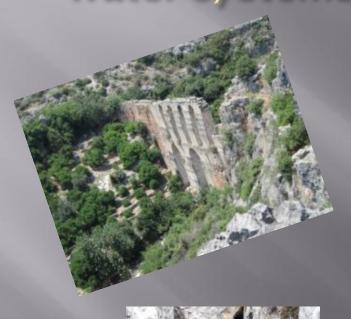
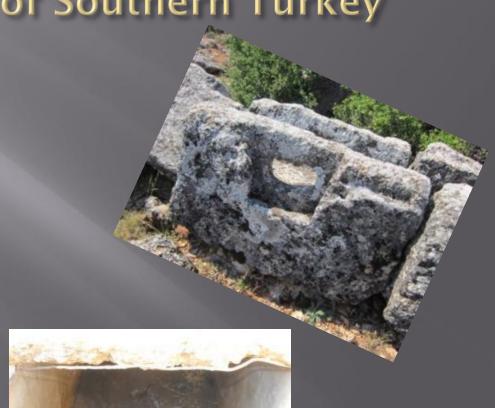
# Ancient Water Systems of the Lamas Çayi And the surrounding hinterland Water systems of Southern Turkey









#### Cilicia



Cilica

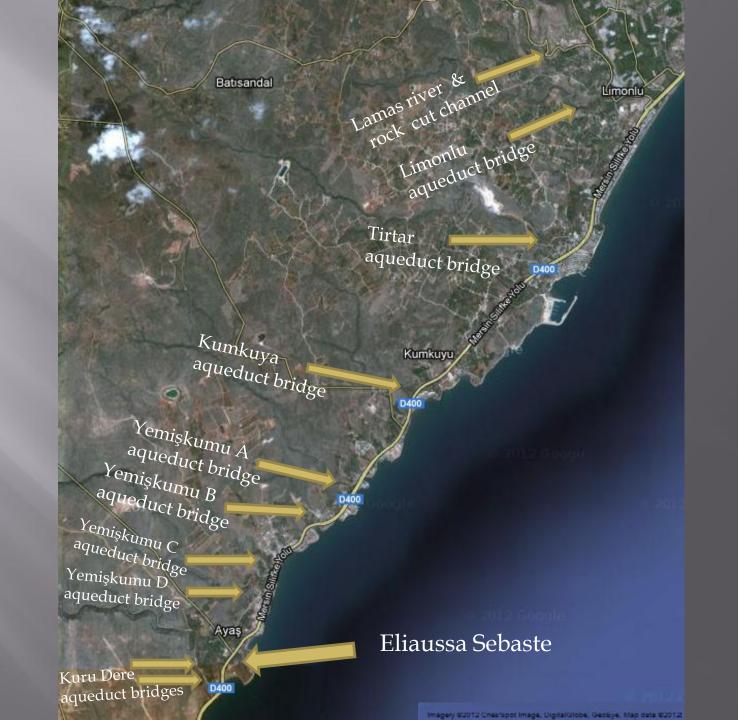
### Ancient Water Systems of the Lamas Çayi



#### Modern Lamas Valley Hydroelectic plants



# ELAIUSSA SEBASTE WATER SYSTEM



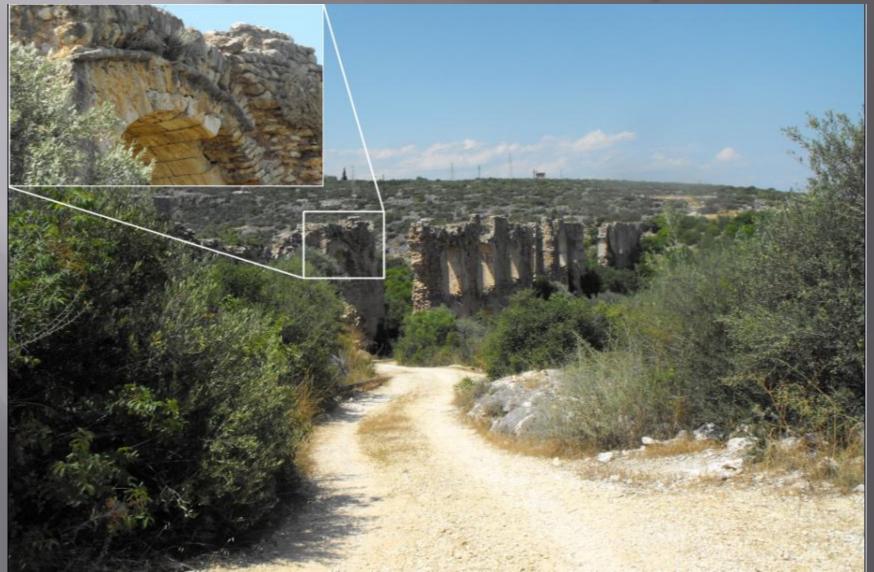
### Ancient rock cut aqueduct channel (Elaiussa Sebaste)



