronger

The present project includes credentialed researchers. Prof. Atila is a trained archaeologist, and the broader team includes people working in archaeology, soils, engineering, and geophysics. That is a real improvement over a project driven only by enthusiasts. The remaining issue is not whether people have credentials. It is whether the team has the right range of specialties and enough independence to test its favored interpretation hard.

Noah's Ark Scans openly advocates the possibility that Durupinar is the Ark. The organization raises money for the work, leads tours, produces documentaries and social media, and uses Ark language in much of its public presentation. Andrew Jones is equally open about his own belief. None of that invalidates a measurement. It does mean that independent review becomes more important, not less.

I would like to see the team deliberately invite people who do not have a financial or reputational interest in Durupinar being the Ark. That should include geomorphologists, soil biogeochemists, independent GPR and electrical resistivity tomography (ERT) specialists, geoarchaeologists, and statisticians. Some should think the Ark interpretation is plausible. Some should think it is unlikely. The purpose is not ideological balance. It is to make sure someone in the room is always asking what else could produce the same result.

Turkey's permit system controls who can physically work at the site. That makes remote participation even more useful. Researchers who are not dependent on project funding, Turkish permits, continued site access, or a public role in the project could still analyze raw radar volumes, core

photographs, petrographic slides, soil tables, and laboratory results. This is in no way an accusation that the Turkish government is directing the science. It is simply a way to reduce both real and perceived conflicts of interest.

High-value samples should be split and sent under coded identifiers to more than one laboratory where practical. Raw geophysical datasets should be given to outside analysts before they see existing wall and room overlays. Every core should be logged and published, including the boring ones. Every soil sample should be reported, not only the group averages or the strongest contrasts. Negative results are not failures. They are part of the map.

Most importantly, the project should decide in advance what would count against the Ark interpretation. If repeated drilling through a supposed wall shows uninterrupted natural bedding, the wall hypothesis should weaken. If the hard horizon proves to be local limestone, basaltic rock, or cemented sediment, the petrified-wood interpretation for that horizon should be dropped. If the carbon difference disappears after matching for vegetation, soil depth, moisture, and carbonate content, the decayed-timber explanation should lose weight. On the other hand, if independent analysts repeatedly map the same architecture and cores recover worked mineral-replaced wood at those predicted locations, the natural-only model should lose weight. A good test has to allow both sides to lose.

Discussion

The easiest way to keep the Durupinar discussion clear is to separate the steps. First comes observation: a radar reflector exists, one soil sample has more carbon than another, a drillhole encounters a hard layer, or a stone has a hole through it. Next comes context: is the observation unusual after we account for geology, topography, vegetation, weathering, and regional archaeology? Only then should we ask whether it is human-made. After that comes construction. Only after a coherent vessel is demonstrated do chronology, biblical geography, and historical tradition become capable of supporting the specific identification with Noah's Ark.

Most current claims have not yet crossed those middle steps. That does not make the project unimportant. Durupinar is an unusual formation with measurable subsurface and chemical variation, and the present coring program is worth doing. But "unusual" and "artificial" are not synonyms.

The communication surrounding the project matters here too. The formal university material is often more cautious than the headlines surrounding it. Noah's Ark Scans has at times used terms such as "corridors," "rooms," "ship structure,"

"groundbreaking" soil results, and "possible petrified wood" before the underlying material has been independently tested and completely published. News and social media then compress those qualifications even further. A possible interpretation quickly becomes a discovery.

I think that cycle is beginning to work against the research. The stronger the headlines become, the harder it is for a careful geologist or archaeologist to join the project without appearing to endorse conclusions that have already been announced. It also fuels the tendency to demonize Christians, creation geologists, and biblical archaeologists who question some of the methods or simply call for more rigorous scientific testing. Already, some who raise those concerns are labeled atheists or evolutionists, or told that they lack faith in the biblical account. Nothing could be further from the truth. In many cases, they are doing exactly what Scripture calls us to do: "test all things" (1 Thessalonians 5:21), examine the evidence carefully, and do the hard work of being prepared to give thoughtful answers to a watching world. Unfortunately, social media rewards sensationalism, certainty, and novelty. Science usually moves in slower language: we observed this, we tested that, this alternative remains possible, and sometimes, we were wrong.

That may help explain why several leading organizations that fully affirm the biblical Flood remain skeptical of Durupinar. Answers in Genesis has repeatedly published Andrew Snelling's geological objections (Ham 2025). The Institute for Creation Research responded to the newest drilling headlines by again arguing that natural geology better explains the formation (Thomas 2026). Associates for Biblical Research has long treated the Durupinar identification cautiously and has published archaeological work questioning the drogue-stone interpretation (Başaran, Keleş, and Geissler 2008; Lanser 2008). These groups would have every theological reason to welcome a well-supported discovery of the Ark. Their skepticism should therefore be engaged through better data, not brushed aside as lack of faith.

