MOON: DOES IT HAVE A PURPOSE

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“Allah it is Who made the sun radiate a brilliant light and the moon reflect a luster, and ordained for it stages, that you might learn the method of calculating the years and determining time. Allah has not created this system but for a purpose. He expounds the Signs in detail for a people who have knowledge. In the alternation of the night and the day, and in all that Allah has created in the heavens and the earth, there are many Signs for a people who are mindful of their duty to Allah.” (Al Quran 10:6-7)

If you wonder what your life would be like without the moon, the surprising answer is that you wouldn’t be here to wonder at all! Earth before the impact that created the moon for our planet was a totally different planet. So suggests a discovery channel documentary, if there were no moon:

http://www.youtube.com/watch?v=HIQoP-R5A9w

The main message of the documentary is that if there were no moon, there would have been no land based life on our planet. The Earth has a large moon, making it unique in the inner solar system. The inner Solar System, that is the habitable zone of our solar system, includes the planets Mercury, Venus, Earth and Mars. Mercury and Venus have no moons, and Mars has only two small asteroid-sized objects orbiting it. There are 139 moons in our solar system, but our moon enjoys some special features. Of all the known moons in our Solar System, only three are in the inner region.

The moon gravity creates the tidal waves in the oceans. The Moon affects the ocean tides more in some areas than others. Near the equator the tides are only a few feet but as we travel towards the poles they can be much higher. In the Bay of Fundy in Canada the tides can be as high as 53 feet under the most favorable circumstances. As a result the movements of the tide have always created special environments and ecological systems on the Earth. Many life forms have developed in these tidal pools and basins. Without tides, the kinds of plants and animals on Earth would be quite different than those we know today.

Compared to the moons of other planets, Earth’s Moon is an unusually large object. Pluto is the only other planet in our solar system that has a moon which is considerable in size when compared to the size of its planet. The radius of the moon is one fourth of the earth and because of its relative significant size compared to earth it exerts a considerable influence on earth. Explaining the unusually large moon compared to its planet, it is noted in Encyclopedia
Britannica, “In addition to its nearness to Earth, the Moon is relatively massive compared with the planet—the ratio of their masses is much larger than those of other natural satellites to the planets that they orbit. The Moon and Earth consequently exert a strong gravitational influence on each other, forming a system having distinct properties and behavior of its own.”¹

Earth is within habitable distance from the sun, neither so close to the sun that the planet’s water has been baked away, nor so far out that it has frozen into ice and the coupling with a good sized moon stabilizes its axis of rotation, giving it a predictable climate. Prof. Dr. Bernard H. Foing is chief Scientist of European Space Agency’s Research and Scientific Support Department. He writes in astrobiology magazine:

“The Moon has been a stabilizing factor for the axis of rotation of the Earth. If you look at Mars, for instance, that planet has wobbled quite dramatically on its axis over time due to the gravitational influence of all the other planets in the solar system. Because of this obliquity change, the ice that is now at the poles on Mars would sometimes drift to the equator. But the Earth’s moon has helped stabilize our planet so that its axis of rotation stays in the same direction. For this reason, we had much less climatic change than if the Earth had been alone. And this has changed the way life evolved on Earth, allowing for the emergence of more complex multi-cellular organisms compared to a planet where drastic climatic change would allow only small, robust organisms to survive.”² Without the Moon, the Earth’s axis (the imaginary line through the North and South Poles) would wobble like a top that has been hit by a misbehaving child, or like a tightrope walker without a balancing pole. With the Moon, the axis wobbles a little bit but generally stays put. That keeps the seasons more or less the same for periods long enough for complex life forms to develop, adapt, evolve and succeed.

