

Is there a connection between the 1897 Cretan Revolt and the discovery of the Antikythera Shipwreck?

J. H. Seiradakis

Introduction

The Antikythera Mechanism was found by chance, in a shipwreck, close to the small Greek island of Antikythera, in April 1900, by sponge divers. The shipwreck was dated between 86 and 67 BC (based on coins from Pergamon). Later the Mechanism was stylistically dated, around the second half of the 2nd century BC (100 – 150 BC). About this time the great Greek astronomer Hipparchos (190 – 120 BC) lived in Rhodes.

It was a portable (laptop-size), geared mechanism which calculated and displayed, with high precision, the movement of the Sun and the Moon in the sky and the phase of the Moon for a given epoch. It could also calculate the dates of the four-year cycle of the Olympic Games. It had one dial on the front and two on the back. Its 30 precisely cut gears were driven by a manifold, with which the user could select, with the help of a pointer, any particular epoch (on the front dial). While this was done, several pointers were synchronously driven by the gears, to show the above mentioned celestial phenomena on several accurately marked annuli. It contained an extensive user's manual. The exact function of the gears has finally been decoded, and a large portion of the manual has been read after 2000 years by a major new investigation, using state of the art equipment.

Based on new surface photography and high resolution tomography data, a new model has been built at the Aristotle University, revealing the technological abilities of ancient Greeks.

No complicated geared instruments are known before the Antikythera Mechanism and for several centuries after. Therefore, this astronomical device stands out as an extraordinary proof of high tech in ancient times.

The Cretan revolt of 1897

The island of Crete was part of the Byzantine Empire until 1204 AD. In 1205 AD the island became an overseas colony of the Republic of Venice until its fall to the Ottoman Empire during the Cretan War (1645–1669). Since then there were significant rebellions against the Ottoman rule, particularly in Western Crete. One of the most famous revolts took place in 1770 AD, encouraged by the Russian Naval Forces. Toward the end of the 19th century, in particular after the liberation of the main land of Greece in 1821, there were continuous rebellions leading, eventually to an autonomous Cretan State (1898 – 1913).

In 1896 AD, while Crete was still under the Ottoman rule, tensions were aggravated, leading to a rebellion that soon covered most of the island¹. Volunteers from the main land (but also

1 There are several books about the 1897 Cretan rebellion, see for example *Τα Σελινιώτικα Νέα (Ta Seliniotika Nea)*, 27 February 2014 (in Greek).



Figure 1. The optical telegraph.

from several European countries) came to Crete and fought for the liberation of the island). In February 1897 the Greek government sent military forces to the island, under the royal adjutant Timoleon Bassos, provoking a war with the Ottoman Empire. Immediately the Ottoman administration, with the consent of the Great Powers (Italy, France, Austria-Hungary, Germany, Great Britain and Russia), blockaded Crete and restricted all communications between the island and Greece. The Greek Ministry of War reacted by establishing an *optical telegraph* between Cape Grambousa in NW Crete, Antikythera and the Port of Kapsali at Kythera, which was Greek territory. From there communications were transmitted to Athens by wire.

The message transmitted by optical telegraph

The optical telegraph (often called *heliograph* – Figure 1) was a simple but effective means of communication over long distances during the late 19th and early 20th century. Communication was achieved by transmitting optical flashes (usually Morse code), reflecting sunlight by mirrors. The flashes were produced either by tilting the mirror by a few degrees up or down, or by using a shutter. The optical telegraph used at Grambousa, Antikythera and Kythera was probably of the Mance Mark V type or a variant of it.

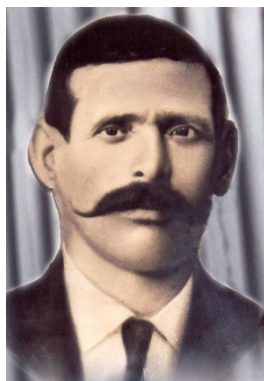


Figure 2. Elias Lykopantis or Stadiatis, who discovered the Antikythera shipwreck.



Figure 3. A suit used around 1900 by Simiot sponge divers (photographed by the author in 2008 at the Museum of Naval Art at Symi).

