

# Chalcolithic Period in the Near East

## Topics 8-10

Chalcolithic in the Levant: Culture-historical Overview

Chalcolithic in the Levant: Growth of Metallurgy

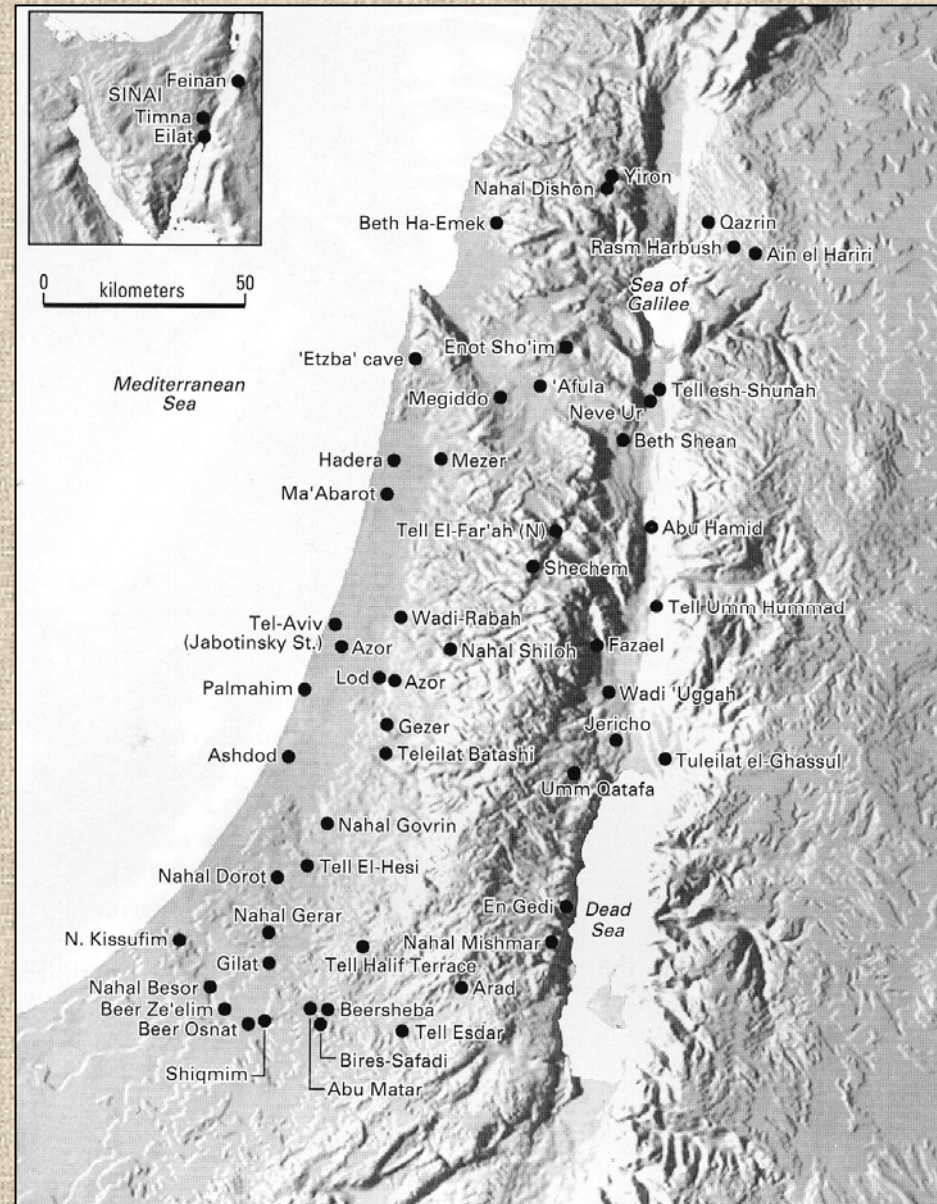
Chalcolithic in the Levant: Cult, Sanctuaries, and Hoards

# Geography

- Much more geographic and ecological differentiation than in Mesopotamia
- Zones run mostly north-south

