

"And when they board a ship, they call on God, with sincere and exclusive faith in Him, but He brings them back safe to land, behold! they associate partners (idols) to Him" (Holy Qur'an, Chapter 29, Verse 65)

SCIENCE
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4 Scientific Verses

QUR'AN on SEA & WAVES



WHAT THE HOLY QUR'AN SAYS ABOUT THE SEAS AND

RIVERS 



Modern Science has discovered that in the places where two different seas meet, there is a barrier between them. This barrier divides the two seas so that each sea has its own temperature, salinity, and density. For example, Mediterranean sea water is warm, saline, and less dense, compared to Atlantic ocean water.

When Mediterranean sea water enters the Atlantic over the Gibraltar sill, it moves several hundred kilometers into the Atlantic at a depth of about 1000 meters with its own warm, saline, and less dense characteristics. The Mediterranean water stabilizes at this depth (see figure 13).

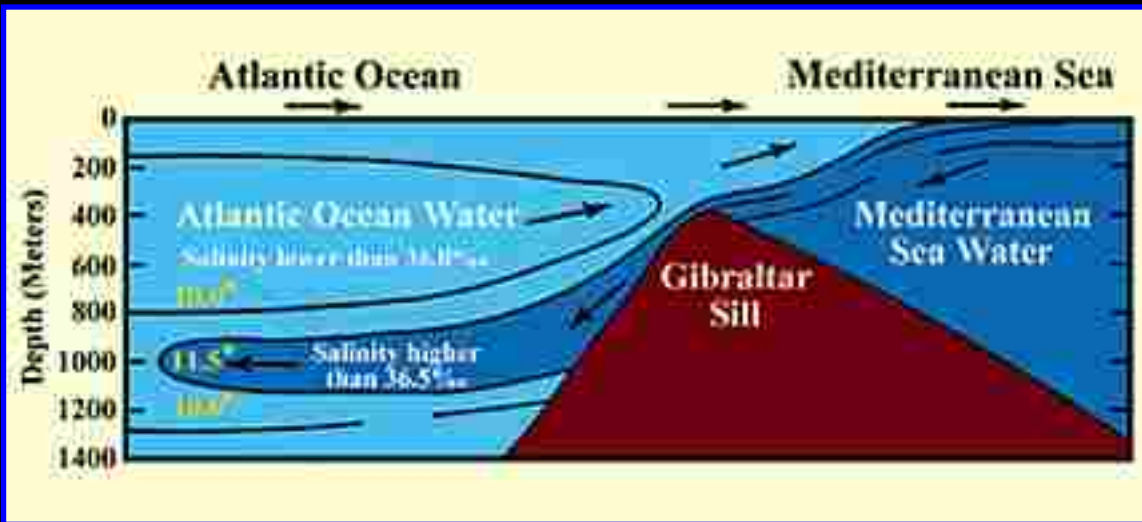


Figure 13: The Mediterranean sea water as it enters the Atlantic over the Gibraltar sill with its own warm, saline, and less dense characteristics, because of the barrier that distinguishes between them. Temperatures are in degrees Celsius (C°). (Marine Geology, Kuenen, p. 43, with a slight enhancement.)

Although there are large waves, strong currents, and tides in these seas, they do not mix or transgress this barrier.

The Holy Qur'an mentioned that there is a barrier between two seas that meet and that they do not transgress. God has said:

"He has set free the two seas meeting together. There is a barrier between them. They do not transgress"

(The Holy Qur'an, Chapter 55, Verse 19-20)

But when the Qur'an speaks about the divider between fresh and salt water, it mentions the existence of "a forbidding partition" with the barrier. God has said in the Qur'an:

"He is the one who has set free the two kinds of water, one sweet and palatable, and the other salty and bitter. And He has made

between them a barrier and a forbidding partition." 

(The Holy Qur'an, Chapter 25, Verse 53)

One may ask, why did the Qur'an mention the partition when speaking about the divider between fresh and salt water, but did not mention it when speaking about the divider between the two seas?

Modern science has discovered that in estuaries, where fresh (sweet) and salt water meet, the situation is somewhat different from what is found in places where two seas meet. It has been discovered that what distinguishes fresh water from salt water in estuaries is a "pycnocline zone with a marked density discontinuity separating the two layers." This partition (zone of separation) has a different salinity from the fresh water and from the salt water (see figure 14).

