

## New assumptions in regards to the geological setting of the Minyans draining works of the Copais plain

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### Introduction

For the first time in history lake Copais, the largest lake in Greece (250,000 acres), was partly desiccated by works completed by the Minyans around 2000B.C. Its desiccation has been a very important issue because this was the method used to develop these acres and cultivate tis land, while in parallel avoiding disease caused by stagnant waters of the lake.

### The study area

Copais today is a plain with 95 meters average altitude. The plain is occupied by Pliocene deposits., while rocks like neritic limestone, flysch, dolomite and peridotite protrude. The limestone is karstified presenting numerous sinkholes. The rivers which traverse Copais are the Melanas, the Beotian Kifisos, the Erkina and the Potza river.

### Ancient draining works

Minyans tried to desiccate part of Copais Lake. They constructed waterproof embankments (from clay and large & small limestone rocks) in order to join B. Kifisos with Melanas river and then limit the water and guide it to the sinkholes in the northeast part of the lake. In this part of the plain there are numerous sinkholes able to drained a big amount of the water. Later, Minyans tried to used two of these sinkholes to construct a tunnel which would have transferred larger amounts of water from the lake, but they never finished the construction. Furthermore, along the boundaries of the lake they constructed more embankments in order to desiccate and cultivate the fertile land which was covered by the lake's water. The areas surrounded and protected by the embankments always included sinkholes for drainage in case of flooding. Castle Gla and Acropolis of Agios Ioannis have been constructed on top of protruding limestone, they were enclosed by walls andthey were having strategic role as storing places of the harvest crop.



Figure 1. Sinkhole which used for entrance of the tunnel

### Extra suggestions from those of Knauss's theory

- Knausse's assumption that ancient settlements were located next to castle Gla, don't seem to be valid. The reason is that this place was often flooded. This is apparent from the fact that the settlement is located near the area where the waters of the rivers end up and for this reason castle Gla is located on top of a protruding limestone hill and surrounded by sinkholes excluded from the fortification walls of the castle. In addition, one extra embankment behind the castle, on a higher level-proves that the entire area was flooding.
- There was one more Acropolis (of Agios Ioannis) near the sinkholes where the rivers Melanas and B. Kifisos end up. This acropolis had a similar operation with castle Gla. This ancient Acropolis came up from recent excavations.
- Minyans desiccated parts by protecting them with embankments. As aforementioned this areas always included sinkholes for drainage in case of flooding.



