

Preliminary geoarchaeological observations of
the Magdala Archaeological Project: One of the
most important archaeological discoveries of
the last 50 years in Israel.

Meralis Plaza-Toledo
Marcela Zapata-Meza



Location



The Migdal antiquities site extends across the northwestern shore of the Kinneret (Sea of Galilee), to the foot of the eastern slope of Mount Arbel

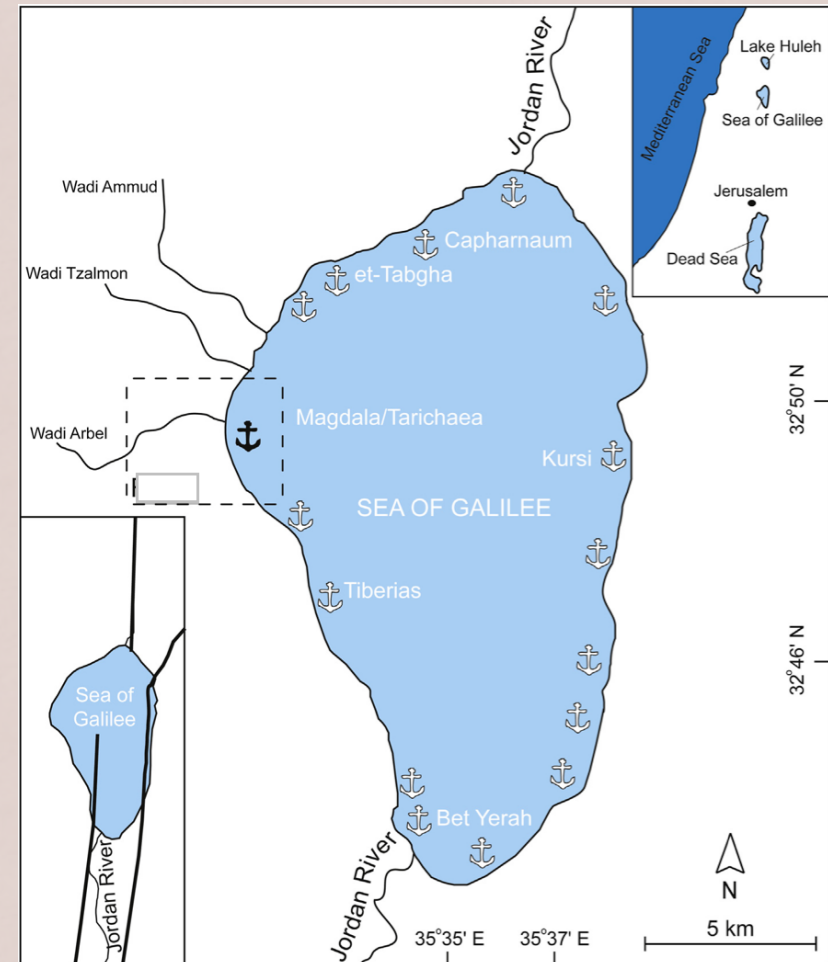
History

- The settlement from the Early Roman period is mentioned in Jewish sources. The settlement is also mentioned in Christian sources because according to Christian tradition, Mary Magdalene was born in Migdal.
- Previous to the foundation of the city of Tiberias by Herod Antipas in 19 CE, Migdal was the only urban center on the western bank of the Kinneret.
- In the Roman period, the city is mentioned in the historical sources as a Jewish town and Josephus Flavius military base, which played an active role in the Great Revolt.



History

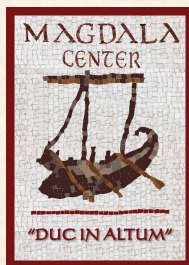
- The ancient city of Magdala was erected around the 3th century BCE.
- Ideal position along the western shore of the Sea of Galilee, crossed by the main trade route connecting Egypt with Damascus (*Via Maris*)
- Since Hellenistic times its economic supremacy in the region was very probably related to the activity of an important harbour. Before 19 CE, Magdala, which extended over 10 ha, was the main urban centre of the western coast of the Lake.



