

## SCIENTIFIC MIRACLE OF THE HOLY QURAN REGARDING SECRETS OF CREATION OF MOUNTAINS

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### ABSTRACT

*Various Quranic verses have mentioned cases of Divine creation in the world, making us ponder on them. Among these creatures are the mountains. The Almighty Allah has specifically invited us to pay attention to creation of the mountains and spoken about different aspects of them. However, the major focus of this study is on aspects and secrets of creation of mountains. Results of the present study show that the mountains have many uses for the earth inhabitants, including calm and establishment, as a heaven for humans, fountain head of the rivers, and the means to finding roads. This research aims at reviewing mountain secrets using Quranic verses and scientific facts.*

**Key words:** Holy Quran, Creation, Mountains, Miracle, Secrets.

### Introduction

Among Quranic miracles that are discovered in the recent centuries and have surprised scientists are Quranic statements about scientific issues such as, duality of creatures, movements of the sun and the earth, creation of the mountains, etc. That is while humans did not discover such issues several centuries after revelation of the Holy Quran (Rezaei Esfahani, 2001). The miracles of Quranic verses should have two characteristics; 1. They should reveal scientific secrets that were not discovered before revelation of that Quranic verse. That scientific issue should be discovered a long time after revelation of the verse and should not be discoverable via usual means of humans in revelation era. 2. The unseen news should be about the occurrence of natural and historical events that were not known by anyone at the revelation time, but be materialized later on as the Holy Quran had announced. The news should not be predictable via usual ways (Rezaei Esfahani, 2001).

Although many exact scientific issues are presented in the Holy Quran, it should be kept in mind that the Holy Quran is not a mere encyclopedia or a book on ecology, botany, cosmology, or a scientific book; rather, it is a book for training and guidance (Makarem Shirazi, 2004; Rostami, 2007). The Holy Quran has introduced itself as the guiding

book; *شَهْرُ رَمَضَانَ الَّذِي أُنزِلَ فِيهِ الْقُرْآنُ هُدًى لِّلنَّاسِ*, (Sūrah Al-Baqarah (2): 185) "Ramadan is the (month) in which was sent down the Qur'an, as a guide to mankind." The purpose of the Quran is leading human beings to the path of salvation (Marefat, 2007). The major reason why scientific issues are mentioned in the Quran, as stated in the Quran, is proving the existence of Allah (Rostami, 2007). Dr. Abdullāh Shahātah has stated, "Especially among Meccan Quranic chapters, there is no chapter except that it mentions the world and pondering on its creation and order to attract people's hearing, seeing, senses, and mind to Allah's creation, thus relating the creatures to their Creator" (Shahātah, Bitā, p. 30). Other purposes of Quranic scientific facts are proving the Resurrection, introducing a purpose for the creation (Rafeie Muhammadi, 2001), and knowing the nature (Golshani, 2014). All these are keys to the main purpose that is proving the existence of Allah. As mentioned, one of the purposes of Quranic verses about scientific facts is knowing the world nature. More than 750 Quranic verses mention natural phenomena (Tantāwī, Bitā, 2015). Among these natural phenomena are the mountains, which are mentioned in many verses. Some of the verses are about mountains' appearance and height (Sūrah Al-Baqarah (2): 260; Sūrah Hūd (11): 43). Some other Quranic verses implicitly mention mountain width, height, essence, and gigantic appearance (Sūrah Ibrāhīm (14): 46;

