# Why are Ships Depicted on the Lod Mosaic?

# Short historical notes on Lod

Lydda/Lod is a town situated on the coastal plain of Israel, 16 km southeast of Tel Aviv-Jaffa (**fig. 1**). The name first appears in Thutmosis III's list of Canaan towns (1465 BC). Josephus mentions that Julius Caesar returned the privileges of the Jewish population of Lydda: »... the Jews with regard to their high priest enjoy the same benefits which they have had formerly by the concession of the people and the senate, and let them enjoy the like privileges in Lydda<sup>1</sup>.

Between the First (66-73) and Second (132-136) Jewish Wars, Lydda/Lod flourished and was very prosperous. It had a large market, raised cattle, alongside the dyeing and pottery industries that prospered. Vespasian occupied the town in 68. At the time of St. Peter a large Christian community existed at Lydda:

»As Peter travelled about the country, he went to visit the Lord's people who lived in Lydda«<sup>2</sup>.

After the destruction of the Second Temple in Jerusalem, Lydda/Lod became the seat of the Sanhedrin, where famous scholars like R. Eliezer ben Hyrcanus, R. Tarfon, R. Akiba, R. Joshua ben Levi, R. Eliezer ben Kappara and R. Hama taught. After the Second Jewish War or the Bar Kochba Revolt (132-136), the Jews remained in Lydda, though their agricultural plains were destroyed. In 200 Emperor Septimius Severus established the Roman city called COLONIA LUCIA SEPTIMIA SEVERA DIOSPOLIS and the town remained partly Jewish<sup>3</sup>. During the Byzantine period, Lydda was predominantly a Christian town. Lydda also is the legendary birth place of St. George, later the patron saint of England<sup>4</sup>. Therefore, Lod was also known as Georgiopolis, as mentioned in late Byzantine and Crusader sources. Following the Arab conquest, the name Diospolis was changed to Ludd.

# The mosaic floor

During the salvage excavation carried out in 1996 at Lod on the behalf of the Israel Antiquities Authority and the Lod Mu-

- 1 Josephus, Ant. XIV, 10.6.
- 2 Acts of the Apostles 9:32
- 3 Negev/Gibson, Holy Land 303.
- 4 Negev/Gibson, Holy Land 303.
- 5 Avissar, Lod 157

nicipality, under the direction of Miriam Avissar, a beautiful and almost complete mosaic floor was discovered (17 m long and 9 m wide, c. 153 m²). It is a unique archaeological find in Israel that survived throughout the centuries in almost a complete state, despite being covered and protected only by one to 1-2,5 m of soil and debris. The mosaic floor probably belonged to the dining room (*triclinium*) of a very opulent Roman villa. Colourful pieces of frescoes in a good state of preservation that decorated the wall of the room and other parts of the villa were found within the soil that covered the mosaic floor<sup>5</sup>. Among the numerous shards scattered on the site, the archaeologists identified numerous pieces of imported amphorae, dating from the late 3<sup>rd</sup> to the beginning

**Fig. 1** Location map. – (Computer process Z. Friedman after Frank, Bible Lands, back-cover; photo H. Th. Frank).





Fig. 2 General view of the Lod mosaic; looking NE. – (Photo N. Davidov; Courtesy of Israel Antiquities Authority).

of the 4<sup>th</sup> century<sup>6</sup>. The majority of the coins found during the excavation date from the 3<sup>rd</sup> century, whereas the latest date to the 4<sup>th</sup> century<sup>7</sup>. The coins, the shards and the style of the mosaic indicate that the villa and its mosaic floor were constructed at the end of the 3<sup>rd</sup> or the beginning of the 4<sup>th</sup> century.

The designs of the mosaic floor are divided into two main carpet-like sections (fig. 2). Two rows of rounded *emblemata* 

with wild animals and birds are depicted in the upper part of the northern carpet. The main design of the northern panel comprises a large circle with an inscribed octagon. In the centre of the octagon are depicted a lion and lioness confronting each other from two mountain peaks separated by a river from which a mythological sea creature (*ketos*) emerges. Below this scene exotic African animals (an elephant, a giraffe, a rhinoceros, a tiger and a water buffalo) are depicted.

7 Avissar, Lod 157.

<sup>6</sup> Only scattered short notes were published in some journals, mainly in Hebrew. A detailed report of all aspects of the excavation has not yet been published.

