## Anatoliy Zolotukhin

## Where were Scylla and Charybdis located?

**Abstract:** On the basis of the textual analysis of the Odyssey by Homer, the author states that Scylla, Charybdis, and Planktos were in the Bosphorus. According to Homer, there was a huge whirlpool Charybdis in the Bosphorus in 629-571 B.C. The Black Sea level suddenly became 5-10 m lower (Phanagoreia regression) and the stream in the Bosphorus took the opposite direction against the existing one. The hydrological experiment carried out in the shallow water helped to find out the location of Charybdis and so Scylla, Planktos. 38 years later the Black Sea level rose, the stream turned back to direction existing today and Charybdis disappeared.

**Keywords**: Scylla, Charybdis, Planktos, Odyssey, Bosphorus, Phanangoreia, Scheria, Aeetes

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The issue of Scylla's and Charybdis' location (the Pillars of Hercules) is important in outlining two major points: where Odysseus sailed and where Atlantis was. According to Plato's Dialogues Timaeus and Critias, Atlantis was beyond the Pillars of Hercules. Most of the researchers adopt the idea that Odysseus sailed in the Mediterranean Sea, the Pillars of Hercules were in the strait of Gibraltar, the strait of Messina, between Sicily and Apennine peninsula. It made many researchers look for Atlantis either in the Atlantic ocean or in the Mediterranean Sea. The first scholar who thought that Odysseus had sailed in the Black Sea and who defined the location of the Pillars of Hercules in the Bosphorus was academician K.M. Berr. Another important step in Homer's question solving was made by A. Losev who wrote the first Homer's biography which is close to real. The spotlight of this work was Losev's assertion that Homer is an immanent author and the information about his life should be looked for in his works. But A.F. Losev did not give the idea of how to do it. 1,2

In 2001 my book 'Homer. The immanent biography' was published and translated into English by prof. V. Chernitskiy<sup>2</sup>. Due to the elaborate immanent methods, it was possible to outline 8 main stages of Homer's life, his Cimmerian origin, and Odysseus' itinerary.

To get the idea of Scylla's and Charybdis' location we may analyze Circe's words in Hexameters 69-70 in the XII Song of Odyssey about Argo's passing by the wandering cliffs' of Planktos:

οἴη δὴ κείνη γε παρέπλω ποντοπόρος νηῦς, 70 Άργὼ πᾶσι μέλουσα, παρ Αἰήταο πλέουσα<sup>3</sup>.

<sup>1.</sup> Золотухин (2001), 3-6

<sup>2.</sup> Zolotukhin (2006), 7-11.

<sup>3.</sup> Homer, Odyssey, Perseus (XII, 69-70)

One seafaring ship alone has passed thereby, 70 that Argo famed of all, on her voyage from Aeetes<sup>4</sup>,

In the key Hexameter 70 the words «Ἀργὰ πᾶσι μέλουσα...» have the exact translation Argo which sailed from Aetes'. Nowadays nobody denies the fact that Argo sailed to Aetes to the Caucasus (*Scheria*) to get the Golden Fleece. On the way back the ship might have come across Planktos, Scylla and Charybdis in the Bosphorus or in the Dardanelles. Thus Hexameter 70 precisely indicates that Odysseus sailed in the Black Sea. It also contains some information about the width of strait:

"'τὸν δ' ἔτερον σκόπελον χθαμαλώτερον ὄψει, Ὀδυσσεῦ.

102 πλησίον ἀλλήλων καί κεν διοϊστεύσειας<sup>5</sup>.

'But the other cliff, thou wilt note, Odysseus, is lower - they are close to each other; thou couldst even shoot (twice) an arrow across <sup>6</sup>.

This translation specifies that the strait was as wide as 2 lengths of the arrow's flight:  $\delta\iota = \delta\iota\varsigma^7$ . Homer chose the word  $\delta\iota$ -οϊστεύσειας which had this indication. We may state that the width of the strait between Scylla and Charybdis was about 700-800 m. According to the Sailing Directions, the minimal width of the Bosphorus is 741 m and the Dardanelles 1297 m.

