

Bashirov: Geology and the Quran – [Geológia és a Korán]

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SCIENTIFIC INTERPRETATION OF GEOLOGICAL STATEMENTS IN THE QURAN: PLATE TECTONICS AND STABILIZERS

[A KORÁN GEOLÓGIAI VONATKOZÁSAINAK TUDOMÁNYOS ÉRTELMEZÉSE]

JALAL BASHIROV

<https://orcid.org/0009-0005-7757-0196>

İstanbul Üniversitesi-Cerrahpaşa: Istanbul, TR

bashirovjalal@gmail.com

Abstract. This study examines the Quranic verse, "And the land we extended it, and placed in it stabilizers," through a geological lens, challenging claims of scientific inaccuracies. It argues that the verse aligns with modern geological concepts such as plate tectonics, ocean floor expansion, and the breakup of Pangea. Additionally, the role of stabilizers, including mountains and isostasy, is explored to highlight their compatibility with scientific principles. The study concludes that these verses, expressed in accessible language over 1,400 years ago, reflect profound scientific insight, supporting the Quran's claim as a divine revelation.

Keywords. Quran and science, plate tectonics, isostasy, volcanic mountains, seismic waves

Introduction

The relationship between religious texts and scientific data has been the subject of much debate throughout history. In particular, the extent to which some statements in the Quran coincide with modern science has been addressed from different perspectives. This study examines the statement in the Quran, "And We spread out the earth and placed stabilizers in it" from a geological perspective and evaluates its relationship with modern geology. It investigates how these verses can be associated with concepts such as plate tectonics, isostasy and mountain formation processes that are accepted today. While some critics claim that such statements contain geological errors, other researchers argue that these statements should be examined contextually. In the study, verses with geological contexts such as Qaf 7, An-Nahl 15 and Al-Anbiya 31 were selected and compared with scientific concepts. For this purpose, a comprehensive literature review was conducted by scanning current academic studies in the field of geology, articles published in peer-reviewed journals and scientific resources.

The study evaluated the extent to which the Quranic verses are compatible with scientific paradigms. Concepts such as plate movements, subduction zones, mountain roots and

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crustal balance were compared and analyzed with the statements in the Quran. The findings show that the geological statements in the Quran coincide with modern science. This study offers a new perspective to understand how the Quran relates to scientific facts.

Materials and Methods

In this study, the relationship between the Quranic expressions, “And the land We extended it, and placed in it rawasiye/stabilizers” (The Monotheist Group, 2025) and modern geological theories was analyzed. The methodological framework of the research includes the following steps: First, the verses of the Qur’an that may be associated with geological terms and concepts (e.g., Qaf 7, An-Nahl 15, Al-Anbiya 31) were selected and analyzed. According to my research, the studies of exegesis and religious studies conducted by Professors Mehmet Okuyan and Caner Taslaman are the most recent in the literature and demonstrate why the older interpretations are mistaken (Taslaman, 2022). In this article, these more recent studies were evaluated together with older publications. The English translation of the verses was taken from the Monotheist Group version, which, unlike other translations that misinterpret the term “stabilizer” as “mountain,” was more rigorous in its translation. Furthermore, the context of the verses was taken into consideration, selecting only those sections that contain geological expressions.

Next, a comprehensive review of the scientific literature on modern geological topics such as plate tectonics, isostasy, mountain-forming processes, and plate movements was conducted. During this analysis, articles published in peer-reviewed journals, geological books, and relevant references were examined, with particular attention paid to topics such as Wadati-Benioff zones, subduction zones, and mountain roots.

A comparison between Quranic and scientific concepts was also made. The expressions of the verses were directly associated with modern geological terminology, identifying the similarities and differences between scientific processes and the language of the Quran. An example of this approach is the association of the word rawasiye with the stabilizing role of mountains, comparing it with geological literature.

In addition, geological figures and table were used to increase the understanding of the scientific theories addressed in the study. Maps showing the boundaries of tectonic plates were added, as well as explanatory tables on the geological meaning of the term rawasiye. Each of these visual elements was detailed to demonstrate the scientific equivalents of the selected verses.

Finally, the data obtained from the literature review were compared with the expressions in the verses, creating a synthesis. A systematic analysis was conducted to examine how scientific and religious perspectives overlap. The results demonstrate that the verses of the Quran contain no scientific errors and, on the contrary, are in line with advances in geology.



In addition, the study was subjected to a critical evaluation to test its compatibility with modern scientific paradigms. The accuracy and completeness of the expressions contained in the verses were analyzed in light of contemporary scientific methods.

How should the verses in the Quran that say “And the land We extended it” be understood?

We witness that non-Muslims like Prof. Dr. Celal Şengör are not interested in understanding the Quran or that Islamic scholars who lack geological knowledge say that there are geological errors in the Quran or misinterpret the geological verses of the Quran. Upon examining these verses from the perspective of a geologist, it becomes evident that the interpretations suggesting geological inaccuracies may stem from misunderstandings of the terminology or concepts presented. Instead, these verses exhibit parallels with established geological principles when analyzed in the context of modern scientific understanding. Even some ordinary Muslims who have no knowledge of geology even claim, out of their ignorance, that the Quran says the world is flat. The relevant verses are usually as follows:

Qaf 7: And the land We extended it, and placed in it *stabilizers*... (The Monotheist Group, 2025).

Seeing that the verse mentions the earth, the first mistake that can be made would be not to resort to geology. When we look at geology, plate tectonics stands out as the most appropriate explanation for this verse.

Thanks to the convection currents in the mantle, the ocean floors are expanding by spreading between 2 and 20 cm per year, and over a long period of 200 million years, the ocean floors are renewed and rejuvenated by basaltic lavas emerging from the asthenosphere, the continents are separated, the oceans are opened and closed, and valleys and rift zones are formed on the ocean floors (Figure 1). As an example, we can show the breakup of Pangea and the fact that the Atlantic Ocean may have opened and closed at least 10 times. According to geologists, after 200-250 million years, the continents will come together again in a form similar to their original form (either taking the form of Novapangea, Neopangea, Aurica or Amasia). As a result, we can say that when the Quran says "And the land We extended it", it refers to the breakup of Pangea.

