

## **THE MYSTERY SINKING OF THE MA'AGAN MIKHAEL SHIP HAS OPENED UP NEW CHAPTERS AND FAR REACHING CONNECTIONS IN ANCIENT SEAFARING**

by

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### **Summary**

In a truly remarkable series of circumstances the underwater discovery of a 2,400 year old merchant vessel off the coast of Israel in 1985 and its mysterious sinking has set off a chain of wide ranging connections which will be explored in this article. The sinking of the ship, so close to the ancient harbor of Tel Dor and the Tantura Lagoon opens up the possibility that this was the ship's destination. The article will explore the spectacular harbor site of Tel Dor and its famed lagoon with its underwater history of three millennia of seafaring. Dor's far reaching trade network extending west across the Mediterranean into the Atlantic and beyond will be detailed. A little known Phoenician/Israelite seafaring partnership at Tel Dor will be recovered and its significance discussed. The question of trans-oceanic voyages in light of the influential status of Tel Dor as a major maritime center in the eastern Mediterranean will be presented along with well documented evidence of ancient scripts found in America with the latest epigraphic analysis of these controversial tablets.

**Advanced Knowledge of Ancient Ship Technology  
The Mystery Sinking Leads to Tel Dor  
Voyage and Cargo: A Geological Clue  
The Phoenician/Israelite Seafaring Partnership  
An Unrecognized Factor: Israelite Maritime Capability  
Transoceanic Voyages: Challenging the Consensus  
Ancient Mediteranean Scripts in America: Records on Stone**

### **Overview:**

- 1) The mysterious sinking of the ship off a deserted shore and its destination are traced to the ancient harbor of Tel Dor and the Tantura Lagoon.
- 2) The Cargo: Geological Clue to the Route of the Voyage.
- 3) Tel Dor and the Tantura Lagoon reveal a prominent role as a major center of maritime activity with trade networks extending to the Atlantic Ocean and beyond.
- 4) The Phoenician/Israelite maritime partnership is explored as a key factor in the history of Dor and the development of ancient Israelite seafaring.
- 5) Their wide spread trade network extends from Dor, leads to the Iberian Peninsula and to transoceanic voyages.
- 6) Ancient inscriptions in America are re-evaluated in light of recent evidence of sophisticated ancient ship and harbor construction, the reality of ancient ocean crossings and new epigraphic data.

**Maritime Technology of the First Millennium  
Has Been Enriched With This Unique  
Discovery**

The technology of this marvelously preserved, almost intact ship has significantly advanced our knowledge of ancient ship construction. The discovery of the ship has also opened a window into maritime trade and ancient harbors of this important and strategic coastal area on the eastern Mediterranean coast.

ANALYSIS OF the construction of the ship by nautical experts in ship construction has found the ship to have been extremely seaworthy and masterfully constructed.

The 13.5 meters long merchantman was 4 meters wide with a displacement of 23 tons and carried a single square sail. The ship was built "shell first, an ancient method of ship construction" which used pegged mortise and tenon joints, many of which were found in place still joining the planks of the ship together. It was discovered at a depth of about 2.5 meters in shallow waters 70 meters off the beach of Kibbutz Ma'agan Mikhael for which it was named. The complete lower part of the hull was remarkably preserved as was the mast step, stern and stem posts. The keel was intact and a unique wooden one armed anchor with a lead filled stock with ropes still attached was also found. Many artifacts were in an excellent state of preservation; seventy pieces of pottery basically in good condition and wooden artifacts presumably used for cosmetics were in the ship plus the 13 tons of rocks which were cargo for building purposes. (1)

Shell first construction was a technique of ship building that can be traced back in time to the 14th century BCE. New evidence suggests that there was a transition to "frame first" construction much earlier than had been suspected and the transition occurred in the eastern Mediterranean in the first few centuries CE. (2)

The ship was the prototype of hundreds of ships that sailed through the Mediterranean Sea, west to the Iberian Peninsula and into the Atlantic Ocean in the first millennium. She represented the long heritage of Caananite/Phoenician shipbuilding. Analysis of the meticulously spaced mortise and tenon joints which connected the planks together indicates highly specialized

techniques of ship construction and diffusion of these special techniques across the Mediterranean. (3)

The construction of the ship supports the capability of open sea voyages beyond the Mediterranean Sea and of voyages across the Atlantic Ocean. The ships construction is viewed as generally representative of typical merchant vessels of that era.

The technical details of the construction of the ship and its sophisticated workmanship are fully described in Vol. 1 and 2, "The Ma'agan Mikhael Ship: The Recovery of 2,400 Year Old Merchantman, by Elisha Linder and Ya'akov Kahanov.

**The "Mystery Sinking" and Her Destination**

The vessel sank 2,400 years ago at a deserted beach 70 meters off the shore directly in front of one of three small sandstone islands. ( Fig.1-photo)

The central theme of this article proposes that she was headed for an anchorage site 10 km north up the coast and mistook the landmarks of the three islands at the deserted beach for her planned destination: the harbor of Tel Dor and the safety of the Tantura Lagoon which had three similar islands. ( Fig. 2-map)

Intriguing questions linger about the sinking of this merchant vessel. How could the captain, who had sailed the ship successfully through the eastern Mediterranean make such a fatal error? She sank off a deserted beach perpendicular to the shore, in an upright position with her bow pointing to the beach. It appears that she sailed directly into this area purposefully. Why?

THERE MAY be clues as to why the ship sank at this site from the three islands running parallel to the shoreline of the deserted beach and several other factors which may have contributed to her mysterious sinking.

**A Clue to the Mystery Sinking?**

The three islands are the most intriguing clue to her sinking and have opened up a connection to the ancient harbor city of Dor and the Tantura Lagoon which was directly north of where the

**Fig. 1- The Mediterranean coast of Israel where the 2,400 year old ship sank 70 meters off this beach directly in front of the larger of the 3 Islands. Kibbutz Ma'agan Mikhael is the dark area.**



(Photo Courtesy E. Linder, Univ. of Haifa, RIMS)

**Fig. 2 Map of the coast**



(Map- c. Zena Halpern)

**Fig.3 –Divers from Recanati Institute of Maritime Studies. University of Haifa preparing to install hose to suction sand. One of the three islands is in the background.**



(Photo- Courtesy I. Grinberg/E. Linder- Univ. of Haifa, (RIMS))

ship sank and had a similar chain of three islands forming the lagoon.

In the fifth century BCE, the exact site along the coast where the ship sank was deserted. This is a heavily investigated area and no archaeological remains have been found on the beach near where the ship sank in shallow water. (Fig.3-photo) The captain would not have purposefully sailed to a deserted beach with no anchorage. His newly built ship and her cargo were extremely valuable. Was this human error? We will examine this possibility.

#### **Dor: A Key Harbor for Three Millennia**

I PROPOSE that the ship was sailing to Dor. The idea was suggested to me by Dr. Elisha Linder while visiting the site where the ship sank and our discussion ranged over several possibilities of why the ship sank so close to the beach. Was she beached? Was the crew captured? There were wars going on within this time frame between the Phoenicians, Persians, Greeks and Egyptians. Did they desert ship? None of these seemed plausible. The most logical answer seemed to be that she was heading for the safety of a harbor and somehow missed it. Further investigation of the geography of the area convinced me that the answer lay in human error. (Fig.4-photo)

Tel Dor, in the 5th century BCE, the time the ship sank was a key harbor city. A Phoenician port with a history dating back to 2000 BCE, she rivaled Tyre. Interestingly, for a site of such unique maritime history and archaeological importance, she had received surprisingly little attention until the pioneering work of the UESI (Undersea Exploration Society of Israel). There had been three archaeological investigations of the tel by Garstang in 1920, Liebowitz and Dauphin. (4) But it was Avner Raban and Elisha Linder who furthered interest with results of their surveys of its ancient harbor installations in 1962-67. In 1973, the University of Haifa (Dept. of Maritime Civilizations) and the Recanati Center for Maritime Studies (RIMS) conducted probes and excavations at Dor. Avner Raban, Elisha Linder, Kurt Ravah, Shelly Wachsmann and Sean Kingsley all did pioneering work in uncovering her remarkable maritime history. Wachsmann did an excavation and survey in 1994 in a joint project of exploration carried out by the the Institute of Nautical Archaeology (INA)

Texas A&M University (TAMU) and Haifa University's Institute for Maritime Studies (5)

Ephraim Stern led 20 seasons of land archaeological excavations from 1980 to 2000. He and teams from universities abroad and Hebrew University have uncovered 11 excavation areas from the Iron Age to the Roman period on the tel. His book, "Dor: Ruler of the Seas" is a meticulous and exciting account of the discoveries on Tel Dor. Some of the striking finds were the uncovering of a massive Solomonic city gate from the Early Iron Age of the Israelite period, a Roman theater and a spectacular "Acropolis" which rises on a promontory jutting out to the sea with a view of the southern cove where there are remains of a Canaanite port. The eastern side of the tel contains residential areas laid out with evidence of sophisticated town planning. Another cove on the western side has slips for ship repairs and launching. The Tantura Lagoon to the south contains at least 18 shipwrecks covering a vast time period. (Fig.5-photo)

The significance of Dor's land and maritime history is without parallel in Mediterranean nautical history, for much remains both underwater and onshore that awaits discovery from a vast time period - the Middle Bronze Age to the Byzantine period.

HER INFLUENTIAL role in extending trade west across the Mediterranean and her Iberian connection has not been acknowledged and it will be a dominant theme in this paper for it will lead to a controversial thesis: her trade network extended to the American continent. There will be frequent re-emphasis throughout the paper of certain salient points surrounding this issue.

Described as "Ruler of the Seas," Dor was an international port in the Middle Bronze Age. It is one of the richest and most spectacular sites in coastal Israel with a fascinating history. First as a Canaanite harbor city in the Middle Bronze Age or earlier, she was conquered by a Sea People – the Sikils in the 12th century BCE. The Phoenicians re-conquered the city in the 11th century and when the Israelites entered the northern coastal area they conquered Dor and it became King Solomon's key harbor on the Mediterranean coast in the 10th century BCE after David forged an important connection with King

**Fig- 4 Small islet to the right is exact site where ship sank.  
Island to the left is Pigeon Island**



(Photo- Courtesy I. Grinberg/E.Linder - Univ. of Haifa (RIMS))

**Fig. 5 – View of Tantura Lagoon and her 3 islands. Tel Dor is in the extreme left of the photo.  
Note sand spit, a bay and the mound of Dor. Ship was heading to enter the lagoon at the  
extreme lower right. Note part of third island- immediately south of it is the entry  
into the lagoon.**



(Photo-Courtesy E. Linder)

Hiram of Tyre. Israelite maritime interests focused on this harbor and it was twice rebuilt “to epic proportions” by Solomon and Ahab. (6) Dor on the strategic Carmel Coast, Tyre and Sidon to the north were linked together in a major maritime cooperative venture for much of the 1st millennium.

The important and overlooked Phoenician/Israelite search for raw materials, trade and seafaring is a major focus of this paper. Dor was under Israelite control for 300 years from the 10th to the 7th centuries BCE and during this time a significant and far ranging Phoenician/Israelite trade network spread west across the Mediterranean to North Africa, the Iberian Peninsula, to western islands of the Atlantic Ocean and beyond. Despite the

Assyrian, Babylonian and Persian eras, this dual partnership of Phoenicians and northern Israelites continued throughout the first millennium.

Carried along with this trade network, the Phoenician alphabet was also spread west by seafaring merchants and its adaptation to Iberian scripts becomes a very significant factor in assessing Phoenician and Iberic scripts found in America, a controversy that continues unabated. The Phoenicians not only exported commodities, they exported their innovative alphabet. (7)

It was the Phoenicians who took the idea of a consonantal alphabet which had been developed before 1500 BCE and reduced the script to 22 signs transmitting it to other cultures. Its earliest spread began with its transmission to the Greeks

by the end of the 2nd millennium and it spread to the Etruscans and Romans. The script was adopted by Iberians possibly as early as the 11th century BCE as a result of the Phoenician colonization drive to the central and western Mediterranean and Iberia. This script had flourished along the coast of Lebanon at Phoenician harbor cities such as Tyre and Sidon and in the coastal area of northern Israel in the 12th century BCE (8)

#### **Destination of the Ship: Tel Dor and the Tantura Lagoon**

TEL DOR, DRAMATICALLY overlooks the Mediterranean Sea and the "Lagoon of Dor" is just to the south of this extensive mound. This was one of the most important ancient harbors on the coast and has become the focus of intensive land and underwater archaeological investigation. Three millennia of maritime activity have been discovered at Tel Dor and the Tantura Lagoon.

In the recent report of the Dor/Tantura Project we have an excellent description of the lagoon.

"It is partially protected from the sea by a string of small islands which are separated from the shore by a narrow navigable channel. Dor Lagoon was a well-used anchorage." (9)

Despite its use as an anchorage, many ships sank in the lagoon and it is a veritable graveyard of shipwrecks and cargoes covering several millennia. Kurt Raveh, a maritime archaeologist has devoted many years to uncovering her history and explained that ships entered the lagoon from the south via a narrow channel seeking the relative safety of the lagoon. As they approached the islands from the southwest in a storm with winds tearing at the sail they were at peril from swirling currents and shifting sand banks. Also as they sailed in northward, the water in the port flowed southward and many vessels crashed into the shoals and sank. Dor was both a harbor and a ships graveyard. (10) While it held danger it was the only anchorage along the Carmel Coast where ships could escape the ravages of storms and sudden winds.

It is a unique geographic area of sea, narrow elongated coast and mountains. This area of the Carmel Coast is a narrow strip of land approximately 3.5 km wide and it lies between

the sea and the mountains. Its name originates from the Carmel Mountains which run parallel to the shore east of the sea. The range stretches from Haifa south to the Crocodile River, a distance of about 35 km.

The fatal error of the sinking leads us to Dor and a widening area of inquiry.

Let us begin with her starting point.

#### **Voyage and Cargo: A Geological Clue**

Her journey began far across the Mediterranean Sea and her route will be traced from the geological analysis of the 13 tons of rock cargo which she carried.

In meticulous detective work geologists have tracked the chemical signatures of the unusual rock cargo to the island of Euboea (Evia) in the northeastern Aegean Sea. It has also opened a window into the maritime trade of the Phoenician city of Dor with Euboea which was ancient, extensive and wide-ranging. The early commercial connections of the Phoenicians with the Aegean and their mineral resources in the Late Bronze Age linked Euboea, Ugarit, Cyprus and Phoenician cities linguistically, culturally and commercially. (11)

From the geological analysis of her rock cargo we can project a starting point for her voyage in the eastern Aegean, far from her final destination.