1. Coastal plain
2. Hill country
3. Jordan Valley/Rift Valley
4. Transjordan escarpment
5. Eastern desert

But also desert (Negev) in the south





En Gedi on the shores  
of the Dead Sea



Israel coastal plain



hill country



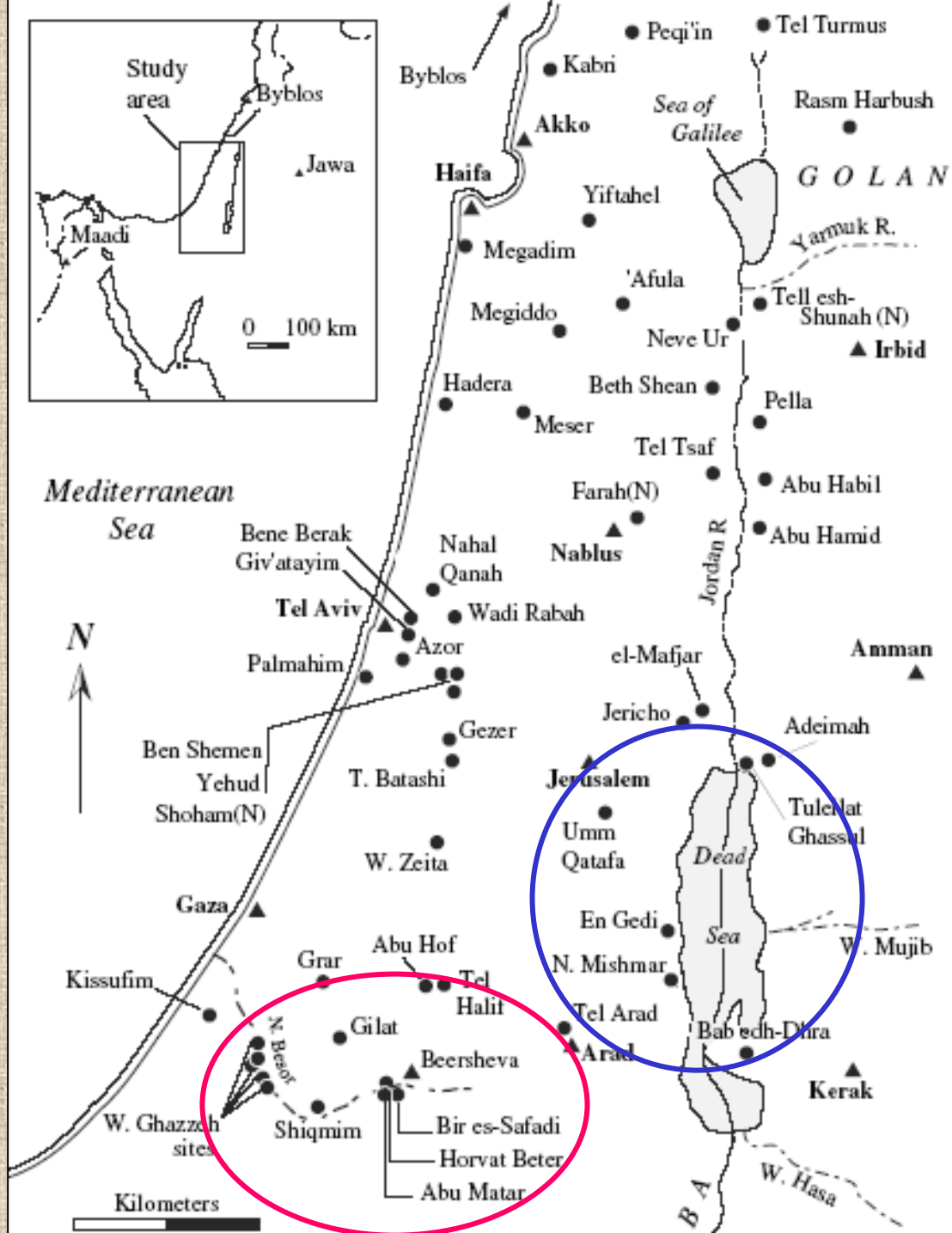
Basalt desert,  
eastern  
Jordan



Wadis leading toward the Dead Sea

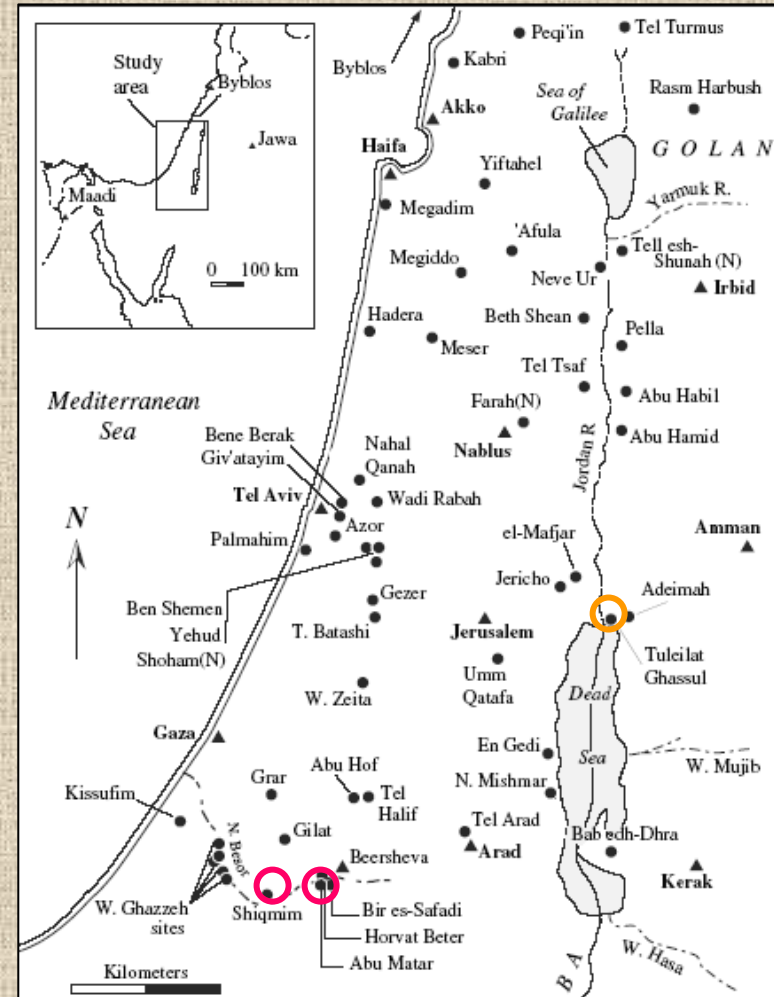
# Chronology

- Late Chalcolithic: c. 4500 – 3500 BCE
- Little agreement on subdivisions of this period
- Also not much agreement on preceding period(s)
  - derived out of Late Neolithic?
  - intervening early Chalcolithic phase(s), for example, Wadi Rabah?
  - regionally distinct?
  - in any event, development seems to be gradual
- Variable knowledge of different regions and considerable regionalization
  - we will focus on southern Levant, especially Beersheva / northern Negev region and southern Jordan Valley
- Influence of Biblical archaeology
  - terminologies
  - assumptions
- Also comparisons to developments in Mesopotamia and Egypt



# Settlement patterns

- Substantial growth in numbers of sites compared to preceding periods
- Appearance of some large sites, around 10 ha – 2-tier hierarchy, especially in Beersheva Valley
  - Larger sites include Shiqmim, Bir es-Safadi
  - In Jordan Valley, Tuleilat Ghassul is 20 ha, and thereby the largest known Chalcolithic site in southern Levant
- Small sites: villages
- Also numerous sherd scatters, especially in Jordan Valley – perhaps camps of herders
- Expansion of settled areas – from better watered coastal plain, where most earlier settlement was concentrated, into semi-arid hills and desert areas
  - Evidence for use of irrigation techniques, such as basin irrigation, use of springs



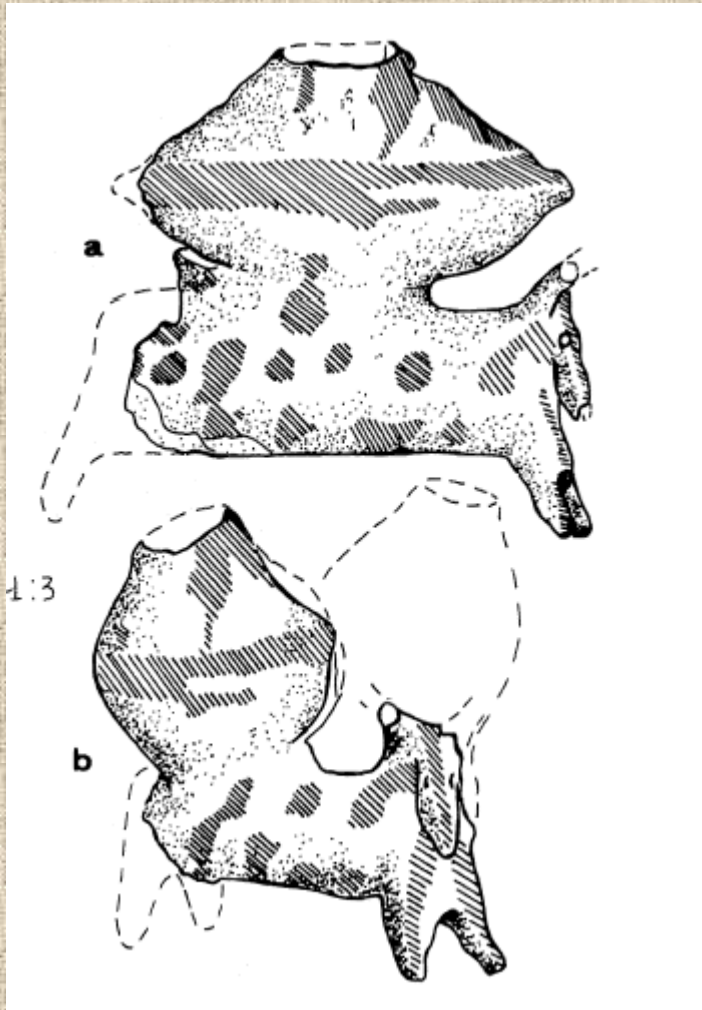
# Subsistence practices

- Crops included wheat, barley, lentils, chickpeas
- But also olives, dates, and variety of other fruits and nuts
  - Olives already used in earlier times, but now probably domesticated
  - Olive oil seems to have been important and desired product
  - Chemical signatures of olive oil found in “torpedo” jars; oil probably transported in these vessels
- Domesticated animals included sheep, goat, cattle and pig
  - Quantity of pig appears related to climate; where (semi-) arid there was little or none
  - Hunted animals of various kinds (gazelle, equid, birds, etc.), but they played limited economic role
- In at least some cases, evidence of keeping sheep to old age; probably a sign of the importance of wool
- Use of pack animals – based on skeletal pathologies (cattle) and figurines