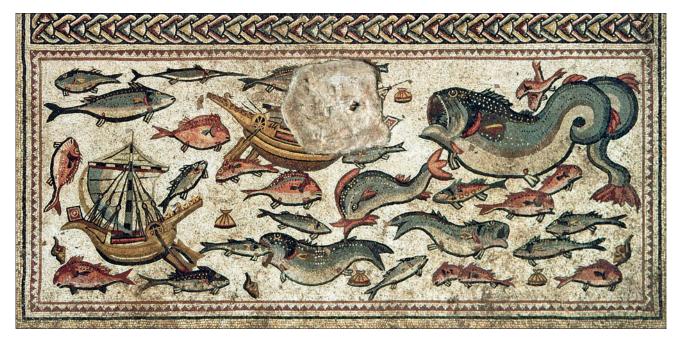


Fig. 3 The maritime frame with both ships. – (Photo N. Davidov; Courtesy of Israel Antiquities Authority).

A *kantharos* with leafy tendrils spreading out and forming spirals in different directions is flanked by a peacock on its either side set on a white background. This frame separates the northern and southern carpets, which also seems to be an optical dividing line of the room with several functions. Between the northern frame and the *kantharos* panel is depicted a wide maritime panel comprising a sea inhabited by rich fish fauna and two sailing ships (the subject of this paper) (fig. 3)<sup>8</sup>. The design of the upper frame in the southern carpet depicts different birds standing on various branches on a white background. The southern edge of the mosaic is missing. No human figure appears in the mosaic.

# The maritime panel9

The marine panel in the mosaic floor decoration is unique in the Lod villa; it shows a variety of fish fauna of different sizes and two sailing ships. Many of the fish are depicted in a realistic manner. A single dolphin diving downward is shown beneath the bottom of Ship 2, while a large fish-monster with open jaws appears in the upper right corner facing Ship 2 (fig. 3). The sea environment of the maritime scene

is depicted with white tesserae, while the fish fauna and the ships are made with a variety of hues: blue, dark blue, yellow, ochre, light and dark brown, red, grey, green and black. Several small conical features that may indicate small shells, lobster traps or some other objects are depicted between the fish fauna. No shoreline or harbour installations are depicted, thus the white background seems to indicate the open sea.

A ship rigged with fully open square sail seen from its port side appears in the lower left corner of the maritime panel (Ship 1). The second ship seen from its starboard side is depicted close to the top frame, almost in the middle of the maritime panel (fig. 3). The static positions of both Lod Ships indicate that they are anchored, although they lack any mooring or anchoring devices. The ships are not proportional to the scene, appearing quite small among the surface teeming with fish. The top ship (Ship 2) sustained some damage on its upper part by a cesspit dug during the Ottoman period 10. Ships depicted in any mosaics probably are used as symbols of vessels concurrent to the period of the mosaic surface where they are represented. Such depictions, and especially the elements of the ships, have to be studied with comparable material, which in the end will bring a better understanding of ancient ships in the Roman-Byzantine period.

<sup>8</sup> Ships depicted in mosaics in general have not been paid enough attention, nor have been researched in depth, especially from the point of view of marine archaeology. The research of ship iconography in mosaics (innovative research) began with my MA dissertation, which dealt with ship depictions in mosaics in the eastern Mediterranean, namely Israel and Jordan. This research extended throughout my PhD dissertation that looked into understanding ancient ships, their construction, propulsion and steering and types of vessels, which complement the long list of ship representations in other art forms (frescoes, graffiti, reliefs, models, coins etc.), and also supplement the data of known Roman and Byzantine shipwyrecks.

<sup>9</sup> While in the final stage of writing my PhD dissertation I received the offprint published by Haddad and Avissar (Haddad/Avissar, Suggested Reconstruction) about the ships depicted on the Lod mosaic. The interpretation and the suggested

reconstruction of Ship 2 (damaged by the Ottoman cesspit) by both authors are problematic. Haddad and Avissar referred to the damaged Ship 2 as representing a vessel that suffered a »marine trauma«, which is the opposite. This statement was misinterpreted by the previous authors because Ship 2 is anchored and did not suffer any »sea trauma« as the result of a storm at sea and therefore it was depicted with a broken mast. The reconstruction of the ship's rigging proposed by Haddad and Avissar was not properly understood and, therefore, they thought the mast had broken. This interpretation resulted from the authors' lack of knowledge and understanding of the vessel's rigging. I published a detailed article with an alternative interpretation of both ships on the mosaic and the proper depiction of the rigging of Ship 2: Friedman, Lod Mosaic Reconsidered.