THE VOYAGE began at Euboea at the Bay of Karystos where she loaded on her cargo of blueschist rocks. She may have been built at a ship building center on that island or in northwest Turkey from analysis of the type of wood (pine) used to construct the vessel and then sailed to Euboea.

She carried about 13 tons of cargo of blueschist rocks which have a distinctive blue color and were most likely to be used for construction purposes or for decorative items. In the search for similar type rocks throughout the Mediterranean area, geologists Aryeh Shimron and Dov Avidgad traced more than half of the rock cargo to Euboea, an important ancient center for the mining of minerals such as copper, lead and silver, concluding that this island was the origin of her voyage. (12)

She may also have stopped at a port on Lavrion in southern Greece, an ancient mining center from identification of the lead or tin ingot she carried in her hold.

### **The Route of the Ship**

#### **A Voyage Through Historic Maritime Pathways**

From Euboea or Lavrion the vessel may have followed a south- southeasterly course sailing past areas and islands rich in history such as Salamis, site of one of the great naval battles in history in 480 BCE where the Persian fleet of 1200 ships was destroyed by 300 Greek triremes.

Her course would have taken her past the legendary islands of Andros, Delos, Chios and Crete where one of the most massive volcanic eruptions in history destroyed the Minoan fleet and ravaged Crete some 1200 years before her voyage. (Fig. 6-map)

In her southeasterly route the ship would have sailed within one hundred miles of Santorini (Thera) where the volcanic eruption in the Late Bronze Age blew out the center of the island causing massive destruction to Crete and surrounding areas. The resultant tsunami swept across to the Levantine coast and the delta of Egypt. Volcanic ash has been found in areas along the Levant coast.

At Rhodes, her course would have taken her directly east keeping well away from the treacherous rocks off the coast of southern Turkey where countless ships had sunk.

HERE IS WHERE two Canaanite shipwrecks were found and dated to the 14th and 13th centuries BCE. The first ship, the Cape Gelidonya was found by Peter Throckmorton who brought it to the attention of the University of Pennsylvania and subsequently George Bass directed the underwater exploration with Throckmorton. This was a "first" in underwater exploration in the early 60's and Bass, after meticulous research and evidence from the Near Eastern weights found on the Cape Gelidonya ship identified her as Canaanite, proof of Semitic seafaring well before scholars accepted it. (13)

With Bass's discovery in 1985 of the Uluburun shipwreck which carried 10 tons of copper and a ton of tin ingots (origin still undetermined of the

tin) perceptions of the extent of maritime trade of the Late Bronze Age in the eastern Mediterranean were challenged.

SEMITIC SEAFARINGg began with the Minoans, diffused across to Ugarit and spread south to the ancient harbors of Byblos, Arwad, Tyre and Dor as early as the latter part of the Middle Bronze Age.

OUR SHIP SAILED past the islands off the coast of southern Turkey in an easterly direction, stopping at a port on the southern coast of Cyprus to pick up another load of rocks, then sailed to the eastern Mediterranean coast where she mysteriously sank.

### **Fateful Ending of Voyage**

The over 1000 km voyage from Euboea ended in the sea off a deserted and barren beach. About ten km north was the ancient harbor of Tel Dor which offered anchorages at the Tantura Lagoon. The most significant clue to the sinking is that the lagoon at Dor had three similar islands in a direct line up the coast which is re-emphasized. (Fig.7-photo)

While the sinking of the ship was a disaster for the skipper and the owner, it has turned out to be one of the most important maritime archaeological discoveries in underwater archaeology with far reaching implications.

### **An Archaeological Prize**

Maritime archaeologists have determined that the ship was on her maiden voyage from analysis of her timbers which still held the smell of resin. The ship remained covered by sand and the anaerobic conditions preserved more than half of her hull for two and a half millennia. This was the first merchant vessel found in such a marvelously preserved condition and she was excavated underwater with astounding precision by maritime archaeologists from the University of Haifa and RIMS. She was preserved with polyethylene glycol (PEG) for three and a half years, subsequently was reassembled and is now on view at a newly built wing in the Hecht Museum, University of Haifa.(14)

### **How the Ship Was Discovered**

The discovery of the ship in 1985 was a sheer coincidence, as the scuba diver never expected to find an ancient shipwreck so close to the beach

**Fig. 6 Voyage of the Ma'agan Mikhael Ship from Euboea to Cyprus and Dor near where she sank.**



(Map-c. Zena Halpern)

**Fig. 7-Deserted beach near where ship sank-Note extreme left and mound which could have been mistaken for Dor**



(Photo – c. Z. Halpern)

which was part of the beachfront of Kibbutz Ma'agan Mikhael. This shallow stretch along the coast had been surveyed with sonar and nothing had been found in that immediate area which was also a training ground for divers. (15) The ship went down near a small rocky islet. Shifting sands covered the ship in an anaerobic environment for two and a half millennia, leaving it in an outstanding state of preservation and revealing it in one breathtaking moment to the scuba diver, Ami Eshel. Eshel saw some odd rocks, pieces of wood protruding from the seabed and shards of pottery. He immediately recognized that the rocks were not common to the area and realized he might have found a shipwreck. He quickly surfaced to report his find to his mentor, Dr. Elisha Linder who lives at the kibbutz as he did. Linder is the pioneer underwater archaeologist of Israel and was in Sardinia at the moment of this dramatic discovery. He was on one of his life long

searches for Phoenician shipwrecks when Ami Eshel, whom he had taught to scuba dive as a youngster found the ancient vessel.

The unusual coincidence of finding an almost intact ship from the fifth century BCE right at the doorstep of his home was astonishing .

For it to have been found by one of his students whom he had taught to dive adds dramatically to this story.

### Coincidences Galore

A series of unusual coincidences unfolds, for this was the exact spot where Elisha Linder had begun marine archaeology in Israel 30 years earlier. In the early 1960's trawler fisherman from the kibbutz brought up ancient artifacts in their nets and Linder realizing the value and importance of the artifacts convinced the

fishermen to donate their finds and thus began the first maritime museum in Israel at Kibbutz Ma'agan Mikhael. (16)

Linder then recruited Israeli frogmen to volunteer their time to search the coastal waters for shipwrecks and sunken harbors and began the Undersea Exploration Society of Israel (UESI). They trained at the very site off the beach where the ship sank, as this area of sandy beach was their first base.

THE UESI EXPLORED the coast from the north to the south and searched the Red Sea for shipwrecks and submerged ancient harbors. The famed scientist from MIT, inventor of side scan sonar, Harold Edgerton surveyed the coast with Linder in a search in the 1970's. Edgerton's "mud pinger" was a sophisticated sonar device he invented to locate ships beneath the sea bottom. But, nothing was found in the immediate area off the beach where the ship was discovered. (17)

It is surmised that shifting sands as a result of the construction of the Aswan Dam reduced the counter clockwise movement of sand and sediment which in the past had followed a northerly sweep up the coast. The result was a loss of the sand covering which revealed the ship suddenly on that fateful day when the scuba diver Ami Eshel came upon the odd rocks and wood sunk in the seabed.

An interesting sidelight to the Edgerton/Linder search is that Cyrus Gordon hearing about their search for biblical harbors became so interested in nautical matters that he invited Edgerton to teach techniques of underwater exploration on the faculty of Brandeis University in the early 70's. Gordon headed the Mediterranean Studies Dept. at Brandeis University at that time. (18) It was the remarkable timing of the Edgerton/ Linder search that correlated with Gordon's work on the links and interactions between the Mediterranean and ancient America, a controversial issue in the scholarly community.

His groundbreaking book; "Before Columbus: Links Between the Old World and Ancient America" was published in 1971. Linder was a student of Cyrus Gordon and his underwater research had a major impact on Gordon's theories of the extent of Bronze Age seafaring.

Linder with his background in maritime archaeology was fully cognizant of the extent of ancient seafaring and understood that ancient mariners were able to sail in the deepest waters of the Mediterranean, later borne out by the deep water discovery of ships in the Mediterranean. He knew that they could sail out of sight of land using their skills in navigational astronomy, this being the basis for transoceanic voyages. It was at this time also that Linder completed his dissertation in 1971, "The Maritime Texts of Ugarit: A Study in Late Bronze Age Shipping" in which he revealed the extensive shipping history of Ugarit, translating from the tablets communications between rulers about their ships such as attacks by enemy ships, cargoes, tonnage, etc.

Fast forward to 1985.

The day after Eshel's discovery an immediate investigation of the ship began conducted by Kurt Raveh and Shelly Wachsmann. This was in the fall of 1985.

Right after the winter storms, in the spring of 1986 Avner Raban and Elisha Linder began three seasons of underwater recovery after their initial surveys determined there was a valuable shipwreck enveloped by sand and apparently marvelously intact. (19)

The ship was found to be brand new. As mentioned its timbers still held the smell of resin. Her bow was pointed directly to the beach and it sank perpendicular to a beach where there was no anchorage. The vessel appeared to have sunk straight down as if caught in the grip of a submerged sand bar. Unbelievably, divers found the ship in remarkable condition after 2,400 years still caught in this mysterious grip.

IS THE ANSWER to the Sinking Found in the Three Islands off the Deserted Beach?

There is a chain of undersea ridges along this section of the coast which runs parallel to the shoreline forming a series of small rocky islands. Three of these islands are immediately off shore and there is a very small islet directly in front of this group where the ship sank. Today, this is right off the kibbutz's beachfront and swimmers and boaters enjoy the area.

The islands emerge again 10 km north and form the lagoon at Dor as previously noted. These three offshore islands are part of a chain along the western perimeter of the lagoon. Ships entered from the southwest sailing into the lagoon for anchorage. As one of the few natural anchorages along the coast and one of the largest fortified mounds Dor was a very well known site to mariners. She was built on a rocky promontory, part of a ridge that stretches parallel to the sea with the Carmel Range east about 2 km. This is an important factor as the ridge and the Carmel Mountains formed a natural defensive barrier for the tel on its eastern side. The eastern side of the tel had a huge city gate with defensive walls and a residential area laid out with streets and drainage. Tel Dor may have covered approximately 75 acres and its buildings were visible from the sea at the time the ship sank somewhere from 430 to 400 BCE of the Persian Period. (Fig.8-photo)

The offshore islands that form the lagoon of Dor are immediately south of the tel. Many ships have been wrecked in the lagoon and it is a veritable "museum of shipwrecks." Eighteen ships have been found in the lagoon representing every age. These ships and cargoes have been buried under a thick anaerobic blanket of sand which has preserved them for thousands of years.

This unique phenomenon, a singular situation, has made Dor and the lagoon along with coastal Israel a living laboratory for underwater research, unequaled along the eastern Mediterranean coast. The same phenomenon contributed to preservation of the Ma'agan Mikhael ship for two and a half millennia.

#### **The Unique Geography of the Carmel Coast**

AN OUTSTANDING feature of this area of the coast are the Carmel Mountains. From Mt. Carmel, at Haifa the cliffs run parallel to the shore. They are completely visible from the sea. At the place where the ship sank they merge even closer to the sea and they turn to the east abruptly about one km south of the sinking where the Crocodile River flows out to the sea. At this point the Carmel Mountains continue but much further inland to the east.

The jagged limestone cliffs of the Carmel in the area where the ship sank rise close to the sea and

from a distance they could have been mistaken for the huge mound of Dor if the ship was sailing on a moonless night. Phoenician ships sailed by the night sky using Kochab in Ursa Minor as a guide.

THE SKIPPER of this newly built ship on her maiden voyage may have been unfamiliar with the coast, sailed into the wrong group of islands and also mistook one of these cliffs for the mound of Tel Dor. I propose that he sailed into the area on a moonless night when Dor's buildings were not visible from the sea and saw only a looming cliff like mound in the dark off in the distance. The ship evidently became caught on a hidden sandbar and could not free herself, weighed down with the 13 tons of rock cargo. With wave action and shifting sands, she might have sunk deeper into the sandbar.

In summary, I propose that the skipper of this ill-fated ship who had sailed his ship safely in a more than 1000 km voyage in open sea through some of the most treacherous waters of the eastern Mediterranean made not one but two serious errors. He mistook the three islands off the deserted beach for the three islands of Tantura Lagoon at Dor and one of rugged cliffs for the high mound of Dor.

The high mound of Tel Dor was a landmark to sailors. Rising on the only large promontory along this section of the coast, a harbor city on a hill it could be seen from the sea and it also had three islands on its western side at the lagoon.

#### **The Ancient Harbor of Dor and the Tantura Lagoon**

##### **Crossroads of the Ancient World – A Maritime Network Extends West to Iberia**

The coast of the eastern Mediterranean was a key area of maritime activity for millennia. In the Late Bronze Age, Canaanite/Phoenician ships had crisscrossed the area in trade ventures. The eastern Mediterranean was a vital and vibrant crossroads of commerce and this trade spread west across the Mediterranean Sea to the Iberian Peninsula possibly as early as the 12th century. Dor was a leading force in this sea trade, for as an exceptional port facility she was a magnet drawing commerce and conquerors to the Carmel Coast.

**Fig. 8 - View From Tel Dor looking across South Bay, the sand spit and beyond is the lagoon.**



(Photo-c. Z. Halpern)

By the fifth century BCE of the Persian Period, the time of the ship's voyage, the western Mediterranean and the Iberian Peninsula had long been Phoenician settlements and Israelites had settled in many ancient and long lasting communities along the Mediterranean shores and in Iberia.

Evidence from Phoenician era shorelines in Portugal indicates that Phoenician merchant-seafarers were exploring and settling as far west as Portugal in the 7th century BCE and were active along the coasts of the Atlantic, searching for resources and trading in northern European waters. (20) They had also sailed south into the Atlantic, to the Canaries, the Azores and north to Britain in search of tin. They may also have sailed into the Baltic for the precious amber which was so sought after, as they used amber in their necklaces and it has been found in significant amounts in the Near East and in an ancient harbor site close to Dor. (21)

They were expert navigators with centuries of experience sailing the Mediterranean and the western Atlantic coast of Iberia. They knew the ports, the dangerous reefs, the sudden winds, the seasonal variations of the waters. This information was exchanged and handed down for centuries, as was ship building techniques and sea charts of port to port distances and hazards, carefully limited to their own group to protect their commercial interests. However, many ships sank and their cargoes litter the bottom of the sea.