# Depictions of pack animals



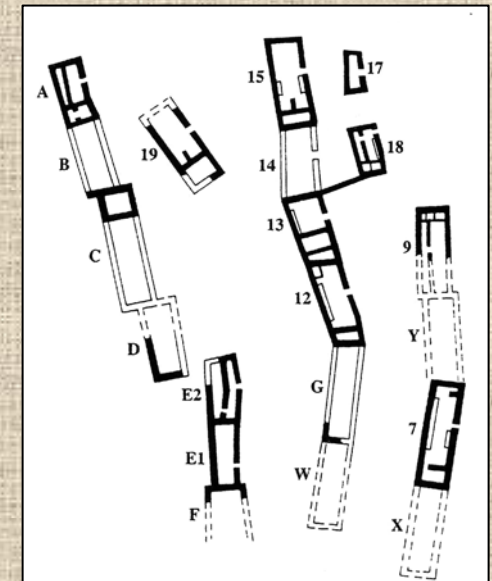
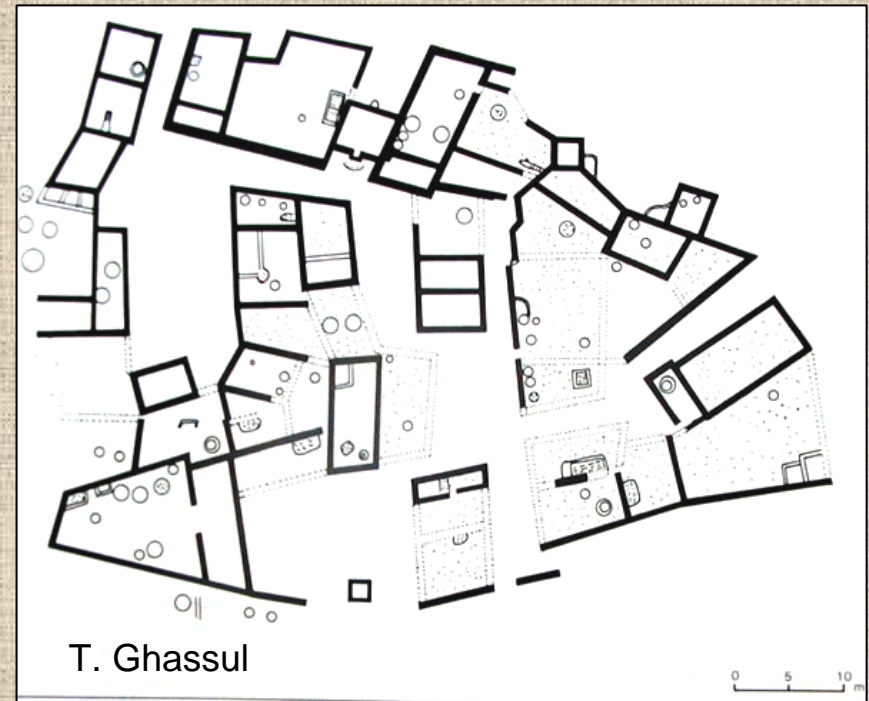
Animal from Ein Gedi with churn