The war between Greece and the Ottoman Empire ended soon by the intervention of the Great Powers. By 1900, the Greek army was withdrawn from Crete and the heliograph operators left the islands. However, the operator of the Antikythera heliograph, escaping the military and financial bureaucracy of Greece, stayed at Potamos, the little port of Antikythera, enjoying the cheap and simple life of the island and his monthly salary!

The Antikythera shipwreck was accidentally discovered on Tuesday, 4 April 1900, five days before Easter by the Symiote sponge diver Elias Lykopantis (Figure 2),² while he was diving in a full diver's suit (Figure 3). Greece was still using the Julian calendar (until February 15, 1922), therefore this date would correspond to 17 April 1900, according to our modern Gregorian Calendar. The news spread among the inhabitants of the small island of Antikythera. However, the divers, having been hired and paid to collect sponges, had to continue their trip to their destination (the shores of North Africa), returning to Symi several months later. According to information provided by some old divers at the island of Symi in August 2007, the sponge expeditions usually started around April (when the weather improved) and ended several months later³.

Ten days later, on Friday after Easter (April 14, 1900), the residents at the Port of Kapsali (at Kythera) noted, much to their surprise that the Antikythera telegrapher was persistently requesting urgent communication. The communication was established and lasted about one hour, during which a message was relayed that a treasure shipwreck was discovered at Antikythera, insisting for immediate broadcasting to Athens⁴. In the Ministry of Education (responsible for cultural issues at the time) the message brought some justified activity, but after investigating the records of the Antikythera telegrapher it was rejected as the "*product of heavy alcohol use*"!

2 See Svoronos I.N. (1903, in Greek), *Ὁ Θησαυρὸς τῶν Ἀντικυθήρων*, Beck & Barth, Athens or Svoronos I.N. (1908, in German), *Die Funde von Antikythera*, Beck & Barth, Athens.

3 Price, D. de S. (1974), *Gears from the Greeks: The Antikythera Mechanism – A calendar computer from ca. 80 BC*, American Philosophical Society, Transactions, N.S. 64.7, Philadelphia, mentions that the divers sailed immediately back to Symi, which contradict the information provided by the old Symiote divers.

4 Most of what follows is mentioned in an article at the greek journal *Ἡλιος (Helios)* v. 345, p. 563 (1957), written by Stylianos Lykoudis, son of Emmanuel Lykoudis, who was the government observer during the marine excavations that took place between November 1900 and September 1901.

| | |
|--|---|
| <p>Δέκα μέρες πρίν, τὴν Μεγάλῃ Τρίτῃ τοῦ 1900, δύο σφουγγαράδικα μηχανοκίνητα Συμιακά, ποὺ ἀνέβαιναν ἀπὸ τὴν Ἄφρική, τ' ἀνάγκασε φρέσκος ὄστριαγάρμης (Ν Δ), νὰ καταφύγουν στὸν ὄρμο τοῦ Ποταμοῦ στ' Ἀντικύθηρα. Τὸ ἓνα ἀπὸ τὰ δύο ξεμύτησε ὡς στὸν δίπλα κάβο Γλυφάδια, καὶ σὲ 25 μέτρα μόνον ἀπὸ τὴν ἀκτὴ, κατέβασε μὲ σκάφανδρο δῦτη, σὲ 35 ὄργιες βάθος στὴ θέσι Πινακάκια, νὰ βγάλῃ θαλασσινὰ γιὰ τὴν νηστεία τῶν ἡμερῶν. Μὰ σὲ λίγο ἔκανε σινιάλο νὰ τὸν τραβήξουν ἀπάνω. Ἀντὶ γιὰ πίννες καὶ «γαῖδουρόποδα» ἀνέβασε ἓνα ὠραῖο χάλκινο χέρι, ποὺ ἀπέσπασε ἀπὸ ἀρχαῖο ἀγάλμα ποὺ βρισκόνταν μαζί μὲ ἄλλες ἀρχαιότητες στὸν βυθὸ καὶ ἔπιπταν μάρκος 55 τοῦλάχιστον μέτρα. Οἱ δύο καπετάνιοι τῶν καϊκιῶν, Δημήτριος Ἐλευθερίου ἢ Κοντὸς καὶ Ἡλίας Σταδιώτης, ἐβούτηξαν οἱ ἴδιοι νὰ θεβαιωθοῦν καὶ ἐπέισθηκαν, καὶ ἀνέβηκαν στὰ καϊκία τους κι ἔκαναν ἀμέσως πανιὰ γιὰ τὴν Σύμη, μ' ἔλο τὸν φουρτουνιασμένο καιρὸ.</p> | <p>Ten days ago, on Good Tuesday before Easter of 1900, two sponge trawlers from Symi, coming from Africa, were forced by strong northeastern winds to resort to the bay of Potamos of Antikythera. One of the two boats got out of the bay as far as the next cape Glyfadia and 25 meters from the coast, let one of the divers, with a diving suit to descend at a depth of 35 fathoms in order to collect some seafood, useful for the Easter fasting days. Soon after, the diver gave signal to be drawn to the surface. Instead of muscles and clams he had brought up a nice bronze arm that he had extracted from an ancient statue he had found together with other antiquities at the bottom of the sea, covering an area of at least 55 feet in length. Both captains of the boats, Demetrios Eleftheriou or Kontos and Elias Stadiotis, dived themselves to make sure and be personally convinced of the finding and went back to their boats and immediately set sail for Symi, despite the stormy weather.</p> |
|--|---|