<sup>10</sup> Avissar, Two Merchant Ships 48.

Fig. 4 Ship 1. – (Photo Z. Friedman)



#### Ship 1

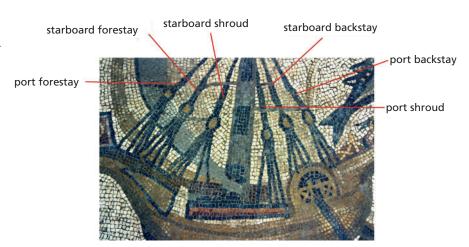
This ship has survived completely and is shown with its full rigging. Such a depiction is rarely preserved in any art, and especially in mosaics. The prow of Lod Ship 1 points to the left, thus showing its entire port side (fig. 4). The hull has a spoon-like shape. The strakes are rendered in ochre and brown tesserae. The lower part of the hull comprises three rows of black tesserae, probably indicating the pitch/bitumen coating of the bottom to make the hull watertight (fig. 4). No wale reinforcing the hull longitudinally is shown. A short plank outlined with one strip of black tesserae indicates the bulwark set above the gunwale amidships. The stempost with a pointed tip has a forward extension with a slight downward arching. A small square frame outlined with black tesserae is set above the stempost. A circle with an inscribed crosslike pattern is depicted within the purple background of the frame. The rear extended hanging poop is fenced with a lattice screen and the head of a duck looking forward projects above the fence (fig. 4).

The rigging comprises a broad tapered mast, stepped amidships, a horizontal yard and a fully open square sail billowing forward the mast and over the starboard gunwale. The alternate black and white bands of both posts indicate a symbolic composite mast and yard girdled with wooldings at evenly spaced intervals (fig. 4)<sup>11</sup>. The mast is secured in place by two forestays, two backstays and one shroud on either side. The lower end of each line splits into three to five shorter arms forming the connecting elements of the tackle lines to the gunwale. Between the lower ends of each tackle line and the splitting arms is found a small wooden block or

deadeye. This gear is outlined with one strip of black tesserae, while the field is composed of ochre or yellowish-brown tesserae, thus emphasizing the wooden texture (figs 4-5). All the tackle lines are depicted with black tesserae and clearly indicate their individual function and position. The port forestay indicated by the most left-hand line stretches from the joint point of the masthead with the yard to the top gunwale of the prow; the four split ends are attached to the port fore gunwale, just behind the lower edge of the square frame set on the prow. The starboard forestay (middle line) stretches from behind the joint of the yard and the mast to the starboard fore gunwale and its four ends are attached to the starboard fore gunwale. The line closer to the left side of the mast indicates the starboard shroud and its five split ends are attached to the starboard gunwale, slightly fore-amidships (figs 4-5). The line closer to the right side of the mast, stretching from behind the mast indicates the port shroud and the four split ends are attached to the port gunwale just before the rudder-cabin. The location of the upper end of the port shroud has been misinterpreted by the mosaicist, who either did not understand the proper setting of the lines, or he intentionally depicted the line from behind the mast, thus not altering the fore side of the mast (fig. 4). The upper end of the starboard backstay (middle line) stretching from the joint of the mast and the yard is attached to the quarter gunwale by the spit arms probably in front of the starboard ruddercabin. The port backstay (extreme right-hand line) stretching from the joint of the yard and the mast is attached to the port quarter gunwale by three split ends just aft the rudder-cabin (figs 4-5). These distorted depictions of the upper and lower ends of the tackle lines were misinterpreted by the mosaicist,

<sup>11</sup> Casson, Seamanship 69 n. 123; 232 n. 31.

**Fig. 5** Ship 1: the tackles with deadeyes. – (Photo and computer process Z. Friedman).



who probably did not understand the proper function and position of each line.

The masthead projecting above the yard also supports the triangular topsail. One lift stretching from each side of the masthead to the tips of the yardarms holds the yard; apparently they also form the leeches of the triangular topsail. A small flagstick is fixed to the tip of the masthead and a small flag blowing forward is attached at its tip (fig. 4). The large square sail created by white, ochre and grey tesserae billows before the mast and over the starboard gunwale, thus suggesting that the wind is blowing from the port-quarter or astern. The port leech is outlined by one strip of black tesserae. The backward turned port edge of the bunt was meant to give some perspective to the sail (fig. 4). The port clew seems to be attached to the port gunwale at amidships. The arching starboard leech is outlined by one strip of ochre tesserae. The halyard, brails, braces and sheets are not shown. Three to four fragmented horizontal black lines depicted on the lee face of the bunt indicate the seams or the reinforcing bands. These lines formed the base of the brail-rings sewn on the fore-face of the bunt.