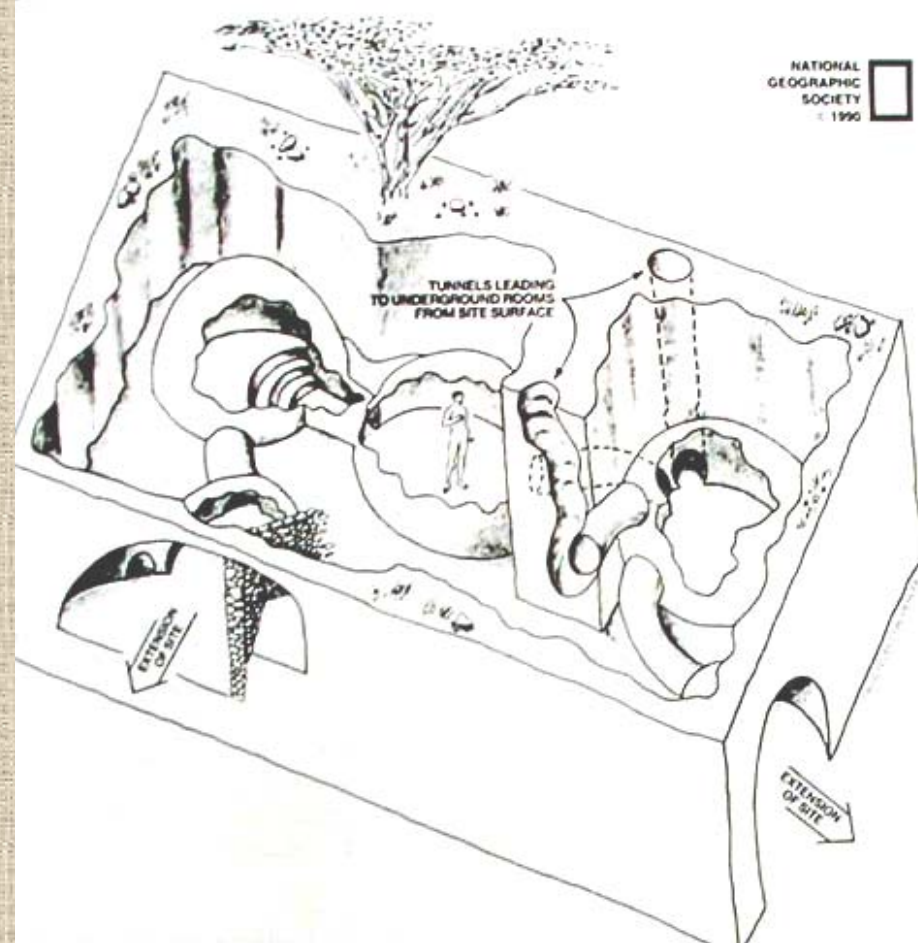
Ram from Gilat with cornets on its back

# Architecture

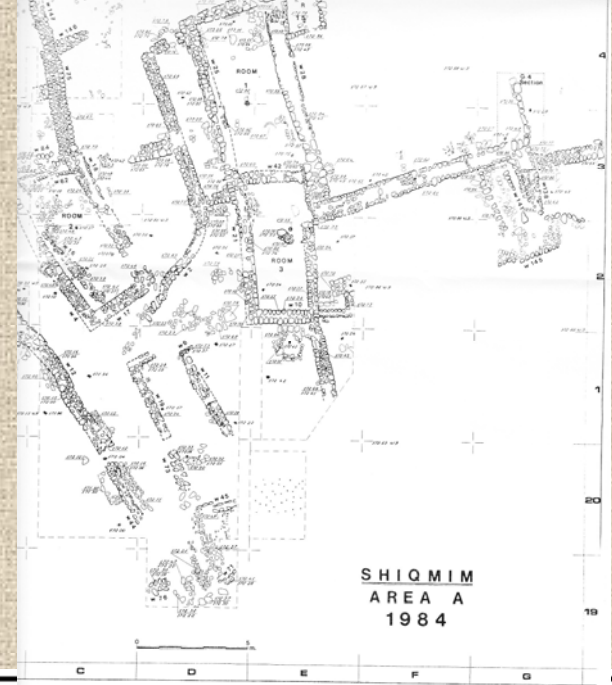
- Rectangular, 'broad-room' houses
  - Entrance on one long side
  - Bench or platform
  - In Telailat Ghassul some have wall paintings
- But also (semi-)subterranean and curvilinear architecture
  - For example, at Shiqmim, Bir es-Safadi
  - Underground chambers connected by tunnels
  - Sometimes with pits or bins
  - Originally thought to be earliest phase of houses in settlements
  - But probably more for storage and defense than daily life



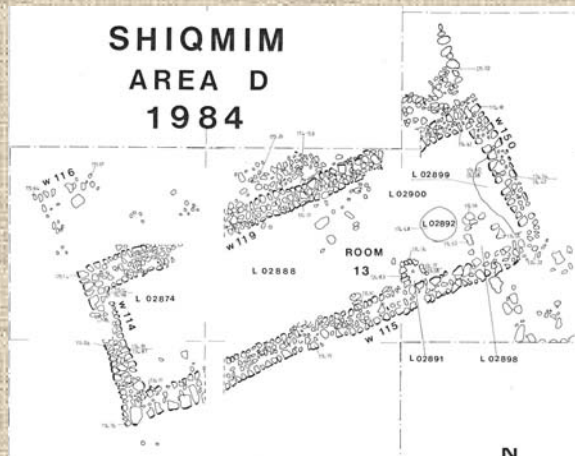
Golan region



Subterranean architecture at Shiqmim



Traces of metallurgy close to the site  
(grey spots in the photograph above)

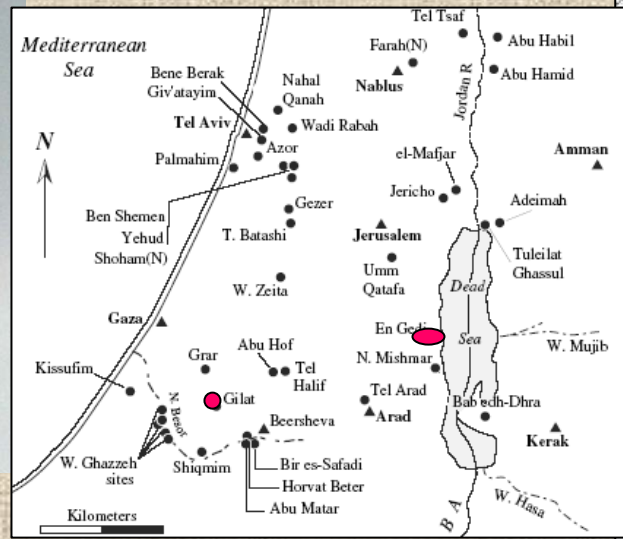
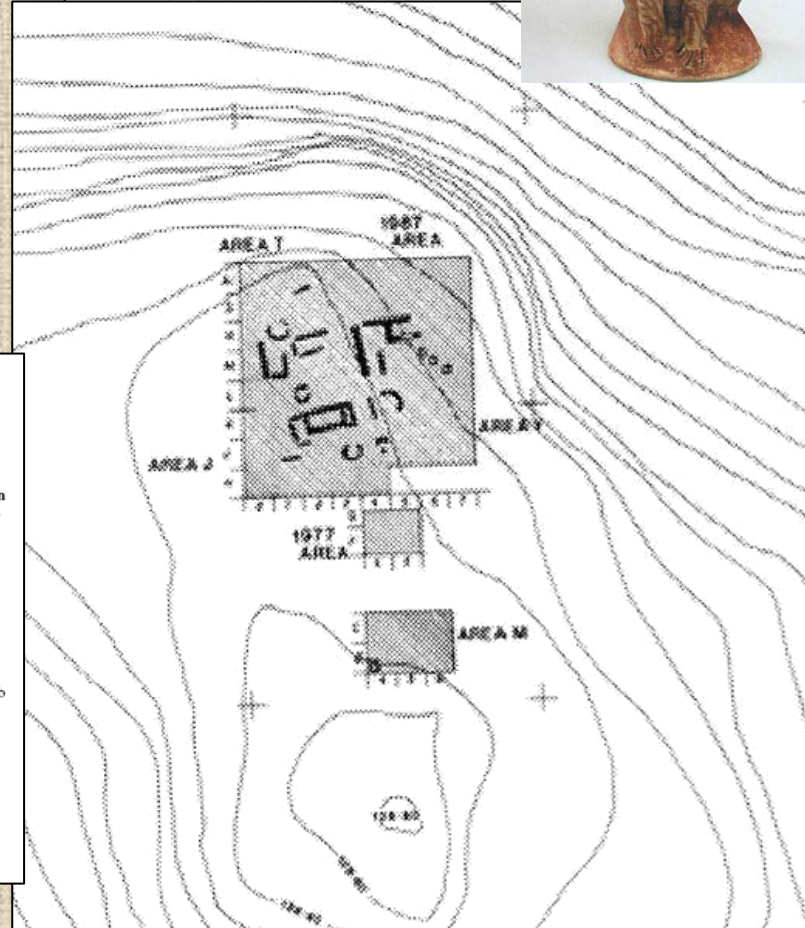
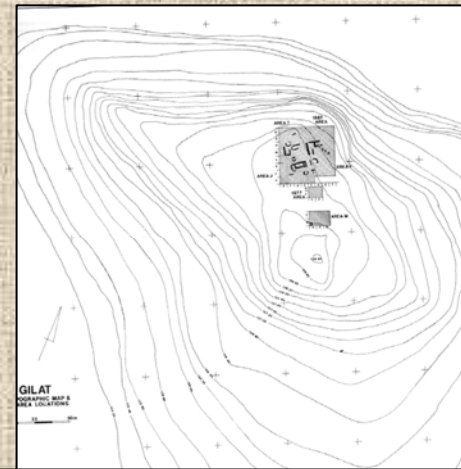
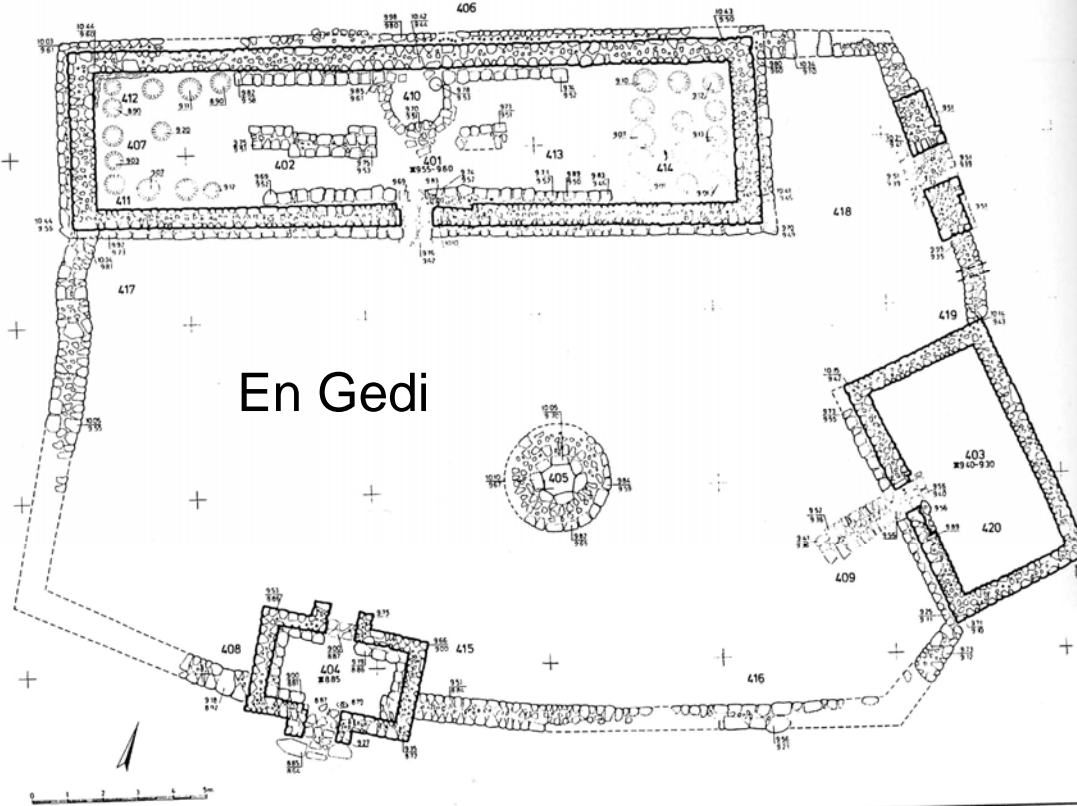