So Scylla, Charybdis and Planktos were in the Bosphorus. Their location was found out with the help of the experiment, by spilling water in the opposite direction (from the Marmara Sea to the Black Sea) in the test model of the strait made in scale 1:20000. The outlines of the strait were modeled in the basis of the first exact map made by Manganary in 1834, the copy of which was borrowed in Mykolaiv Observatory <sup>9</sup> (Pic. 1).

We don't claim to have obtained the precise physical pattern of the process, though. It was impossible to keep to the criteria of Frood, Reynolds and Strukhal, e.i. to restore the infrasound self-oscillations of Charybdis within 8 hour period, described by Homer in 'Odyssey'(XII, 105).

This is what Circe says to Odysseus about Charybdis (XII, 105-110):

[105] Thrice a day she belches it forth, and thrice she sucks it down terribly. Mayest thou is not there when she sucks it down, for no one could save thee from ruin, no, not the Earth-shaker. Nay, draw very close to Scylla's cliff, and drive thy ship past quickly; for it is better far [110] to mourn six comrades in thy ship than all together.' 10

<sup>4.</sup> Homer, Odyssey (1919)

<sup>5.</sup> Homer, Odyssey, Perseus

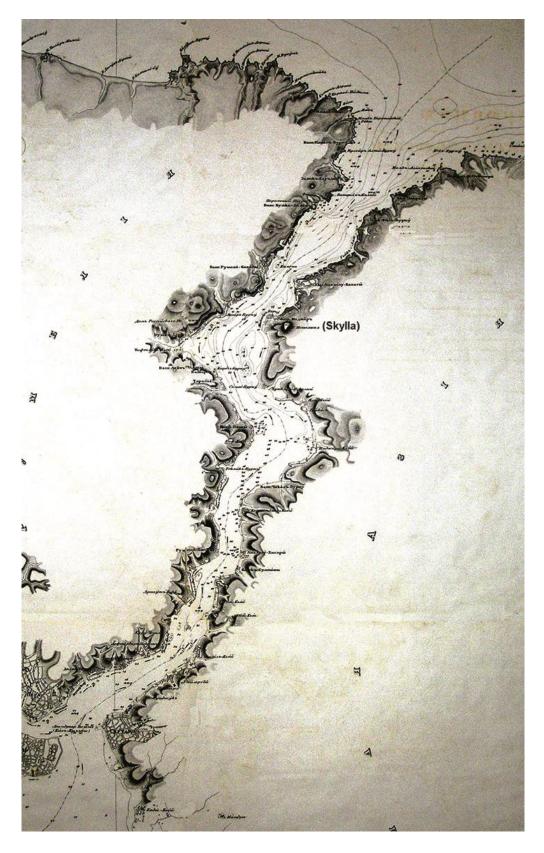
<sup>6.</sup> Homer, Odyssey (1919)

<sup>7.</sup> Дворецкий (1958), 362

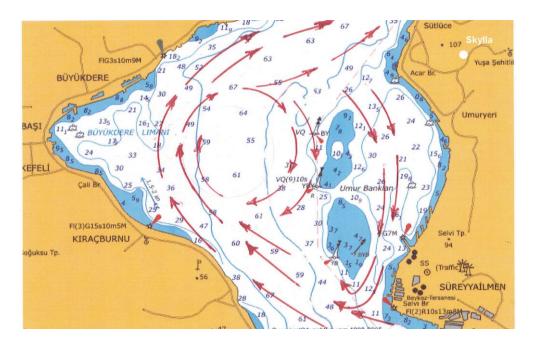
<sup>8.</sup> Лоция (1988), 11

<sup>9.</sup> Манганари

<sup>10.</sup> Homer, Odyssey (1919)