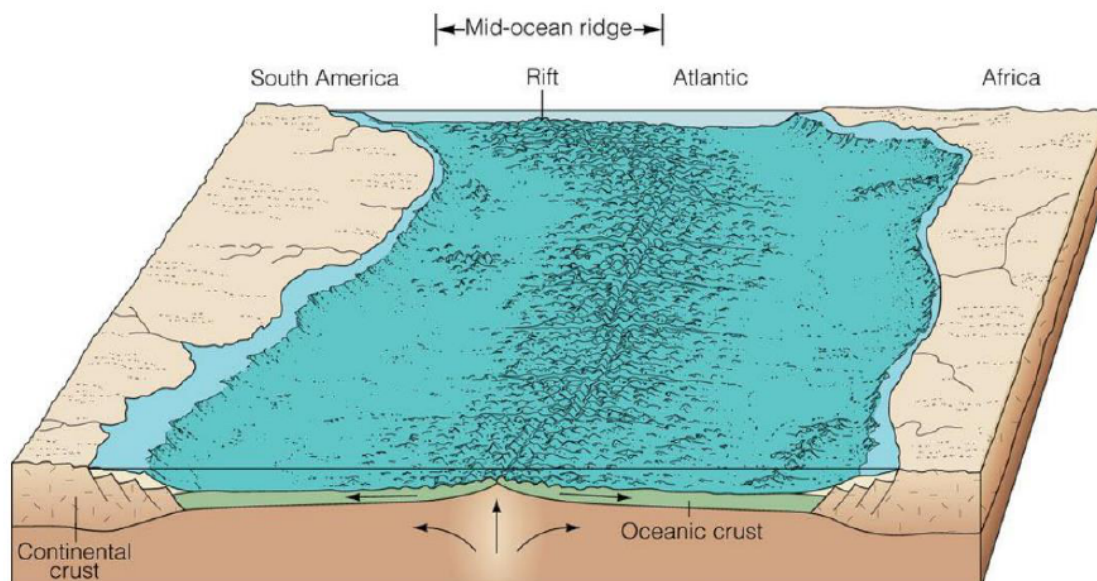


Figure 1 : Formation of the Atlantic Ocean between the diverging continents of America and Africa (Ankara Üniversitesi Açık Ders, n.d.).

Since the Quran is not a scientific book, we would not have expected the Quran to contain comprehensive and term-filled statements in the form of a detailed geological thesis titled “Plate Tectonics or Continental Drift Theory”. The fact that the Quran describes a scientific fact that would be discovered centuries later in the simplest language (something that people who lived 14 centuries ago could imagine) was the most logical way to prove to people of all ages that the Quran is the word of God. Therefore, it would be a mistake to abandon the view that this verse points to such a great scientific fact and say that it points to the “flat earth theory”, which is a man-made invention that contradicts science.

Are the spreading of the earth and the placement of stabilizers in it related? Why does the Quran draw attention to these two together?

The spreading of the earth and the placement of stabilizers (volcanic mountains) on the earth are both realized through convection currents. As a result of the breakup of Pangea, mountains such as the Alps, Andes, Rocky, Zagros, Atlas, Cordillera, Hindu Kush and Karakoram were formed, and the roots of these mountains play a stabilizing role by creating heavy pressure within the ground. In addition, since the lithosphere part that is torn apart by the spreading of the earth on one side is equal to the lithosphere part that is spent by the subduction zone on the other side, there is a constant balance in the earth's crust. Thus, the phenomenon called "isostasy" occurs on the earth. Isostasy refers to the balance/stability that is maintained despite the deformations in the earth's crust. The fact that the Quran also

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refers to the expansion of the earth and the placement of stabilizers in it in the same verses proves once again that the Quran is not the word of man.

What does the word “rawasiye” (رَوَاسِي) in the Quran cover in geology?

Geological explanation of the word rawasiye:

In the Quran, the word mountain is used both in the singular form of “jebel” (with the word جَبَلٌ, for example in 59:21) and in the plural form of “jibale” (with the word جِبَالٌ, for example in 78:7). In the verses related to this subject, the word “rawasiye” (رَوَاسِي) is used instead of “jibale”. The relevant verses are as follows:

- **Rad 3:** And He is the One who has spread out the land, and made in it *stabilizers* and rivers, and all the fruits He made in pairs. (The Monotheist Group, 2025).
- **Al-Hijr 19:** And the land We have stretched, and placed *stabilizers* in it, and We have planted in it from everything in balance. (The Monotheist Group, 2025).
- **An-Nahl 15:** And He has cast onto the earth *stabilizers* so that it would not tumble with you, and rivers, and paths, perhaps you will be guided. (The Monotheist Group, 2025).
- **Al-Anbiya 31:** And We made on the earth *stabilizers* so that it would not tumble with you, and We made in it wide paths that they may be guided. (The Monotheist Group, 2025).
- **An-Naml 61:** The One who made the earth a habitat, and He made in it rivers and He made for it *stabilizers*, and He made between the two seas a barrier. (The Monotheist Group, 2025).
- **Luqman 10:** And He cast onto the earth *stabilizers* so that it would not tumble with you, and He spread on it all kinds of creatures... (The Monotheist Group, 2025).
- **Fussilat 10:** And He placed in it *stabilizers* from above it... (The Monotheist Group, 2025).
- **Qaf 7:** And the land We extended it, and placed in it *stabilizers*... (The Monotheist Group, 2025).
- **Al-Mursalat 27:** And We made *stabilizers* in it, and We gave you to drink fresh water? (The Monotheist Group, 2025).

If we look carefully at the verses where the “rawasiye” is mentioned, we will see that it is related to these:

- I. The flowing of rivers and fresh waters.
- II. The expansion of the earth.