The steering gear comprises a pair of rudders, whereas one oar is mounted on each quarter. The upper shaft of the port rudder projects between two vertical stanchions of the fenced side of the rudder-cabin with the barrel roof (figs 4-5). The left side of the shaft is depicted with black tesserae and the right side with dark-brown hue, thus suggesting a three dimensional appearance. The starboard rudder is indicated only by its blade projecting behind the lower stern. Both blades are broad and elongated. The lower shafts of both rudders transverse the blades longitudinally, hence indicating that each wing was inserted into a groove cut longitudinally into the shaft and then being locked by wooden treenails and bronze nails. The shoulders and the lower edges of the wings angle towards the shafts. Both longitudinal edges of each wing have shallow concave cuts. The left side of each blade is depicted by a strip of black tesserae appears to give them some perspective, or it may indicate the copper or lead sheathing to protect the blades from any damage.

#### Ship 2

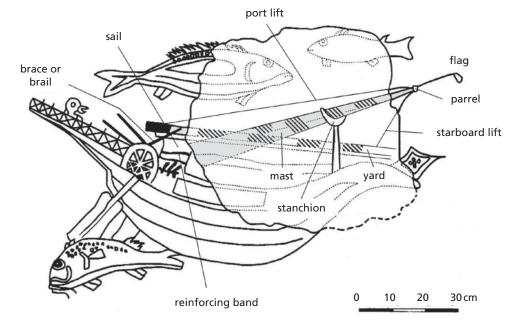
The ship is located close to the top of the frame (fig. 3). It is quite damaged, but still bears enough fragments to allow us to distinguish the hull shape and its rigging (fig. 6). The bow points to the right. The rounded spoon-shaped hull is similar to that of Ship 1 (fig. 4), but slightly longer (fig. 6). The seams between the planks are indicated by one row of black tesserae. The upper part of the starboard strakes is composed of ochre tesserae. The brownish-red tesserae used on the lower part of the ship may indicate the pitch/bitumen coating to make the hull watertight. A wide plank probably forming the bulwark is placed above the gunwale. It is outlined with one black strip and the field is made with purple tesserae. The projecting wale reinforcing the vessel longitudinally is depicted alongside the middle starboard hull. Its upper and lower edges are outlined with one strip of black tesserae. The upper part of the beam is depicted with two rows of light yellowish-ochre stones, while the middle and lower parts comprise three rows of dark ochre hues and was meant to give the wale a three-dimensional appearance (fig. 6a-b). The bow, the stempost and the rigging are damaged. A partially preserved rhomboid frame outlined with black tesserae is set above the forward extension of the stempost, similar to Ship 1. Individual white tesserae are placed within the purple background, thus creating a chequered pattern. A lattice screen surrounds the hanging poop with a rear extension and the head of a duck looking forward projects above the screen (fig. 6).

The Ottoman cesspit's cut through the mosaic affected the rigging and the fore part of the vessel. The remains of this rigging provide us with significant information as to its function and position in the ship. The mast did not survive the damage; only the masthead with a small flagstick attached to its tip, the port upper corner of the sail and a small part of the yardarm are preserved. The small ball-like element at the base of the flagstick indicates the socket attached to the tip of the masthead (fig. 6). A small flag is affixed to the tip of the flagstick. The outer lines stretching from either side of the socket towards the yardarms indicate the lifts that support

Fig. 6 Ship 2. – (Photo Z. Friedman).



**Fig. 6a** Ship 2: reconstructed sailing gear. – (Drawing Z. Friedman).



the yard (figs 6-6a). The inner lines beneath the lifts outline the masthead. The inclined position of the masthead and the flagstick projecting over the prow suggest that the mast had been retracted from the mast-step and lowered onto the deck (fig. 6a). The preserved left corner of the sail is made with grey tesserae. Three fragmented black horizontal lines depicted on the bunt beneath the yard represent the seams or the reinforcing bands. Three short vertical lines attached to the lower fragmented seam/band may indicate the robands used to bind the sail beneath the yard. The segmented black line stretching from the yardarm to the top of the barrel roof of the rudder-cabin, most probably indicates the upper end of the brace or the backstay (fig. 6a). The function of both black parallel lines behind the rudder-cabin and parallel to the upper edge of the poop lattice fence is not exactly understood.