### **Importance of Dor**

The Phoenician harbor of Tel Dor dates back to 2,000 BCE, and her three millennia of maritime history are recorded in the lagoon and the mound of Tel Dor, a city which certainly rivaled Tyre and the harbor cities of the north. Dor emerged strengthened after the end of the Late Bronze Age and grew in importance as maritime activity shifted south after the destruction of harbor cities to the north. She appeared to survive the hiatus at the end of the Bronze Age that affected so much of the coast.

By fifth century BCE Tel Dor was a major harbor city with skilled craftsmen engaged in many enterprises such as the famed purple dye industry (the extraction of purple dye from murax shells). The production of fabrics of purple, violet and crimson gave her unrivalled status in the Mediterranean as kings sought these priceless cloths. The glass industry added to her fame from the special sand in this area found as far north as Akko, which produced beautiful glass. She manufactured a variety of vases and amphorae which were highly valued and she imported and exported commodities throughout the Mediterranean. Many types and sizes of amphoras have been found dating from the Middle Bronze Age to the Byzantine period at Dor. (22) There can be no doubt that the city was a wealthy and strategic port and that the Carmel Coast was a key center for the production of valuable commodities.

Its impressive harbor installations can still be seen today. Huge ashlar blocks were used to construct slipways for ships and paved stone quays were found for ships to load or unload. Ship building, repairs, maintenance and launching were done in the northern cove at the slipways. (23)

THE TEL ONCE covered 75 acres and the ruins of many cultures surround one as you walk on the tel. Awareness that this harbor city dates back to 2000 BCE and the Canaanites who first settled on this mound is an impressive experience.

The lagoon and its three islands form a barrier to the west, as has been pointed out. The harbor city of Dor and its coves are part of this maritime complex of lagoon, of coves on the western side bordering the sea and of the tel which spread to the east.

And about 10 km south, are the almost identical three islands and the cliffs of the Carmel Range, close to the sea where the ship sank off that deserted beach.

A sketch of Tel Dor shows its three islands which provided the anchorage for ships sailing in from the sea to Tantura Lagoon, a bay, the tombolo (sand spit) and the tel (Fig.9)

The coast along the eastern Mediterranean has few natural harbors. Dor with its three islands forming a natural lagoon must have attracted ancient inhabitants well before the Early Bronze Age as underwater remains were found when the sea level was lower showing evidence of human occupation.

There are three coves at Tel Dor; South Bay, Love Bay and North Bay which are part of the western side of the mound of Dor. North Bay served as an anchorage and was a ship building site from which ships were launched and here also were the purple dye installations. Immediately south of the tel is South Bay separated by a sand spit called a tombolo and the lagoon is beyond.

Underwater investigations began in the 1970's led by the remarkable maritime archaeologist and scholar, Avner Raban. His investigations have revealed extensive Phoenician harbor installations at the harbors of Dor and Tantura Lagoon. Kurt Raveh, Yakov Kahanov, Ehud Galli, Hadas Mor, Shelly Wachsmann all have done outstanding

work which has resulted in impressive finds. The tel itself has been excavated over a period of twenty years by Ephraim Stern whose book "Dor, Ruler of the Seas" gives a detailed and scholarly report of the strata of Dor from the Late Bronze Age/Early Iron Age to the Byzantine period.

Dor was the major center for maritime commerce in this area of the coast, with harbor facilities and a population of craftsmen engaged in ship building, harbor construction, the purple dye industry and the manufacturing of various commodities. She imported metals from Anatolia and Euboea and Iberia, timber for shipbuilding came from the famed forests of Lebanon, from Arabia came spices and incense. From the west and the east, raw materials flowed in on her ships and they carried back her products to far flung trading centers. She had skilled masons, ivory carvers, seal cutters.

By the Early Iron Age, in the mid - 11th century BCE, the Phoenicians re- conquered Dor from the Sikkil, a Sea People who had ruled Dor for a century. A new Phoenician harbor city was built which became a major cultural center for the entire region (24) its influence spreading far beyond its environs west across the Mediterranean to the Iberian Peninsula. So important was the new harbor city that it later became one of the 12 districts of the Solomonic kingdom and his main port on the Mediterranean during its Israelite era. The biblical account tells us that his son-in-law governed this large district.

### **Destination Dor!**

The destination of the "Mystery Ship" which was named the Ma'agan Mikhael after the kibbutz near where it sank, must have been Dor and its lagoon.

THERE WOULD BE no reason for the ship to have sailed to a shore without an anchorage. The lagoon at Dor was the only place for ships to anchor that offered relative safety and a reason to unload her cargo of special blueschist stones destined either for building purposes or decorative items at Dor.

I propose that the three islands off the deserted shore were mistaken for the cosmopolitan harbor of Dor and that the cliffs of the Carmel, so close

**Fig. 9 - Sketch of Tel Dor and Tantura Lagoon with the 3 islands.**



(Sketch- Courtesy --Recanati Institute for Maritime Studies (RIMS) Univ. of Haifa)

**Fig.10- Tarshish Fleets sailed from Dor on the Carmel Coast and Ezion Geber on the Red Sea. From Dor these fleets sailed to the Western Mediterranean, to Iberia and Britain. Solomonic and Tyrian Fleets sailed from Ezion Geber to Arabia, Africa and India.**



(Map - c. Z. Halpern)

to the coast were mistaken for the mound of Tel Dor from the sea.

Dor was a flourishing harbor for maritime trade with far off ports in the Persian period when the ship sank sometime between 430 and 400 BCE. The province of Judah, under Persian rule at this time carried on extensive trade from the key port of Dor with Greece, Anatolia, Egypt, Africa, India, Carthage, and Iberia.

Long standing trade was carried on with islands in the Aegean such as Euboea where the ship picked up her cargo of blueschist building stones

traced by geologists to this rich island of minerals and mines.

When the metal resources of Euboea, Laurion and Cyprus were not sufficient to meet their growing needs the Phoenicians struck out west for more distant sources of minerals,

The Iberian Peninsula plays a vital role in this story as this westward move established close commercial ties and trading centers on the peninsula. The rich metal resources of Iberian mines were brought to Phoenician "manufacturing

centers" and then exported on ships in a vast trade network. (Fig. 10-map)

The fateful sinking of this ship has given us a window into the sophisticated skills of shipbuilding of this era, for the ship, recovered from the sea, preserved and reassembled by experts from the Recanati Institute for Maritime Studies (RIMS) University of Haifa is providing ongoing, invaluable information on ancient ship construction.

THE WING THAT has been built for the ship at the Hecht Archaeological Museum continues to grow as a challenging center of study for nautical scholars enriching us with the knowledge it has brought of ancient shipbuilding.

#### **The Phoenician/Israelite Seafaring Partnership**

The Phoenician expansion in the 11<sup>th</sup> century BCE along the northern coast can be traced to the maritime commercial partnership developed first by David ca. 1000BCE when the coast was conquered by the incoming northern Israelites. Dor was returned to the Phoenicians as they recognized their renowned skills in seafaring and their lucrative maritime trade. In the second half of the 10<sup>th</sup> century BCE, Hiram of Tyre and Solomon of Israel solidified this partnership and their fleets sailed from Dor and the Red Sea port at Ezion-Geber. A partnership with the Israelites gave them access to this port on the Red Sea and trade with Arabia, Africa and its gold.

Phoenician seafaring can be traced to the great port of Ugarit (Ras Shamra) where Canaanite/Phoenician prominence began in the 18<sup>th</sup> century BCE. Ugarit was a major port, of great importance in the Late Bronze Age for her cuneiform texts have been deciphered revealing considerable maritime history. It is to Ugarit that we can trace the origins of the alphabetic idea. This famed port was destroyed in the destructive period ending the Late Bronze Age but her innovative cuneiform alphabet had a major influence on the development of Phoenician script. (25)

By the end of the 11<sup>th</sup> century BCE some harbor cities had recovered from chaos ending the Late Bronze Age and were rebuilt. A new surge of maritime activity began. Sturdy Phoenician ships had already sailed past the Pillars of Hercules out

into the Atlantic, establishing harbors on the south and west coasts of the Iberian Peninsula. Their ships sailed north to Cornwall in Britain in search of the precious tin needed to manufacture bronze weapons and tools.

Phoenician ships also boldly sailed to the Canary Islands from West African shores, to the Madeiras, the Cape Verde Islands and there appears to be evidence of a Phoenician settlement on the Azores at Corvo, the most westerly island of the Azores.

Phoenician merchant adventurers had established a harbor at Gadir (Cadiz) in Spain as early as 1200 BCE. The silver mines, tin, lead and gold on the Iberian Peninsula lured the Phoenician seafarers and their new Israelite partners ever westward for their alliance was forged at this time.

By the eighth century BCE, Carthage became the foremost harbor city in the western Mediterranean, a sister city to Dor and Tyre. Dor remained pre-eminent, a vital harbor city with extensive maritime trade.

Did the Phoenicians venture ever onward and westward into the Atlantic and sail to Brazil? The westward currents and the trade winds would carry sturdy ships to the shores of South America from the west coast of Africa. A Phoenician fleet sponsored by Pharaoh Necho ca.600 BCE had sailed from the Red Sea down the east coast of Africa, rounded the Cape of Good Hope, sailed up the west coast of Africa into the Straits of Gibraltar to Egypt a thousand years before the Portuguese launched their explorations down the west coast of Africa.

IN THE 6<sup>th</sup> century BCE (ca 530 BCE) a century before the Ma'agan Mikhael sank, a voyage from Ezion-Geber to Brazil was recorded in the controversial Paraiba Inscription which related an ancient voyage from the Red Sea port of Ezion-Geber to Brazil. Phoenicians and Israelites used this port to embark for distant voyages writes Linder in his unpublished dissertation. (26)

The vital importance of this Red Sea port should not be overlooked as it constituted the key to the widespread commerce that Phoenicians developed with Africa and the east. Ships were sailing from Ezion-Geber for centuries as it was a vital link

between the Mediterranean, the Indian Ocean and to lands beyond.

### **Israelite Maritime Capability**

#### **The Unrecognized Factor**

David's maritime policy in the tenth century BCE resulted in an important partnership with King Hiram of Tyre. He astutely recognized Phoenician maritime expertise and formed an alliance with Hiram who wanted access to the Red Sea port which the Israelites controlled.

DAVID'S CONTROL of Dor later gave Solomon an excellent operating harbor and commercial contacts with the maritime cities of Tyre and Sidon. The superior Phoenician maritime heritage formed the basis for Solomon's commercial enterprises with Hiram and the establishment of Phoenician/Israelite seafaring collaboration which developed in the 10th century BCE lasted throughout the first millennium BCE. These dual ports; Dor on the Mediterranean and Ezion-Geber on the Gulf of Aqaba were the keys to the growing sea power of the Tyrians and northern Israelites.

Phoenician sea power developed in the western Mediterranean with an Israelite component, an unrecognized factor in assessing the role of the Israelites in shipping and maritime trade.

By the 8th century BCE, Carthage was established as a new colony by the Phoenicians. Israelites were also involved as Israelite seals have been found at Carthage, evidence of their presence. During this time Dor was under Israelite control. Carthage shortly became a sea power in the western Mediterranean, subsequently spreading her merchant culture far beyond the confines of the western Mediterranean. Trade was the motivating force along with the search for raw materials and ships sailed to the Canaries, the Azores, to ancient Britain and into the North Sea.

Thus, the opening century of the Iron Age saw a unique collaboration develop with Phoenician maritime and commercial interests and Israelite control of an important seaport on the Red Sea and on the Mediterranean Sea. This collaboration has been an under-rated factor in assessing the maritime activities of the northern Israelites.

### **A Submerged Artificial Harbor in the Red Sea**

From the Red Sea port of Ezion-Geber, fleets sailed to Arabia, Africa, India and the legendary land of gold, Ophir a three year voyage and a destination argued about but still not precisely identified.

The Solomonic harbor on the Gulf of Eilat was the focus of an underwater search by Elisha Linder and Harold Edgerton. At Jezirat Fara'un (Pharaoh's Island) a naval base with an artificially constructed "cothon" was discovered. Avner Raban and Elisha Linder, premier underwater archaeologists extensively investigated this site finding evidence of well constructed harbor installations and a "cothon," an artificial harbor on Jezirat Fara'un. (Fig. 11- map)

Fleets returned with vast amounts of gold from the 3 year voyage to Ophir. The naval base was the site where the precious cargo could be unloaded in safety at the artificial harbor and then transferred in small coasters to caravans for the overland trip to markets. (27)

### **Brief Overview of Tel Dor**

#### **Canaanite Dor**

An example of an early Canaanite harbor, Dor had quays and wharves built in the 14th or 13th centuries BCE and had been in use as a harbor for centuries. There are a variety of historical sources attesting to the importance of Dor as a major harbor city dating back as far as the 13th century BCE when Ramses III. ca. 1180 BCE records that he destroyed three of the Sea Peoples.

A UGARIT text mentions pirates, a Sea People called the Sikils from the same time period. The tale of Wenamon gives us a glimpse into an Egyptian caught in a precarious situation with his ship after he landed at Dor.

#### **Sea People Dor**

Canaanite Dor was conquered and demolished by the Sikils, a Sea People in the invasion period of the Sea Peoples during the Late Bronze Age period of destruction. (1150-1050 BCE) The Sikils occupied the Carmel coast for a century,

**Fig. 11- Map – From Dor, fleets sailed west across the Mediterranean and from Ezion Geber on the Red Sea fleets sailed to Africa and across the Indian Ocean to the rich lands of Southeast Asia.**



(Map- c. Z. Halpern)

making Dor their capitol. Some scholars suggest that the Sikils were from Sardinia.

#### **Phoenician Dor**

The Phoenicians retook Dor from the Sikils. They settled in the city in the second half of the 11th century rebuilt it and constructed quays, wharves, slips, etc.

By the 8th century BCE, Carthage was established as a new colony by the Phoenicians and Israelites were involved as Israelite seals and artifacts have been found at Carthage. During this time Dor was under Israelite control. Carthage shortly became a sea power in the western Mediterranean, subsequently spreading far beyond the confines of the western Mediterranean. Trade was the motivating force along with the search for raw materials and ships sailed to the Canaries, the Azores, to ancient Britain and into the North Sea. Iberia remained their dominant interest.

