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 **Vehbi Koç Vakfı**

THE SHIPS DEPICTED ON THE KELENDERİS MOSAIC*

Zaraza FRIEDMAN**

Özet

Kelenderis Mozaiği Üzerindeki Gemi Betimlemeleri

Günümüzde Aydıncık olarak bilinen Kelenderis antik kenti, Mersin ili sınırlarında yer almakta olup Küçük Asya'nın Akdeniz kıyılarındaki limanlarından biridir. Kent sahip olduğu doğal körfez ve kıyıları sayesinde Antik Çağ'dan bu güne Doğu Akdeniz Bölgesi'ndeki önemli demirleme yerlerinden biri olmuştur. Kelenderis, Orta Anadolu Paltosu'na vadilerden geçen yollar ile bağlanmasının yanı sıra sahip olduğu limanı vasıtasıyla Kilikya'dan Kıbrıs'a ve Akdeniz kıyılarındaki ülkelere ulaşım olanağı sunmaktadır.

1989 ve 1992 yılları arasında kentin mevcut limanı yakınında yapılan kazılarda Arkaik Dönem'den Geç Bizans Dönemi'ne kadar yerleşimin devam ettiği ortaya çıkarılmıştır. Bu kazılarda KI-111 plankaresi içinde 12.00 m. uzunlukta ve 3.20 m. genişlikte bir mozaik bulunmuştur. Mozaiğin, yaklaşık 1/3'lük bölümünde (3.1x3.1 m. ölçülerde) büyük bir geminin liman içinde demirlemesi resmedilmiş olup, kalan 2/3'lük bölümünde geometrik bezemeler bulunmaktadır.

Kıçtan halatla bağlanmış yelkenli ve kürekli botlara sahip bu gemiler denizcilik arkeolojisi bakışı içinde ilk kez yazarın kendisi tarafından doktora tezinde (2003) değerlendirilmiştir. Bu makalenin amacı konumuz olan mozaikte yer alan araçların tiplerinin tanımlanmasıdır. Bunların tanımlanması ile özellikle mozaikler ve diğer sanatlardaki gemi ikonografisinin detaylarının anlaşılması sağlanacaktır.

Anahtar Kelimeler: Kelenderis, Mozaik, Gemiler, Liman, Liman Arkeolojisi.

Location and a Short History of Kelenderis

The ancient Kelenderis known today by the name Aydıncık (previously Gilindire) is located in the province of Mersin, on the Mersin-Antalya D 400 highway, which also is a port of the southern Asia Minor coast on the Mediterranean (Fig. 1). The site is located in the central part of the Rough Cilicia, known as Tracheia or Aspera¹. The natural bay and the coast provide a significant anchorage in the eastern Mediterranean since antiquity. Kelenderis was connected with the Central Anatolian Plateau through passages in the valleys but mainly it was the port which linked the southern Cilicia with Cyprus and other countries lying on the Mediterranean coasts. The land around the ancient city was not adequate for farming, or other agricultural activities. On the plateau behind the hills there are vineyards, olive plantations and stockbreeding². Timbers, mainly cedar and pine growing on the slopes of the Taurus Mountain Range, which were essential materials for shipbuilding and other constructions in antiquity, provided one of the important traded products throughout the centuries and even today. The topography of the city

* I thank Professor Levent Zoroğlu for giving me the permission to use the harbor scene mosaic with the ships in my PhD dissertation.

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¹ Zoroğlu 2007, 68.

² Zoroğlu 2007, 68.

was not suited to extend the settlement in antiquity and thus developing the land communication. Therefore the connection with other countries had been mostly made by the sea way. The port being a transit site between the eastern and western Mediterranean, formed an important overseas trade lane. Later in the Roman period the port became insufficient for big fleets and the city lost of its importance. Nowadays Kelenderis bestows a safe shelter for yachts sailing in the eastern Mediterranean³.

The Cilician Harbor

Since its early days, Kelenderis was the harbor of the mountainous area of Cilicia that connected with Cyprus and other harbors in the Mediterranean. Voyagers who preferred the sea route to reach the southern coast of Asia Minor sailed to Kelenderis. They described some of the ruined fortifications, towers, graves, the theatre, the harbor-bath, aqueducts and few cisterns⁴. Captain Beaufort visited the harbors of Cilicia in 1811 – 1812 and prepared a map which also shows the location of Kelenderis (Fig. 2). Barlett drew a panorama of the harbor with a large tower on the edge of the peninsula (Fig. 3). The ruins today are overlaid by the expanding modern town. Ancient fortifications may still be traced around the modern lighthouse, on the promontory which forms the harbor.