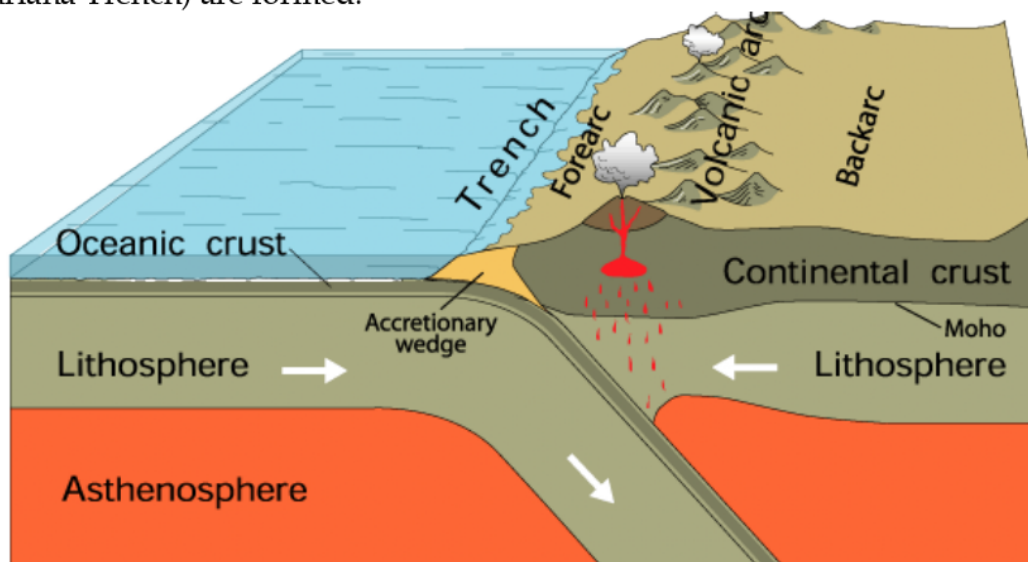
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- III. The shaking of the ground.
- IV. The shaking of the roads.
- V. Being placed on the ground above the ground.
- VI. Being placed inside the ground.

In order not to confuse the last two parts, I would like to state that the answer to the possible question of “Did God place the rawasiye on or inside the ground?” is “both.” This question is similar to the question of “Did God create man from soil (, water, clay) or sperm?” The fact that all the answers are correct does not contradict each other, on the contrary, they complement each other, and the fact that different features of the rawasiye are touched upon here shows that there is no contradiction, on the contrary, there are elements that complement each other. For example; if I say that I live in Turkey, this does not contradict the information that I live in Istanbul. Because the information given is correct but insufficient. Icebergs are also not rawasiye, but they will help us understand what rawasiye is. For example, if we compare the lithosphere to the ocean, the part called "above the earth" would be the part above/outside the ocean. The part inside the ocean (the part of the iceberg that is not visible) would be the part called "inside the earth", which shows the roots of the mountains.

In order to understand what rawasiye is, we need to look at the converging plate boundaries. When two plates move against each other, they collide and the plate with the higher density dives under the other plate and sinks into the asthenosphere and undergoes subduction. Thus, they form the “subduction zone” (Figure 2). When 2 oceanic plates or oceanic and continental plates collide, subduction zones, volcanic island arcs and trenches (e.g. Mariana Trench) are formed.



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Figure 2: Volcanic island arcs and trenches formed by the collision of oceanic and continental crust. The volcanic mountains here are one of the rawasiye (U.S. Geological Survey [USGS], 2016).

Geological explanation of the word “an-tamīda” (أَنْ تَمِيدَ):

In An-Nahl 15, Al-Anbiya 31 and Luqman 10, God draws attention to the fact that rawasiyes are related to “an-tamīda” (أَنْ تَمِيدَ). Although the majority of traditional translations have translated it as “so that it does not shake” as if there was a preposition “la”, the correct translation of this word should be “so that it shakes”, “related to shaking” or “related to your balance being disturbed” (Taslaman, 2022).

If we think “Is there anything that will affect our subject here?” we will have to say “yes, there is”. Because the question “Do rawasiyes have a feature such as preventing the shaking of the ground or are they related to shaking in the ground in general?” will help us determine what rawasiye is. For example; if we say “rawasiyes only prevent shaking in the ground”, there is no question of grabens (Figure 11) being rawasiye. Because grabens are formed by earthquakes but they do not prevent earthquakes (Kent et al., 2016). If we say that “rawasiyes are generally related to earthquakes”, then we can say that rawasiyes can both occur as a result of earthquakes and prevent earthquakes. We can also say that they can only be related to one of these two. So what do we need to do to be consistent? Therefore, we need to derive additional criteria from the Quran so that we can understand what rawasiyes cover. I will touch on this in Table 1.

For now, I would like to explain what the word “an-tamīda” means in science. We can explain it in 2 ways:

1. The word “an-tamīda” is related to earthquakes that occur in the subducting part of subduction zones. Because rawasiyes occur as a result of subduction zones. The zone where the earthquake occurs is called the “Wadati-Benioff Zone” in geology (Figure 3).

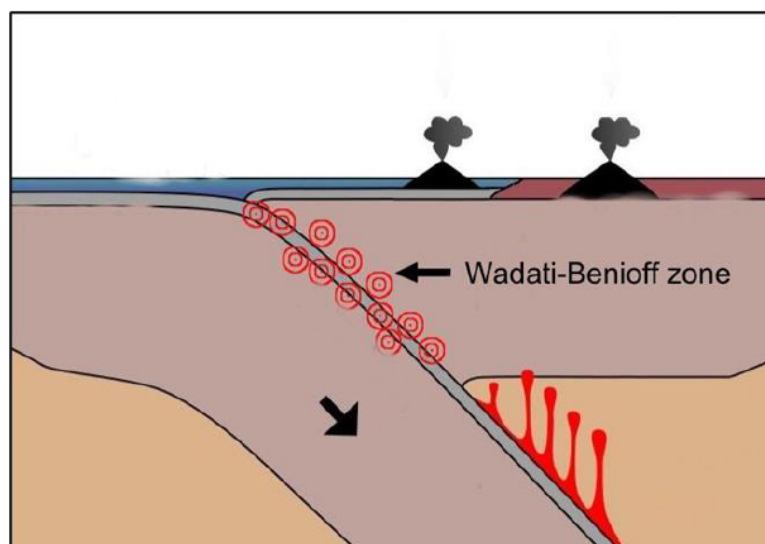


Figure 3: The scientific equivalent of the word “an-tamīda” in the Quran, which is related to shaking: Wadati-Benioff zone (Simple English Wikipedia, 2024).

2. The word “an-tamīda” is related to tsunamis that occur due to earthquakes that occur at the moment of subduction in the oceanic crusts. These tsunamis cause serious damage to living spaces on land and disrupt both the material and spiritual balances of people. This explains why the word “zilzal” (زلزال), which directly means earthquake, is not used in the relevant verses, and the word “an-tamīda” is used instead (Figure 4).