Conclusion

I want the project to succeed in the most important sense of that word: I want it to tell us what Durupinar actually is. I have known Andrew Jones long enough to believe that he sincerely wants answers and has both good intentions and good motivation in pursuing this work. The best way to protect that work now is not to make the claims louder. It is to make the testing harder.

Continue the drilling. Recover and identify the hard layer. Drill the identified radar targets.

Separate organic carbon from carbonate carbon. Compare interior soils with genuinely matched controls. Publish the full laboratory results. Invite qualified outsiders into the data analysis. Let people who think the formation is natural try to prove it. Then let the evidence decide.

If Durupinar contains the remains of a large ancient, constructed vessel, that process will not weaken the case. It will make it far stronger. If it is a natural formation, the same process should reveal that. Either way, the truth is worth more than the headline.

References

- Avci, Murat. 2007. "Noah's Ark: Its Relationship to the Telçeker Earthflow, Mount Ararat, Eastern Turkey." *Bulletin of Engineering Geology and the Environment* 66 (16 March): 377–380.
- Başaran, Cevat, Vedat Keleş, and Rex Geissler. 2008. "Mount Ararat Archaeological Survey." *Bible and Spade* 21 no.3 (Summer): 70–96.
- Baumgardner, John R. 1988. "A Search for the Elusive Ark." Newsletter, August 19, 1988. Excerpts reproduced in Durupinar Core Drilling Locations and Results, Noah's Ark Scans. <https://tc8bf57eu1msb72.public.blob.vercel-storage.com/articles/Durupinar-Core-Drilling-Locations-and-Results.pdf>.
- Berard, Brooke A., and Jean-Michel Maillol. 2007. "Multi-Offset Ground Penetrating Radar Data for Improved Imaging in Areas of Lateral Complexity-Application at a Native American Site." *Journal of Applied Geophysics* 62, no.2 (June): 167–177.
- Brown, Joel, Josh Nichols, Leah Steinbronn, and John Bradford. 2009. "Improved GPR Interpretation through Resolution of Lateral Velocity Heterogeneity: Example from an Archaeological Site Investigation." *Journal of Applied Geophysics* 68, no.1 (May): 3–8.
- Collins, Lorence Gene, and David Franklin Fasold. 1996. "Bogus 'Noah's Ark' from Turkey Exposed as a Common Geologic Structure." *Journal of Geoscience Education* 44, no.4: 439–444.
- Farmanyan, Sona V., and Areg M. Mickaelian. 2019. "Astronomical Tourism Sites in Armenia." In *Astronomical Heritage of the Middle East*. Edited by Sona V. Farmanyan, Areg M. Mickaelian, J. McKim Malville, and Mohammad Bāgherī, 253–257. Astronomical Society of the Pacific Conference Series 520. <https://adsabs.harvard.edu/pdf/2019ASPC..520..253F>.
- Galbraith Laboratories. 1979a. "Certificate of Analysis, Sample No. 1, Report I-3967." October 9, 1979. Knoxville, Tennessee. Digital copy in author's files.
- Galbraith Laboratories. 1979b. "Certificate of Analysis, Sample No. 2, Report I-3968." October 9, 1979. Knoxville, Tennessee. Digital copy in author's files.
- Ham, Ken. 2025. "Has Noah's Ark Been Found...For Real This Time?" Answers in Genesis, June 1, 2025. <https://answersingenesis.org/blogs/ken-ham/2025/06/01/has-noahs-ark-been-found-for-real/>.
- Hamade, R.F., S.P. Manthri, F. Pusavec, K.A. Zacny, L.A. Taylor, O.W. Dillon Jr., K.E. Rouch, and I.S. Jawahir. 2010. "Compact Core Drilling in Basalt Rock Using PCD Tool Inserts: Wear Characteristics and Cutting Forces." *Journal of Materials Processing Technology* 210, no.10 (1 July): 1326–1339.
- Hassan, Kamaleldin M. 2015. "The Fossil Wood of East Cairo, Egypt: A Mineralogical View." *Mineralogia* 45, nos.1–2 (July): 47–57.
- Jackson, Robert B., Kate Lajtha, Susan E. Crow, Gustaf Hugelius, Marc G. Kramer, and Gervasio Piñeiro. 2017. "The Ecology of Soil Carbon: Pools, Vulnerabilities, and Biotic and Abiotic Controls." *Annual Review of Ecology, Evolution, and Systematics* 48 (November): 419–445.
- Jones, Andrew. 2024. "Integration of Ground-Penetrating Radar, LiDAR, and Empirical Field Studies: A Multifaceted Analysis Comparing 1987 and 2019 Field Studies of the Durupinar Boat Formation Known as 'Noah's Ark.'" In *Mount Ararat and Noah's Ark: History, Myth and Land*. Edited by Faruk Kaya, Oktay Belli, and Randall W. Younker, 121–133. Ankara, Turkey: Akademisyen Kitabevi.
- Lanser, Richard D. 2008. "Noah's Ark Update." Associates for Biblical Research, September 26, 2008. <https://biblearchaeology.org/research-articles/noahs-ark-update/>.
- Lebedev, V.A., A.V. Chugaev, E. Ünal, E. V. Sharkov, and M. Keskin. 2016. "Late Pleistocene Tendurek Volcano (Eastern Anatolia, Turkey). II. Geochemistry and Petrogenesis of the Rocks." *Petrology* 24, no.3 (19 May): 234–270.
- Manataki, Merope, Antonis Vafidis, and Apostolos Sarris. 2021. "GPR Data Interpretation Approaches in Archaeological Prospection." *Applied Sciences* 11, no.16 (17 August): 7531.
- Mustoe, George E. 2017. "Wood Petrification: A New View of Permineralization and Replacement." *Geosciences* 7, no.4 (20 November): 119.
- Noah's Ark Scans. 2026a. "Core Drilling Begins at Durupinar Noah's Ark Site, Drill Bit Shatters on Possible Layer of Petrified Wood." September 23. <https://www.globenewswire.com/news-release/2026/09/23/3367545/0/en/core-drilling-begins-at-durupinar-noah-s-ark-site-drill-bit-shatters-on-possible-layer-of-petrified-wood.html>.
- Noah's Ark Scans. 2026b. "Groundbreaking Soil Sample Results Shake Secular Science." June 27. <https://noahsarkscans.substack.com/p/groundbreaking-soil-sample-results>.
- Noah's Ark Scans. n.d.-a. "About the Noah's Ark Project." <https://www.noahsarkscans.com/about>.
- Noah's Ark Scans. n.d.-b. "Noah's Ark Project Details." <https://www.noahsarkscans.com/the-ark-project>.
- Noah's Ark Search. n.d. "Durupinar." <https://www.noahsarksearch.com/resources/durupinar/>.
- Patton, Nicholas R., Kathleen A. Lohse, Mark S. Seyfried, Sarah E. Godsey, and Susan B. Parsons. 2019. "Topographic Controls of Soil Organic Carbon on Soil-Mantled Landscapes." *Scientific Reports* 9 (23 April): 6390.
- Román-Sánchez, A., T. Vanwallegem, A. Peña, A. Laguna, and J.V. Giráldez. 2018. "Controls on Soil Carbon Storage from Topography and Vegetation in a Rocky, Semi-Arid Landscape." *Geoderma* 311 (1 February): 159–166.
- Sivas Cumhuriyet University. 2026a. "Akademisyenimiz Prof. Dr. Cenker Atila Onculugunde Dev Proje: Nuh'un Gemisi Arastiriliyor." July 28. <https://www.cumhuriyet.edu.tr/haber/18523-akademisyenimiz-prof-dr-cenker-atila-onculugunde-dev-proje-nuhun-gemisi-arastiriliyor>.
- Sivas Cumhuriyet University. 2026b. "Universitemiz Onculugunde Yurutulen Nuh'un Gemisi Arastirmalarinda