#### **Israelite Dor**

In the 10th century David controlled the coast from Dor to Jaffa. Dor was conquered by the

Israelites in the 10th century and they ruled it for 300 years until the 7th century. Dor was so important that in the 10th century it became Solomon's major harbor and comprised one twelfth of his kingdom. As ships sailed into the lagoon at Dor they passed one of the islands which is named after Solomon's wife, "Taphet." After Solomon several Israelite kings continued an active maritime policy. Ahab rebuilt Dor as a great fortified harbor town. Stern states that "there is no doubt that the ships of the two peoples went on trade voyages together." (28)

#### **The Dor/Iberian Connection**

As the Phoenicians struck out west in the search for raw materials to fuel their ever growing commercial enterprises, their Israelite partners accompanied them. A vital, overlooked connection is the Iberian/Israelite factor, dating back to the time of Solomon which has been emphasized throughout this paper. At one of the stratas at Dor, a hoard of coins was found, analyzed as originating from the Rio Tinto silver mines in Iberia and dated to the 11th-10th century BCE by the silver content. This will be discussed in detail further on.

### **Dor Under Assyrians, Babylonians, Persians**

Assyrians, Babylonian and Persians in rapid succession took over the city. It was destroyed and rebuilt many times as testified from the archeological stratas.

FROM THE 7th to the 5th centuries its stratas reveal several conquests by the invading Assyrians, Babylonians and Persians but its Phoenician maritime character remained unchallenged through the ensuing centuries. Despite the conquerors, it retained a semi-autonomous status as they recognized its vital maritime expertise, of great economic value to them. In essence they needed the Phoenician ships as Assyria had no navy of its own. And the Persians used Phoenician ships in their naval battle with the Greeks at Salamis.

### **Jewish/Persian Dor**

In the Persian Period Dor was a prosperous city at the time the ship sank with a Jewish community involved in maritime trade and activities. Jewish maritime interests at this time had developed extensive networks of commercial communities throughout the Mediterranean and in Iberia. These communities were centered at key ports along the entire Mediterranean coast.

The little known ventures of Jewish seafaring activities began as far back as the tenth century BCE, endured for centuries and an important maritime diaspora was created connecting Jewish communities along the entire Mediterranean rim engaged in shipping and trade well into Medieval times. Hebrew speaking and writing communities forged far ranging, close commercial maritime linkages from ancient times.

Jewish cartographers from Majorca, inheritors of Carthaginian knowledge may well have passed on ancient sea-charts known as portolans into medieval kingdoms, opening up a surge of interest in geographical knowledge.

### **Seafaring Judeans**

In the 2nd century BCE, Dor and the coast were re-conquered by Jewish kings (Hasmoneans) descendants of the Maccabees whose policy was to again control the coastal area and regain the maritime trade of the past. They sought to emulate the reigns of David, Solomon and Ahab, a time of flourishing maritime activity. The shipbuilding, metallurgical skills and purple-dyeing had

enriched the Phoenician-Israelite partnership in the past. Dor was a maritime center in the tenth century BCE that lasted almost a millennium, beginning at first with northern Israelites and the Hasmoneans sought this former sea power. It is to Dor that we can trace the beginning of Jewish maritime history.

This great harbor city with a heritage of millennia of seafaring began its spread westward across the Mediterranean Sea as early as the 12th century BCE. In the intervening centuries, Dor continued to flourish, although at times it was under the control of the Assyrians, Babylonians and the Persians all who recognized its maritime importance and ceded it relative independence.

By the fifth century BCE, the time the Ma'agan Mikhael ship sank, Dor was a prestigious port, known throughout the Mediterranean. Her trade with the easternmost Greek islands in the Aegean Anatolia, Iberia, Africa brought into the area a veritable influx of metal products as she imported their raw materials for manufacture and exported her products to far distant trading centers.

Tantura Lagoon was the entryway into the only anchorage along the strategic northern coast and important to the areas to the west of Dor, one of which was Megiddo. (Fig.12- photo)

### **Years of Underwater Research Along the Coast of Israel**

TANTURA LAGOON has been explored by several teams of underwater archaeologists from the Recanati Institute of Maritime Affairs (RIMS) at the University of Haifa. No less than 18 shipwrecks lie at the bottom of this lagoon spanning three millennia from Canaanite to Byzantine through to the Napoleonic era. A ton of ancient coins have been found in the harbor from every era. Avner Raban found extensive evidence of a sophisticated technology of harbor engineering in key harbors along the coast of artificial ports; moles, island-like quays and piers. It was the Phoenicians who began and developed marine architecture and the technology of harbor engineering. (29)

Just this past October an underwater search revealed a shipwreck from the period of Kings David and Solomon. Carbon 14 dating of a piece of timber places it from 997 to 806 BCE. (30)

**Fig. 12 – A Section of the “Harbor City” of Tel Dor looking west**



**(Photo – c. Z. Halpern)**

The evidence continues to mount that Dor and other harbors along the Carmel Coast were a vital force in seafaring history through millennia.

Was it limited only to the Mediterranean/Iberian/Atlantic region?

It seems implausible that these daring and proficient seafarers would not explore further west, crossing the Atlantic to Brazil, the Caribbean and into the Gulf of Mexico-the entry to the rivers of the American continent. The Mississippi River would take them deep into the heartland and the Ohio River with its many tributaries into the southeast. The Rio Grande entered through the Gulf of Mexico would take them to southwestern rivers.

#### **Summarizing Some Key Points**

This article has described Tel Dor as it spreads dramatically over an extensive mound overlooking the Mediterranean Sea, the only natural harbor along the coast and of major importance in the maritime history of the region. Twenty years of land excavation of the mound under the direction of Ephraim Stern and four decades of underwater research by Avner Raban, Elisha Linder and others have made this area a formidable part of the history of seafaring.

The mound is part a dramatic landscape of seashore, lagoon and coves which sparkle in an azure sea with the rugged Carmel Mountains as a backdrop.

In her northern area are the coves where the famed purple dye industry was conducted which brought fame and wealth to Dor. The prized and valuable brilliant purple dye for fabrics was sought after by rulers throughout the Mediterranean area and beyond. When the supply of mollusks was depleted, the Phoenicians searched beyond the Mediterranean, going as far as the island of Madeira for similar mollusks. The northern cove where the purple dye industry was located and which was such an important natural asset to the growth of Dor lasted for centuries.

Dor is 35 km south of the modern city of Haifa and about 12 km north of the great harbor of Caesarea, built by Herod in the first century BCE on an ancient anchorage known as Strato's Tower which may have held a lighthouse.

Dor was the largest fortified city in the 10th century BCE and lasted well into the Byzantine era. We have emphasized that the Mediterranean coast is mostly an unbroken seacoast and the advantage of this strategic area was in the coves, the lagoon and the protective Carmel Mountains immediately to the east of the tel. In the 10th century BCE, there was a lagoon on the eastern part of the tel which silted up. Thus, the mound at that time had another lagoon on its eastern section and the tel was completely enclosed by water. Today it is a sandy area and one can climb the mound from the eastern side. (Fig.13-photo)

**Fig.13 – View of Tel Dor from South Bay beach. Paths lead up the southern side of the mound.**



(Photo – c. Z. Halpern)

**Fig. 14 - Tel Tanninim- Beyond the curve of the shore, in the far distance is where the ship sank.**



(Photo – c. Z. Halpern)

#### **Ancient Anchorages on the Carmel Coast**

Another ancient anchorage directly south about 1 km from where the ship sank is Tel Tanninim excavated by Dr. Robert Stieglitz of Rutgers University which has uncovered a Persian harbor.

The photo shows Tel Tanninim in 1999. Beyond the cove, in the far distance one can see the island near where the ship sank. (Fig.14- photo)

The strategic location of Tel Dor is of the utmost importance. Other sites clustered around the environs of Tel Dor. Tel Mevorakh, a mound to the south served as an ancillary site to this important harbor and was also excavated by Ephraim Stern. The Carmel Coast was dotted with other harbors and tells. Athlit, immediately north is where the huge bronze naval ram was found underwater indicative of heavy naval warfare in the 2nd century BCE.

Evidence of the rich and significant maritime trade comes from these sites in the form of pottery imported from eastern Greek islands; from Euboea, Rhodes, Samos, Chios, Cos, and Cyprus. There was far reaching and very ancient maritime trade from the Carmel Coast spanning three millennia and encompassing three continents; Europe, Asia, Africa from the Late Bronze Age to the Byzantine period.

Tel Mevorakh, immediately south of Tel Dor was occupied in the 11th and 10th centuries BCE during the reigns of David and Solomon. Typical of Israelite style building, the four room house was found in the strata from the 11th century, the time of King David. This mound revealed the rich and prosperous period of Phoenician/Israelite maritime partnership which began about the 11th century BCE. Further evidence of Israelite presence was found from the collared-rim jars, generally characteristic of Israelite settlement.

The architectural features of this site indicate distinctive Israelite/Phoenician stone work. (31)

### **End of Bronze Age: A Critical Juncture in Time in Seafaring**

It was in this chaotic period, the end of one of the great ages in history and the dawning of another that the maritime and commercial partnership was created between the Phoenicians and the Northern Israelites. Its results have been lost to history.

IN THIS CRITICAL era, nautical technologies were improved, harbor facilities were extended along the coast and Dor became the key harbor city for the Phoenicians and Israelites. A new "Golden Age" of seafaring was developing out of the ashes of the ending of the Bronze Age. The movement was west across the Mediterranean and along with it was the spread of technology of ship construction and the Phoenician alphabet.

Four decades of underwater research has revealed the extent of the large scale, sea borne trade extending westward into the Atlantic and along the Iberian coast. It spread from key harbors along the eastern Mediterranean Carmel Coast with Dor a vital part of this expansion. Carthage, the northern and western coasts of Africa, the Balearic Islands, the Canary Islands, Madeira, the Azores and the Iberian Peninsula were part of this westward expansion. We have evidence of the northward spread to Britain, Ireland and perhaps the Baltic rim.

### **An Intriguing Question**

One intriguing question remains. Did they sail west across the Atlantic to land in America during this time?

Scripts found in various sites in America match scripts of Old World alphabets or syllabaries from the Mediterranean area. We cannot overemphasize the importance of the spread of the Phoenician alphabet with a single-sound symbol which provided seafarers a precise method of recording and bookkeeping.

These skilled mariners with their masterfully constructed ships followed the westerlies, the currents and trade winds off the coast of West Africa to Brazil and into the Caribbean extending

their trade network deep into America, carrying their scripts with them.

A multitude of Phoenician/ paleo-Hebrew and Iberic scripts have been found across America. The last four decades have given us extensive evidence from underwater archaeological discoveries of countless ancient shipwrecks and their cargoes in the seas and the oceans. Submerged harbors have been discovered, evidence of sophisticated engineering of these ancient harbors and the skill of proactive construction to maintain harbor integrity. We have only to look at the 1st century BCE harbor of Caesarea which was a masterpiece of engineering, able to hold a fleet of one hundred Roman ships. Ancient ships have given up their secrets. The technology of ship construction, their seaworthiness for ocean navigation and extensive maritime trade covering vast distances has become a reality in the face of this evidence.

The old model of belief against early contact via ocean crossings is being dismantled. The standard belief which prevailed was that the oceans were barriers to travel and people lacked the capacity to sail more than a few miles from shore before the exploits of the 15th century has been disproven with underwater archaeological discoveries.

The consensus that seafarers did not sail in deep waters has been effectively negated by the deep water discovery of 8th century BCE Phoenician ships in the center of the Mediterranean Sea. In 1999, using the latest deep water technology, Robert Ballard, the discoverer of the Titanic and Harvard archaeologist Larry Stager located 2 Phoenician shipwrecks (only cargoes remained) thirty miles off the southern coast of Israel, in thousand feet deep waters. (32)

SHIPS WERE DISCOVERED in the Straits of Messina described by nautical archaeologists as pinnacles of technology. The largest concentration of ancient ships were discovered in the deep sea in the Straits of Sicily. In a press release, Ballard stated that "It is clear from this discovery as well as the one off Sicily that the deep ocean holds great promise....more important discoveries in the near future could significantly alter our present understanding of ancient maritime trade." (33)

Increasing evidence of early sea travel and ocean crossings becomes indisputable in the face of the volume and extent of ancient shipping.

From the Minoan ships of Crete carved on frescoes and the ships of Ugarit described in the cuneiform texts to the Canaanite/ Phoenician ships; all were ancestors of a type of ship construction seen in the Ma'agan Mikhael vessel of the 5th century BCE. The famed triremes –the warships of the Persian Period, the Jewish merchant ship of the 3rd century BCE and the Roman grain ship from the 2nd century CE are but a small assortment of ships covering four millennia. Some are iconographical representations and models have been created. With the discovery of the Ma'agan Mikhael ship, we now have concrete evidence which has immeasurably widened our knowledge of the centuries of transmission of shipbuilding and harbor construction.

THE DISCOVERY, the underwater recovery, its preservation and reassembly of the Ma'agan Mikhael marks a milestone in understanding shipbuilding and seafaring in ancient times. (Fig.15- photo) Its mysterious sinking has opened up a link to the ancient harbor of Dor (Fig. 16-map) which has led us to a vibrant and sophisticated merchant culture of sea traders crossing oceans and connecting continents. (Fig.17-ship)

We are now led irrevocably to the American continent and its connection with ancient Mediterranean seafarers.

#### **Transoceanic Voyages: Challenging the Consensus**

##### **Ancient Mediterranean Scripts in America: Records on Stone**

In a vast sweep across the American continent, from Maine to New Mexico, from the Susquehanna River to the Ohio River Valley, west across the Mississippi and its tributaries from the Rockies, south to the Rio Grande; ancient scripts have been found from Mediterranean cultures spanning three millennia. A multitude of scripts are inscribed on these stones; records of ancient voyages to the American continent.

The evidence is overwhelming, highly controversial and has provoked bitter debates.

Semitic scripts such as the Bat Creek Stone from Tennessee, the Decalogue Stone and the enigmatic rock with an astronomical recording of a 2nd century BCE date from New Mexico, and the Ohio artifacts are but a minimal sampling of evidence from one culture; Mediterranean Semitic seafarers engaged in trade ventures and the search for raw materials on the American continent.