The steering gear comprises a pair of rudders, as one oar mounted on either quarter. The port rudder is indicated only by a small part of the rectangular blade, visible between the bottom of the ship and the fin of the fish swimming below. The blade is outlined with one row of black tesserae. The shaft of the starboard rudder, outlined with one strip of black tesserae, projects through the screened opening of the rudder-cabin with its barrel roof (fig. 6-6a). It seems to be mounted forward the central stanchion of the screen. The lower ends of both shafts transverse the blades longitudinally, thus emphasizing that the wings probably were inserted into a groove cut alongside the lower shaft and then locked by wooden treenails and bronze nails. The shoulders of the wings are slightly angled towards the shaft. The longitudinal outer edges of each blades have a slightly concave shape; it is

**Fig. 7** Lowered mast on the deck of a merchantman from Sousse, Tunisia. – (After Casson, Seamanship fig. 191).



made with dark brownish-red tesserae that may suggest the copper or lead sheathing to protect the blades from damage. This colouring also may suggest a perspective view of the blades and intentionally made by the mosaicist.

#### Discussion

Although the Lod Ships are not shown with anchors or mooring devices, it does not mean that they were not anchored. Depictions of ships in any form of art and especially in mosaics (Piazzale delle Corporazioni, Ostia and the Catalogue of ships in the Althiburus mosaic, Tunisia) are not shown with anchors or mooring devices, but are static and not sailing. Although the Lod Ships are not depicted at scale, they present us with distinct details to indicate seagoing merchantmen. The broad tapered composite mast and yard, symbolically indicated by the alternating white and black strips, the billowing square sail, the triangular topsails and the projecting head of a water bird above the fenced hanging poop are typical features of Roman seagoing merchantmen. The Lod vessels probably symbolize medium size ships that could carry a cargo of 60-120 t. Such vessels had a dual purpose, to transport cargo, as well as passengers overseas, and are known from some references in ancient literature. When Josephus described one of his journeys from Caesarea Maritima to Rome, he wrote that the ship (phasolos) in which he sailed wrecked in the Adriatic Sea<sup>12</sup>. He mentions that 600 passengers and crew had to swim for their lives all night after the wreckage. He and another 79 people were lucky to be rescued by a ship from Cyrene<sup>13</sup>. Synesius, later known as the Bishop of Ptolemais (404), describes in a letter (Epist. 4) to his brother the voyage from Alexandria to Cyrene in a phasolos that nearly wrecked with its passengers and crew in the proximity of the Libyan coast 14. We learn that the vessel had a crew of 13, whereby more than half of them were Jewish sailors along with 50 passengers on board:

»The crew of twelve with the skipper made it thirteen. More than half of them were Jews... The rest were a collection of peasants, who even as recently as last year had never handled an oar... We had taken on board more than fifty passengers, about a third of them women...« 15.

Whenever studying ship depictions in any form of art and especially in mosaics, we have to be careful and try avoiding mistakes and misinterpretations. The lowered mast on the deck of Lod Ship 2 (fig. 6-6a) indicates that, when a vessel anchored for a period of time in a harbour or an anchorage, the mast was not left in its vertical position, but was lowered to the deck or even removed from the ship. A similar example with the lowered mast on the deck of a cargo ship while it was engaged in loading/unloading lead or gold ingots in the vicinity of the shore appears in a mosaic from Sousse, Tunisia (3<sup>rd</sup> century), now displayed in the Bardo Museum<sup>16</sup>. The heel of the lowered mast projects forward above the prow, while the masthead rests on a forked stanchion placed on the quarter (fig. 7). The preserved sections of Lod Ship 2 rigging allow us to reconstruct its original gearing and the position of the lowered mast on the deck. The masthead probably rested on a forked stanchion placed on the prow (fig. 6a), and reversed to that of the Sousse Ship (fig. 7). Both examples from Lod and Sousse show that, when the mast was lowered on the deck, it could be laid on either position. The static position and the lowered mast on the deck of Lod Ship 2 indicate that the vessel is anchored, although no mooring or anchoring devices are shown. The blocks or deadeyes used for stretching or securing the tackle lines are not unique representations in Lod Ship 1. A similar example comes from a merchantman depicted in the Torlonia relief, dated to the early 3<sup>rd</sup> century <sup>17</sup> (fig. 8).