- Heyecan Verici İlk Sonuclar.” August 28. <https://www.cumhuriyet.edu.tr/haber/18597-universitemiz-onculugunde-yurutulen-nuhun-gemisi-arastirmalarinda-heyecan-verici-ilk-sonuclar>.
- Snelling, Andrew A. 1992. “Special Report: Amazing ‘Ark’ Exposé.” *Creation* 14, no. 4 (September): 26–38.
- Snelling, Andrew A. 2017. “Is Noah’s Ark on Mount Ararat?” *Answers Magazine* 17, no. 3 (May 1): 54–62. <https://answersingenesis.org/noahs-ark/noahs-ark-found/noahs-ark-mount-ararat/>.
- Thomas, Brian. 2026. “Possible Ark Site Has Mainstream Media Hopping.” Institute for Creation Research. October 1. <https://www.icr.org/article/possible-ark-site-turkey/>.
- USDA Natural Resources Conservation Service. 2017. “Rangeland Soil Quality—Organic Matter.” https://www.nrcs.usda.gov/sites/default/files/2022-12/Rangeland_Soil_Quality_organic_Matter_1.pdf.
- Yunker, Randall W. 2021. “The Case for Ağrı Dağı/Masis as Biblical Mt. Ararat.” *Journal of the Adventist Theological Society* 32, no. 1: Article 1. <https://digitalcommons.andrews.edu/jats/vol32/iss1/1/>.