Figure 4: Simulated tsunami impact on an urban area (Pinterest, n.d.).

That is why God draws attention to the expansion of the earth, the shaking of the earth and the placement of rawasiyes inside the earth. If we consider that all of these are related to plate tectonics, we should say that this book was written by someone who had knowledge of plate tectonics. If we assume that this information became known to science in the last century (as a result of the research of Kiyoo Wadati and Hugo Benioff between 1935 and 1945) (Frohlich, 1987; Benioff, 1949) (since we know that the Quran was sent/written 14 centuries ago, saying that the Prophet Muhammad could not have had such knowledge), we can easily say that the Quran could only have been sent by God.

Now let's come to what rawasiyes cover: folded mountains are formed as a result of the collision of two continental crusts (Figure 5) (Geography Lessons, 2020). To understand this, we need to look at the Wilson cycle (Mitartemis, 2012). It is known that the root of Mount Everest, which has a height of 8.8 km, can be between 60-140 km. This shows that the root of Everest can be between 7-17 times its own height. The Quran's comparison of mountains to stakes also points to the roots of mountains (Figure 5).

An-Naba 7: And the mountains as pegs? (The Monotheist Group, 2025).

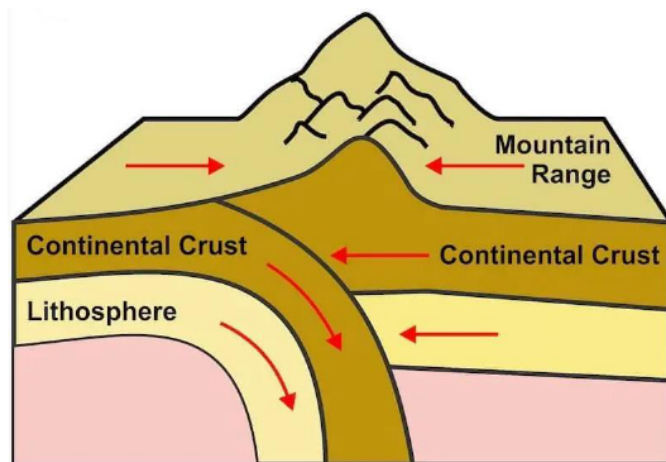


Figure 5: *Rawasiyes*: Fold mountains formed as a result of the collision of continental plates (The Geography Teacher, n.d.).



An-Naml 88: And you see the mountains, you think they are solid, while they are passing by like the clouds. The making of God who perfected everything. He is Expert over what you do. (The Monotheist Group, 2025).

The answer to the question, “Does the information in verse 88 that mountains move not contradict the information that mountains have fixed roots?” would be “no, it does not contradict.” This is because mountains are within the continental lithosphere, including the crust and the roots of the earth, and they flow at a very slow speed above the mantle. Since this occurs at a speed lower than the flow of clouds, it cannot be observed. Since the thickness of the continental lithosphere varies between 40-280 km, it also includes the roots of the mountains. The analogy of clouds in the verse stems from the similarity in the formation of mountains and clouds, which proves that the Quran is not the word of man.

The answer to the question, “So, do mountains have a feature such as reducing the effect of earthquakes or changing their course?” is “yes.” The article by van der Meijde et al. (2020), answers this question.

I do not accept the interpretations that claim that *rawasiye* covers the entire crust or heavy metals, because they are unrelated to the verse. I think it is not in vain that the verse mentions earthquakes and heavy pressures by using the word *rawasiye*. Also, if we assume that *rawasiye* is placed in the earth's crust (lithosphere), saying that *rawasiye* is the entire earth's crust would mean “God placed the lithosphere in the lithosphere”, which is unthinkable.

Table 1: Geological structures that can be classified as rawasiye and their 3 defining features.

| | Rawasiye (stabilizers / heavy pressures) | It is related to the interior of the earth. | They are associated with shaking of the ground. | They are heavy pressures on the ground. |
|---|---|--|--|--|
| 1. | Volcanic Mountains | ✓ | ✓ | ✓ |
| 2. | Laccoliths | ✓ | ✓ | ✓ |
| 3. | Batoliths | ✓ | ✓ | ✓ |
| 4. | Bismalites | ✓ | ✓ | ✓ |
| 5. | Dome mountains | ✓ | ✓ | ✓ |
| 6. | Fold mountains | ✓ | ✓ | ✓ |
| 7. | Horsts | ✓ | ✓ | ✓ |
| 8. | Grabens | ✓ | ✓ | ✓ |
| 9. | Hills | ✓ | ✓ | ✓ |
| 10. | Plateaus | ✓ | ✓ | ✓ |
| 11. | Cratons | ✓ | ✓ | ✓ |
|  - always yes,  - sometimes yes sometimes no. | | | | |

1. Volcanic mountains: These are mountains formed as a result of the collision of two oceanic or continental and oceanic plates. All volcanic mountains in water and dry can be included here (Figure 6).