Above-ground architecture at Shiqmim

# Some sites interpreted as sanctuaries or places of pilgrimage

- Buildings similar in general plan to broad-room houses, but with special features
- En Gedi enclosed by wall, with gate
  - Pits containing burnt animal horn cores and pottery (especially fenestrated bowls)
  - Central feature interpreted as altar with special animal figurine, lots of ash and broken bits of shell, beads, figurines
  - Basin in courtyard for use with liquids
- Gilat – buildings surrounding an open area, thought to be for gatherings
  - Lots of special/unusual artifacts
  - Little evidence of domestic occupation
- Also presumable cultic buildings in settlements
  - T. Ghassul – a broad-room building with possible altar, offering pits and storage room with numerous cornets

# En Gedi



# View from En Gedi to Dead Sea

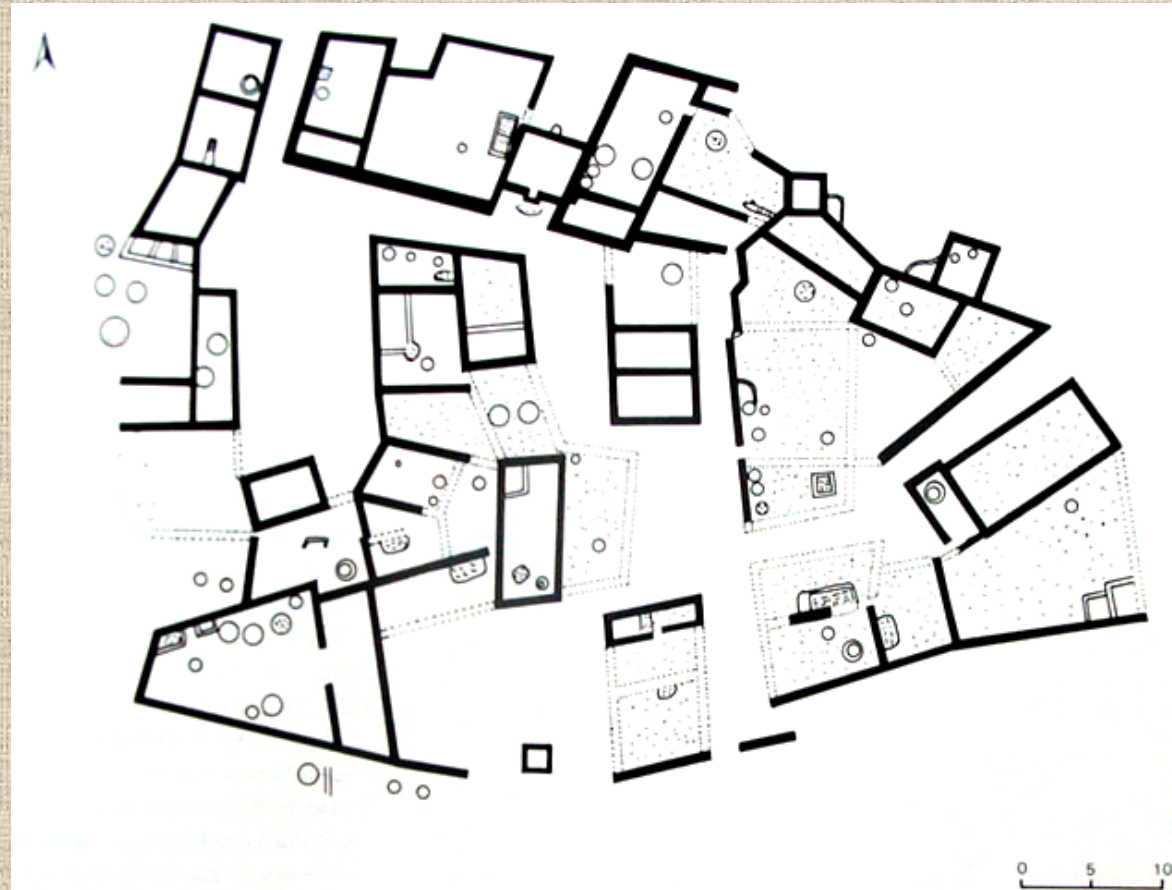


En Gedi:  
Gate to complex

Round “altar”  
in courtyard

# Teleilat Ghassul

- excavations begun in 1928
- site consists of numerous tells
- occupied from Late Neolithic through Late Chalcolithic
- some town planning: streets, covered drains