Sūrah Al-‘Asrā’ (17): 37; Sūrah Maryam (19): 90; Sūrah Al-‘Ahzāb (33): 72; Sūrah Al-Hashr (59): 21). There are other verses about historical importance of the mountains (Sūrah Al-‘A’rāf (7): 74; Sūrah Al-Hijr (15): 82; Sūrah Al-Shu’arā’ (26): 1499). Some verses have used mountains for making analogy (Sūrah Hūd (11): 42; Sūrah Al-Nūr (24): 43). Some of the Quranic verses refer to the mountains that witnessed Prophets’ (s.a) miracles, such as those of Prophet Abraham (a.s) and Prophet Moses (a.s) ( Sūrah Al-Baqarah (2): 260; Sūrah Al-‘A’rāf (7): 143, 171). Still there are verses stressing the mountains as the shelter for humans and animals (Sūrah Al-Nahl (16): 68, 81) or the source of flowing water (Sūrah Al-Ra’d (13): 3, Sūrah Al-Nahl (16): 61, Sūrah Al-Mursalāt (77): 27). Some Quranic verses emphasize Quran’s scientific miracle, that the mountains are the nails of the earth, that a little part of them are on the earth, but much of them are beneath the earth, and that their duty is stabilization of the earth (Sūrah Al-Naba’ (78): 7, Sūrah Al-Ra’d (13): 3, Sūrah Al-Hijr (15): 19, Sūrah Al-Nahl (16): 15, Sūrah Al-‘Anbīyā’ (21): 31, Sūrah Al-Naml (27): 61, Sūrah Luqmān (31): 10, Sūrah Fussilat (41): 10, Sūrah Qāf (50): 7, Sūrah Al-Mursalāt (77): 27, Sūrah Al-Nāzi’āt (79): 32, Sūrah Al-Ghāshīyah (88): 19). Other Quranic verses mention various routes passing through the mountains (Sūrah Fātir (35): 27) or the movement of the mountains (Sūrah Al-Naml (27): 88). Some of the verses contain the mountains that glorify Allah along with other creatures (Sūrah Al-‘Anbīyā’ (21): 79, Sūrah Al-Hajj (22): 18, Sūrah Sād (38): 18). Certain verses mention the return of mountains to Allah in the Day of Judgment (Sūrah Tāhā (20): 105, Sūrah Al-Kahf (18): 45, Sūrah Tūr (52): 10, Sūrah Al-Wāqī’ah (56): 5, Sūrah Al-Hāqqah (69): 14, Sūrah Al-Ma’ārij (70): 9, Sūrah Al-Muzzammil (73): 14, Sūrah Al-Mursalāt (77): 10, Sūrah Al-Naba’ (78): 20, Sūrah Al-Takwīr (81): 3, Sūrah Al-Qāri’ah (101): 55)<sup>1</sup>. All these references show that the

Exalted Allah has a special viewpoint about the mountains and they are ponderable. Nevertheless, the main purpose of this research is the secrets of creating mountains. In fact, Allah has not created anything in vein, as is stated in the Quran (Sūrah Al-Mu’minūn (23): 115, Sūrah Al-Dukhān (44): 38, Sūrah Al-‘Anbīyā’ (21): 16, Sūrah Al-‘Ahqāf (46): 3). The mountains are no exception and have many secrets and benefits. Allah invites us to pay attention to creation of the mountains, *وَالِى السَّمَاءِ كَيْفَ رُفِعَتْ وَآلِى الْجِبَالِ كَيْفَ نُصِبْنَا أَفَلَا يَنْظُرُونَ إِلَى الْإِبِلِ كَيْفَ خُلِقَتْ*, “Do they not look at the Camels, how they are made? And at the Sky, how it is raised high? And at the Mountains, how they are fixed firm?” The present study reviews the secrets of creation of mountains using Quranic verses.

### The Reasons for and Secrets of Creation of Mountains

The Holy Quran has used two terms to refer to the mountains; one is *isjibāl* and the other is *rawāsī*. *Tabarsī* has written about the verses containing *rawāsī*, “*Rawāsī* are the mountains. This word refers to something that is so heavy that it is firm in its place, just as an anchor that keeps a ship firm in its place. The mountains are firm things that save the earth from trembling” (Tabarsī, 1993; 4, p. 46, under verse 32 of Sūrah Al-‘Anbīyā’). The creation of mountains is not without a reason. In various sūrahs, creation of mountains, secrets of their creation, and secrets of their existence are mentioned with different words, which will be discussed below.

### Comfort and Calm for the Earth Inhabitants

The holy Quran has stressed creatures’ calm and comfort more than other benefits of mountains, which prevent the earth irregular movements and vibration (Sobhani, 2005). The role of mountains in preventing earth vibration is stated in several Quranic sūrahs as

<sup>1</sup> This categorization is taken from the books “Min Ayāt Al-‘I’jāz Al-‘Ilmī Al-‘Arz fī Al-Qurān Al-Karīm” and

“The Face of Nature in the Quran”.