If the moon had been much closer to the earth as it was in the early history of the earth, each wave in the oceans would have been a tsunami wave making life on the ground very difficult if not impossible. If the gravitational pull of the moon was constant all the times there will be no tides in the oceans. Encyclopedia Britannica has the following to say about moon’s gravity:

“Its equatorial radius is 1,738 km (1,080 miles), and its shape is slightly flattened in a such a way that it bulges a little in the direction of Earth. Its mass distribution is not uniform—the centre of mass is displaced about 2 km (1.2 miles) toward Earth relative to the centre of the lunar sphere, and it also has surface mass concentrations, called mascons for short, that cause the Moon’s gravitational field to increase over local areas.”³
The Moon’s heavily cratered surface is evidence of the many meteorite impacts that occurred in the inner solar system during the late heavy bombardment period. Credit: European Space Agency (ESA)

All these facts about earth and moon coupling that are conducive to complex life on our planet should not be considered just accidental and chance happenings, but special providence of the Creator. Allah says:

“And He has pressed into service for you the night and the day, and the sun and the moon; and the stars too have been pressed into service by His command. Surely, in that are Signs for a people who make use of their reason.” (Al Quran 16:13)

The Quran described the orbital motion of the moon also:

“And Allah it is Who created the night and the day, and the sun and the moon, each gliding along in its orbit.” (Al Quran 21:34)

As mentioned in the verse of Sura Yunus, highlighted in the beginning of the article, ‘and ordained for it stages, that you might learn the method of calculating the years and determining time,’ the study of movement of sun and moon, led to the development of astronomy and mathematics. Prof. Dr. Bernard H. Foing writes, “For most of our history, we were hunting and fishing or doing agriculture, and we organized our lives by using the Moon. It determined the time for hunting, or the time where we could harvest. That’s why most of our calendars are based on the Moon.” According to the Encyclopedia Britannica:
“Centuries of observation and scientific investigation have been centered on the nature and origin of the Moon. Early studies of the Moon’s motion and position allowed the prediction of tides and led to the development of calendars.” Foing adds, “Finally, the Moon had a key role in the emergence of science, and in our understanding of our place in the universe. We saw the repetition of the phenomena of lunar phases, and we observed solar and lunar eclipses. These were big challenges to our understanding of nature.” Encyclopedia Britannica adds, “The study of the Moon’s motions has been central to the growth of knowledge not only about the Moon itself but also about fundamentals of celestial mechanics and physics.”

The Holy Quran states:

“And for the moon We have appointed stages, till it becomes again like an old dry branch of a palm-tree. It is not for the sun to overtake the moon, nor can the night outstrip the day. All of them float in an orbit.” (Al Quran 36:40-41)

The table details all the 139 moons of our solar system:

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<tr>
<th>PLANET</th>
<th>MOONS</th>
<th>MOON NAMES</th>
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<tbody>
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<td>Mercury</td>
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<td>Venus</td>
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<td>Mars</td>
<td>2</td>
<td>Phobos, Deimos</td>
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<td>Jupiter</td>
<td>62</td>
<td>Io, Europa, Ganymede, Callisto, Amalthea, Himalia, Elara, Pasiphae, Sinope, Lysithea, Carme, Ananke, Leda, Metis, Adrastea, Thebe, Callirrhoe, Themisto, Kalyke, locaste,</td>
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<td>Saturn</td>
<td>33</td>
<td>Erinome, Harpalyke, Isonoe, Praxidike, Megaclite, Taygete, Chaldene, Autonoe, Thyone, Hermippe, Eurydome, Sponde, Pasithee, Euanthe, Kale, Orthosie, Euporie, Aitne, plus others yet to receive names</td>
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<tr>
<td>Uranus</td>
<td>27</td>
<td>Titan, Rhea, Iapetus, Dione, Tethys, Enceladus, Mimas, Hyperion, Prometheus, Pandora, Phoebe, Janus, Epimetheus, Helene, Telesto, Calypso, Atlas, Pan, Ymir, Paaliaq, Siarnaq, Tarvos, Kiviuq, Ijiraq, Thrym, Skadi, Mundilfari, Erriapo, Albiorix, Suttung, plus others yet to receive names</td>
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<tr>
<td>Neptune</td>
<td>13</td>
<td>Triton, Nereid, Naiad, Thalassa, Despina, Galatea, Larissa, Proteus, plus others yet to receive names</td>
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<tr>
<td>Pluto</td>
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<td>Charon</td>
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<td>TOTAL</td>
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To ensure that I was not being overzealous in favor of the Holy Quran, I decided to look up the Bible about our moon. There are two different creation stories in the Genesis in the Bible. Let us review the Sacerdotal version that is mentioned in the first chapter of Genesis. Here the earth is created before the sun and the moon, which is scientifically incorrect. The earth is created by God on the third day and the sun and the moon are not created until the fourth day. The creation of the earth is described in the verses 9-13:

"And God said, 'Let the waters under the heavens be gathered together into one place, and let the dry land appear.' And it was so. God called the dry land Earth, and the waters that were gathered together he called Seas. And God saw that it was good. And God said, 'Let the earth put forth vegetation, plants yielding seed, and fruit trees bearing fruit in which is their seed, each according to its kind upon the earth.' And it was so. The earth brought forth vegetation, plants yielding seed according to their own kinds, and trees bearing fruit in which is their seed, each according to its kind. And God saw that it was good. And there was evening and there was morning, a third day." (Genesis 1:9-13)

Other facts mentioned in here that are scientifically untenable are the observations that the plants were created before the creation of the sun, this disregards what is common knowledge today that the plants need sunlight for photosynthesis for their life. Moreover, evening and morning are in place before the creation of the sun. The sun and the moon are created on the fourth day, according to the Biblical account. Here is what the Genesis says about moon without naming it:

"And God said, 'Let there be lights in the firmaments of the heavens to separate the day from night; and let them be for signs and for seasons and for days and years, and let them be lights in the firmament of the heavens to give light upon the earth.' And it was so. And God made the two great lights, the greater light to rule the day, and the lesser light to rule the night; he made the stars also. And God set them in the firmament of the heavens to give light upon earth, to rule over. the day and over the night, and to separate the light from the darkness. And God saw that it was good. And there was evening and there was morning, a fourth day." (Genesis 1:14-19)

Searching for the word 'moon' on the www.Bible.com, to look for any additional mention of our moon, I found 62 verses. But unlike the Holy Quran, none of them mentioned that there was a purpose behind the creation of the moon, that it is revolving in an orbit, that at some point it will no longer be there or that studying its stages is a source of astronomy and mathematics. I was reassured that my reasoning of attributing the verses of the Quran about the moon in my article to the revelation of the Omniscient God was well founded. In Psalm there is some additional mention of cosmology but nothing to equal the Holy Quran, the statement is actually scientifically inaccurate, “He appointed the moon for seasons: the sun knoweth his going down.” (Psalm 104:19) In Joshua we read, “And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies. Is not this written in the book of Jasher? So the sun stood still in the midst of heaven, and hasted not to go down about a whole day.” (Joshua 10:13)
These contradictions in the Bible reminded me of the book by Dr. Maurice Bucaille *the Bible, the Quran and the Science*. Talking about the moon he writes in the chapter *the Creation of the Heavens and the Earth*:

“Whereas the Bible calls the Sun and Moon 'lights', and merely adds to one the adjective 'greater' and to the other 'lesser', the Qur'an ascribes differences other than that of dimension to each respectively. Agreed, this is nothing more than a verbal distinction, but how was one to communicate to men at this time without confusing them, while at the same time expressing the notion that the Sun and Moon were not absolutely identical 'lights’?”

The verses he was alluding to are, ‘Have you not seen how Allah has created seven heavens in *perfect* harmony, And has placed the moon therein as a light, and made the sun as a lamp?’” (Al Quran 71:16-17) And also, “Blessed is He Who has made mansions in the heaven and has placed therein a Lamp and a Moon giving light.” (Al Quran 25:62)

There is no mention of orbital motion of the moon in the Bible. The Holy Quran not only mentions the orbital motion of the moon but also describes it as distinct from that of the sun:

“And Allah it is Who created the night and the day, and the sun and the moon, each gliding along in its orbit.” (Al Quran 21:34)

And:

“It is not for the sun to overtake the moon, nor can the night outstrip the day. All of them float in an orbit.” (Al Quran 36:41) Unlike the Bible, there is nothing in the Holy Quran about the moon or for that matter any other issue that contradicts present day established scientific understanding.