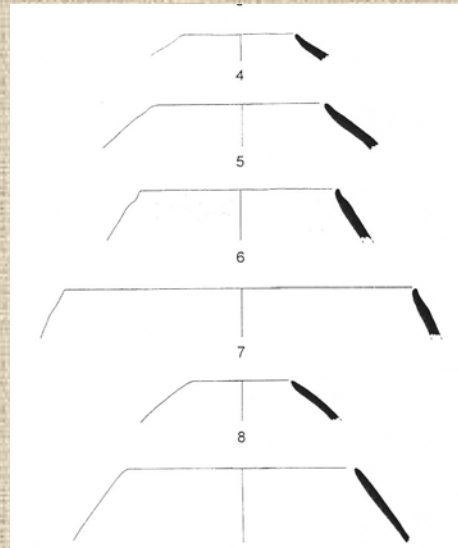
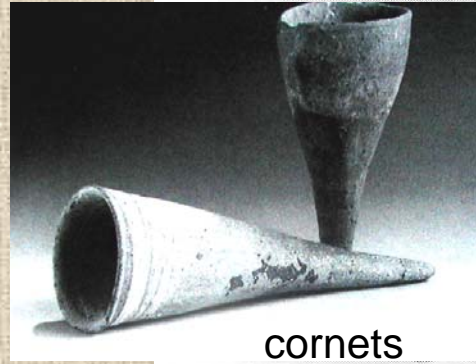
# Teleilat Ghassul: wall painting

- little known about context in which discovered

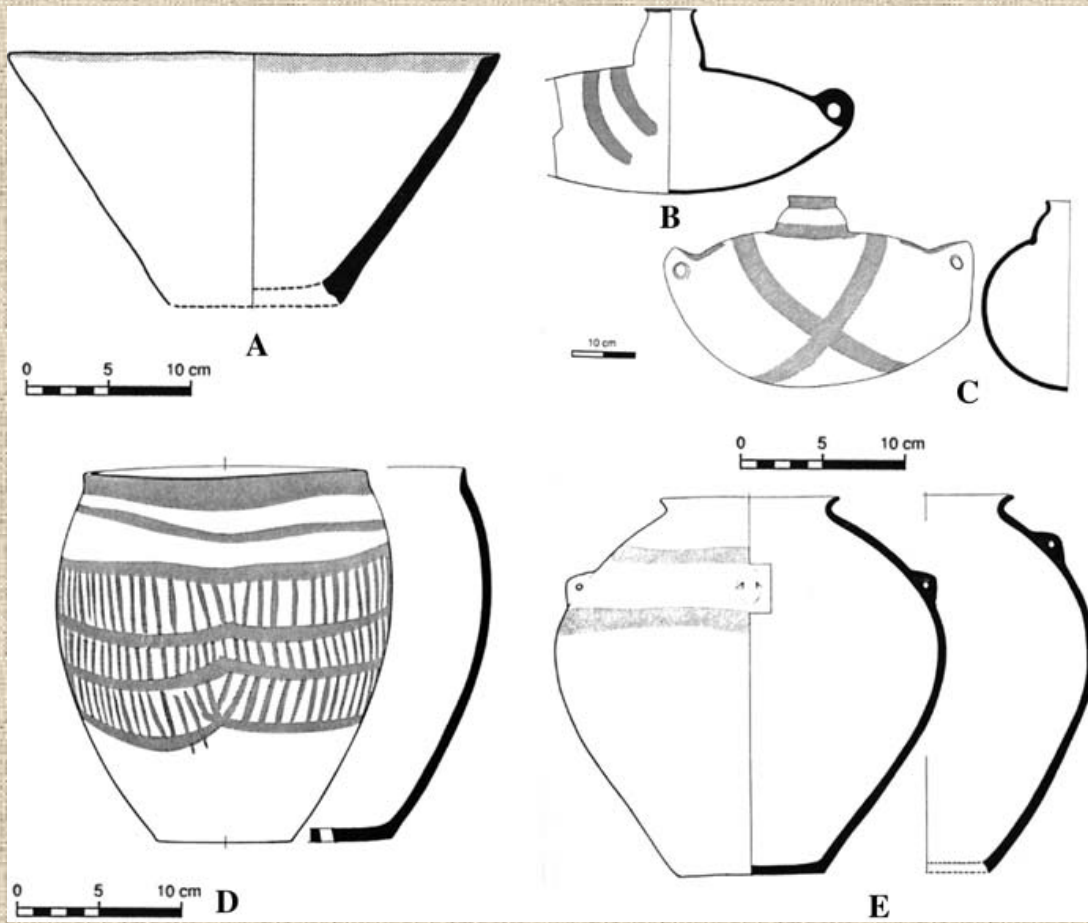


# Pottery

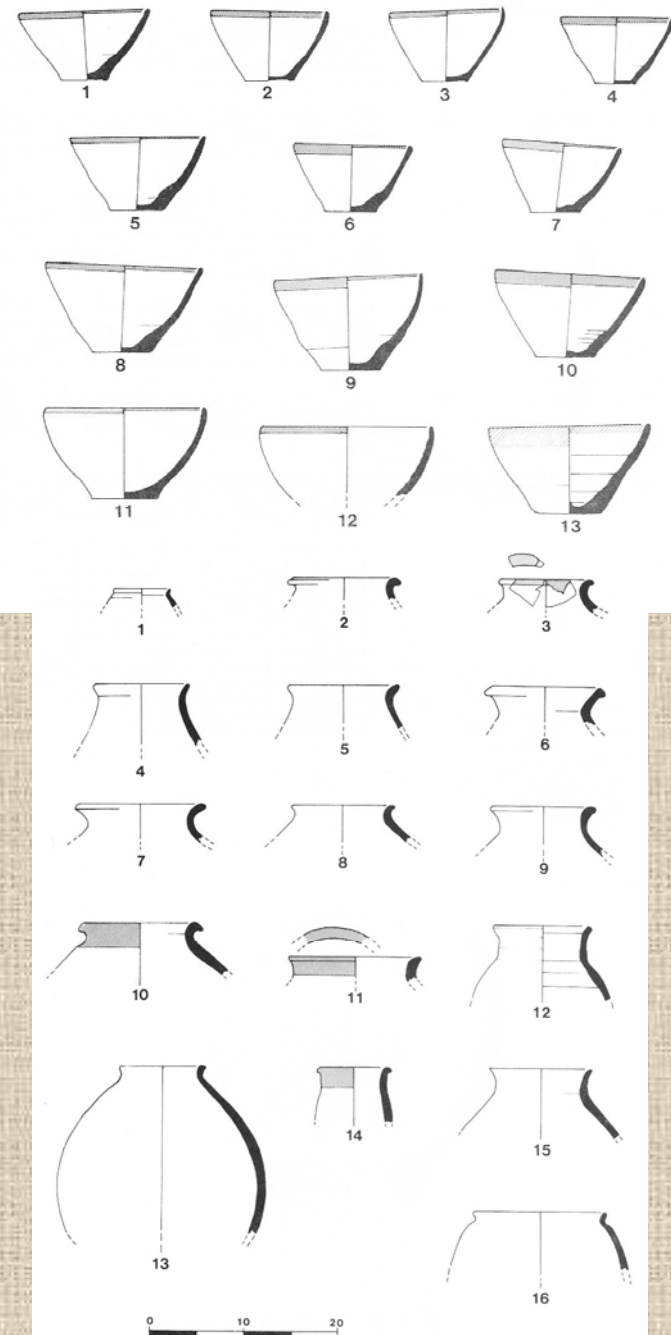
- Considerable variety of forms, especially open forms
  - V-shaped bowls, bowls with fenestrated stands, basins
  - Pithoi, globular pots, holemouth jars
  - Also special forms, such as churns, with residues of milk fat; torpedo jars with residues of olive oil; cornets, thought to be connected to cultic activities