<sup>2</sup> Sūrah Al-Ghāshīyah (88): 17-19.

follows. <sup>3</sup>وَأَلْقَى فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِكُمْ (بهم), “He set on the earth mountains standing firm, lest it should shake with you/them.” وَالْجِبَالُ وَالْجِبَالُ <sup>4</sup>أَوْتَادًا, “(Have We not made) the mountains as pegs.” These and other similar verses show that the mountains keep the earth from trembling. Now the question is that what is the origin of the earth vibration? In general, two kinds of forces may shake the earth; one is the earth inner force and the other is its outer force.

**a. The Earth Inner Force:** The forces inside the earth are so much that all the materials inside it are molten. Surely a severe force is exposed to the earth because of these materials. The eruption of molten material from the crater, the existence of warm water fountains (Kamarei, 2008), and the earthquakes (Sobhani, 2005; Hamīdī, 2007; Makarem Shirazi, 2004) reveal the very high temperature deep inside the earth. Tantāwī has written in his exegesis of the Quran, *Al-Jawāhir fī Tafsīr Al-Qurān*, “The earth erupts volcanos from its inside lava. These volcanos are like mouth through which the earth breathes to vent its inner hotness and fire. If there were no mountains, thousands of volcanos erupted and a severe earthquake happened. Then the earth exited its orbit and lost its balance” (Tantāwī, Bitā, 2015). Ayatollah Ma’refat has also written, “The earthquakes and volcanos are scant evidences of the earth inner hotness and fire eruption” (Ma’refat, 2007).

The folding phenomenon in ecology is recently discovered. Folding is the cause of formation of mountain skirt or mountain width. The earth layer on which we live is a solid layer under which are warm liquid layers. Nowadays it is proved that the stabilization of mountains is related to the folding phenomenon. In other words, folding is the substruction of projected stones that form the mountains (Zakīr Nīk, 2011). Some scientists believe that most mountains on the earth are formed by eruption of volcanos and then diffusion and congealing of molten

materials. This way they are formed like nails on the earth, thus calming underground volcanos and preventing vibration of the earth (Sobhani, 2005; Hamidi, 2007; Makarem Shirzai 2004).

**b. The Earth Outer Force:** Among the main outer forces to the earth are the sun and the moon gravities. The sun and moon gravities are so strong that they attract a great deal of water from world huge seas and oceans, making small and large tides throughout them. If crust of the earth was without a shield, like the oceans, and was formed of a thin layer, such as soil or sand, it could easily be effected by the moon gravity. Then it had irregular movements like the sea tide. The mountains are like a strong steel armor around the earth. Since they have an underground relationship with each other, they create a strong overall net and prevent irregular movement of the earth crust (Hamidi, 2007; Makarem Shirazi, 2004). One of the other outer forces are severe hurricanes. These hurricanes are formed because of the earth movement around itself and around the sun with high speed. If there were no barriers against the hurricanes, they would perish whatever live beings on the earth. These barriers are in fact the mountain ranges (Hamidi, 2007; Sobhani, 2005).

### The Regulator of the Earth Movement Speed

As mentioned before, the earth faces three forces, namely the force of heat and molten material, the force of moon and sun gravities, and the force of thunderstorms. Some scientists believe that the mountains are like flywheels<sup>5</sup> that control earth speed variation (Makarem Shirazi, 2004). The Holy Quran has stated this fact about fourteen hundred years ago (Sūrah Al-Ra’d (13): 3; Sūrah Al-Hijr (15): 19; Sūrah Al-Nahl (16): 15; Sūrah Al-‘Anbiyā’ (21): 3; Sūrah Al-Naml

<sup>3</sup> Sūrah Luqmān (31): 10; Sūrah Al-‘Anbiyā’ (21): 31; Sūrah Al-Nahl (16): 15.

<sup>4</sup> Sūrah Al-Naba’ (78): 7.