Seafarers representing one of the earliest of these merchant adventurers; the Phoenicians and the Israelites in the 10th century BCE, the Carthaginians and Berbers from North Africa in the 8th century BCE, Romans of the 2nd century CE and later the Norse in the 9th century CE left their inscriptions of ancient alphabets incised on stones across America. (Fig. 18-map)

The Bat Creek Stone from Tennessee, the artifacts from Ohio, the Davenport Relics from Iowa, the Kensington Runestone from Minnesota, the Spirit Pond Stones from Maine, the Grave Creek Tablet from West Virginia, the "Hidden Mountain" site in New Mexico and Roman coins found in many states are just a few in this considerable array of evidence from several cultural groups. (Fig.19-map)

Controversial and ignored by American scholars, the work of Cyrus Gordon, Barry Fell, George Carter, Arlington Mallery, Joseph Mahan, all scholars in their own right have been relegated to the area of "fringe scholarship."

CYRUS GORDON, premier epigrapher and linguistic scholar whose knowledge of the ancient scripts of three continents was unequaled; a scholar who wrote ground-breaking, voluminous works on the Ancient Near East daringly questioned the consensus. In his "Before Columbus: Links Between the Old World and Ancient America," and "Riddles in History" he presented evidence of seafaring in the Bronze and Iron Ages and ancient inscriptions in America and Mexico which has all but been ignored. His grasp of an "ancient ecumene" of Bronze Age maritime networks across oceans has begun to be validated only in recent times with advances in epigraphy and underwater archaeological discoveries.

**Fig. 15- Divers at site of ship**



( Photo – I. Grinberg)

**Fig. 16- Map of Coast. Note close proximity of Carmel Mts. to the sea.**  
(Map. c. Z. Halpern)

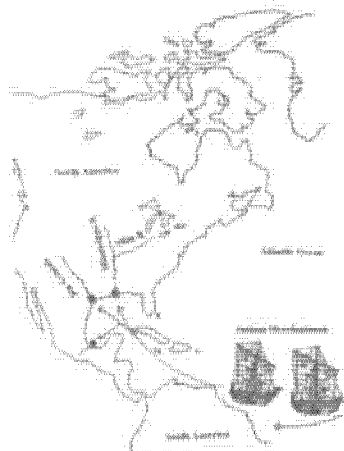


**Fig. 17- Judean Ship- ca.300BCE**



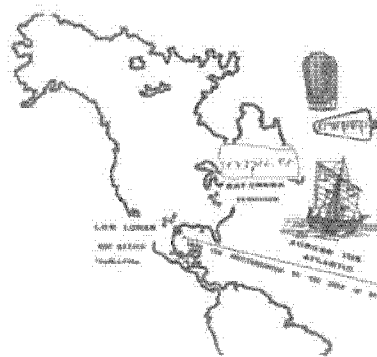
(Sketch of Beit Shearim ship- c. Artist)

**Fig. 18 – Transoceanic Voyages to Gulf of Mexico – entry way to America’s rivers; Rio Grande, Mississippi River, Ohio River and interior of continent.**



(Map – c. Z. Halpern)

**Fig. 19 – Shown are the Bat Creek Stone, Tennessee; Ohio Artifacts and the Los Lunas site in New Mexico.**



(Map – c. Z. Halpern)

Barry Fell, author of “America BC” and “Bronze Age America” has been scathingly criticized despite his pioneering work in translating Iberic Punic inscriptions found in 19th century America and identifying ancient scripts that were unknown at the time.

The concept of ancient transoceanic voyages has been considered anathema to scholars. However, a new chapter is opening forcing a re-evaluation of trans-Atlantic voyages and of the ancient alphabets inscribed on tablets across North America. Based on a decade of underwater archaeological discoveries utilizing side scan

sonar, robotic devices and a host of cutting edge technological advances able to probe the oceans and seas, we are entering a sweeping change in older models of thinking.

#### **The Advances of Underwater Archaeology: A New Chapter Opens**

When Cyrus Gordon and Barry Fell wrote in the 1970’s, underwater archaeology was developing as a new scientific frontier. They were visionaries who had an inkling that men would be probing the vast bottoms of the worlds oceans and seas with robotic devices and scanning the seabed with

sonar miles below the surface. The latest development of deep sea archaeology will further revolutionize our understanding of man's voyages across great distances as new finds turn up deep below the oceans.

GORDON AND Fell suspected that technological advances and discoveries would change our perception of ancient seafaring. These men and others forged ahead in their respective disciplines. Gordon initiated underwater archaeology courses at Brandeis in the 1970's with MIT's leading scientist, Harold Edgerton, inventor of side-scan sonar. George Carter, professor of geography saw early on that oceans were connectors not barriers.

The discoveries that have unfolded in the last forty years have given us evidence of the sophisticated technology of ancient ship construction, harbor engineering, cargoes that were carried over great distances over open seas to distant ports and vast trade networks that spanned continents. Uncovered have been ancient sunken harbors revealing technical skills in the engineering of quays, piers, and wharves submerged for thousands of years dating back before the Late Bronze Age. Pioneers such as Avner Raban, Elisha Linder have paved the way from the unparalleled wealth of evidence from the coast of Israel.

It is from the eastern Mediterranean harbor cities lining the coast and its seafaring merchants spreading west, carrying their sea trade network and the Phoenician alphabet to North Africa and Iberia that becomes a primary factor in understanding American discoveries of ancient scripts across the continent.

Cyrus Gordon's immense knowledge of ancient alphabets and languages gave him the tools to grasp the extent of ancient seafaring. Barry Fell was also prescient and wrote about ancient shipwrecks that might lie in the harbors off the rocky coast of Maine and broke ground in the decipherment of many of the tablets found in America. Other pioneers broke new ground such as Gloria Farley who wrote "In Plain Sight; Old World Records in Ancient America" and Mallery & Harrison's, *The Rediscovery of Lost America: The Story of the Pre-Columbian Iron Age in America*.

In 2001, Dr. Elisha Linder, the pioneering founder of underwater archaeology in Israel and the project director of the Ma'agan Mikhael ship said:

"The use of sonar instrumentation has enormously facilitated the location of ancient shipwrecks and harbors. With increasing knowledge of ancient shipbuilding we are better able to assess the sailing capabilities of merchant ships in antiquity and to project their potential for transoceanic navigation including possible contacts between the Old World and ancient America." (34)

Centuries of transmitted navigational knowledge and sailing instructions accompanied these voyages along with the exchange of information of captains and shipwrights. Working within specialized maritime groups knowledge was shared, limited to those within their own circle, keeping secret, routes to vital areas.

Over thirty years ago, Cyrus Gordon said: "The next test ahead is to go through all the material that has been brushed aside by those who believe transoceanic travel was impossible in the early centuries." (35)

Today, we stand at a new epoch of discovery and a re-evaluation of the role of ancient seafarers based on new finds from underwater archaeology and advances in decipherment of ancient alphabets.

#### **Voyages of Mediterranean Seafarers in the First Millennium BCE**

##### **An Ancient Harbor Opens a New Perspective on the Extent of Maritime Trade**

**Tel Dor Reveals Archaeological Evidence of Voyages to Iberia in the 11th Century BCE**

A DISCOVERY of a hoard of silver coins from the archaeological site of Tel Dor has given us evidence of voyages to the Rio Tinto silver mines in Iberia as early as the 11th century BCE.

The "hard data" is from a 3000 year old jar containing silver coins found "in situ," buried in a pit beneath an ancient floor. It was buried sometime in the late 11th or early 10th century BCE. At this time, Dor was a Phoenician city and the jar containing about 20 pounds of silver was buried by a resident of the city who never returned to claim the treasure. The jar was found

during the 1995 excavation season led by Ephraim Stern. Analysis of the silver showed a 10% gold content traced to Iberian silver mines. During the 11th and 10th centuries, the Rio Tinto silver mines in Iberia produced silver with a similar gold content. The archaeological evidence from the Rio Tinto site indicates that Dor was importing silver from the most important silver production zone in ancient Iberia. (36)

THE PHOENICIANS had expanded west to the Iberian Peninsula as far back as the 11th to 10th centuries BCE to obtain silver from the rich silver mines. Conjectures of Phoenician settlement of Cadiz in this time period are now backed up with "hard data." Phoenician merchant voyagers in search of mineral wealth had reached the western Atlantic in this critical time period- the End of the Late Bronze Age and the inception of the Early Iron Age. Despite the "Dark Age" commerce with the west was of such great importance that the maritime network continued intact from Dor to Iberia.

Utica had been founded on the North Atlantic coast in the 11th century BCE in this early westward move across the Mediterranean. The westward move continued and crossed the Atlantic, accompanied by the spread of the Phoenician alphabet, an important factor in evaluating tablets inscribed with Phoenician, Paleo-Hebrew, Iberian-Punic and Libyan scripts found in America.

#### Phoenician/Israelite Voyages - Early Iron Age

The Phoenician expansion west is connected to the partnership of Hiram of Tyre and Solomon of Israel in the 10th century (950 BCE) as has been emphasized previously.

Tel Dor had become Solomon's key port and was a major player in maritime exploits and the search for mineral wealth by striking out west across the Mediterranean from this strategic section of the Carmel Coast. Dor was the major port in this coastal area. To the north were Tyre and Sidon, Byblos and Aradus. But Dor had become pre-eminent from the Phoenician/Israelite partnership.

Cyrus Gordon writes that the "known record of Phoenician and Hebrew sailors working together in naval exploits starts with Hiram I and Solomon

in the 10th century BCE." Gordon points out that in the 5th century BCE, as reported by Herodotus, the Mediterranean fleet of the Achaemenians was manned by Persians and Jews. (37) This maritime partnership began 500 years before the Persian Period and continued for centuries despite various rulers who conquered Dor. The Phoenicians and the northern Israelites remained in control of the maritime trade and this trade spread west.

We cannot overemphasize the importance attached to these westward voyages. The impetus was the search for mineral wealth in the Iberian Peninsula. The extremely rich deposits of tin, silver, gold, copper on the peninsula drove maritime activity to continually push ever westward into the Atlantic Ocean and lands beyond. Maritime bases were set up throughout the western Mediterranean to protect the mineral wealth of Iberia.

Carthage, Malta, the Balearic Islands, Sardinia, Sicily all became Phoenician outposts for this purpose with an Israelite component. Carthage is the outstanding example of Phoenician influence in the western Mediterranean. Phoenician/Israelite seafarers transmitted the Phoenician alphabet to the western Mediterranean and this formed the development of the Iberic/Punic scripts across a wide area from North Africa to Iberia. Seafaring merchants carried the alphabet with them.

A Phoenician inscription exists at Nora on Sardinia dated to the 7th century BCE.

TARSHISH SHIPS from Dor, Tyre and Carthage voyaged to the West African coast and into the Atlantic; to the Canaries, Madeira, the Cape Verde Islands and the Azores. There is a record of a Phoenician presence on Corvo in the Azores, the most western island in the Azores.

Those who disparage ancient voyages across oceans underestimate the motivation to search and locate mineral wealth to fuel the economies and the material cultures of ancient states.

Phoenician Voyages to Iberia- 7th century BCE: Archaeological Data. An interdisciplinary team of scientists has documented that 7th century Phoenicians were active along the coasts of the Atlantic and had sailed into northern Europe for resources and trade. Excavation of three harbor

sites in Portugal has revealed the strong possibility that Phoenician shipwrecks are buried beneath the silt at these harbors.

SILVER FROM the Rio Tinto mines was flowing into Dor and Tyre and other harbor-cities along the eastern Mediterranean coast from Iberia since the 11th-10th centuries BCE. In the 7th century the Assyrians conquered Dor but they lacked maritime skills and a navy, thus the conquerors were dependent on the maritime expertise of the Phoenicians to fill their coffers. So much silver came into the area that the value was depressed. (38)

### **Persian Period Voyages**

#### **5th Century Voyages to Britain**

Himilco ca. 450 BCE voyaged along the Atlantic coast of Iberia as far as Brittany and sailed to the Cassiterides Islands in search of tin. Britain and Ireland were visited within the time frame of the voyage of the Ma'agan Mikhael ship. The archaeological data of the 7th century BCE geological survey of harbors of Portugal and Phoenician ships buried beneath the sediment supports the historical background of these voyages.

Phoenician ships were in contact with northern European cultures in the 5th century BCE. Similarity of Phoenician and Norse ship construction is evident in the spacing of the mortise and tenon joints which join the planks of the "shell first" type of ships.

The voyage of Hanno, ca. 425 west across the Mediterranean and down the coast of Africa is another example of adventurous seafaring in the fifth century BCE, again within the time frame of the Ma'agan Mikhael ship.

#### **5th Century BCE Ma'agan Mikhael Voyage**

During the late 5th century the Ma'agan Mikhael Ship made her fateful voyage from the island of Euboea sailing across the eastern Mediterranean to the Carmel Coast. The underwater retrieval of the hull of the ship gives us evidence of the advanced technology of construction of the first millennium BCE merchant vessels and their ability for ocean sailing. The captains of these ships had mastered the navigational skills needed

to cross the Mediterranean and sailed west into the Atlantic and across well before the fifth century BCE. Centuries of navigational knowledge and expertise had been handed down to these skilled skippers along with knowledge of ship construction and port to port sailings. However, many sank and the shipwrecks at the bottom of the Mediterranean in depths of more than a thousand feet are testimony to the heavy volume of sea traffic.

By the fifth century BCE, Dor had been a flourishing harbor for two and a half millennia. She had been conquered by several empires, the Assyrians, the Babylonians and the Persians, but all had recognized her invaluable maritime expertise and she retained her commercial leadership. Now under Persian rule she had wide and far-flung trade networks beyond the Mediterranean area. To the east there was maritime trade with Arabia, India, Southeast Asia, to the south with Africa, to the west with Iberia and Britain.

### **Roman Period Voyages**

By the Roman period, huge grain ships were carrying 500 tons of Egyptian grain to Roman ports. Evidence of impressive ships have been found in underwater shipwrecks discovered in the Straits of Messina. (39)

IN THE 1st CENTURY BCE, during the reign of Herod, Roman engineers built a new harbor several km south of Dor on an ancient anchorage known as Strato's Tower. Caesarea was a huge harbor which could hold 100 Roman ships and Rome now led in maritime and naval activity in the Mediterranean and she sent her ships across the Atlantic. Caesarea Maritima has been the focus of underwater excavation for the last decade and the engineering of this harbor ranks it as one of the most sophisticated harbors of the ancient world. Concrete was used to fill the massive forms sunk into the seabed. Pozzalana, a form of concrete made from the volcanic ash at Vesuvius was used as it hardened quickly on contact with water (40)

It was during this peak of Roman maritime activity that ships reached the Gulf of Mexico and sailed into the ancient harbor of Comalcalco, leaving significant markers of their presence in several sites, one of them at the pyramid site of

Calixtuhualco, Mexico where a sculptured Roman head was professionally excavated. The motivation for the voyages was the fabulously rich Mexican gold and silver mines. Roman contact with America is further documented by Roman coins found in colonial times in various states.