# Pottery from Bir es-Safadi



# Pottery from Shiqmim



# Pottery

- Use of fast wheel, especially for bowls and hole-mouth forms
  - But also regional variation in terms of how frequently it was used
  - And much pottery still handmade
- Compared to previous periods, more standardized decorations and proliferation of forms
  - Plain band of red paint around rim of V-shaped bowls, cornets
- Bowls made in clear size categories
- Petrographic studies show that pottery was produced locally at most sites
  - But no production at Gilat
  - Torpedo vessels tend to be made of non-local clays: as one would expect if these were primarily used to transport olive oil

# Copper Metallurgy

- Seems to have been more sophisticated and further developed in southern Levant than anywhere in Mesopotamia at this time
- Divided into supposedly utilitarian items (chisels, axes, adzes, awls, pins, needles, knives) and complex symbolic items (scepters, standards, 'crowns', vessels, maceheads)
  - Many 'utilitarian' items probably not actually used as tools, either

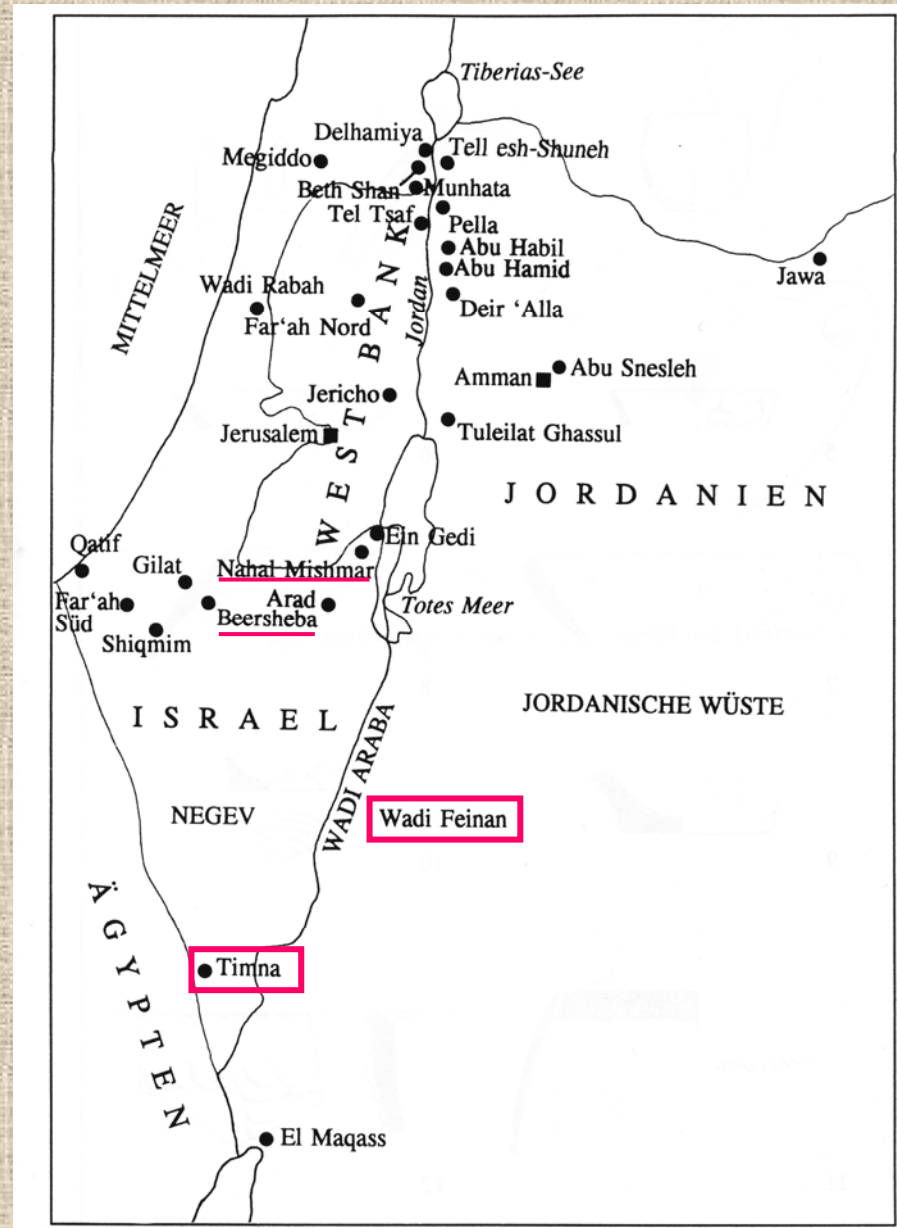


# Copper metallurgy

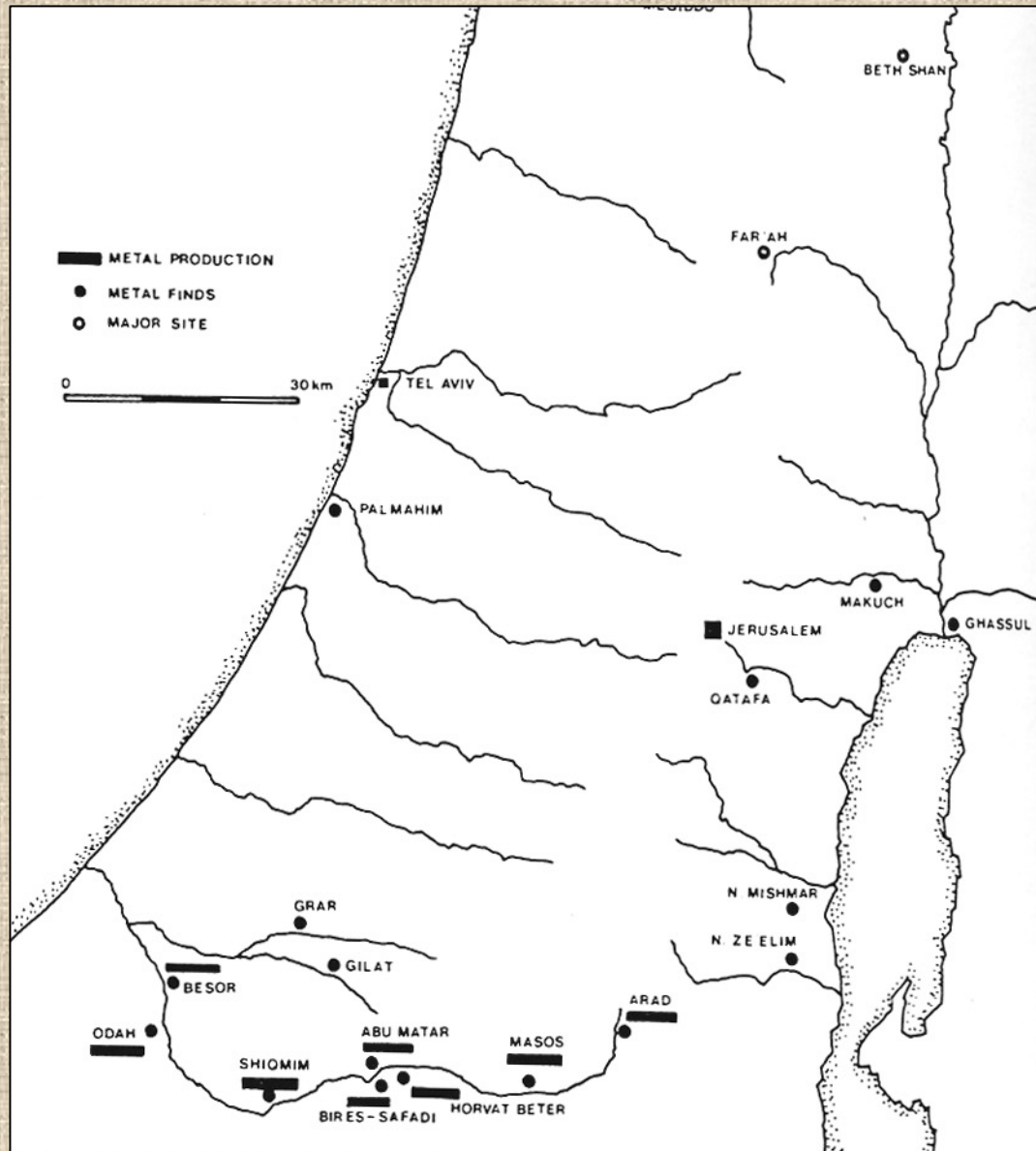
- Copper deposits in Negev (Wadi Feinan and Timna)
  - These were exploited for some copper production
  - But many of the copper artifacts found are not from these local sources
- Tools and symbolic objects were made in different ways
  - Tools made of more or less pure copper; cast in open molds, then annealed and hammered
  - Symbolic objects made of various copper alloys, using a 'lost wax' technique; location(s) of these copper sources remains uncertain
- Evidence for smelting at places such as Shiqmim and Abu Matar
  - In households, not in central workshops
  - However, some indication at Abu Matar that copper smelting may have become more aggregated over time, perhaps into workshops
  - For making tools
  - No workplaces yet identified where the complex symbolic forms were produced
  - Note that most evidence for copper working is in the northern Negev, approximately 100 km or more from Timna and Wadi Feinan sources

# Copper sources in the southern Levant

- Ores from both Wadi Feinan and Timna had to be mined
  - Possible using shallow pits
- Smelting attested in both places,
  - Mostly ores seem to have been transported to places like those in Beersheva valley for smelting
- To produce 1 kg copper requires about 20-60 kg charcoal, which requires even more wood
- Different scholarly opinions as to whether copper smelting was elite controlled (“attached specialists”) or not