The rudder-cabins with barrel-roof and lattice-fenced opening as depicted in both Lod Ships are unique representations in any ship iconography (figs 4. 6-6a). The helmsman probably sat inside the cabin and worked the rudders by long tillers (not visible in the mosaic), as we can see in other representations. The rounded and irregular openings on the starboard side of the quarter-cabin in the Torlonia Ship are assumed to show the window and the side door of the cabin. The helmsman sitting inside the cabin worked the rudders by a long tiller inserted perpendicularly into the head of each loom (fig. 8). We may assume that the rudder-cabin of the Lod Ships resem-

<sup>12</sup> Josephus, Life 3.

<sup>13</sup> Josephus, Life 3.

<sup>14</sup> Glover, Life and Letters 330-334.

<sup>15</sup> Cassson, Ships 268 n. 1.

<sup>16</sup> Ben Abed, Tunisian Mosaics 24 fig. 214.

<sup>17</sup> Casson, Seamanship fig. 144.

**Fig. 8** Deadeyes on the tackles of the Torlonia Ship. – (After Casson, Seamanship fig. 144).

ble a similar quarter-cabin as depicted in the Torlonia relief. Generally in depictions of the rudders of merchantmen and warships the shaft projects from a rounded or square oar-port at the end of an oar-box<sup>18</sup> (**fig. 7**) and not from a rudder-cabin as evidenced by both Lod Ships (**figs 4-6a**).

The square and rhomboid frames set above the prow of the two Lod vessels are quite unique elements used to indicate the ships' trademark. The most common decoration on Mediterranean seagoing merchant ships was an *oculus* or a dolphin painted or applied on either side of the lower prow just above the waterline. With careful consideration, we may suggest that the owner of the Lod Ships probably was Jewish and, therefore, followed the Jewish law that prohibited the use of any human or animal figure, or even an *oculus* decoration on the prow, and therefore chose geometric frames to mark his ships.

The Lod vessels are typical Roman *naves oneraria*, probably of medium size (60-120 t load capacity), that may be associated with the *kerkouros* or *corbita* <sup>19</sup> type, carrying *garum*, grain or other merchandise from North Africa to Rome and

other Mediterranean ports. The ships also may indicate the *phasolos* (*phaselis* in Latin) type suited for carrying passengers and cargo<sup>20</sup>.

The North African origin of the Lod Ships is suggested by a sailing ship depicted on a mosaic floor from Djemila (Cuicul), dated to the 4<sup>th</sup>-5<sup>th</sup> century<sup>21</sup> (**fig. 9**). The rounded spoon-shaped hull of this vessel is similar to the Lod Ships (figs 4. 6). The Djemila Ship does not have the outer extended stempost as on the Lod Ships. The rounded spoon-shape and the colouring of the hull of the Djemila Ship, the fully open square sail with its tackles and the rear extended fenced poop with the head of a water bird projecting above (fig. 9) are very similar to the Lod Ships (figs 4. 6). The lack of artemon rigging (fore-sail) on Lod Ship 1 indicates that such vessels generally were rigged with one main mast and sail, or they also could be rigged with the artemon mast and sail as indicated by the Djemila Ship. The Djemila Ship is sailing, as evidenced by its fully open sail billowing forward the mast and both men sited on the quarter benches, probably working the tackle lines (fig. 9).

<sup>18</sup> Casson, Seamanship figs 129. 131. 140.

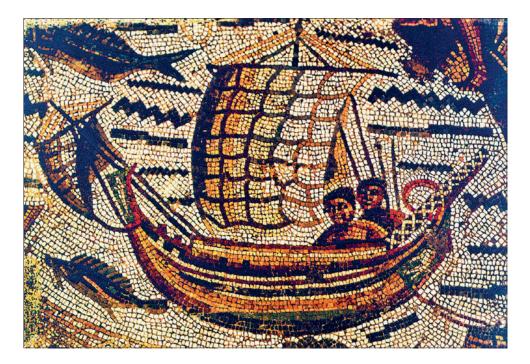
<sup>19</sup> Casson, Seamanship fig. 137: Althiburus, Catalogue of Ships.