Jews were active in shipping and naval warfare during this period and there is a report of Jewish pirates in the first century BCE attacking Roman shipping in attempts to disrupt the commerce. Pompey was ordered to clear the sea of the pirates. Jewish naval activities existed in the second century BCE during the Hasmonean period and during the Jewish Revolt in 67-70 CE, Jewish warships fought against the Roman navy. There was a long tradition of Jewish maritime activity dating from the 10th century BCE lasting well into the Byzantine period and early Middle Ages.

A JUDEAN merchant vessel of the 3rd century BCE was found incised on a Jewish tomb at Beth Shearim, Israel. Ships such as these were engaged in maritime trade as far back as the 13th century BCE.

Warships of the 1st century BCE was found engraved on the wall of a tomb in Jerusalem. The tomb is "Jason's Tomb" and the warships incised on the wall are evidence of Jewish naval activity along the coast. Evidence of naval warfare along the coast of Judea has been found with the discovery of the massive bronze naval ram found in the harbor of Atlit, about 6 km north of Tel Dor.

#### Second Millennium Trans-Atlantic Voyages to America's Southeast

##### **The Metcalf Stone from Georgia**

A stone was found in 1966 in the ruins of an old mill by Manfred Metcalf who brought the stone to the late Dr. Joseph Mahan of the Columbus Museum of Georgia. Cyrus Gordon described the script as similar to script of the later half of the 2nd millennium BCE. He suggested that the signs represented Minoan Linear A and Mycenaean Linear B, reflecting an intermediate stage between the syllabary and the alphabet and that the stone could be an inventory of commodities. (41) The stone was found near a major river which flows through Georgia and into the Gulf of Mexico.

Another tablet inscribed with cuneiform was found in the same area near this river.

A fascinating connection with the area where the Metcalf Stone was found is that the area was once inhabited by a tribe of Indians called the Yuchi. The Yuchi people practice an ancient ceremony called the "Green Corn" ceremony which is strikingly similar to the Hebrew Feast of Tabernacles or Succoth. It was the opinion of Gordon that both the Yuchis and the ancient Hebrews shared similar cultural features rooted in the same ancient East Mediterranean culture of the Bronze Age. (42)

The Yuchi people are an ancient culture in America dating well before the arrival of Europeans. Dr. Joseph Mahan, curator at the Columbus Museum in Georgia associated this ceremony with a very ancient east Mediterranean cultural tradition common to both the Yuchis and the Hebrews.

The Metcalf Stone, with its 2nd millennium script and the ancient Yuchi ceremony date back to contacts in the Late Bronze Age from the east Mediterranean with southeastern America.

#### First Millennium Trans-Atlantic Voyages to South America

##### **The Paraiba Inscription from Brazil**

This inscribed stone was found on a plantation near Paraiba in 1872 by workers. A copy was sent to the Instituto Historico in Rio de Janeiro. A member of the institute, Ladislau Netto began to study it and it was sent for further study to Ernest Renan. Knowledge of Semitic inscriptions in the 19th century was just emerging. (Fig. 20) Controversy erupted and it was declared a fraud.

IN A STRANGE twist of fate, Cyrus Gordon became involved through one Jules Piccus who had acquired copies of the text and sent it to Gordon. Gordon's conclusion was that the text was genuine as no one in 1872 knew the intricate use of expressions in the inscription which had Northwest Semitic elements unknown in the 19th century. (43)

Gordon stated that the inscription told of a voyage of a voyage of Sidonians from Ezion-Geber during the reign of King Hiram. He identified the king as Hiram III (553-533 BCE) from the style

of the script and considered it to be "the first known text of the Red Sea Navy." He connected the name Brazil (Barzel) with iron of which Brazil had the world's greatest supply and was known to the Canaanites as the "Island of Iron."

Gordon wrote that "The Paraiba text reflects Phoenician-Jewish partnership at sea four centuries after Solomon." (44)

HIRAM III's reign in the mid 6th century BCE was a century before the Ma'agan Mikhael ship. Similar ships were sailing to distant areas engaged in extensive trade. We can project that a Sidonian ship could well have made the voyage to Brazil using the westward trades and currents. A return voyage would be along the east coast of America following the Gulf Stream and then south to the Azores, west to Iberia and into the Mediterranean Sea.

One of the most important results gained from the underwater recovery and analysis of the Ma'agan Mikhael ship is that we now have an entirely new perspective on the reality of transoceanic voyaging from her advanced construction.

#### **Trans-Atlantic Voyages to America's Midwest The Davenport Tablets from Iowa**

In a major and scholarly investigation of the background of three inscribed stones and "elephant pipes" found in Iowa from 1873 to 1878, James L. Guthrie describes a twenty year world-wide controversy in the 19th century and meticulously refutes 140 years of scholarly debunking of these artifacts in his recently published monograph, "The Blind Men and the Elephants: The Davenport Relics Reconsidered." (2005) He succinctly points out that "learned scholars of the time did not recognize the scripts on the tablets and concludes that after a decade of studying all the evidence, the tablets reflect North African and Iberian scripts and motifs of the early centuries AD including striking features that would not have been known in 19th century Iowa." (45)

#### **The Background of the Tablets**

Davenport, Iowa is on the upper Mississippi River across from Rock Island, Illinois. In 1805 a trading post was started and grew into a small village of traders. This area was the home of two

Indian tribes, the Sauk and the Fox. The city was incorporated in 1839 and German and Flemish settlers came to Davenport. They worked on farms, in railroading and on the Mississippi River. The setting is important in evaluating what Davenport was like in the thirty years before 1873 when the first artifact was found. The Civil War had ended in 1865 eight years previously and growing numbers of settlers were making their way west into the American heartland.

They found the area scattered with mounds. About 75 mounds were in the immediate area and citizens of Davenport busied themselves excavating these burial mounds. Similar mounds stretched across America from the east coast to the American interior and were known as "Hopewell Mounds." (earlier mounds were called "Adena")

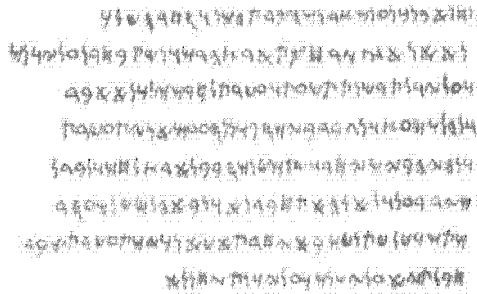
In 1873, a farmer found an "old pipe" shaped like an elephant, kept it and smoked it for years. Other "elephant pipes" were found in mounds and people began to take notice of these odd finds.

From 1874 to 1877 burial mounds were opened just outside of the town and among the relics found in one of the mounds were skeletons and an inscribed tablet engraved with strange signs running across the tablet in three upper rows. This was named the "Cremation Scene" tablet. The man who was involved in the digging was a Swiss Lutheran minister Jacob Gass but there were others also.

HE AND TWO friends continued digging on one farm with eleven mounds and in 1878 a fourteen pound limestone tablet was found in an indisputably intact mound. It was named the "Sun God Tablet" and it was found in a protective stone chamber or vault under a stone "altar" within the mound. (Fig.21& 21 a ) Note also the "elephant pipe."

Guthrie believes the Sun God Tablet holds the key to the authenticity of all of the artifacts and explains why in painstaking detail. Other artifacts subsequently found were four pipes carved in the shape of elephants (mastodons). All in all, three tablets, four mastodon pipes and two small images of frogs were dug up. Human skeletal remains were also found in these mounds, glass beads and the small frog effigies with quartz eyes. The tablets, pipes and other items caused a twenty

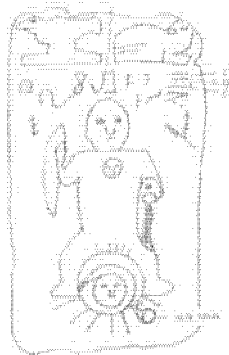
**Fig. 20 -The Paraiba Inscription**



(Photo- Courtesy – C. Gordon)

**Fig. 21- The Davenport Tablets from Iowa- The “Sun God” Tablet.**

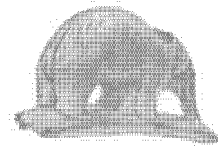
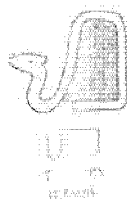
Sketch of Sun God Tablet is below. Note symbol above head and coiled serpent at feet of figure. A coiled snake or cobra in ancient Egypt was the symbol for *Uraeus* which stood for the crown representing *Atum*. Guthrie points out that this complex symbolism was unknown to anyone in Davenport, Iowa in 1878 when this tablet was found. Note symbol above god’s head. See below.



(Courtesy- J. Guthrie)

( Figs. 21 a & b) Snake like sign above god’s head may be a ligature reading T-M, the consonantal spelling of Atum. May have been a standard logo for Atum in the early AD Centuries  
( Guthrie, p. 18 –“*The Blind Man and the Elephants.*”)

Elephant Pipe



year world wide controversy at the time with bitter debates between believers and non-believers, accusations of a hoax and the character assassination of Jacob Gass. The story was published in several journals and in 1894 the Smithsonian Institution in Washington, DC got involved with Cyrus Thomas, a top official denouncing it as a hoax. (Cyrus Thomas also declared the Bat Creek Inscription a fraud)

A CENTURY LATER, in 1975, the "Cremation Scene" tablet (Fig. 22) came to the attention of Barry Fell who identified the inscription as Punic-Iberian. (Luckily the tablets and other relics had been preserved for over 140 years in the Davenport Museum.) At the same time, an Iowa archaeologist Marshall McKusik published a paper on the Davenport Stones stating that they were fraudulent and a furious and bitter debate ensued between Fell and McKusik.

#### **One Hundred and Forty Years of Controversy**

Almost a century and a half controversy surrounds these artifacts despite the fact that they were inscribed with very specific complex symbols and scripts which were not known in Iowa in 1875 and the debate was characterized with deliberate misinformation. The interpretation of ancient inscriptions requires extensive research and analysis as to the meaning of the symbols and the scripts. Without scientific or historical analysis, elaborate hoax scenarios have been developed and published by scholars to disparage the Davenport artifacts, the Bat Creek Stone and similar tablets found in ancient mounds across America. Guthrie writes, "I didn't appreciate the extent to which fantastic debunking stories have inhibited professional work on inscriptions such as Bat Creek, Newark, Kensington, Grave Creek, Spirit Pond and others. (46)

Guthrie's meticulous analysis proves that certain symbols on the tablets, particularly the "SunGod" tablet and the scripts on the other tablets could not have been known in 19th century Iowa for they contain North African and Iberian scripts unknown to scholars of the time. These texts did not get deciphered until about 1918 from analysis of Numidian-Punic bilingual inscriptions from Tunisia and North Africa. Berber writing was virtually unknown in America in the 19th century.

(47)

#### **The Sun God Limestone Tablet –A Key to Authenticity**

The scenario that unfolded with respect to this evidence of pre-Columbian contact with the heartland of ancient America unfolds in Guthrie's fascinating monograph. He meticulously points out features of the Sun God Tablet which scholars have been unaware of. Specifically, the Sun God Tablet "reflects Egyptian traditions preserved by Berbers of the early centuries AD and it contains material that was not known in 19th century Davenport." This fact supports the authenticity of all the tablets. In essence, they are all ancient.

TWO EXAMPLES of the complexity of the tablet are the two snakes on the "Sun God Tablet" - a rattlesnake coiled twice around the face at the feet of the figure and a sign above the head of the figure; key factors in interpreting this tablet. Ancient Egyptians associated the snake Uraeus (cobra) as representing the crown of Egypt. The uraeus (winged cobra) was also used in Phoenician/Egyptian art symbolizing divine power. In this tablet, a coiled rattlesnake is used with very intricate symbolism and mythology. Guthrie points out that the snake like sign over the god's head may read T - M and would stand for "Atum" in Berber writing unknown to Americans of that era. (See Fig. 21) "Atum" is a potent name and can be equated to Ra the central creator-god of Egypt. The material engraved on the sun god tablet was unknown to anyone in 19th century Davenport Guthrie points out. Complex symbols and signs such as the "Egyptian snake and sun designs with two apparent references to Atum and Libyan letters used to designate the seven lights on the zodiac," appear on this tablet and on the Calendar Stone. (48)

Guthrie's masterful monograph delivers a point by point analysis of every aspect of these artifacts from 21st century knowledge. He succinctly points out that the debunking stories concocted by scholars averse to any pre-Columbian contact with America have seriously damaged any recognition of the validity of many other finds such as the Bat Creek Stone, the Grave Creek Stone, the Ohio artifacts. This applies particularly to the Bat Creek Stone and the enigmatic site in New Mexico which will be discussed ahead.

Guthrie writes....“the negative impact has been to retard serious investigation. It has been characterized by “far fetched scenarios, inaccurate statements and misrepresentations.”

Guthrie points to a North African (Berber) origin of the Davenport Relics, sometime in the early centuries CE and writes that a considerable body of data from linguistics, genetics and botany suggests that people from the western Mediterranean had visited the Americas in these early centuries. (49)

#### **A Second Century CE Voyage to America- The Bat Creek Stone from Tennessee**

THE BAT CREEK Stone was found about 1890, “in situ” in an undisturbed burial mound at a creek of the same name, on the Little Tennessee River by an investigator from the Smithsonian Institution and is another example of an elaborately constructed hoax scenario by various scholars. (Fig.23)

It has been categorized as “fraudulent” despite the accompanying evidence of two unusual brass bracelets with a zinc content dated by chemical testing to ca. 200 CE, the remains of wooden ear-spool fragments (Carbon 14 dated to ca. 427 CE ) The alloy of brass (copper, zinc and lead) was produced in the eastern Mediterranean during a narrow time frame of 45 BCE to 200 CE. In addition, a comprehensive and detailed analysis of the script by Cyrus Gordon dated the letter forms to the 2nd century CE. (50)

The inscribed stone was found under the skull of one of nine skeletons found in the mound. The skeleton with the stone was facing south and the other artifacts were under its skull, making it the most important person in the grave. This information and a description of the finds were recorded by the Smithsonian investigator who opened the mound and it was published in the Annual Report of the Smithsonian about 1894. Note the timing which correlates with the Davenport controversy which also involved the Smithsonian and its director Cyrus Thomas who declared these finds frauds.