<sup>5</sup> A flywheel is a rotating mechanical device that is used to store rotational energy. Flywheels are often used to provide continuous energy in systems where the energy source is not continuous. In such cases, the flywheel stores energy when rotation is applied by the energy source, and it releases stored energy when the energy source is not applying rotation to it.

(27): 61; Sūrah Luqmān (31): 10; Sūrah Fussilat (41): 10; Sūrah Qāf (50): 7). Now we want to see how the flywheel characteristics prevent the earth from trembling. In fact, the earth has two kinds of movements; one is the annual motion of the earth around the sun that is not related to our discussion, and the other is rotation of the earth around itself that makes the day and the night. Two terms in physics should be explained here. 1. Rotational movement: Any movement that is done around an axis. 2. Acceleration: The change, either an increasing or a decreasing, in speed or speed direction generates an impulse called acceleration. In all devices with rotational movement, a flywheel appropriate with device size is installed on the axis to regulate the speed (Sobhani, 2005). As a result, the only things that prevent the earth pieces from collapsing because of inner and outer forces are the mountains that work as flywheels. The roots of heavy mountains that are deeply inside the earth pieces prevent them from dismantling, just as the nails join wood pieces (Sobhani, 2005).

In many Quranic verses the mountains are described as “having roots”, “being like nails”, and “being like flywheels”. This last attribute is stated with different words. <sup>6</sup> وَالْجِبَالِ أَرْسَاهَا, “And the mountains hath He firmly fixed.” و <sup>7</sup> جَعَلَ لَهَا رَوَاسِي, “Who has made the earth firm to live in?” <sup>8</sup> وَجَعَلَ فِيهَا رَوَاسِي مِنْ فَوْقِهَا وَبَارَكَ فِيهَا, “He set on the (earth), mountains standing firm, high above it.” <sup>9</sup> وَالْجِبَالِ أَوْتَادًا, “(Have We not made) the mountains as pegs.”

The exegesis writers have written much about these verses. *Fakhr Rāzī* and *Alūsī* have said, “When a ship is on the water it bends to the two sides, but it stands firm when heavy things are put in it. Likewise, the earth is trembling on the water, but the mountains keep it steady” (Fakhr Rāzī, 2010).

Also it is said that before the creation of mountains the earth has been as a sphere and had a circular movement like the heavens. When the mountains were set up on the earth,

they kept it from trembling (Biyyāwī, 2008). Allamah Tabatabaei has written, “Calling the mountains nail may be because they were mostly produced of volcano eruptions; a point on the earth is cut, molten materials overflow from it, and congeal as a nail on the earth, making it calm again” (Tabatabaei, 2007).