<sup>20</sup> Phasolos (phaselis in Latin): this vessel was suitable for carrying passengers and cargo. They were in use in the Mediterranean in the 1st centuries BC and AD.

It relied on sails and had no oars; Torr, Ancient Ships 120. The larger version served as a man-of-war; Casson, Seamanship 168 n. 58 f. There are no references to indicate when such vessels ceased to sail in antiquity.

<sup>21</sup> Ferdi, Mosaïques en Algérie 150.

**Fig. 9** A sailing ship on the mosaic from Djemila, Algeria. – (After Ferdi, Mosaïques en Algérie 150).



The style and the subject decoration in the Lod maritime frame indicate a strong North African connection. A rectangular frame inhabited by very rich fish fauna from Cap Matifou, Algeria, dated to the 4<sup>th</sup>-5<sup>th</sup> century<sup>22</sup>, does not show ships, dolphins or fish-monsters, but various types of fish in realistic appearance and similar to the Lod fish. The composition of the Lod maritime frame may have been produced from similar patterns that were common decoration themes in the North African mosaics, which circulated around the Mediterranean through trade connections and the movement of mosaicists contracted in varied projects by reach patrons. The Lod Ships are probably pointing to the profession of the villa's owner, who owned ships or traded in North African ports, or else they were used as apotropai associated with the safe return of the vessels and the celebration of such a successful journey<sup>23</sup>. We may assume that at least the main mosaicist came from North Africa and brought with him patterns from his homeland workshop that were used as guidelines for the overall designs of the Lod mosaic frames, especially augmented by the maritime panel, while local artisans were employed to carry out the laying of the tesserae. The Lod Ships with their detailed gearing could not have been produced by the mosaicists, unless they were guided by a patron who possessed nautical knowledge and was familiar with similar ships, or if they had used detailed patterns of actual ships. A closer inspection of the mosaics reveals mistakes made by the workers, especially distinct in the geometric borders, thus indicating that the work was

carried out at the site; thus, the panels were not prefabricated in a workshop and then carried in trays to the designated site within the mosaic surface<sup>24</sup>.

## Conclusion

Both Lod Ships are a »time capsule« showing two vessels in two distinct positions: one with fully open sail and symbolically indicating its propulsion by the wind, while the second ship is being anchored for a period of time as shown by the mast lowered on the deck and not left vertically in its position (fig. 3). The ships are symbols of Roman merchantmen (naves oneraria) that sailed in the Mediterranean in the 4th century carrying cargo and/or passengers. They may be associated with a more specific type of kerkouroi, corbita or phasoloi. The Djemila sailing ship and the fish fauna frame from Cap Matifou augment the North African influence in the themes and the decorations of the Lod mosaic. Apparently, both ships symbolize the profession of the villa's owner, a shipper who owned or traded in ships of North African type in the Mediterranean. The ships also may have been used as apotropai associated with the safe return of the vessels and the proprietor, as well as ex-voto to celebrate such a safe homecoming. The almost complete preservation of the Lod mosaic indicates that the villa did not have a very long life and probably it was destroyed and abandoned at the end of the 4th or the beginning of the 5th century. There are no indications

during the excavation in 1996. After the excavation the mosaic was recovered for protection. It was uncovered again in the spring of 2010 and removed from its site for restoration for the travelling exhibition in the USA from October 2010 to December 2011. The mosaic returned to its new home at the museum built on the rich.

<sup>22</sup> Ferdi, Mosaïques en Algérie 166 f.

<sup>23</sup> Dunbabin, Mosaics of North Africa 126.

<sup>24</sup> Personal observations of the mosaic while studying the maritime scene in situ. Being a marine archaeologist, specializing in ship iconography on mosaics, I was fortunate to receive the permission from Mrs. Avissar to study the ships in situ

of »iconoclastic adjustments« (defacing of the fish and other animals within the mosaic panels), which suggests that the mosaic was already covered and protected by soil and debris at the time of the iconoclasm (8th century).

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# **Bibliography**

#### **Sources**

Acts of the Apostles: Hebrew-English New Covenant. Ed. by K. D. Fried (Powder Spring 2003).

Josephus, Ant. / Josephus, Life: Flavius Josephus: Complete Works. Ed. by W. William / W. S. La Sor (Michigan 1991).

Synesius, Epist.: Synésios de Cyrène. Les Belles Lettres, 2: Correspondance. Lettres I-LXIII. Ed. by A. Garzya / D. Roques (Paris <sup>2</sup>2003).