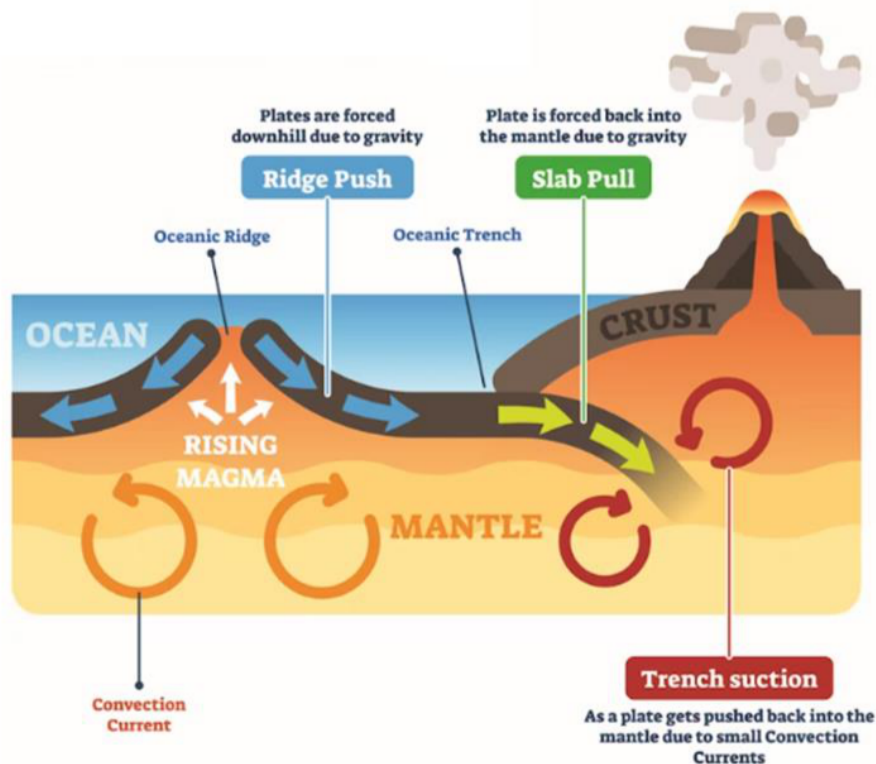


Figure 6: Volcanic mountain formed as a result of subduction (Tutor2u, 2024).

2. Laccoliths: They are intrusive masses that are placed inside the ground in the form of mushrooms and domes and sometimes create a bulge on the ground. Laccoliths can be classified as *rawasiyes* when the cover layer rises and a domed mountain forms on the ground (Figure 7). Although it prevents the ground from shaking while taking the shape of a mountain, it cannot have this feature before it takes the form of a mountain and it does not always take this form. There is no such thing as a shock absorption feature for the state of the ground.

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Figure 7: An exposed laccolith near the Stillwater igneous complex, Montana, U.S (Encyclopædia Britannica, 2025).

3. Batholiths: Volcanic masses that are kilometers wide and generally cover the central part of mountainous masses such as Uludağ (Figure 8).

4. Bismalites: Unlike laccoliths, they are volcanic masses with an indented upper part due to faulting (Figure 8).

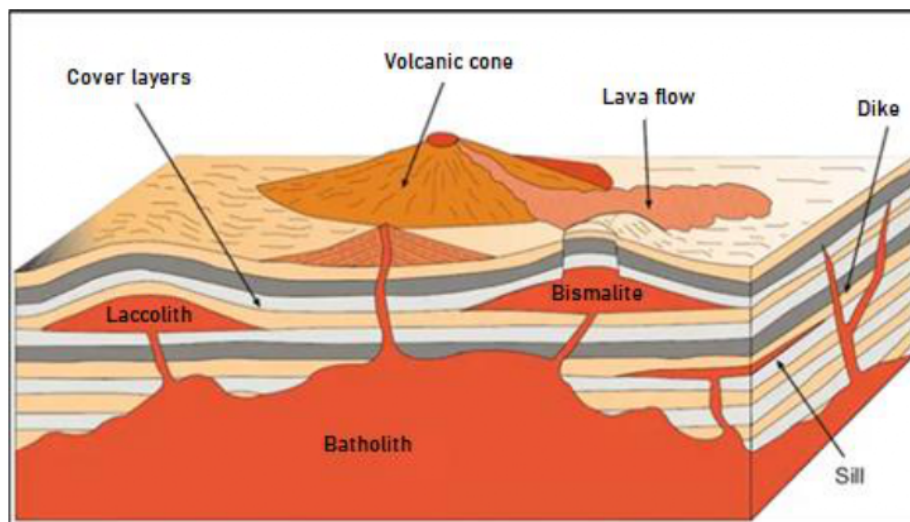


Figure 8: Batholith, bismalites and other volcanic structures (Adapted from Shutterstock, 2025).

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5. Dome mountains: Formed from hot molten material (magma) rising from the mantle into the crust, pushing up overlying sedimentary rock layers to form a “dome” shape (Figure 9). Unlike a volcano, the magma typically does not reach the Earth’s surface.



Figure 9: Half Dome in the United States (Wikipedia, 2025).

6. Fold mountains: They are formed by the process called orogeny (mountain building) where two or more of the Earth’s tectonic plates are pushed together. These mountains are characterized by folds, rock formations formed by the bending of soft sedimentary or metamorphic rocks. The towering folds of the Wildhauser Schafberg in Switzerland are part of the Alps. They are an example of a rawasiye (Figure 10).



Figure 10: Wildhauser Schafberg mountain (Cyrill, 2008).

7. Horsts: Hard layers that do not have folding properties are broken during faulting. The places that rise along the fault line are called horst, and the places that collapse are called graben (Figure 11). Madra Mountain, Yunt Mountain, Boz Mountain and Aydın Mountain in Türkiye can be given as examples of this.

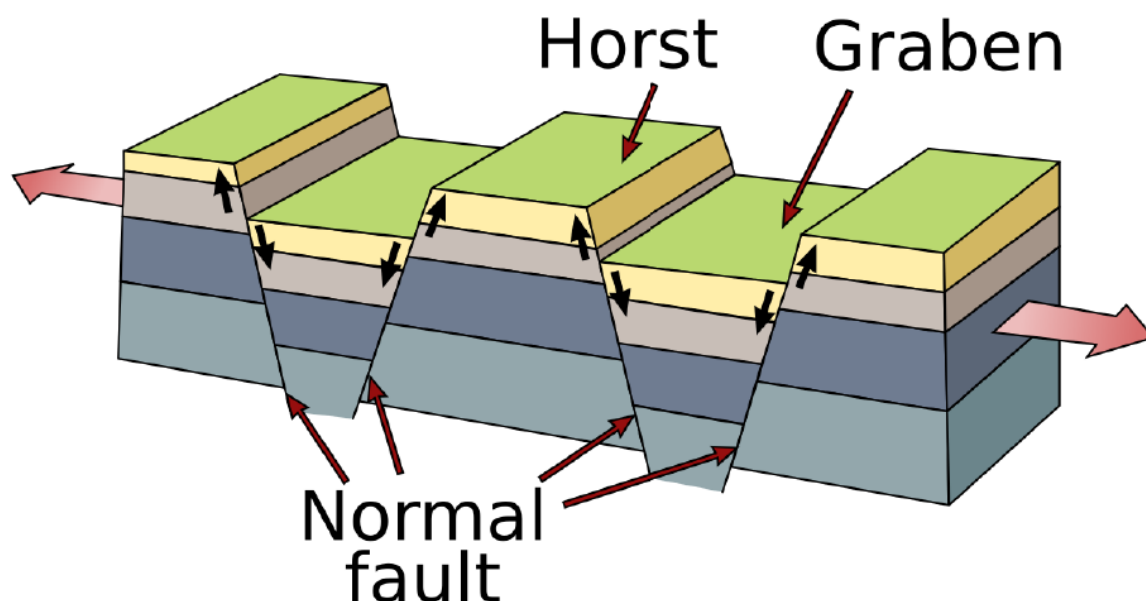


Figure 11: Horsts and grabens are structural features formed due to extensional tectonic forces, resulting in alternating raised and lowered fault blocks (Wikipedia, 2025).