Location of the Sea of Galilee, with the position of the Roman to Byzantine cities and small piers.

Background

- The Magdala Archaeological Project directed by Anáhuac México Sur University in collaboration with the National Autonomous University of México as well as the 1st century synagogue discovered in 2009 by the Israeli Antiquities Authority, are part of the Magdala Center that belongs to the Arke New Gate company.
- The Magdala Archaeological Project is part of an international project that includes geophysical surveys, extensive excavations, restoration, conservation, and interpretations of all the archaeological materials recovered throughout the different field seasons.
- It is the first time the Israel Antiquities Authority gives Mexico a license to lead a project of Biblical Archaeology.



What we found



1 and Fig. 1: Synagogue and Bet Midrash
1 and Fig. 2: Pools and fish industry
2 Market
3 and Fig. 3: Mikva'ot and ritual space

4 Domestic and storage areas
5 and Fig. 5: Production area and fishing activities
6 Harbord

Historical Implications

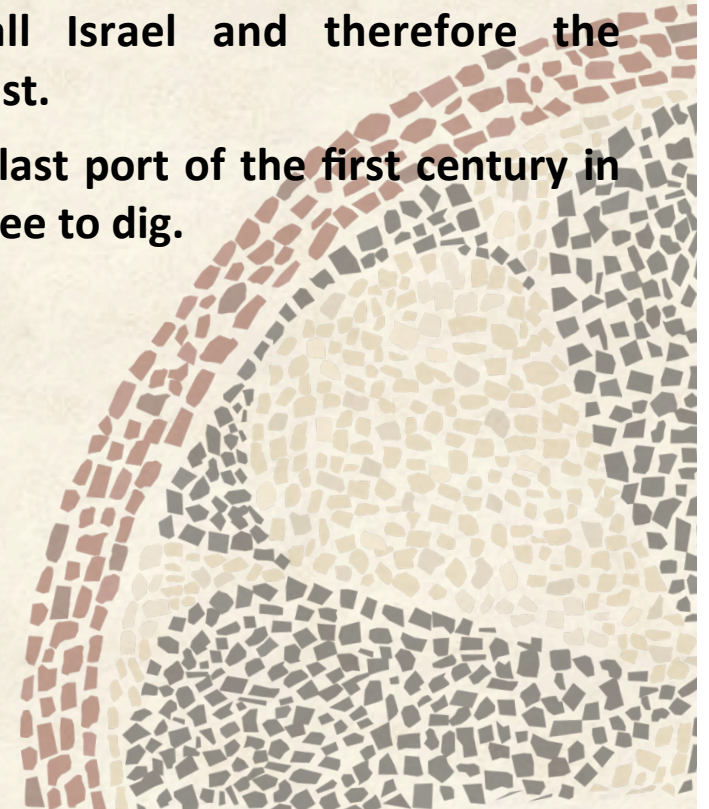


Bimá or stone altar



Mikva'ot and ritual space

- The seventh-century synagogue in Galilee.
- The first representation of the menorah outside the Temple of Jerusalem to the first century.
- The first ground water fed Mikva'ot in all Israel and therefore the purest.
- The last port of the first century in Galilee to dig.



Mount Arbel



Mount Arbel view from Magdala's Synagogue



Mount Arbel cliff and cave



Mount Arbel cave

What Happened after the Revolt?