**EPILOGUE**

Allah is He Who raised up the heavens without any pillar that you can see. Then He settled Himself on the Throne. And He pressed the sun and the moon into service: each pursues its course until an appointed term. He regulates it all. He clearly explains the Signs, that you may have a firm belief in the meeting with your Lord. (Al Quran 13:3)

When we see the elaborate system of our universe and especially our solar system and how gravity and other laws of nature have maintained it for us, our attention should also be drawn to the deeper underlying cause, that is the Creator of this universe and it should make us believe in accountability and life after death.
The Holy Quran says about the Jewish prophets David and Solomon, may Allah be pleased with both of them:

And We bestowed on David, Solomon who was an excellent servant. He was always turning to Us. When there were brought before him at eventide steeds of noblest breed and swift of foot, He said, ‘I love the love of horses because of the remembrance of my Lord.’ So great was his love of them that when they were hidden behind the veil, he said, ‘Bring them back to me.’ Then he began to pass his hand over their legs and their necks. (Al Quran 38:31-34)

In the mirror of Allah’s creation we should be able to see the Creator and glorify Him. Promised Messiah as writes about the purpose of human life and nature of human brain in his book Hakika Tul Wahee, “Let it be clear that man has been created with the ultimate purpose to recognize his Creator. Man is supposed to have full awareness of his Creator and to understand His attributes to a level that his cognizance reaches a degree of certainty. Therefore, Allah has designed the human mind with two different talents. On the one hand, he has been given intellectual abilities. As a result of these abilities he is able to study Allah’s creations, and by observing divine purpose in every particle of nature, by studying the organization and order in the natural systems of the universe, he is able to fully realize that this elaborate infra-structure of the earth and the heaven cannot be by itself, without a creator. He can conclude that there should be a Designer and a Maker of all this!”

“On the other hand Allah has gifted man with spiritual powers and perceptions as well. This dual gift from Allah is for the reason, that, whatever limitations and short comings are left from the domain of intellectual capacity should be satisfied with the spiritual abilities. It is obvious that intellectual abilities given to man are only able to study the earth and the heaven and observing individual details declare that this profound and organized universe should have a creator. It is beyond the capacity of the intellectual abilities to go further and declare that such a Creator of this universe does exist! It is not within their scope to announce that there is indeed such a Maker!”

The spiritual perceptions of the prophets of God
bring man to the certainty that indeed there is a Maker of this universe and human life, Who also deeply cares for them.

In the study of the nature it is paramount to note that Allah works through hidden means and laws of nature. But He is not a deist God, who created the universe and now has nothing to do with it. On the contrary, He is a Personal God, who is ever inclined to listen to human prayers and is keenly involved in human affairs. Promised Messiah may blessings of Allah be on him has elaborated, "Examine the earth and the heavens and whatever you can see in them. Is it possible that such elaborate infrastructure could be maintained without the hidden hand of Allah? No, certainly not, Not at all!"

How can our study of nature help us in our personal life? Again in the words of Promised Messiah may blessings of Allah be on him, "Man has, therefore, been reminded that his God is the Lord and Providence of the Universe, so that the horizon of his hopes may be extended and he may believe that God, the Supreme, has immense beneficial powers and that He can bring into being an extensive variety of means for his benefit."

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2 http://www.astrobio.net/index.php?option=com_retrospection&task=detail&id=2507
5 http://www.astrobio.net/index.php?option=com_retrospection&task=detail&id=2507
7 Promised Messiah as. Haqiqat-ul-Wahi, Ruhani Khaza’in, vol. 22, pp. 7-8
8 Promised Messiah as. Malfoozat recording of September 14, 1907.
9 Commentary on the Holy Quran, based on the writings of Promised Messiah may blessings of Allah be on him, Translated by Sir Zafarulla Khan. Volume I, Surah Fatiha, Published by the London Mosque, page 78.