8. Grabens: They are landforms formed by the sudden collapse of the ground. Although grabens are formed as a result of ground shaking (faulting), they do not have the feature of reducing the effect of ground shaking (Kent et al., 2016). Therefore, it would be correct to translate the word “an-tamīda” not as “so that it does not shake” but as “related to the disruption of your balance”. Only in this case can we say that grabens are related to ground shaking and can we include them in the rawasiye category (Figure 11).

9. Hills: They differ according to their formation methods. Therefore, it should be noted that they can be classified as rawasiye in which way they are formed:

- I. Faulting (Tectonic activity)
- II. Erosion (by wind, rain, glacier effect)
- III. Volcanic activity

Although sand and snow hills form hills on the ground, they cannot be classified as rawasiye because they have no relation to the inside of the ground and its shaking. In addition, all plateaus are hills, but not all hills are plateaus (Sengupta, 2021). The only difference between hills and mountains is their height. The height of hills is up to 500 m (Figure 12), while the height of mountains is more than 500 m.

If the hills are formed by erosion, it may be related to the Quran's emphasis on the fact that rawasiyes are placed inside the ground. God knows best.



Figure 12: Red-layered hills of iron and aluminum-rich sediments in the Painted Hills of Oregon, USA. The sediments are said to have been deposited millions of years ago when the land was an ancient riverbed and flood plain (National Geographic Society, n.d.).

10. Plateaus: Formed by tectonic, volcanic, or dynamic uplift. A flat, elevated landform that rises sharply above the surrounding area on at least one side (Figure 13). It occurs on every continent and covers one-third of the Earth's land surface. Many plateaus form when magma from deep within the Earth pushes toward the surface but fails to break through the crust. Instead, the magma lifts up large, flat, impenetrable rock on top.

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Figure 13: Plateau (Tuko, 2022).

It is known that plateaus have deep roots like mountains. Figure 14 indicates that plateaus are fully compatible with the rawasiye category. Plateau is a heavy pressure on the ground that is formed by the shaking of the ground, has the ability to prevent possible tremors, and has deep roots in the ground.

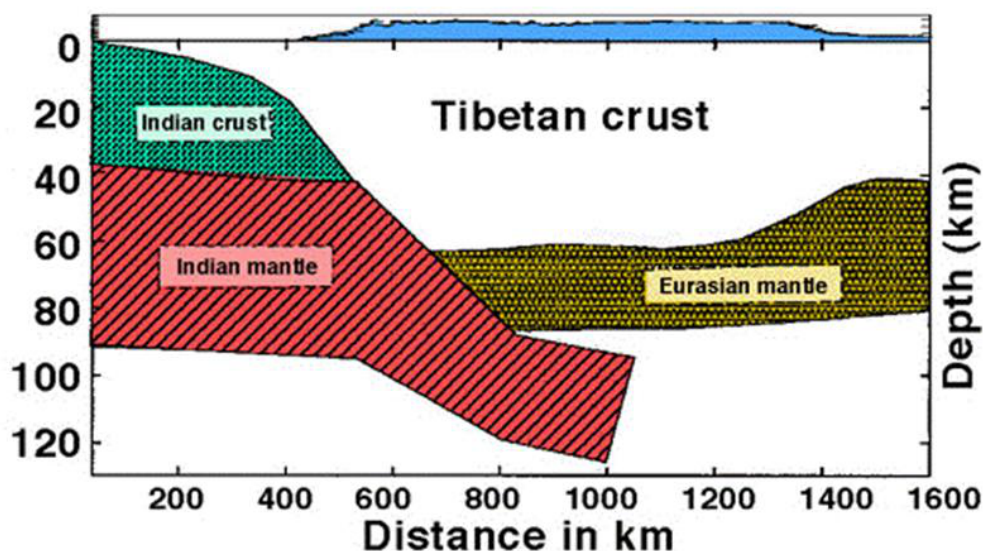


Figure 14: Crust model beneath the Tibetan plateau/Himalayan mountain range (Department of Geology, n.d.).

11. Cratons: The stable interior portion of a continent, characteristically composed of ancient crystalline basement rock (Figure 15) (Encyclopaedia Britannica, n.d.). They have not been affected by orogenic activity for a very long time and have not been fractured or folded. Therefore, cratons tend to be flat (Meteorológia en Red, n.d.).

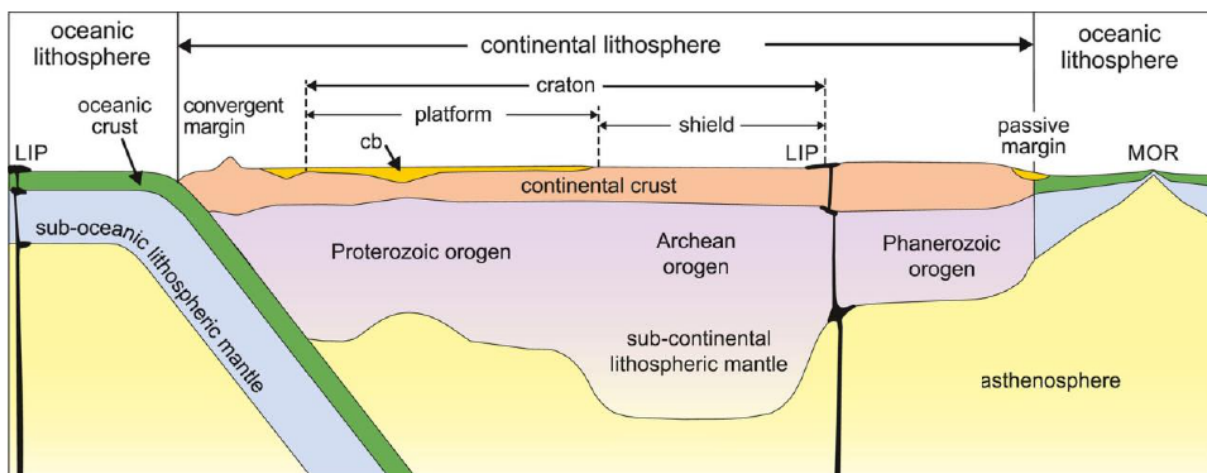


Figure 15: The lithosphere structure, including cratons, shields, and platforms, is illustrated in a cross-section (Cawood et al., 2025).