#### References

Avissar, Lod: M. Avissar, Lod – The Mosaic Floor. Hadashot Arkheologiyot 105, 1996, 157-160 (Hebrew).

Two Merchant Ships: M. Avissar, The Representation of Two Merchant Ships on a Late Roman Mosaic Floor in Lod (Lydda), Israel. In: H. Tzalas (ed.), 6<sup>th</sup> International Symposium on Ship Construction in Antiquity. Lamia, 28-30 August 1996. Proceedings. Tropis 6 (Athens 2001) 47-

Ben Abed, Tunisian Mosaics: A. Ben Abed, Tunisian Mosaics: Treasures from Roman Africa. Conservation and Cultural Heritage Series 7 (Los Angeles 2006).

Casson, Seamanship: L. Casson, Ships and Seamanship in the Ancient World (Princeton NJ 1971).

Dunbabin, Mosaics of North Africa: K. M. D. Dunbabin, The Mosaics of Roman North Africa. Studies in Iconography and Patronage (Oxford 1978).

Ferdi, Mosaïques en Algérie: S. Ferdi, Mosaïques des eaux en Algérie. Un langage mythologique des pierres (Alger 1998).

Frank, Bible Lands: H. T. Frank, Atlas of the Bible Lands. An Illustrated Atlas of the Bible (Maplewood 1990).

Friedman, Lod Mosaic Reconsidered: Z. Friedman, The Ships Depicted in the Lod Mosaic Reconsidered. International Journal of Nautical Archaeology 33/1, 2004, 164-168.

Glover, Life and Letters: T. R. Glover, Life and Letters in the Fourth Century (New York 1901, reprint 1968).

Haddad/Avissar, Suggested Reconstruction: E. Haddad / M. Avissar, A Suggested Reconstruction of One of the Merchant Ships on the Mosaic Floor in Lod (Lydda) Israel. International Journal of Nautical Archaeology 32/1, 2003, 73-77.

Negev/Gibson, Holy Land: A. Negev/S. Gibson, Archaeological Encyclopedia of the Holy Land (revised and updated) (New York, London 2001).

Torr, Ancient Ships: C. Torr, Ancient Ships (Chicago 1964).

# **Zusammenfassung / Summary**

## Warum werden Schiffe auf dem Lod-Mosaik dargestellt?

Das polychrome Fußbodenmosaik, 17 m lang und 9 m breit (ca. 153 m²), das 1966 in Lod entdeckt wurde, wurde von der Israelischen Antikenbehörde unter der Leitung von Miriam Avissar ausgegraben. Dieses nahezu komplett erhaltene Mosaik (ein seltener Fund in Israel oder anderswo im Mittelmeerraum) ist eine eklektische Sammlung von Feldern, die verschiedene Szenen darstellen: mythologische Szenen, Land- und Meeresfauna, wie auch eine seltene Darstellung einer maritimen Szene mit reicher Fischfauna und zwei Segelschiffen. Dieser Aufsatz beschreibt nicht alle Bildfelder, sondern untersucht detailliert die beiden Schiffe und ihre Bedeutung. Diese Schiffe weisen bezeichnende Merkmale auf, die zum Verständnis des römischen Schiffbaus, des Riggs und Antriebs sowie des Schiffstyps beitragen. Die Schiffe von Lod deuten zudem auf den Beruf des Villabesitzers hin und könnten auch auf die Heimat der Mosaizisten, die diese komplexen Mosaikfelder in der Villa anfertigten, hinweisen.

Übersetzung: V. Tsamakda

#### Why are Ships Depicted in the Lod Mosaic?

The polychrome mosaic pavement revealed in 1996 at Lod, 17 m long and 9 m wide (c. 153 m²), was excavated by the Israel Antiquities Authority under the direction of Miriam Avissar. This almost complete mosaic (a rare find in Israel or elsewhere in the Mediterranean) is an eclectic collection of panels depicting various scenes: mythological, land and sea fauna, as well as a rare representation of a maritime scene inhabited by rich fish fauna and two sailing ships. This paper will not describe all the panels, but will study in detail both ships and their meaning. These vessels have indicative features that will help us to understanding Roman shipbuilding, their rigging and propulsion and type of vessel. The Lod Ships also hint at the profession of the villa's owner, as well as suggesting the homeland of the mosaicists who produced these complex mosaic panels in the villa.