For over 100 years the stone was kept at the Smithsonian and viewed upside down. The

official position held that it was Cherokee writing. At the urging of two independent scholars it was

finally viewed in its correct position about 1970 and correctly translated by Professors Gordon & Steiglitz.

Huston McCulloch has meticulously investigated the stone and the artifacts found with it and has published extensively on both the script and technical aspects of the artifacts. In the “Bat Creek Stone Revisited: A Comment,” (2005) a 31 page fully documented monograph, McCulloch explains in painstaking details all of the aspects of the find and refutes a critique by two scholars.

McCulloch’s other publications are “ The Bat Creek Inscription: Cherokee or Hebrew? Tennessee Anthropologist (1988) and “The Bat Creek Inscription- Did Judean Refugees Escape to Tennessee? (1993) Biblical Archaeology Review.

Until Gordon identified the script as Paleo-Hebrew about 1971, it lay in relative obscurity. After his translation, a swirling controversy erupted. It was argued that the stone was planted and the character of the investigator, now dead almost a century was besmirched. Critiques were formulated and published devoid of factual material. It was recently transferred to the McClung Museum in Tennessee and it is still displayed upside down as Cherokee writing!. (authors italics) None of the critics attempted to look at the historical background of the time period or of the cultural forces that may have led to the inscription. Minds were made up that it was fraudulent. However, when Professor Stieglitz translated the first two letters of the stone he revealed a very significant clue. The inscription carries a unique meaning which appears to have escaped everyone.

WHEN PROFESSOR Stieglitz identified the first two letters as “Z” - “Q” meaning “comet” the message became clear. The inscription could now be placed in a historical framework which precludes the possibility of fraud. For the message carried an ancient belief from the Near Eastern world in the appearance of a comet as a harbinger of a messianic leader and a variation of this belief also dates back to ancient China. Stieglitz’s translation is seen below.

**Fig.22- “The Cremation Scene”**



(Guthrie)

**Fig.23- Bat Creek Stone from Tennessee**



(Courtesy- Warren Dexter)

**Fig.24 - Map showing where Roman Head was found “in situ” at Calixtuablaca**



(Map- c. Z. Halpern)

**Fig. 25 - Roman Pottery Head.**



(Photo- Courtesy C. Gordon)

LYHWD= Comet for the Jew(s)  
Year 1. ( of the Messianic Era)

He writes that "the significance of this message is enormous. It evidently refers to a Judean leader designated as "Comet" for this is what 'ziq' means in Late Hebrew, 'kokeba desabit- comet, bright star." (52) In Hayim Balston's Webster New World Hebrew Dictionary (1992) "Kokhav Shavit" means "scepter star." The allusion here to a comet which means a scepter is from the very ancient prophecy known as "Balam's Prophecy," "...a star shall come forth from Jacob and a scepter shall rise from Israel." (Numbers 24) The phrase actually refers to an astronomical event.

THE INSCRIPTION reveals the belief in the appearance of a comet associated with divine leadership and the description was applied to Simon Bar Kochba who was believed to be the messianic leader in the second war against Rome in 132-135 CE and the approximate time of the Bat Creek Stone from Gordon's analysis and details of the script which he described.

The stone was inscribed at a time of a fervant belief which swept through Judea and the entire Roman world associated with the expected appearance of Halley's Comet, conjunctions of planets or meteors. In ancient times the heavens were believed to send portents and comets were viewed as divine messengers, omens of impending disaster and tragedy or harbingers of doom.

For the Jews, Halley's Comet was connected with the coming of a divine messenger or messianic leader. Simon bar Kochba was named "Son of the Star" (star means Kochav in Hebrew) in keeping with this belief. The Bar Kochba Rebellion of 132-135 CE began with the attempt to recapture Jerusalem from the Romans and the comet later known as Halley's Comet was expected at this time.

The appearance of comets and their association with the rise or fall of "divine rule" is recorded throughout Chinese astronomical annals and their appearance presaged the rise and fall of emperors and their dynasties. Many ancient cultures associated comets with disasters. The assassination of Caesar with a fiery comet is well known and a comet was connected to a bloody

battle between Pompey and Caesar. An Egyptian oracle's predictions were connected to the appearance of cometary events and meteor showers. Chinese astronomers kept records of hundreds of comets in the Han Dynasty and Chinese comet atlases recorded different types of comets describing them as "broom stars" or those with long tails. Compiled from earlier records in 300 BCE each comet was a portent for different events.

The Jews likewise associated comets with messianic properties and in an unpublished paper by the late Dr. Louis Winkler, an astronomer he found that during the Bar Kochba Revolt from 132-135 CE a comet with a tail appeared in 133 CE. There are references to a comet in rabbinic texts which were tracked in 240 BCE.

The Bat Creek Stone records an astronomical event from the period of the Bar Kochba Rebellion or from a related time period when the belief swept through Judea of the coming of a comet and a messianic leader. Set against its historical background, the Bat Creek Stone becomes a dramatic and authentic document.

### **The Bat Creek Stone- A Century of Controversy**

Carbon 14 dating of wooden ear spools found in the mound where 9 skeletons were interred dated it to the 2nd century CE; the lead in the brass bracelets matched the date and this type of brass was produced in the eastern Mediterranean from 45 BCE to 200 CE matching the dating of the letter-forms. Gordon wrote in his book "By Study and Also By Faith" in 1990 that "The carbon 14 dating of the Bat Creek wood fragments ushers in a new era in which anyone who is not an obscurantist will have to accept not just the possibility by also the actuality of specific contact between the Eastern and Western hemispheres long before Columbus and the Vikings. The authentication of the Bat Creek inscription is a milestone in the process of formulating a credible unified global history." (53)

Despite all this, a recent attack on the Bat Creek Stone published by a scholarly American journal in 2004 constructed another "hoax scenario" unsupported by facts and filled with absurd assertions that the Smithsonian investigator planted the tablet under the head of the skeleton

buried in the mound and presents other dubious information.

**Archaeological Evidence of Roman Contact in the Second Century BCE With Mexico**

FOR SOLID EVIDENCE of Roman contact during the period of Roman rule we have the Roman pottery head found "in situ" in the Mexican pyramid site at Calixtlahuaca by a Mexican archaeologist over 50 years ago. It has recently been dated by thermoluminescence testing to ca. 200 CE and evidence of early transoceanic contact becomes indisputable for this time period. In an article in *Ancient Mesoamerica* by Hristov and Genovese the authors state that "these findings permit the acceptance of the figurine as the first hard evidence of transoceanic contacts between the ancient Mediterranean and Mesoamerica." (54) That there was significant contact during Roman times with America becomes evident with this find and others in Mexico and other sites in Central America.

**Comalcalco, an Ancient Mayan Harbor**

Additional evidence comes from the Mayan period pyramid site of Comalcalco on the Gulf of Mexico and supports their findings as Mediterranean scripts and Roman mason marks have been found incised on the bricks of pyramids. Comalcalco was located on a river which is now silted up but was a major harbor during the early Mayan period. The unique feature of Comalcalco is that it was constructed entirely of fired bricks, a system of construction found only at this site. Neil Steede, the archaeologist who worked at Comalcalco suggests that there is a strong similarity to Roman construction methods. Analysis of the mortar and cement used at Comalcalco demonstrates that it was similar to Roman concrete. Concrete was used at this pyramid site and at no other site in Mexico at this time period. (55) The Romans used concrete to construct the harbor of Caesarea. Clay pipes have been found at Comalcalco, used for their drainage system and similar to the Roman clay pipes at Caesarea and they may have also been used at Dor. (future research will determine this) Roman coins found throughout colonial America were recorded by Chief Justice Haywood and support contact along with a host of artifacts from Mexico and Central America.

**Unique Clay Braziers from Dor Found in Guatemala**

Excavations at Tel Dor from the remains of homes have revealed clay braziers (charcoal burning stoves) found throughout the city dated to the Hellenistic and Roman periods. In the 2nd century BCE this type of decorated "earthenware stove spread throughout the Mediterranean world and were found at Dor, Caesarea, Akko, Jaffa, Ashkelon and Gaza." (56) These are all coastal sites and harbors. The braziers from Dor were made of clay and consisted of 3 horizontal sections fastened together horizontally with a third upper section decorated with carved heads. The charcoal was placed in the lower part and was perforated to allow air to circulate. The top third portion of these clay braziers had three distinctive supports on the upper section of carvings of bearded faces. (57)

A similar type of artifact with three distinct sections and a decorated top third with sculptured heads have been found at the site of Kaminaljuyu, Guatemala, close to the Usmacinta River, a major river which flows into the Gulf of Mexico from the highlands of Guatemala. They are presently in the National Museum of Guatemala and have been described by Alexander von Wuthenau in his book "Unexpected Faces in Pre-Columbian America." The museum describes them as "three prong incense burners" from an archaeological dig at Kaminaljuyu which is near Guatemala City (58) See Fig.26

**A Transoceanic Voyage to America's Southwest in the 2nd century BCE**  
**The Decalogue Stone, Hidden Mountain, New Mexico**

The site is in a desolate section of the Rio Puerco Valley, adjacent to the Rio Puerco a tributary of the Rio Grande. The Decalogue Stone still stands in a rocky ravine at the base of a volcanic hill. It is inscribed in ancient Hebrew script and is an abridged version of the Ten Commandments.

A PATH leads to the summit of the hill where the astronomical petroglyph is located at the summit. (Fig. 27) There are remains of stone constructions around the perimeter at the top of the hill indicating an ancient encampment. At the bottom of the hill is the Decalogue Stone. (Fig.28) Its placement at the base of the hill, at the

**Fig. 26 – Clay Brazier from Dor –Similar Braziers found in Kaminaljuyu, Guatemala.  
Ships sailed to port of Comalcalco and took Usmacinta River inland to site.**



Artist sketch by John D. Russell

**Fig.27 - Hidden Mountain, New Mexico.**

**Sketch of Astronomical Petroglyph at summit of Hidden Mountain shows solar eclipse dated to Sept. 18, 107 BCE. The late Dr. Louis Winkler, astronomer did the computer calculations confirming the date which David Deal first saw.**



(Sketch- B. Moseley- after Deal)

**Fig. 28 -The Ten Commandment Stone carved on a huge boulder in a rock strewn ravine at the entrance to a path going up to the summit where the astronomical petroglyph is.**



(Photo – c. Z. Halpern)

entrance to the path leading to the summit is identical to the Samaritan use of "Mezuzah" stones placed at the entrance to their dwellings and originates from the commandment in Deuteronomy 6:4-9& 11:20. Samaritans set up their Decalogue stones at their gates, not on their doorposts as Jews do. Gordon has argued that the script on the Decalogue Stone is Samaritan and the stone is an ancient form of a Samaritan Mezuzah, similar to the Decalogue Stone found at Newark, Ohio.

#### **Astronomical Petroglyph, Summit of Hidden Mountain, New Mexico**

THIS ENIGMATIC carving of constellations with a solar eclipse positioned between Virgo and Libra was first dated to 107 BCE by David Deal. (59) The late astronomer Dr. Louis Winkler further analyzed the petroglyph using a canon of eclipses and Total Eclipse software. His findings were extensively documented in an article in M&D. He uncovered eclipses dating from 1540 BCE to 805 CE and found that the Sept. 18, 107 BCE eclipse date correlated to 28 Elul 3654 in the Hebrew calendar which marked the eve of the Jewish festival of the New Year or Rosh Hashana. (60)

The date of 107 BCE coincides with the revival of Jewish naval exploits in the second century BCE under the Hasmoneans, rulers of Judea and is well documented in Maccabees I & II. Their goal was to expand to the coast, re-capture key harbors and gain access to the sea. So important was the achievement of their goal that they mounted a major offensive and seven seaports were captured by these kings. The whole coast came under their control from Akko in the north to Gaza in the south.

Dor and Jaffa came under their rule again and coins were minted by them with maritime symbols.

The astronomical petroglyph carved on a rock recording a date in the second century BCE at Hidden Mountain is evidence of a voyage of Judeans to New Mexico via the Rio Grande to the Rio Puerco, a tributary that brings voyagers to within 100 feet of the mountain.

#### **The Ohio Artifacts: The Decalogue Stone and Other Artifacts**

Heated controversy still exists over these stones found in burial mounds in Newark, Ohio in 1860. The controversy continues unabated 145 years after the find.

The top stone was found encased in a stone box and was pried open to reveal the inner stone. Other stones were found in a complex of mounds covering a wide area.

( Fig. 29) shows the assemblage of stones which are in a museum in Ohio. The Decalogue stone is shown with the box in which it was encased. The encasement of the Decalogue Stone within a sealed stone box indicated that the inner stone was sacred and is similar to the Jewish tradition of the Mezuzah which is affixed to the door of a house. There is a remarkable similarity to the placement of the Decalogue Stone at Hidden Mountain, New Mexico which was placed at the entrance to a ravine leading up to an ancient encampment on the flat topped summit.

This ancient injunction appears to have been carried across the ocean to manifest itself in two widely separate communities in America; one in New Mexico and the other in Ohio.

