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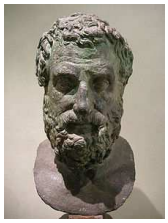
Information about the Environment and for travellers in Crete:



Greeks were the 1st operators of **beacon fire: Friktories** – "Communication platform" of the ancient world

The so called "Friktories" prove one of the earliest communication systems in the Aegean, which was practised with bonfire from mountaintop to mountaintop already in the 6th to the 3rd Century BC. For the transfer of visual signals under use of the fire "stone towers" build by men served in the form of round structures with pyramid-shaped, flat spire. Remnants of "Friktories" were found also on Crete (see fig.); see in addition also in Greek references: Geophysical and Geoarchaeological Project at Priniatikos Pyrgos - N. Panagiotakis: "Contacts between Knossos and the Pediada region in central Crete" in G. Cadogan, E. Hatzaki, A. Vasilakis (eds) Knossos: Palace, City. The following pictures of Friktories remainders were taken by the author of this contribution within a Olive grove on the mountain Juchtas, Archanes.

A video about the topic and the study of the "Friktories" you will find (in Greek) at the following link: [http://translate.google.de/translate?hl=de&sl=en&u=http://www.youtube.com/watch%3Fv%3De45wKUsC2x0&prev=/search%3Fq%3DFriktories%26hl%3Dde%26tbo%3Dd%26biw%3D1920%26bih%3D932&sa=X&ei=zDQGUfu8OsKUtQbJkoCABA&ved=0CD4Q7gEwAQ].

Altogether 4 Friktories tower remainders stand on the in former times probably "bleak" hill summit, which today is covered with olive trees.

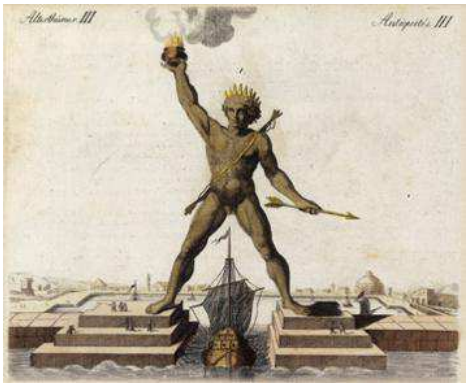
The desire for the fast transmission of information is age-old. Fast means: faster than a runner, faster than a mounted messenger, - depending upon epoch and the conditions of the transmission technique. It is remarkable that the earliest delivered systems with light, thus the fastest transmitting medium at all, worked.

The Greek *Aischylos* (fig. see headline; 525 BC. in Eleusis, Attica; † 456 BC in Gela, Sicily) is before *Sophocles* and *Euripides* the oldest of the three large Greek tragedy poets and is considered as one of the earliest chroniclers of a telegraphic information transfer. In his drama "Agamemnon" he described the distance, on which by means of signal fires the victory over Troy was announced: Designation of the message was Mycenae. The representation is historically surely not reliable, with regards to the transmission circuit; however it clearly shows that the transmission of news was usual by signal fires at present of *Aischylos*. The kind of the transmission was not without difficulties: the telegraphs were at the mercy of the weather, the forwarding of the signal depended also on the attention of the track marshal and they were not "bugproof". Even more worse - there is well-known from the antique reports that signals were falsified or misunderstood - with partially devastating consequences; the analysis of the possibil-

ity of such long-distance communication connections in the antique with fire-towers and the disclosure of information becomes still in individual projects examined.

It is for sure that already many centuries before Christi birth an active maritime trade took place in the Mediterranean area. The idea to not only convey messages with the help of a light visible from far away but also to navigate boats the way into the native port might be already very old. One attributes the Greeks to have been the first operators of beacons. Already around 800 BC *Homer* reported of fires, and there is some referring to their existence in the North Aegean.

The oldest, really significant lighthouse might be the well-known tower of Pharos. It is however definitely not the first lighthouse of the world, as often is to be read. The Egyptians built this tower on an island offshore the Nile delta at Alexandria around 300 BC. Whether it served from the beginning as lighthouse and if this function was its priority purpose, is today unfortunately unknown. It is for sure only that the tower partly collapsed in the year 1302 with an earthquake and was finally destroyed in 1349.



If the legendary ”Colossus of Rhodes“ was a lighthouse, is strongly disputed and is considered as rather improbably. It is said that the “Colossus” was a bronze statue of the God Helios located above the port entrance of the Greek island. It is also said that it had a “fire pan” in its hand where a beacon burned – however it is incomprehensible how this has been maintained.
According to tradition it was build, after *Demetrios Polykletes* in the years 304/303 BC quit the siege of the seaport, what the inhabitants interpret as their victory. In a twelve-year construction period they thereupon established the bronze Helios statue, which should have had a height of approx. 35 m. The exact location is just as unsettled as its appearance. The ”classical“ draft with spread legs set up over the port entrance (see fig.) is considered as quite improbable, possibly the Colossus was in the center of the city. After only 66 years (224 BC) the statue fell with an earthquake. It was not developed again, since according to an oracle in the case of the attempt a large mischief threatens. As fuel material at this time mostly resinous or wood soaked in pitch was used.

With the fall of the Roman Empire around 500 BC darkness turned back to the coasts of Europe again. Without a overall organization there was no control and motivation for the maintenance of beacons. The peoples along the coasts were at mercy of plundering pirates and therefore put only little emphasis thereon to betray by beacons along the coast their exact location. Thereby the era of the beacons was firstly terminated.

By the way were also the Greeks, who made a transmission of news by Heliograph. The first noted use of a Heliograph happened 405 BC. , when the Greeks in the ancient world used polished shields, in order to transfer signals during battles, this has been documented by Xenophon (for further info see at: [http://en.wikipedia.org/wiki/Xenophon]) in his work “Hellenica“; a Heliograph, or also mirror telegraph, uses a mirror to reflection from sunlight to a distant observer. With a movement of the mirror the distant observers sees flashes, which can be used to transfer information by a pre-defined signal coding.