Cratons have deep roots like mountains and plateaus. Therefore, we know that they are related to the inside of the earth and we can classify them as rawasiye (Wang, 2016).

6. Why does the Quran mention streams when talking about rawasiye?

We said above that if we look carefully at the verses where rawasiye is mentioned, we will see that it is related to these:

- I. Rivers and fresh waters.
- II. Expansion of the earth.
- III. Shaking of the earth.
- IV. Swaying of the roads.
- V. Being placed in the earth from above.
- VI. Being placed inside the earth.

We have pointed out why rawasiyes are related to the expansion, shaking of the earth, being placed from above and inside the earth. However, we did not draw attention to its relationship with rivers, fresh waters and shaking of the roads. When we look at the geology, we can say that the rawasiyes could be volcanic mountains, and the flow of the streams forming the valley seems to be compatible with the circular stream model (Radial Drainage Pattern), which is one of the stream (drainage) patterns (Figure 16).



Figure 16: Circular river pattern of hills in Nakhchivan (Azerbaijan) (Author, 2023).

The reason why the verses mentioning rivers and roads in Rad 3, Nahl 15-16, Anbiya 31 and Naml 61 are related to the rawasiyes is consistent with the circular river pattern in science. Science is a special language that God created consciously and purposefully in order to read, understand, recognize and know the works of God. Scientists are experts in analyzing and learning this language. The fact that there is no information in the scientific verses of the Quran that contradicts science, on the contrary, the information that became known to science in the last century, whether in the choice of words or the meticulousness shown in the order of narration of the subjects, makes it impossible for this book to have been written by a person who lived at that time and did not have this information. This is why we know that the Quran is the word of God.

Discussion

This study examines the compatibility of the Quranic expression "And We spread out the earth and placed stabilizers in it" with modern geology and evaluates whether the findings overlap with scientific paradigms. The main argument of the study is that these expressions are parallel to geological concepts such as plate tectonics, isostasy and mountain formation processes.

Although the theory of plate tectonics was developed in the 20th century, it is seen that these expressions in the Quran overlap with this theory. In particular, the fact that the earth's crust is in motion and that continents separate and join over time has been associated with the expression "spreading of the earth" in the Quran. Similarly, the expressions in the Quran that mountains function as stabilizers can be explained by the principle of isostasy. The deep roots of mountains are an important factor that ensures the balance in the earth's crust, and this situation is also accepted in the scientific literature.

One of the most important theses put forward by this study is that, contrary to what Prof. Dr. Celal Şengör said, the geological expressions in the Quran do not contradict modern scientific data and can even be better understood in the light of scientific developments. When these expressions, which are often given wrong meanings in traditional interpretations, are re-evaluated in the context of geology, the scientific depth they contain becomes more clearly evident.

However, the limitations of the study should also be taken into consideration. The Quran is not a scientific book and does not use scientific terms directly. Therefore, a direct one-to-one correspondence between scientific data and religious expressions should not be expected. However, the fact that the expressions in the Quran coincide with science is remarkable when the historical context of the text is considered.

This research encourages a more comprehensive examination of the relationship between religion and science. Future studies can examine other scientific references in the Quran in more detail, including different branches of science. In particular, more comprehensive analyses can be conducted using other disciplines.

As a result, this study offers a new perspective on how geological expressions in the Quran can be interpreted in the light of modern science. In this context, it becomes clear that more research is needed on how religious texts can be related to scientific developments.

Conclusion

This study examined the extent to which the expression "And We spread out the earth and placed fixed mountains in it" in the Quran is compatible with modern geology. The analyses conducted reveal that this verse can be explained by geological processes such as plate tectonics, isostasy and mountain formation. Processes such as the expansion of the earth, the spreading of the ocean floors, the movement of the continents and the formation

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of volcanic mountains stand out as elements that scientifically overlap with the expressions in the Quran.

The study also showed that mountains and isostatic balance are related to stabilization mechanisms in the earth's crust. The term "rawasiye" (stabilizers) used in the Quran parallels many geological phenomena in geology, such as the stabilizing function of mountain roots in the earth's crust. This shows that the verses do not contain simple metaphors, but rather have a conceptual depth that overlaps with scientific facts.

As a result, this study shows that the geological expressions in the Quran do not contradict modern scientific data, but on the contrary, they overlap with today's understanding of geology at certain points. And this research revealing a new miracle that proves the scientific accuracy of the Quran. The studies conducted within the scope of this research show that the Quran is not only a text containing religious teachings, but also provides important observations about natural events. The findings reveal the necessity of evaluating the Quran in the light of scientific discoveries and indicate that studies in this field should be supported by more comprehensive research.