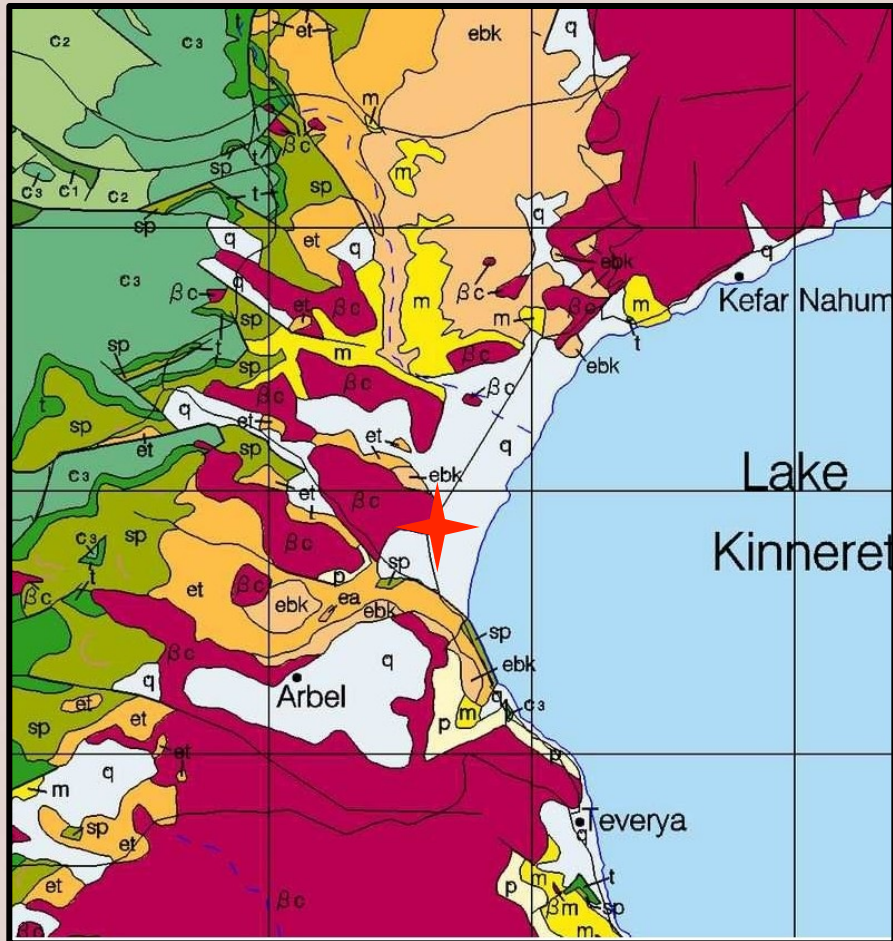
- Theories.....
- The northern quarter and the synagogue were probably abandoned around the time of the Great Revolt. The buildings were destroyed and the stones of the houses were apparently removed for use as building material in the southern quarter of the town. The drainage channel fell out of use and became blocked with heavy brown alluvial fill that also covered over the rest of the site. Following the abandonment at the end of the first century CE this area was not resettled until the nineteen seventies when a holiday camp was erected on the site.....
- After the year 70 CE, for unexplainable reasons, the population of the western sector left their houses while the people gathered at the east zone (Zone C and D) occupying the domestic, production and commercial areas until the 2nd Century CE.....

Geology

- The territory of Israel contains three main geomorphological regions, from east to west:
 - the Mediterranean Coastal Plain
 - the Central Mountain Range
 - the Jordan Valley
- The main tectonic structure in Israel is the Dead Sea Transform Fault which marks the boundary between the Arabian plate to the east, and the African plate to the west.
- As a consequence, the area is characterized by strong seismic activity associated with the Dead Sea transform fault.



Geological map



- The Magdala site is near the lakeshore on the south side of a small alluvial plain consisting of gravel, sand and clay.
- The site is nearby Mt. Arbel which is composed of Eocene limestone and Pliocene basalts.
- Mt. Arbel has karstic areas with caves that were used in ancient times.

Geology



Bet Shean



Hippos

Three main earthquakes affected the Galilee area in ancient times (31 BC, 363 AD and 749 AD) their damage is observed in sites such as Bet Shean, and Hippos however there no particular evidence of an earthquake disturbance in Magdala such as:

- Aligned fallen columns and walls
- Horizontal shift of heavy masonry blocks
- Complete burial of ceramic pots and tools beneath fallen ceilings

Magdala Photos without disturbance



Aerial view of Magdala site without disturbance

Landslide in Magdala?