Figure 1. Sinkhole which used for entrance of the tunnel

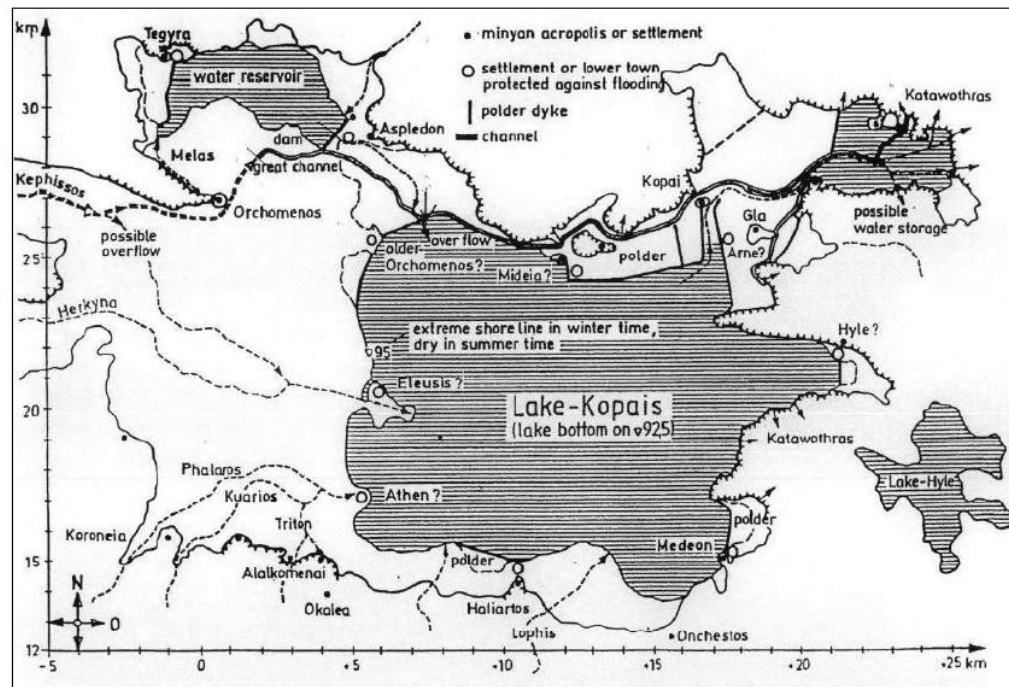


Figure 3. Boiotia, Copais-basin, flooding conditions at the end of the Middle Helladic period (Knauss, 1991)

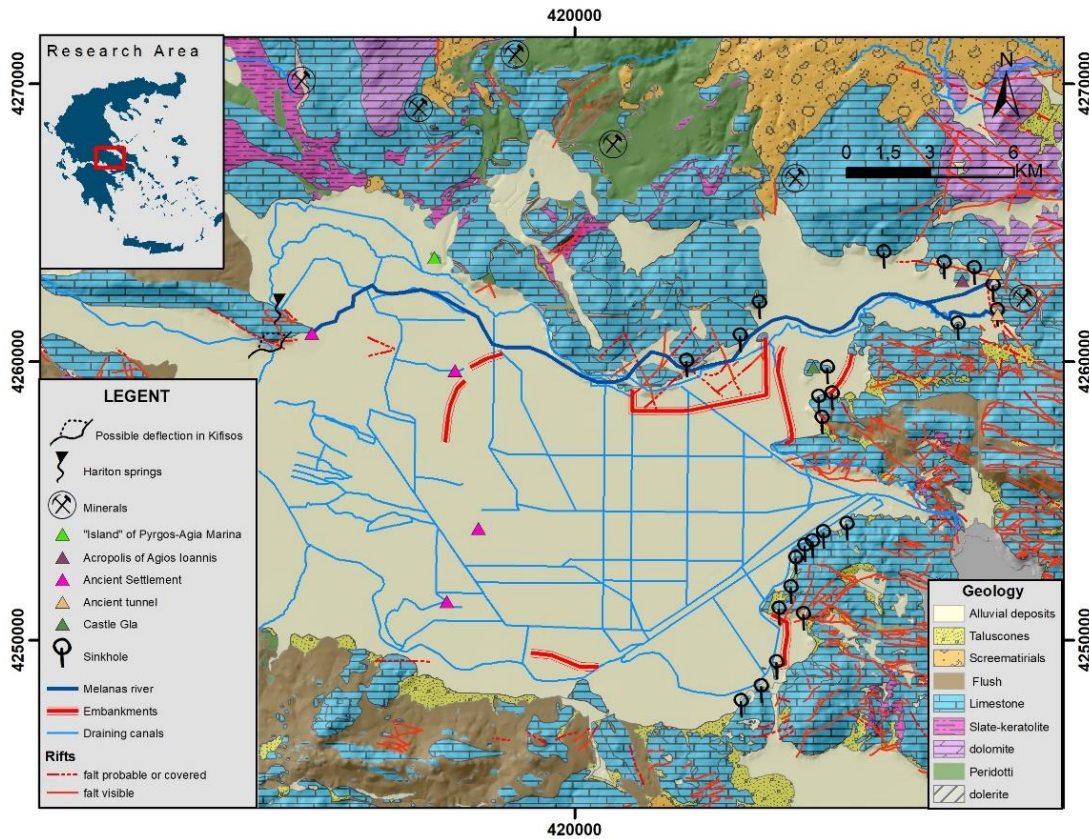


Figure 4. Boiotia-Copais, suggestion about ancient works by Minyans (used maps Atalandi, Vagia & Larymna from I.G.M.E.)

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