Pic. 1. The Bosphorus Strait by E. Manganari 1834. The Black Sea is above



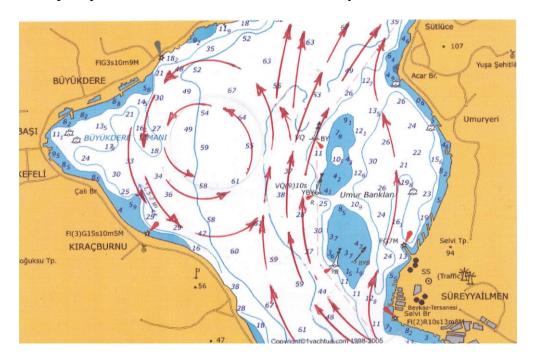
Pic. 2. The stream in the Bosphorus during the absorbing of Charybdis.

The Black Sea is above

But due to the modeling, it became possible to restore the first phase in the formation of the huge whirlpool and to discover its location in the strait. First of all, Planktos was found to have been preserved. It's near the Asian coast. It used to protect the ships which were near Scylla and close from Charybdis. On Manganari's map, the mountain Usha was called Giant. In Homer's times, it might have been a huge mud volcano. Picture 2. presents how Charybdis functioned while absorbing water. Then it wasn't difficult to restore another phase of self-oscillation – the eruption of Charybdis. The stream from right, Asia coast of the Bosphorus blocked the mainstream, the whirlpool Charybdis was swirling clockwise. Thus Charybdis divided the strait into 2 parts: Southern 20 km long and Northern – 10 km long. The water accumulated in the Southern part, then it overcame the barrier and rushed into the center of a strait, coming across the opposite stream of Charybdis. It caused a huge 'splash' which Homer described (XII, 235-239). He also described the initial phase of Charybdis' submergence when the huge whirlpool, more than 500 m in the diameter, revealed the seaweeded bottom of the shallow strait 40-50 m deep (XII, 240-243).

Picture 2 and 3 show that there was no other way from the Black Sea to the Marmara Sea but to nestle the ship close to Scylla and to slip past Charybdis under the protection of Planktos. It could be done only during the eruption of Charybdis, which Circe advised to Odysseus. Why? Firstly, the water between Planktos and Scylla was drawn into the whirlpool, the bottom was revealed, so the ship could hit the rocks and break – effect of 'wandering rocks'. Secondly, during the experiment, it became clear that little particles at the exit between Planktos and the Asian coast were drawn into the whirlpool. Conversely, during the eruption the water level between Planktos and the shore

rose and the opposite current could be overcome by sailing along the coast, which Circe advised. Besides, it became clear that the period of the eruption was twice as short as the period of absorbing. That's why it was necessary to move fast to cover the distance in 1,5-2 hours. When the water, stored in the lower part, poured out, the current leveled and the cycle recurred.



Pic. 3. The stream in the Bosphorus during Charybdis' eruption

The author deciphered more the 400 secret lapidary inscriptions of Homer, found by archaeologists during the last 200 years. According to Homer Charybdis functioned from 629 till 591 B.C. <sup>11,12</sup> It can be admitted that the period of Phanagorean Regression when the Black Sea level became 5-10 m lower, lasted for 38 years. The period of the rise and fall cycle was surprisingly short – about 3-4 weeks as Homer stated. The author hypothesizes that this process was connected with the slipping of the earth crust on the viscous semifluid magma layer caused by outside and inner factors (athenosphere of Earth Mantle) <sup>13</sup>.

Thus the Pillars of Hercules near Scylla (mountain Usha nowadays) and Charybdis (Sarier) were in the Bosphorus. Homer also stated that Atlantis was in Crimea near Evpatoria. Besides due to the 38 years period of Charybdis' function, the Black Sea was called by ancient Greeks Axinus, which means 'hostile', because the trade ships could easily enter but couldn't sail out. Later, when Charybdis disappeared the Black Sea got the name Euxinus which means 'hospitable'.

<sup>11.</sup> Золотухін (2011)

<sup>12.</sup> Золотухін (2013), 12-15

<sup>13.</sup> Золотухін (2016)

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