- During the excavation at the Magdala site, archaeologists found objects and tools made of flintstone which were associated to ancient settlements in Mount Arbel.
- Somehow these tools ended up in Magdala , however there are still questions on what process made this happen; perhaps it was regular erosion or a landslide triggered by an earthquake.
- There is also the question if these tools were re-used during the Hellenistic and Roman periods.



Knife

Flintstone tools

Knives



Flintstone tools

Burins/percutor



Flintstone tools

Burins/percutor



Flintstone tools

Arrow heads



Observations

- Sedimentological studies performed by Sarti et al. (2013) in an archaeological site located a few meters from the Magdala site, revealed a sudden transition from sands to conglomerate layers; they concluded that these variations occurred after the Late Roman period and could be related to changes in sediment supply associated to a climate change or a tectonic event such as the earthquakes that occurred in 363 AD and 749 AD.
- Drill holes in the Magdala site revealed what soil scientist called “a layer of fragmented rocks and boulders in a mass of clay, with thickness varying from several centimeters to approximately 3.0 m. It may be assumed that the stones came from rocks that rolled down from Mount Arbel during earthquakes and subsequently were eroded.”
- These arguments, suggest the possibility that the flintstone tools found at the Magdala site may be due to a landslide triggered by a tectonic event.

Observations

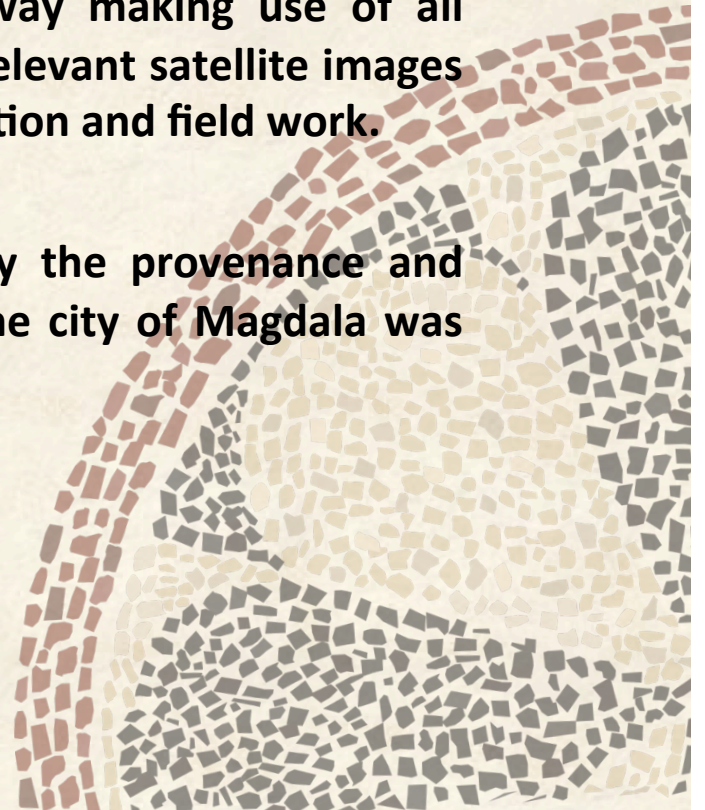
- There are no observable damages in the unearthed structures that suggesting that a landslide or an earthquake affected the Magdala site.
- Possibly no major landslides occurred at the site but small events not strong enough to damage structures but capable of dragging sediments including the flintstone tools.



Synagogue context

Challenge

- How to assess and reconstruct a Jewish-Roman landscape, much altered by physical movements of the soil and by a two-millennia long period of human interference.
- This needs to be assessed in a multidisciplinary way making use of all relevant cartographic material, aerial photographs, relevant satellite images and all important pre-existing archaeological information and field work.
- Detailed research is needed to determine not only the provenance and possible uses of the flintstone tools but also why the city of Magdala was abandoned in the first Century.



MAGDALA ARCHAEOLOGICAL PROJECT

For further information:

<http://www.magdalacenter.com>
<http://issuu.com/proyectomagdala>

Meralis Plaza-Toledo: silarem@yahoo.com
Marcela Zapata-Meza: marcela.zapata@anahuac.mx