The stone is inscribed in a somewhat strange Jewish script. There is a depiction of Moses written over the three letter name of Moses. Cyrus Gordon saw the Decalogue Stone as an example of a Jewish-Samaritan community in Ohio on a tributary of the Ohio River. (61)

Huston McCulloch has written extensively about the Newark Stones and has made the observation that a small stone bowl found with the objects has remarkable similarity to ancient stone vessels made in Judea in the 1st century. (stone vessels were considered ritually pure.) (62)

IN A RECENTLY published book by Ida May Gallagher, "Contacts with Ancient America," she points out that many of the Iberic tablets found in early Adena mounds indicate contacts with people from Spain, Portugal or North Africa. "Later Hopewell tablets point to Hebrew contact about 200CE." She asks: "Did Iberian and Hebrew traders introduce the Iberic and Old Hebrew alphabets to the Adena and Hopewell?" (63)

**Fig.29 The Ohio Artifacts**

**Artifact #1 was encased within the stone box shown here.  
This is similar to the *Mezuzah* of Jewish tradition.  
The stone bowl may well have an answer to this mystery.**



**(Photo – c. Z. Halpern)**

**Fig.30 – One of the Spirit Pond Stones from Maine**



**(Courtesy- C. Gordon-Riddles in History)**

(Adena and Hopewell are names given to the moundbuilders in America)

It is only recently that epigraphic scholars have studied the inscriptions found in mound burials in America and deciphered the alphabets on these tablets along with identifying the ancient symbols. Gallagher states that “it is thought that Southwest Iberian and Hebrew speaking peoples made contact with moundbuilding peoples as early as 100 BCE.” (64)

#### **A Norse Voyage to Maine: The Spirit Pond Stones**

Named Spirit Pond after the site where three runestones were found off a beach in Maine by Walter Eliott, this was a significant discovery. However, a major controversy erupted and Eliott was accused of a hoax and removing artifacts from state land and threatened with arrest.

On the back of one of the artifacts is the carving of a map which closely resembles the area around

Spirit Pond. (Fig.30) These stones were deciphered by Norse scholars as runic. However, the Spirit Pond Stones met the same fate as the Kensington Runestone and other artifacts; heated controversy erupted with accusations of fraud, character attacks on the finder, construction of elaborate hoax scenarios, pervasive misinformation much as the Davenport and Bat Creek Stone.

THE KENSINGTON Runestone found in Minnesota, near the great copper mining area of the Upper Michigan Peninsula has the same runic characters as the Spirit Pond Stones.

The same argument was used with the Vinland Map. The Vinland Map controversy erupted into a two continent argument about the ink, the appearance on the map of Greenland, wormholes, etc.

**A 4th Century BCE Carthaginian Voyage to America Analyzed by a Geologist  
Coin from Carthage Depicts World Map and America**

Geologist Mark McMenamin's analysis of a gold coin minted in Carthage ca. 350 BCE indicates a map of the Mediterranean area and a land mass to the west depicting America. McMenamin used computer enhanced images of gold coins minted in Carthage to analyze the coin and he has disproved previous scholars who interpreted the symbols to be Phoenician letters. His painstaking analysis found that the design on the coins is a map of the Mediterranean area and far to the west is the land mass of America. (65)

**A New Model Emerges**

Old models which characterized the impossibility of transoceanic voyages are being challenged by the latest underwater archaeological discoveries of ancient shipwrecks found deep beneath the seas and oceans.

The consensus formerly held that ancient mariners were "timid shore huggers" never

venturing into deep waters, lacking the navigational skills and seamanship to sail beyond the immediate coast and were fearful of being out of range of protective harbors. This old model of belief of the archaeologists and historians is being disproven with increasing finds of shipwrecks far from shore and in very deep waters.

In 1988 Roman ships were found in 2,600 feet deep waters between Tunisia and Sicily. Robert Ballard and Marguerite McCann used the latest search techniques such as ROV's and advanced electronic equipment to locate them. In the Skerki Bank, 80 miles from Sicily seven wrecks were found. Between Rhodes and Alexandria, the remains of shipwrecks with 2500 amphora were found in 10,000 feet deep waters, 170 miles from land. Analysis of photos of these ships by a maritime archaeologist from a nautical archaeology university indicated that the idea of timid seafaring was finished...they were as you can get from land and they were the super tankers of their time, pinnacles of technology, designed for long distance trade." (66)

In 1999, Ballard and his team located two Phoenician shipwrecks dated to the 8th century BCE in 1000 feet of water 35 miles from land off the coast of Ashkelon, Israel. These long lost shipwrecks and their cargoes litter the oceans and the seas and are giving up their secrets. The last great archaeological frontier is this history, a time capsule beneath the waters that will provide the final answers to a century old debate in this country. Were there ancient voyages and transoceanic contacts between continents?

WITH THE PASSING of the old model of ancient seafaring, a new model will emerge from the exploration of the ocean floor. The Mediterranean was the great sea highway and ships sailed through it out into the Atlantic and to the Americas. The evidence is growing and indisputable.

Artifacts found in North and South America have to be judged and evaluated from this new perspective.

## REFERENCES

1. Kahanov, Ya'akov & Linder, Elisha, 2004 The Ma'agan Mikhael Ship: The Recovery of a 2400 Year Old Merchantman, Vol. 1, pgs. 3-4
2. Kahanov, Y., Mor, Hadas & Tresman, John, 2000 The Dor/ Tantura Project, p.3
3. Linder, E. 2004 Migration & Diffusion, v. 5, p.87-89
4. Stern, Ephraim, 1994 Dor: Ruler of the Seas, p.83
5. Wachsmann, Shelly, INA/CMS Expedition (TAMU)
6. Stern, *ibid*, pg. 21
7. Fleming, Nicholas, 1971, Cities Under the Sea, pg. 73
8. Raban & Stieglitz, 1997, Phoenician Harbors in the Levant, Michmanin #11, Hecht Museum, pgs.10 & 22
9. Kahanov, 2000 The Dor/Tantura Report, pg. 1
10. Raveh, Kurt & Kingsley, Sean, 1996, The Ancient Harbor & Anchorage at Dor, Israel, pg.77
11. Morris, Sarah, 1992 Daidalos & the Origins of Greek Art, pp. 80-92
12. Kahanov & Linder, 2004, Vol. 2 pg. 245 & Vol.1, pgs. 153-155
13. Bass, George, 1975, Archaeology Under the Sea, pp. 56-59
14. Kahanov & Linder, v. 2, pp. 3-4
15. *ibid*, v.1, pg. 3
16. Personal Interview- 2004, Dr. Elisha Linder, Kibbutz Ma'agan Mihael, Israel
17. *ibid*
18. Gordon, Cyrus, 2000, A Scholar's Odyssey, pp.89-91
19. Kahanov & Linder, vol. 1, p. 3
20. Dunn, E., 2003 Paleogeographies in Delta-Alluvial Plain Setting of 3 Phoenician Harbors, Portugal, Paper #17-5, p. 1
21. Heltzer, M., 1997, On the Origin of Near Eastern Archaeological Amber, pp. 29-33
22. Raban & Stieglitz, 1993, Commerce & Culture, pp. 8-10
23. Stern, p. 80
24. *ibid*, p. 99
25. Raban & Stieglitz, p. 10 & p.22 (Heltzer)
26. Linder, E., 1971, The Maritime Texts From Ugarit: Unpublished Ph.D. Dissertation (Ann Arbor, MI)
27. Raban, Avner, 1985, Harbor Archaeology, pp.23-25
28. Stern, p. 120
29. Raban & Stieglitz, Architecture and Harbor Installations, pp.13-14
30. Hasan, E., 2004, CDNN, pgs.1-3 [www.cdnn.info/industry/i041028/i041028.html](http://www.cdnn.info/industry/i041028/i041028.html)
31. Stern, pp. 43-46
32. Ballard, Robert, 2004, Ancient Phoenician Ships Found Off Israel's Coast, [www.expedition2003.org/press/pressReleases/pr062300.php](http://www.expedition2003.org/press/pressReleases/pr062300.php)
33. *ibid*
34. Linder, E., 2001, NEARA Abstract (New England Antiquities Research Assoc., Waltham, Mass. Conference)
35. Gordon, Cyrus
36. Stern, 1998 July/Aug. Buried Treasure: The Silver Hoard From Dor, Biblical Archaeology Review, pp. 48-50
37. Gordon, 1974, Riddles in History, p.89
38. Stern, BAR, p. 51
39. Davis, D., 2003, Sailing the Open Seas, Archaeology Odyssey
40. Holum, Hohlfelder, Raban, Bull, 1988, King Herod's Dream Caesarea on the Sea, p.101
41. Gordon, Cyrus, 1971, Before Columbus, pp.89-92
42. *ibid*, p. 90

43. Gordon, Riddles, pp. 71-75
44. *ibid*, p.89
45. Guthrie, James, 2005, The Blind Men and the Elephants: The Davenport Relics Reconsidered
46. *ibid* pp. 1, 4
47. *ibid* pp. 17-18
48. *ibid* pg. 14
49. *ibid* p.5
50. Gordon, Cyrus, 1971, Before Columbus, pgs. 175-185
51. McCulloch, Huston, 1993, BAR, pgs. 82-83
52. Stieglitz, Robert, 1976, ESOP, pgs.1-5
53. Gordon, C., 1990, By Study and By Faith, pgs.67-80
54. Hristov & Genovese, 1999 Mesoamerican Evidence of Pre-Columbian Transoceanic Contacts
55. Steede, Neil, 1998, Comalcalco: An Early Classic Maya Site, pgs. 35-40
56. Stern, pg. 240
57. Stern, 240-243
58. Von Wuthenau, A., 1975, Unexpected Faces in Ancient America, pgs.68-79
59. Deal, David, The Discovery of Ancient America, pp.18-19
60. Winkler, Louis & Halpern, Zena, 2001, Migration & Diffusion Oct./Dec. .v.2 #8, pp. 68-79
61. Gordon, C., 1995, Diffusion of Near Eastern Culture in Antiquity & Byzantine Times, Orient, vol. 31, pp. 69-72 See also: Gordon, C., Riddles in History, pp. 36-37 See also The Hebrew Presence in Pre- Columbian America, 1992 NEARA Across Before Columbus. V..2.7. p.273
62. McCulloch, Huston, 1989, The Newark Hebrew Stones, Midwestern Epigraphic Journal
63. Gallagher, Ida M., 2004, Contact With Ancient America, p.58
64. *ibid*, pgs. 66-67
65. McMenamin, Mark, 2000 Jan/Feb, Migration & Diffusion vol. 1 # 1 pp.67-74

## BIBLIOGRAPHY

- Bass**, George 1975. Archaeology Beneath the Sea, Walker & Co. NY
- Davis**, Dan, 2003, Jan/Feb, Sailing the Open Seas, Archaeology Odyssey, Washington, DC
- Deal**, David, 1984, Discovery of Ancient America, Kherem La Yah Press, Irvine, CA
- Fell**, Barry 1976. America BC, Pocket Books, NY
- Fleming**, Nicholas, C. , 1971, Cities in the Sea, Doubleday, NY
- Gallagher**, Ida Jan & Dexter, Warren, 2004 Contact with Ancient America, Sovereign Terrace Books, Mt. Pleasant, SC, 29464
- Gordon**, Cyrus, 1971. Before Columbus Links Between the Old World and Ancient America, Crown. NY
- Gordon**, Cyrus, 1974. Riddles in History, Crown, NY
- Gordon**, Cyrus, 2000. A Scholar's Odyssey, SBL, Georgia
- Gordon**, Cyrus, 1995. Diffusion of Near Eastern Culture in Antiquity and Byzantine Times, Orient, v.31
- Gordon**, Cyrus, 1998. The Hebrew Presence in Pre -Columbian America, Across Before Columbus: Evidence for Transoceanic Contact with the Americas Prior to 1492. Ed. D. Gilmore & L. McElroy, NEARA Publications Edgecomb, Maine 04556
- Guthrie**, James, 2005. The Blind Men and the Elephants:The Davenport Relics Reconsidered NEARA Publications, 94 Cross Point Rd. Edgecomb, Maine 04556 [www.neara.org](http://www.neara.org)
- Hasan**, E. Muhammed, 2004, Archaeologist Hopes 3000 Year Old Wood is From Ancient Ship, Cyber Diver News Network, Hof Dor, Israel (28 Oct 2004) pgs. 1-2

- Hristov, R. & Genovis, S.** 1999, Mesoamerican Evidence of Pre-Columbian Transoceanic Contacts. *Ancient Mesoamerica* 10
- Kahanov, Y., Mor, H., Tresman, J.** 2005, The Dor/Tantura Project University of Haifa, Israel.
- Kingsley, Sean & Raveh, Kurt.** 1996, The Ancient Harbor and Anchorage at Dor, Israel; Results of the Underwater Surveys 1976- 1991, Dor Maritime Archaeology Project, BAR International Series 626
- Linder, Elisha & Raban, Avner.** 1975, Marine Archaeology, Cassell, London
- Linder, Elisha ,** 2004, April-June, vol. 5, #18, Migration & Diffusion, The Ma'agan Mikhael Ancient Ship, The Recovery of a 2,400 Year Old Merchantman
- Linder, Elisha & Kahanov, Ya'akov. ,** 2003, Ed. E. Black The Ma'agan Mikhael Ship: The Recovery of a 2400 Year Old Merchantman, Vol. 1, , Israel Exploration Society & University of Haifa, Israel
- Linder, E., Kahanov, Y.,** 2005, Ed. J. Tresman, The Ma'agan Mikhael Ship; The Recovery of a 2400 Year Old Merchantman, Final Report , Vol. 2, IES/Univ. of Haifa
- McCulloch, Huston J.** 1993, The Bat Creek Inscription: Did Judean Refugees Escape to Tennessee, Biblical Archaeology Review, Washington, DC
- McCulloch, Huston J.** 1998, The Bat Creek Stone: A Reply to Critics, Across Before Columbus? Evidence for Transoceanic Contact with the Americas Prior to 1492, Ed. D. Gilmore & L. McElroy, NEARA, Maine
- Morris, Sarah P.** 1992, Daidalos & the Origins of Greek Art, Princeton., NJ
- Raban, A.** 1985, The Ancient Harbours of Israel in Biblical Times in Harbor Archaeology: Proceedings of the First International Workshop on Ancient Mediterranean Harbours Caesarea Maritima, BAR International Series 257, Ed. A. Raban, University of Haifa
- Raban, A. & Stieglitz, R.,** 1997, Feb. Phoenician Harbors in the Levant, Michmanim #11, Hecht Museum, University of Haifa, Israel
- Stieglitz, Robert.** 1976, An Ancient Jewish Inscription From Tennessee, Epigraphic Society Occasional Publications (ESOP) v.3, no.65
- Stern, E.** 1994, Dor Ruler of the Seas: Twelve Years of Excavations at the Israelite-Phoenician Harbor Town on the Carmel Coast Israel Exploration Soc. Jerusalem
- Stern, E.** 1998 July/August, Buried Treasure: The Silver Hoard From Dor, Biblical Archaeology Review, Washington, D.C.
- Von Wuthenau, Alexander,** 1975, Unexpected Faces in Ancient America: 1500 BC – 1500 AD: The Historical Testimony of Pre-Columbian Artists, Crown. NY

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