Imam Ali (a.s) has mentioned the same fact this way, <sup>10</sup> وَوَدَّ بِالصُّخُورِ مَيِّدَانَ أَرْضِهِ, “And He prevented the earth from trembling with the mountains that are like nails.” <sup>11</sup> وَوَدَّ حَرَكَاتِهَا بِالرَّاسِيَّاتِ مِنْ جَلَامِيدِهَا وَذَوَاتِ الشَّنَاقِيْبِ الشَّمِّ مِنْ صَيَاخِيْدِهَا فَسَكَّنَتْ مِنَ الْمَيِّدَانِ لِرُسُوبِ الْجِبَالِ فِي قَطْعِ أَدِيمِهَا <sup>12</sup> وَتَغْلُغْلِهَا, “O Lord! You created firm mountains like the nails to prevent the earth from vibration and set them as the haven for the creatures.” <sup>13</sup> Imam Ali (a.s) has also said in another sermon, <sup>14</sup> وَجِبَلٍ جَلَامِيدِهَا وَنُشُوزٍ مُتُونِهَا وَ أَطْوَادِهَا فَأَرْسَاهَا فِي مَرَاسِيْهَا وَ أَلْزَمَهَا قَرَارَاتِهَا فَمَضَتْ رُءُوسُهَا فِي الْهَوَاءِ وَ رَسَتْ أَصْوُلُهَا فِي الْمَاءِ فَأَنْهَدَ جِبَالَهَا عَنْ سُهُولِهَا وَ أَسَاخَ قَوَاعِدَهَا فِي مَثُونِ أَقْطَارِهَا وَ مَوَاضِعِ أَنْصَابِهَا فَأَشْنَقَ قِبَالَهَا وَ أَطَالَ أَنْشَارَهَا وَ جَعَلَهَا لِلْأَرْضِ عِمَادًا وَ أَرَزَّهَا فِيهَا أَوْتَادًا، فَسَكَّنَتْ عَلَى حَرَكَتِهَا مِنْ أَنْ تَمِيدَ بِأَهْلِهَا <sup>15</sup> أَوْ تَسِيخَ بِحَمْلِهَا أَوْ تَزُولَ عَنْ مَوَاضِعِهَا, “Allah created the earth rocks and high mountains firm in their places and decided that they remain in their places. He set up the mountains high in the sky and made their roots inside the water. Allah made the mountains in valleys of various points on the earth. He set up the summits and high hills. He made the mountains as pillars and nails in the earth to calm the vibrating earth from shaking its residents, dismantling, and trembling.” In these sermons, Imam Ali (a.s) has described the mountains just as described in Quranic verses. Scientifically, this duty of the mountains is called isostasy or an equilibrium in the earth crust caused by gravity, which is in turn because of rock quality of the mountains under the ground (Yahyā, 2011). Therefore, the mountains, just like their eminent appearance, are the nails that keep the earth pieces together (Kamarei, 2008).

<sup>6</sup> Sūrah Al-Nāzi’āt (79): 32.

<sup>7</sup> Sūrah Al-Naml (27): 61.

<sup>8</sup> Sūrah Fussilat (41): 10.

<sup>9</sup> Sūrah Al-Naba’ (78): 7.

<sup>10</sup> Sermon 1.

<sup>11</sup> Sermon 90, p. 197.

<sup>12</sup> Sermon 170, p. 403

<sup>13</sup> Sermon 202, p. 487.



afterwards shows that the mountains have an effective role in purifying water from unwanted materials and bacteria (Sobhani,2005).

### Havens for Human Beings

In some Quranic verses, another benefit of mountains for humans is mentioned; as a haven, including this verse, *وَجَعَلَ لَكُم مِّنَ الْجِبَالِ أَكْنَانًا*<sup>18</sup>, “Of the hills He made some for your shelter.” The term "اكنان" (shelter) means the caves and houses dug in the mountain, where humans hide from cold, heat, rain, and wind (Tabarsī,1993; Tabatabaei,2007; Makarem Shirazi,1995; Hossaynī Shāh 1984; Kashani,1994). There are also other Quranic verses in this regard, including, *وَتَنْحِتُونَ الْجِبَالَ*<sup>19</sup> “And ye carve houses out of (rocky) mountains with great skill.” *يَنْحِتُونَ مِّنَ الْجِبَالِ*<sup>20</sup> “And they used to hew out dwellings from the mountains (feeling themselves) secure.” *قَالَ سَأُوِي إِلَىٰ جَبَلٍ يَّغْصِمُنِي مِنَ الْمَاءِ*<sup>21</sup> “Noah’s son replied: I will betake myself to some mountain; it will save me from the water.”

People living in cities may not know the importance of mountain caves, but nomads, travelers, shepherds, and people without fixed houses benefit from mountain caves in hot summers and cold winters (Makarem Shirazi,1995). In fact, the first havens of humans have been mountain caves before they learnt to build houses. Nowadays caves can reside humans at special conditions (Hamidi,2007). Moreover, mountain areas have a relaxing greatness and silence in which human heart can rest and concentrate. One’s mind gets rid of harming thoughts and experiences new conditions. The mountains have always placed people seeking calm. The Prophets (s.a) took refuge in mountains from the oppression of their ages and worshipped Allah in silence and privacy. Prophet Adam (a.s) used to go to “Sirāndiyā” mountains,

Prophet Abraham (a.s) and Prophet Moses (a.s) went to “Tūr” mountain from Sīnā range, and Prophet Jesus (a.s) spent his time in “Sā’ir” mountain. Prophet Muhammad (s.a) worshipped Allah in “Nūr” mountain near Mecca when he was appointed as prophet. “Jūdī” mountain was the saving place of Prophet Noah (a.s) and his sincere companions from the storm (Hamidi, 1386, p. 157).