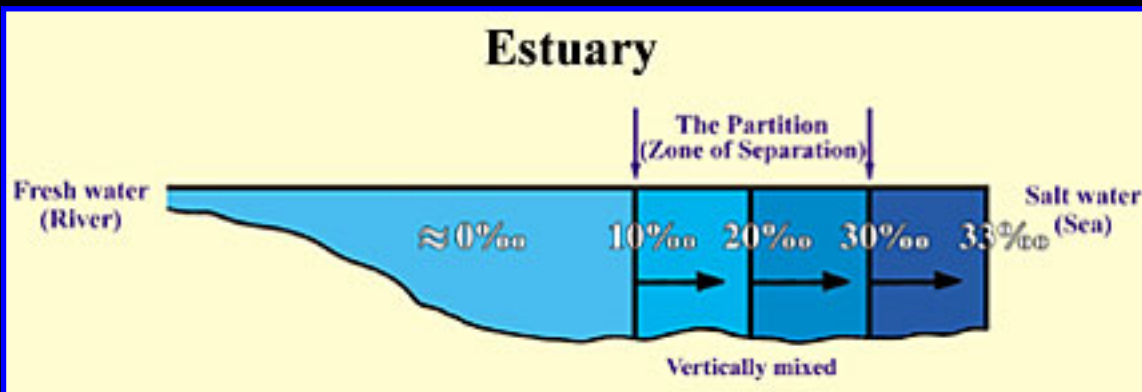


Figure 14: Longitudinal section showing salinity (parts per thousand ‰) in an estuary. We can see here the partition (zone of separation) between the fresh and the salt water. (Introductory Oceanography, Thurman, p. 301, with a slight enhancement.)

This information has been discovered only recently, using advanced equipment to measure temperature, salinity, density, oxygen dissolubility, etc. The human eye cannot see the difference between the two seas that meet, rather the two seas appear to us as one homogeneous sea. Likewise, the human eye cannot see the

division of water in estuaries into the three kinds: fresh water, salt water, and the partition (zone of separation).



WHAT THE HOLY QUR'AN SAYS ABOUT THE INTERNAL

WAVES 

God has said in the Qur'an:



"Or (the unbelievers' state) is like the darkness in a deep sea. It is covered by waves, above which are waves, above which are clouds. Darkneses, one above another. If a man stretches out his hand, he

cannot see it...." 

(The Holy Qur'an, Chapter 24, Verse 40)



This verse mentions the darkness found in deep seas and oceans,

where if a man stretches out his hand, he cannot see it. The darkness in deep seas and oceans is found around a depth of 200 meters and below. At this depth, there is almost no light (see figure 15). Below a depth of 1000 meters there is no light at all. Human beings are not able to dive more than forty meters without the aid of submarines or special equipment. Human beings cannot survive unaided in the deep dark part of the oceans, such as at a depth of 200 meters.

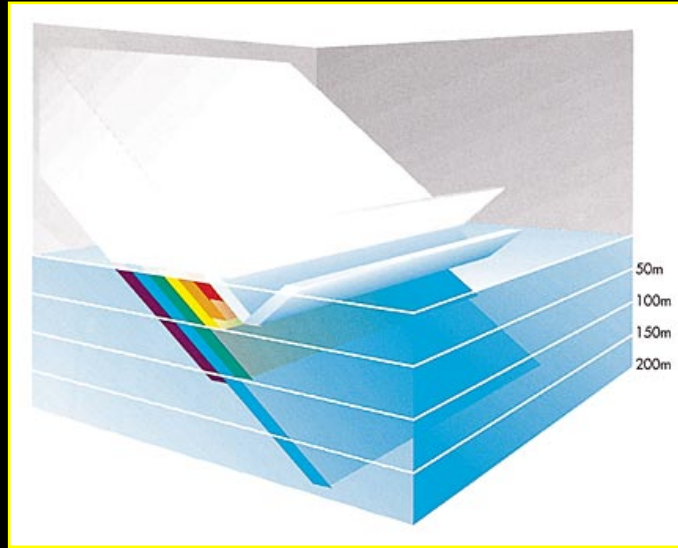


Figure 15: Between 3 and 30 percent of the sunlight is reflected at the sea surface. Then almost all of the seven colors of the light spectrum are absorbed one after another in the first 200 meters, except the blue light. (Oceans, Elder and Pernetta, p. 27.)

Scientists have recently discovered this darkness by means of special equipment and submarines that have enabled them to dive into the depths of the oceans.

