

# Johann David Michaelis, *Questions for a Society of Learned Men Who Will Travel from Denmark to Arabia on the Order of His Majesty the King* (1762)

## Abstract

The Göttingen professor and theologian Johann David Michaelis (1717–1791) was one of the most respected German Orientalists of the eighteenth century. In the 1750s, Michaelis planned an extensive expedition to the Near East, his primary goal being to find empirical evidence to support Biblical accounts. To prepare the members of the expedition, Michaelis compiled a catalog of questions covering a wide range of topics. His intention was to facilitate the systematic recording of observations made during the journey. Michaelis did not take part in the expedition itself, which occurred in the 1760s.

The excerpt here, Question 2, focuses on the empirical examination of the biblical narrative according to which it was possible for the Israelites to cross the Red Sea during their flight from the Egyptians. Michaelis hypothesizes that there was an ebb tide, which was amplified by strong winds. He specifies the place from which the travelers were to make their observations and asks them to note the times of tidal ebb and flow. To obtain further information, he advised the travelers to interview the locals, especially fishermen. Additionally, Michaelis asks the expedition to investigate whether there might have been an isthmus made of coral on which the Israelites could have walked, and to examine the sea bed to determine whether it could have supported the refugees.

## Source

### II.

#### **About the Ebb Tide at the Extreme Tip of the Red Sea, its Time, Strength, and Depth, and also the Sea Floor at the Point of Crossing by the Israelites: Likewise about the Coral**

The whole question about the Israelites' crossing of the Red Sea can be more fully understood by reading the preface and notes from my paper, "Essay physiques sur l' heure des marées dans la mer rouge." The entire objective is to determine with certainty whether an extreme ebb tide—caused by a north-by-northwest wind blowing against the flood tide—could have dried up so much of the sea that a pathway across was opened up to the Israelites.

The place where travelers can make their observations is not far from Suez at Thal Bedea, where the crossing is believed to have occurred.

First and foremost, it is true that this farthest corner of the Red Sea at Bedea does indeed experience tidal ebb and flow. Travelers have not yet paid much attention to the tidal movements in this area, because it is not an ocean but rather the utmost tip of a long gulf that includes many islands. Therefore, one cannot make determinations about it a priori from the course of the moon.

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For that reason, we request that you record the exact date of observation, the hour and minute at which high and low tide occur, and when the ebb and flow resume. Most desirable is for observations to be made several days in a row, and on a few days between the 17th and 24th days of the moon (not of the month, but of the new moon). But most important to me are the two nights before and after the 24th day following the new moon (in any given month of the year). This is because I am of the opinion that the passage must have taken place on one of those two nights.

Also to be noted is the height of the perpendicular rise of the water at high tide, as well as how far it drops at low tide. If it were possible to determine the increasing speed of the falling water at low tide, then more could be determined from the observation. One could then calculate approximately how much the water level must have fallen during the extremely low tide that Moses described, while the wind was blowing against the flood tide and holding it back for 19 hours.

At this point, I would request that you make diligent inquiries to the people who live by the Red Sea and others familiar with the area, e.g. fishermen. When a strong north-by-northwest wind blows and pushes the water from the Red Sea into the Indian Ocean, does it sometimes happen that the flood tide is held back from Bab-el-Mandeb and an exceptionally low tide occurs? How deep is the water, and for how many hours does it remain at ebb? Similarly, have they experienced extremely high tides from strong south-by-southwest winds, and how high has the water risen—especially during spring tides?

Incidentally, if the sea floor were laid bare during an extraordinary and particularly strong ebb tide, then this area is probably not very deep. Furthermore, the shallowness must extend from one shore across to the other. Due to my ignorance of seaman's parlance, I would describe it as an undersea isthmus and ask: Could such an isthmus be discovered under the sea in the Bedea region?

As Moses describes it, on both sides of this isthmus the water remained standing and served as walls to prevent the Egyptians from attacking the Israelites' flanks. If this were so, then the sea must have been so deep on either side of the isthmus that its water did not completely empty out. Are such depths to be found on both sides of this hypothetical isthmus?

Approximately how wide is the above-mentioned isthmus? If it were too narrow, perhaps the sharp spine of an undersea hill, then it would not have been possible for 600,000 men, with two million women and children, to have made the crossing in one night. Because this has raised questions about the passage, as does the possibility of the sea floor being muddy or so covered with sea life as to hinder those multitudes, I also ask you to take note and describe the sea floor at Bedea as best you can. Presumably, it is not muddy, but covered over with coral, which is likely as hard as stone at a certain depth. Is this coral firm enough to support people?

Source: Johann David Michaelis, *Fragen an eine Gesellschaft Gelehrter Männer, die auf Befehl Ihro Majestät des Königes von Dännemark nach Arabien reisen*. Frankfurt am Mayn, bey Johann Gottlieb Garbe, 1762, pp. 4–9. Available online at: <http://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb1041996-7>

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