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- 35 -

REFERENCES

- [1.] Ankara Üniversitesi Açık Ders. (n.d.). Eğitim Bilimleri Ders Notları. Retrieved March 2, 2025, from: https://acikders.ankara.edu.tr/pluginfile.php/160632/mod_resource/content/0/2.pdf
- [2.] Author (2023): Photograph: Circular river pattern of hills in Nakhchivan, Azerbaijan. Personal collection
- [3.] Benioff, H. (1949). Seismic evidence for the fault origin of oceanic deeps. *Bulletin of the Geological Society of America*, 60, 1837–1856. https://www.eps.mcgill.ca/~courses/c350/lecturestuff/jan09/Benioff_1949_GSAB.pdf
- [4.] Cawood, P.A. et al. (2022): Secular Evolution of Continents and the Earth System. – *Reviews of geophysics*, 60 (4): e2022RG000789. <https://doi.org/10.1029/2022RG000789>
- [5.] Cyrill. (2008, November 2). Wildhauser Schafberg 2373m [Photograph]. SummitPost. Retrieved March 2, 2025, from <https://www.summitpost.org/wildhauser-schafberg-2373m/459788>
- [6.] Department of Geology, University of Wisconsin-Madison. (n.d.). Mountain Roots. Retrieved March 2, 2025, from: http://www.geology.wisc.edu/~chuck/Classes/Mtn_and_Plates/mtn_roots.html.
- [7.] Encyclopædia Britannica, (2025): Laccolith. Retrieved March 2, 2025, from <https://www.britannica.com/science/laccolith>
- [8.] Encyclopaedia Britannica. (n.d.). Craton. Retrieved March 2, 2025, from: <https://www.britannica.com/science/craton>.
- [9.] Frohlich, C., (1987): Kiyoo Wadati and Early Research on Deep Focus Earthquakes: Introduction to Special Section on Deep and Intermediate Focus Earthquakes. – *Journal of Geophysical Research*, 92(B13):13.777–13.788. <https://doi.org/10.1029/JB092iB13p13777>
- [10.] Geography Lessons, (2020). How Mountain Ranges Are Formed at Convergent Plate Boundaries: <https://www.youtube.com/watch?v=r9Uu-Gp2ztg>.
- [11.] Kent, E., et al. (2016): Geomorphic and geological constraints on the active normal faulting of the Gediz (Alasehir) Graben, Western Turkey. *Journal of the Geological Society*, 173(3), 479–493. <https://doi.org/10.1144/jgs2015-121>.
- [12.] Meijde, van der M., et al. (2020): The Influence of Surface Topography on the Weak Ground Shaking in Kathmandu Valley during the 2015 Gorkha Earthquake, Nepal. – *Sensors*, 20(3), 678. <https://doi.org/10.3390/s20030678>
- [13.] Meteorología en Red. (n.d.). Todo lo que Necesitas Saber sobre el Cratón. Retrieved March 2, 2025, from: https://www.meteorologiaenred.com/tr/bilmen-gereken-her-%C5%9Fey-craton.html#Que_es_un_craton.
- [14.] Mitartemis (2012): Wilson Cycle. Retrieved March 2, 2025, from: https://www.youtube.com/watch?v=I_q3sAcuzIY&t=37s.
- [15.] National Geographic Society. (n.d.): Hill. Retrieved March 2, 2025, from: <https://education.nationalgeographic.org/resource/hill/>.

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A Wesley János Lelkészképző Főiskola Tudományos Közleményei

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<https://doi.org/10.59531/ots.2025.3.1.13-36>

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- [16.] Pinterest. (n.d.): Tsunami – Rapture Watcher. Retrieved March 2, 2025, from <https://de.pinterest.com/pin/415105290629677262/>
- [17.] Sengupta, A. (2021): How Hills Are Formed | Geography Terms Retrieved March 2, 2025, from: <https://www.youtube.com/watch?v=FWr2m5SR0Bg>.
- [18.] Shutterstock. (2025): Volcanic shapes diagram [Vector illustration]. Retrieved March 2, 2025, from <https://www.shutterstock.com/image-vector/volcanic-shapes-volcano-stream-cone-cover-2322687995>.
- [19.] Simple English Wikipedia. (2024): Wadati–Benioff zone. – Retrieved March 2, 2025, from: https://simple.wikipedia.org/wiki/Wadati%E2%80%93Benioff_zone.
- [20.] Taslaman, C. (2022): Kur'an'da Dağların Anlatımı ve Modern Bilimin Verileri. – Retrieved March 2, 2025, from: <https://www.canertaslaman.com/wp-content/uploads/2022/11/Kuranda-Dag%CC%86larin-Anlatimi-ve-Modern-Bilimin-Verileri-.pdf>.
- [21.] The Geography Teacher. (n.d.): Fold Mountains. – Retrieved March 2, 2025, from: https://thegeographyteacher.com/fold-mountains/#google_vignette.
- [22.] The Monotheist Group (2017): The Quran: An English Translation. – Brainbow Press, Thuprai
- [23.] Tuko.co.ke. (2022): List of Plateaus in Kenya and Where They Are Located. – Retrieved March 2, 2025, from: <https://www.tuko.co.ke/facts-lifehacks/481631-list-plateaus-kenya-located/>.
- [24.] Tutor2u. (2024): How Do Tectonic Plates Move? Retrieved March 2, 2025, from: <https://www.tutor2u.net/geography/reference/how-to-tectonic-plates-move>.
- [25.] U.S. Geological Survey: (2016, July 18). Subduction fault zone diagram. Retrieved March 2, 2025, from <https://www.usgs.gov/media/images/subduction-fault-zone-diagram>
- [26.] Wang, L. H., et al. (2018): Making Archean Cratonic Roots by Lateral Compression: A Two-Stage Thickening and Stabilization Model. – Tectonophysics. 746, 562-571. <https://doi.org/10.1016/j.tecto.2016.12.001>
- [27.] Wikipedia contributors. (2025): Horst and Graben. Wikipedia, The Free Encyclopedia. Retrieved March 2, 2025, from https://en.wikipedia.org/wiki/Horst_and_graben
- [28.] Wikipedia contributors. (2025): Sunset over Half Dome from Glacier Point. Retrieved March 2, 2025, from https://en.wikipedia.org/wiki/Half_Dome#/media/File:Half_Dome.jpg.

Absztrakt. Ez a tanulmány geológiai szemszögből vizsgálja a Korán „És mi kifeszítettük a földet, és megszilárdítottuk” című versét, megkérdőjelezve a tudományos pontatlanságra vonatkozó állításokat. A tanulmány mellett érvel, hogy a vers összhangban van a modern geológiai koncepciókkal, mint például a lemeztectonika, az óceánfenék terjeszkedése és a Pangea felbomlása. Emellett a stabilizáló tényezők, köztük a hegységek és az izobárok szerepét is megvizsgálja, hogy rávilágítson a tudományos elvekkel való összeegyeztethetőségükre. A tanulmány arra a következtetésre jut, hogy ezek a több mint 1400 évvel ezelőtt közérthető nyelven megfogalmazott versek mélyreható tudományos meglátásokat tükröznek, alátámasztva a Korán isteni ihletettségre vonatkozó állítását.

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