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Svetlana Tyaglova-Fayer

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## The new reading of the 3D reconstruction of the Antikythera machine (30-day calendar)

Svetlana Tyaglova-Fayer, professeur en liberal de FLE et de russe.

Chercheur indépendant

[tyaglova.fayer.svetlana@sfr.fr](mailto:tyaglova.fayer.svetlana@sfr.fr)

### *Summary*

This is one of the first major discoveries of underwater archaeology: a calculating device. According to some researchers, it was used to determine and predict important astronomical events. Its remains were found in the early 19th century by sponge fishermen near the island of Antikythera. It was probably assembled in a workshop in Rhodes, Syracuse or Asia Minor at the end of the 2nd century BC. It has a complex mechanism consisting of at least thirty-five cogwheels driven by a crank. The Antikythera machine is the oldest known gear mechanism. Its reconstruction includes two plates showing several graduated circles. Our article focuses on one of these circles, which contains 30 symbols, presumably to represent a month in the Egyptian calendar<sup>1</sup>.

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<sup>1</sup> . Its year has 3 seasons; each season has 4 months; each month has 3 decades (weeks) of 10 days each = 30 days.

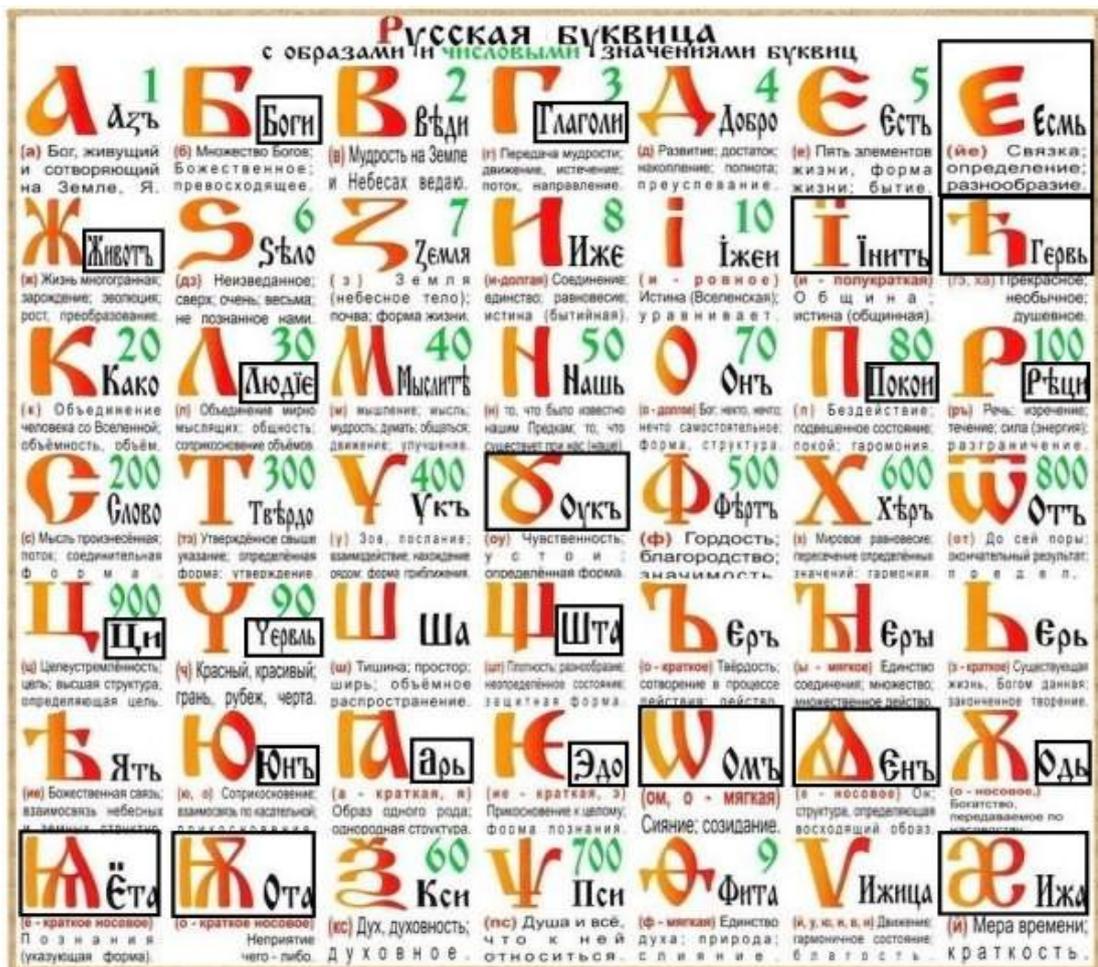
<sup>2</sup> . This fact was established at the very beginning, in 1901 (KABBADIAS, 1901). This was the very first scientific expedition that saw the birth of underwater archaeology. Pieces of six to eight bronze statues, along with over 30 marble statues, are now preserved at the National Archaeological Museum in Athens)

<sup>3</sup> . The identity of the designer is debated, but among the people who could have made this device include Archimedes of Syracuse himself or one of his disciples, mentioned by Cicero in "Treatise on the Republic" (Cicero, De Re Publica I, 14 (22)) [Cicéron : TRAITÉ DE LA RÉPUBLIQUE : livre I \(bilingue\) \(remacle.org\)](#)

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<sup>4</sup> . We already touched on this in the spring of 2023 during our intervention at the 90<sup>e</sup> CONGRES de l'ACFAST: Des symboles pictographiques et sculpturaux de Göbelkli Tepe vers les premiers alphabets. 90<sup>e</sup> CONGRES de l'ACFAS, 306 - Session Lettres, arts et sciences humaines. <https://shs.hal.science/halshs-04086239>; <https://shs.hal.science/halshs-04046030>

<sup>5</sup> . It should be noted that long before Linear B (now written "LB") there was Linear A (now written "LA"), which was specific to the Minoan culture. The "LA" is attested between 1850 and 1450 BC by archaeological evidence provided mainly, but not exclusively, by the island of Crete. Interestingly, the island of Crete offers a remarkable illustration of the evolution of writing. Hieroglyphics can be found there long before "LA". These are not linguistic elements, but a kind of rebus. However, this system was used for accounting purposes during the Ancient Minoan (AM) period and coexisted with "LA" on Crete for a time, only to disappear during the MM period (after 1700 BC). We cannot say whether hieroglyphic served the same language as 'LA', but it is certain that there are links between these two Cretan scripts, even if it is impossible to specify them. These links are less obvious between "LA" and "LB."



А<sup>1</sup> В<sup>2</sup> Г<sup>3</sup> Д<sup>4</sup> Е<sup>5</sup> З<sup>6</sup> З<sup>7</sup> И<sup>8</sup> Ѹ<sup>9</sup> і<sup>10</sup> К<sup>20</sup> Л<sup>30</sup>

і<sup>10</sup> А<sup>1</sup>

і<sup>10</sup> Ѹ<sup>9</sup>

К<sup>20</sup> Г<sup>3</sup>

并

1.

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