#### Limonlu aqueduct bridge



## Tirtar Aqueduct Bridge (Elaiussa Sebaste)



### Kumkuyu aqueduct bridge (Elaiussa Sebaste)



### Above Ground Channel (Elaiussa Sebaste)



#### Yemişkumu (C) aqueduct bridge (Elaiussa Sebaste)

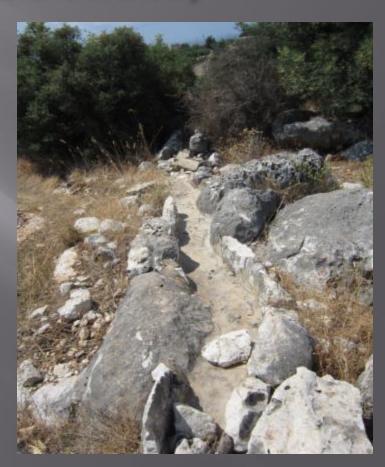


## Ancient channel used for modern water pipe sub-structure



#### Yemişkumu (A) diversion (Elaiussa Sebaste)





The ancient channel with a modern agricultural water diversion

## Akkale off take channel (Elaiussa aqueduct)



#### Bell Cistern Elaiussa Sebaste



Earlier bell cistern destroyed to build later bath building

#### Olba Aqueduct



#### Modern Weir Olba Aqueduct



Gravity flow water intake pipe Olba Aqueduct



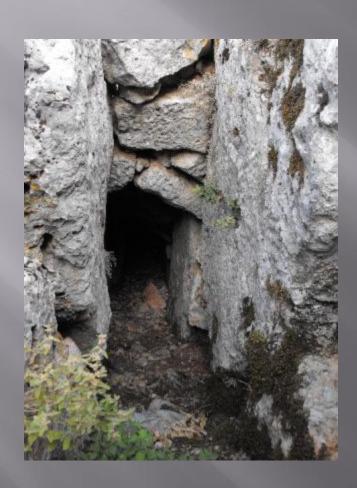
## Ancient Aqueduct still in use (Olba)

