

## Bridge of Evripus THE TIDAL EFFECT

... the inspiration of the tale

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The old Bridge of Evripus, spans the narrowest point of the Evripus Strait. On this bridge, for many centuries, scientists, but also simple people, have admired and continue to admire the unique tidal phenomenon of the Evripus. The channel, namely the channel of Evripus is a narrow strip of sea-width 39 m, 40 m length and depth about 8,5 m connecting the North to the South Evian Gulf, between Central Greece and Evia (Chalkis). In this space presents the following unique complex phenomenon, the waters of the channel to move continuously, while changing motion and time, sometimes directed towards the north and sometimes to the South Evian. The systematic monitoring of the stream showed that while 22-23 days shows a regular change every 6 hours or so, just as the tide, the other 6-7 days of the month the current becomes so erratic that you can change once again 14 times within the same 24 hours! It was found that the normal flow corresponds to the nerves, ie 11-12 days on the new moon (NS) and many others during the full moon, while the irregular flow occurs in the quadrature (WB and TT). Many distinguished thinkers of Ancient Greece including Aristotle and Eratosthenes tried to explain this phenomenon.

The explanation has been given and has now become acceptable is that the natural tidal wave reaching the Aegean Sea on Evoia east, a part of it enters the North of Evia (Evia from the North) and another one enters the South Evian Gulf (from South of Evia). Due to the different length of the route, while the natural tidal wave coming from the south reaches the channel of Evripus in 1 hour and 15 minutes before the coming of the North. From this, it is the natural southern entering bodies of water where n raise the level of 30-40 cm and sea current generated from N. to S. After 6 hours, as the successor to the ebb tide, the conditions are reversed and created oncoming, since in part B. accumulated larger bodies of water. When they occur nerves, so the intensity is high tide, the tide of Euripus presented normal. But in quadrature, where the current is weaker, so the configuration of the coast, the seabed, current weather and barometric other causes contributing to the stream occurs irregularly.

According to popular tradition, the ancient Greek philosopher Aristotle, in despair at his inability to solve the problem of the tides, drowned here - "Let the Evripus receive me, since I cannot comprehend the Evripus." Apart from the legendary truth, Aristotle was closely linked to Chalcis since his mother Phaestis was a Chaldician and was born in the Chalcis colony of Stagira in 384 BC. Exiled towards the end of his life, Aristotle found refuge in Chalcis, where he died of stomach illness in 322 BC.

The first attempt to link the two coasts was made in 411 BC, during the rebellion against the Athenian Alliance. During the Venetian period, a five-arched bridge was built, which led to the main gate of the fortifications of this period. In 1854 the previous bridges were destroyed during the widening project of the Strait of Evripus.

The new bridge, which was supposed to allow passage of large ships, was a sliding bridge that did not affect the city's medieval fortifications. It was inaugurated by the then royal couple Otto and Amalia, a snowy Epiphany of the early 1840's. The bridge was used up until 1890, when it was demolished along with the old fortifications of the city. The construction of the new bridge, which was sliding and rotating, was completed in 1896, following the works to deepen and widen the channel. The bridge, which we see today, was built in the early 60's. The high bridge of the city is the second longest bridge in the country after that of Rio - Antirio and delivered into operation in June 1993. It is 695 meters long of which 215 are in the air. The roadway has 2 lanes and sidewalks on both sides with a total width of 13 meters and is situated at an altitude of 35.5 meters to allow the free movement of ships beneath.

The construction of the project was an impetus for the city as all the guests and heavy vehicles were not required to pass the old bridge and therefore the center of town, but through the high bridge and ring road could be moved to the city and to the North or South Evia without burdening the city center faster and more comfortable.