# Sites with evidence for copper metallurgy





# Hoards and caches



- Most famous is Nahal Mishmar, in a cave near the Dead Sea
- Nahal Qanah in western highlands – mortuary context
  - Copper artifacts and basalt vessels, but also gold and electrum ingots



# Other kinds of production

- Stone vessels and mortars, especially of basalt
  - Source in northern Jordan and Golan region; most basalt vessels from northern sites
  - Also “pillar figures”
- Shell – from Nile, Red Sea, Mediterranean
- Ivory – from elephants as well as hippopotami



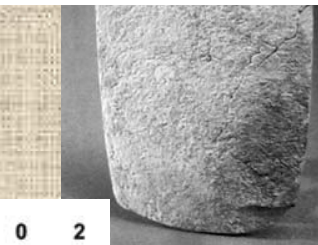
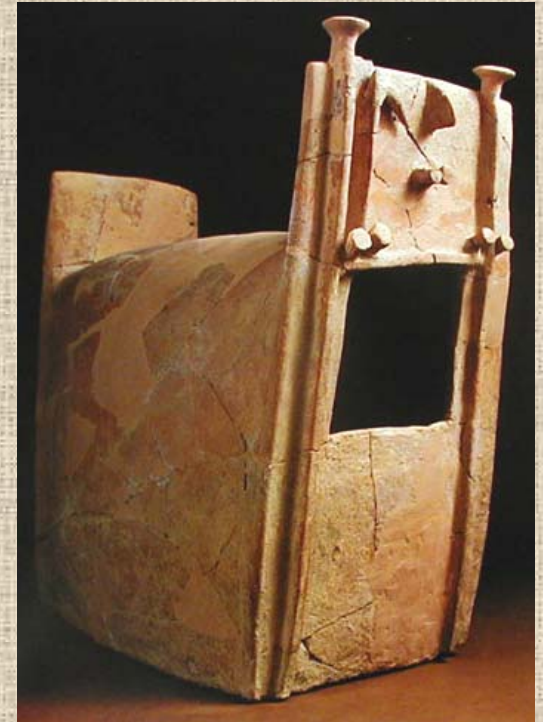
Hippopotamus tusk with circular perforations from N. Mishmar



Still living in Mediterranean coastal waters at the time

# “Cult objects”

In addition to buildings and sites (Gilat, En Gedi) interpreted as sanctuaries or pilgrimage places, also ritual or cultic objects  
“Violin-shaped figurines,” typically made of stone – most from Gilat  
Special anthropomorphic and zoomorphic ceramic figurines  
Various figurines – often found in caches  
Pottery cornets; torpedo jars filled with olive oil  
Box ossuaries with facial features



# Ritual organization

- Why the heavy emphasis on ritual in interpretations of southern Levant Chalcolithic?
  - Lots of elaborate, apparently highly symbolic artifacts
  - Some of them deposited in specific and sometimes unusual places: hoards, caves, sites in special locations
  - What about the influence of the place (“Holy Land”)?
- Some people suggest religion was relatively non-hierarchical, not institutionalized
  - Shamans
- Others think there was institutionalized hierarchy, with full-time priests and central pilgrimage places, such as Gilat
- Also indications of household ritual – for example, in Golan region basalt pillar figures found in many houses
  - In other words, not only some kind of centralized, ‘public’ ritual

# Social organization

- Some argue for chiefdoms
  - But little architectural differentiation
  - Little evidence of elaborate burials
- Does not seem to be egalitarian, based on the wide range of elaborate artifacts and use of imported exotic goods
  - Exotic goods often found in caches or other special deposits
  - Craft specialization and technologies that were not available to everyone
- Also possibility that some things we view as 'luxury goods' were not necessarily so
  - When copper sources are nearby, not all copper objects are necessarily of high value
  - Although quite unlikely that the elaborate forms were everyday items
- Political power, to extent present, probably quite limited in spatial reach, especially compared to Mesopotamia