Figure 4. The Greek text and English translation of the 1957 “Helios” article, summarizing the contents of the message transmitted by the telegraph.

The summary of the contents of the telegraph is reproduced in Figure 4.

There are some contradictions in the above communication.⁵ However it seems to be a vivid description of the discovery of the Antikythera shipwreck. The author of the 1957 article, Sylvania Lykoudis (1878 - 1958) was considered to be a trustworthy and reliable person. In 1939 was elected as a full member in the Academy of Athens.

The bronze arm that was brought up as evidence of the discovery of the shipwreck was the arm of the Philosopher of Antikythera, as was identified much later at the National Archaeological Museum of Athens.

Summary

The Antikythera shipwreck was discovered on Tuesday before Easter, i.e. on April 4, 1900 according to the then used Julian calendar. The first announcement of the discovery was transmitted ten days later, on April 14, 1900, by optical telegraph from Antikythera to Kythera and from there it was wired to Athens. The Ministry of Education in Athens rejected the announcement as unreliable. The optical telegraph had been used by the Greek army, during the 1897 Cretan revolt and was inadvertently left on the island of Antikythera.

5 Small discrepancies which need further investigation: (a) As mentioned earlier it was too early for the boats to be on their way back from Africa. (b) The diver that first saw the Antikythera wreck and extracted and brought up the bronze arm was Elias Lykopantis with the nickname Stadiatis (not Stadiotis). This was confirmed by his niece when Xenophon Moussas and I met her in Rhodes in 2006. She also told us that after her uncle discovered the bronze arm he never allowed anybody else to touch it and that he slept with it in his bunk until they returned home. (c) The diver was wearing a diver's suit. It would have been extremely inconvenient to be searching for seafood in a suit. He was probably testing a new suit or showing its use to a novice. (d) Elias was the most experienced diver, but there is no evidence that he was actually the captain of the second boat. (e) As mentioned earlier the two boats did not set sail for Symi immediately after the discovery. They sailed to the coast of Africa first to collect sponges. This makes sense, otherwise there would be a marked delay of seven months between the return of the boats to Symi (toward the end of April) and the announcement of the discovery to the (Kytherian) Minister of Education, Mr. Spyridon Stais on November 6, 1900, according to newspaper reports.

Acknowledgements

The author would like to thank several anonymous residents of the island of Symi that participated in a workshop about the discovery of the Antikythera shipwreck organized by the *Antikythera Mechanism Research Project*, the *Municipality of Symi* and the journal *Efoplistis* on August 31, 2008 for relating to us personal memories of members of their families. He would also like to thank the postgraduate student Magdalini Nikoli, for her thorough investigation of early newspaper (1900–1901), during her undergraduate Diploma Thesis.