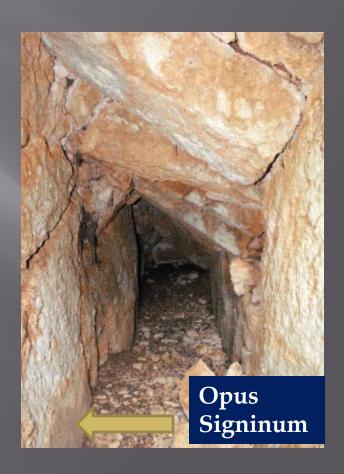


## Ancient Aqueduct still in use (Olba)



## In ground rock cut channels (Olba aqueduct)





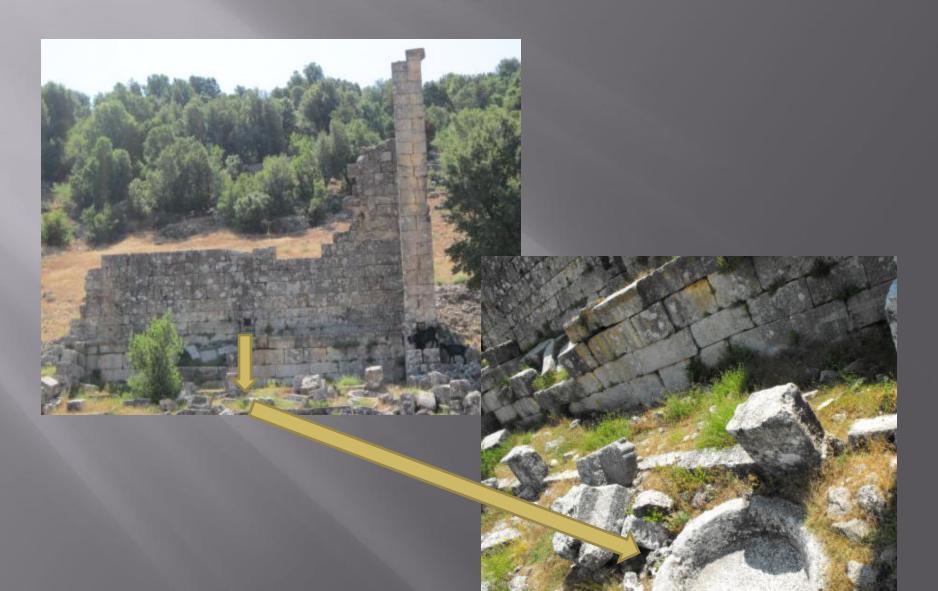
#### Olba - Ancient Sluice Gate



#### Modern Water Taps (Lamas River)



### Olba Nyphaeum



### Ancient & Modern Water Use (Olba Nyphaeum)

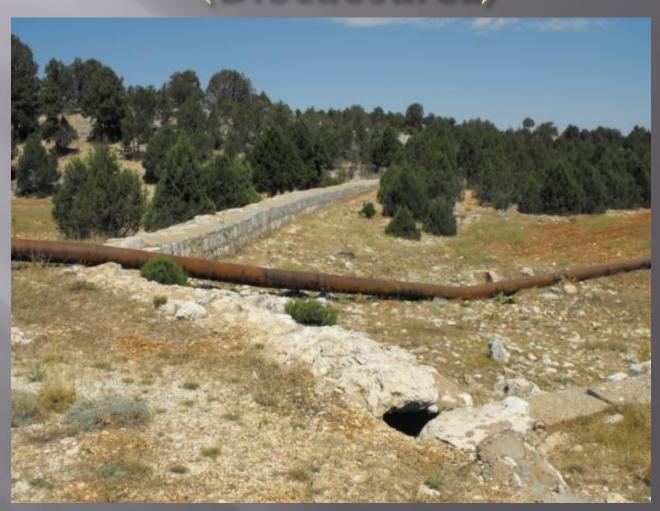




Local resident carrying water from ancient cistern

### Diocaesarea Aqueduct

# Modern water pipeline crossing ancient aqueduct channel (Diocaesarea)



## Ancient aqueduct channel & modern Çeşme (fountain)



## Ancient channel tunneling under the hill (Diocaesarea)



#### Cistern - Silifke



### Cilician Hinterland

#### Rural cisterns (Olba Area)





Ancient cistern still in use right next to modern open pool cistern

#### Roman Villa & Cisterns







Numerous rock cut

#### Rural cisterns Examples (Erdemli area)







### Stone pipes & drains





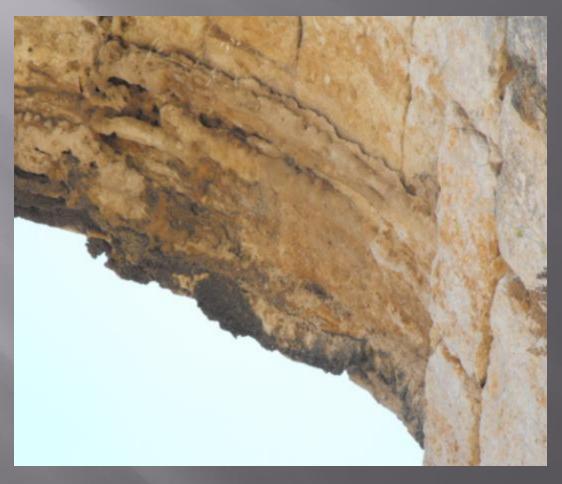


■ Engineering Problems were the same for the ancient & modern builders

## Ancient channel required continuous Repairs



#### Sinter & Leakage



Titar aqueduct bridge

#### Leaks in modern pipes (Erdemli area)



#### Modern Problems (Elaiussa – Lamas River)



Leaking pipeline below ancient aqueduct channel

### Modern Pipeline needs repair



#### Lamas River