### Providing Human Needs by Mines

Two Quranic verses mention another use of the mountains as follows. *وَجَعَلَ فِيهَا رَوَاسِيَ مِّنْ فَوْقِهَا وَبَارَكَ فِيهَا*<sup>22</sup> “He set on the (earth), mountains standing firm, high above it, and bestowed blessings on the earth.” *وَالْجِبَالِ أَرْسَاهَا*<sup>23</sup> “And the mountains hath He firmly fixed; blessings for you and your animals.”

Allah’s blessing on the earth include chemical materials of the soil that are useful for agriculture, as well as gold, iron, silver, etc. mines, and oil and gas reserves deep under the ground (Hedayat Quran exegesis 1998).

### Knowing the Roads

Another benefit of the mountains as stated in Quranic verses is recognition of roads. *وَجَعَلْنَا فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِهِمْ، وَجَعَلْنَا فِيهَا فِجَاجًا سُبُلًا،*<sup>24</sup> “And We have set on the earth mountains standing firm, lest it should shake with them, and We have made therein broad highways (between mountains) for them to pass through: that they may receive Guidance.” If the mountains were as level walls, people could not pass them. The earth folding that has created the mountains has made the roads. The Holy Quran has reminded these facts to make us ponder on them (Rostami,2007).

The Almighty Allah has also mentioned different colors of mountains as another way of recognizing the roads, *وَمِنَ الْجِبَالِ جُدَدٌ بَيَضٌ وَ*<sup>25</sup> *أَلْمٌ تَرَىٰ أَنَّ اللَّهَ... حُمْرٌ مُّخْتَلِفٌ أَلْوَانُهَا وَ غَرَابِيبُ سُودٌ* “Seest thou not that God (has set)... in the mountains tracts white and red, of various

<sup>18</sup> Sūrah Al-Nahl (16): 81.

<sup>19</sup> Sūrah Al-Shu’arā’ (26): 149; Sūrah Al-‘A’rāf (7):

74.

<sup>20</sup> Sūrah Al-Hijr (15): 82.

<sup>21</sup> Sūrah Hūd (11): 43.

<sup>22</sup> Sūrah Fussilat (41): 10.

<sup>23</sup> Sūrah Al-Nāzi’āt (79): 32 & 33.

<sup>24</sup> Sūrah Al-‘Anbiyā’ (21): 31.

<sup>25</sup> Sūrah Fātir (35): 27.

shades of color, and black intense in hue.” Most Quran exegesis writers have interpreted the Arabic judadas clear route, road, and identifiable ways (Tabatabaei,2007; Hussayni,1984; Kashani,1994; Tabarī,2004; Ibn Kathīr,2010). Allameh Tabatabaei has cited two probabilities about these routes, “These routes may be the ones in the mountains that have different colors or the mountains themselves that areas long lines on the earth; some of these ranges are white, some are red, black, and some are multicolored” (Tabatabaei,2007).

### Conclusion

The scientific miracle of the Holy Quran is one of its miraculous aspects discovered in present time. The major purpose of Quran scientific statements is proving the existence of the Exalted Allah. Various Quranic verses have mentioned signs of Allah’s Creation in

the world. Among these signs are the mountains that are mentioned frequently in the Quran. The main focus of this research is on the expediency and secrets of creation of mountains. The most important ones are: 1. The mountains protect the earth against inner and outer forces, just like flywheels, and provide calm and establishment for the earth inhabitants. 2. The mountains are big water stores and fountain heads of rivers. 3. The mountains are the biggest water purifiers for rain water that is polluted by pollutants in the air or on the earth. They turn this water to pure sweet water. 4. The mountains are havens for humans against cold, heat, and rain. 5. The mountain mines provide human food and other needs. 6. Finally, the mountains and their different colors help people identify their path throughout the earth.

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