We can also understand from the following sentences in the previous verse,

“...in a deep sea. It is covered by waves, above which are waves, above which are clouds...”

The deep waters of seas and oceans are covered by waves, and above these waves are other waves. It is clear that the second set of waves are the surface waves that we see, because the verse mentions that above the second waves there are clouds. But what about the first waves? Scientists have recently discovered that there are internal waves which “occur on density interfaces between layers of different densities.” (see figure 16).

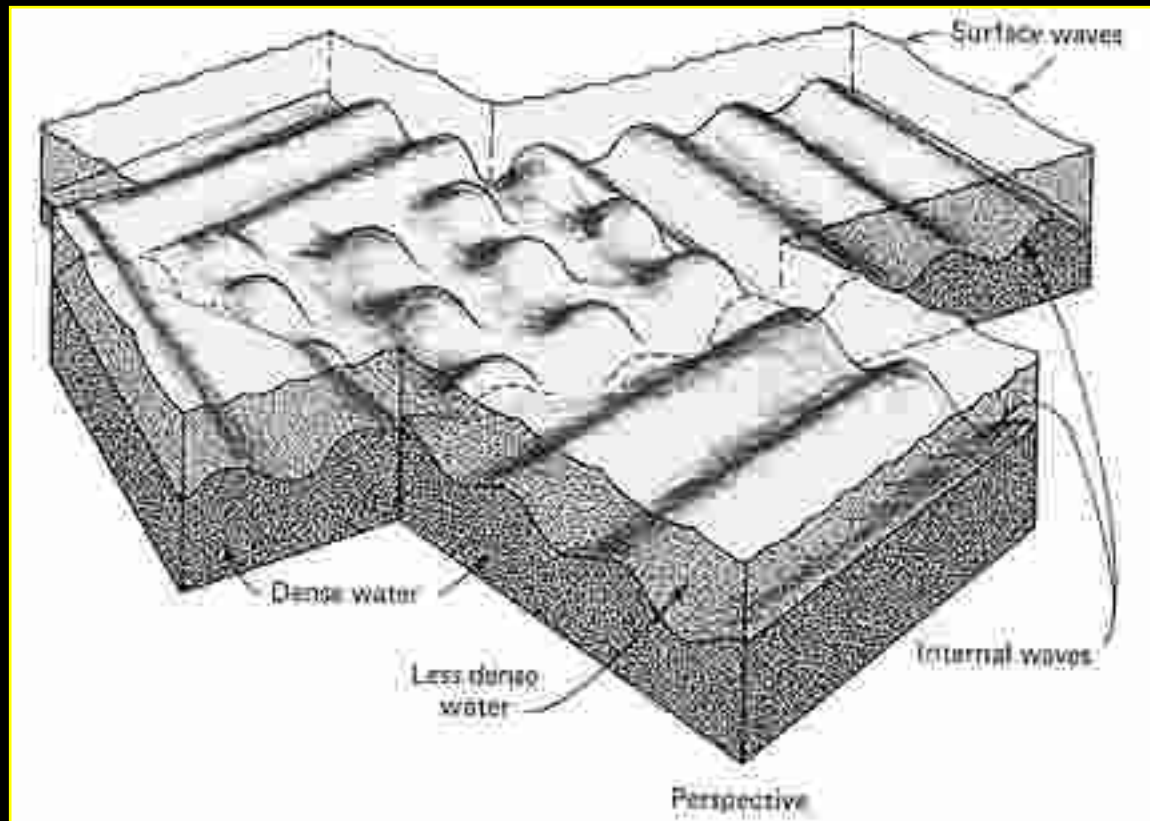


Figure 16: Internal waves at interface between two layers of water of different densities. One is dense (the lower one), the other one is less dense (the upper one). (Oceanography, Gross, p. 204.)

The internal waves cover the deep waters of seas and oceans because the deep waters have a higher density than the waters above them. Internal waves act like surface waves. They can also break, just like surface waves. Internal waves cannot be seen by the human eye, but they can be detected by studying temperature or salinity changes at a given location.



Lane-Poole in 'Speeches and Table Talk of the Prophet Muhammad'

He was the most faithful protector of those he protected, the sweetest and most agreeable in conversation. Those who saw him were suddenly filled with reverence; those who came near him loved him; they who described him would say, "I have never seen his like either before or after." He was of great taciturnity, but when he spoke it was with emphasis and deliberation, and no one could forget what he said...



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Unfold**



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