The Harbor Mosaic

The earliest settlements of Kelenderis were probably located on the peninsula. Later, the city extended to the west of the harbor. The excavations carried out since 1987 near the harbor revealed a continuous inhabited area from the archaic period to late antiquity. Additional excavations were made in 1992 and on this occasion a beautiful mosaic was unearthed in Square K I.111 (Fig. 4)⁵. Indicative historical layers of Kelenderis were revealed in the stratigraphy of this square⁶. The mosaic pavement measuring nearly 12m in length and 3.1m in width was set above the top layer of Square K I.111. A floral border surrounding the entire mosaic comprises lotus buds. The field is divided into two parts, one-third (the top, towards the harbor) comprises the harbor scene (3.1 x 3.1m)⁷ and the other two-thirds are decorated with geometric patterns (Fig. 5). The harbor panel seems to emphasize the main decoration of the mosaic. The scene is depicted in a combined view of low perspective and bird's-eye view with the main focus on the large sailing ship anchored within the port (Fig. 6). The harbor comprises a long and straight quay (on the lower panel), and an arched colonnade (stoa) following the shape of the shore (upper part). On the lower quay are shown different buildings, enclosed by crenellated city-walls. To provide the panoramic view of the harbor, the mosaicist laid down the buildings on the quay below. The structure with a tall arched façade and a narrow sloping landing place rendered with black tesserae, placed in the lower left corner, probably indicates the ship-shed (Fig. 6). Other buildings include a tavern with propylon façade and pitched tile roof, two structures with crenellated tops, a double arched gate, a square tower with a crenellated top, and an additional structure with a pitched roof. These structures may be associated with the varied administration and custom offices of the harbor. The arched colonnade (stoa) topped by tiles roof is reached from the quay, to the left, by five steps through an arched entrance (Fig. 6). The three-arched structure with large windows, behind the stoa, in the left top corner, probably indicates the harbor's baths or a church.

³ Further information in: Zoroğlu 1994a, *passim*. One of the first references of Kelenderis is made by Pliny *NH*, V.xxii.192. The southern coast of Cilicia comprising Celenderis and Nagidos were mentioned as being Samian colonies; Pomponius Mela I.77, in: Romer 1998, 58 and Mitford 1976, 445. The excavations carried out from 1987 to 1992 by Prof. Dr. Levent Zoroğlu from the Selçuk University, Konya, revealed the earliest living period of Kelenderis; Evrin – Zoroğlu et al. 2005, 135-140. Later periods in Kelenderis history, in: Mitford 1976, 445.

⁴ Zoroğlu 2007, 71.

⁵ Zoroğlu 1995, 189-197, figs. 1-4, 12-14.

⁶ Personal communication with Prof. Dr. L. Zoroğlu, September 2000.

⁷ The study and measurements of the harbor panel mosaic were undertaken by the present author *in situ*, in August 2007, during the visiting invitation by Prof. Dr. Levent Zoroğlu to join the excavation season and also to study the harbor mosaic *in situ*.

The function of the building complex paved with this almost-intact mosaic is not clear and Prof. Zoroğlu has been unable so far to identify it yet. He suggested that the mosaic probably dates to the 5th – 6th century CE, based on comparison of the Kelenderis harbor scene with other mosaics depicting similar themes, and the archaeological stratigraphy of the site⁸. He also assumed that the mosaic probably depicts the real harbor of Kelenderis dated to the period of the mosaic. The remains of the baths located to the north-west of the harbor, resemble the structure with the three arched windows depicted in the top left corner of the mosaic. The topography of the actual harbor seems to be similar with the illustration within the mosaic⁹. The straight lower quay in the mosaic may indicate the remains of the western quay beneath the inner side of the peninsula¹⁰.

The Water Crafts

Within the semi-circular harbor is depicted a very large sailing ship seen from its stern and towing two smaller boats, one of which is rigged with a fully open quadrilateral sail, while the other is a rowboat minus oars (Fig. 6). The scene is viewed from the harbor's entrance, though suggesting that the mosaicist viewed the scene from a boat anchored in the open sea and facing the entrance. The towing or mooring line of each boat is looped on either side of the large ship's stern. Both boats are seen from the port side with their prows pointing to the stern of the large sailing ship.

The Large Sailing Ship

The ship has a long and broad hull, evidenced by the full rounded stern (Figs. 7, 7a). It is depicted in a distorted perspective, seen from below the port quarter. The bow facing the shore appears close to it. Apparently, the mosaicist turned the bow towards the port side, thus viewing it in the same plane with the port hull. The raised stempost is outlined with one row of black tesserae and the field is made with ochre stones. A short vertical thin black spar topped by a small flag or bird's head adornment is attached to the tip of the stempost. On the port side of the hull are depicted four parallel long strakes rendered with white, ochre and dark brown tesserae, while the seams are made with one row of black stones. On either side of the stempost is depicted a white trapezoidal wide board that emphasizes the sides of the stem. The dark-brown coloring of the lower part of the hull may indicate the pitch or bitumen coating to make the vessel watertight and also to protect it from the *teredo navalis* (ship worms). Apparently the upper port aft-strake is widened and forms a wing-like aft extension that houses the port steering-oar (Figs. 7, 7a). The wing and the port stern suffered some damages. The distorted broad rounded stern is depicted with yellow, dark-brown and white tesserae. The wide sternpost seems to divide the stern into two parts, each made with almost a straight panel, thus resembling transom boards. The edge of the starboard aft-wing extension was misinterpreted by the mosaicist, who depicted it as an additional sternpost. The tow or mooring line of the sailing-boat is looped around the upper tip of the starboard aft-wing, while the line of the rowboat is looped around the loom of the port steering-oar¹¹. A large rectangular cabin is placed on the mid-deck; it is outlined by a wide strip of yellowish, dark brown and black tesserae, whereas the starboard side is rendered with white and pink hues. Five short bits, each made with two vertical rows of dark brown-ochre tesserae are depicted on the port fore-gunwale (Fig. 8).

The ship is rigged with a very wide fully open quadrilateral sail. The head of the sail is attached to a long thin and slightly arched yard by brail-fairleads; the yard is outlined by one row of black tesserae on its upper part, while the

⁸ Zoroğlu 1996, 266.

⁹ Zoroğlu 1996, 266.

¹⁰ Personal observation during the survey of the harbor and the mosaic, when I visited Kelenderis at the invitation of Prof. Dr. Levent Zoroğlu, in 2007.

¹¹ Friedman – Zoroğlu 2006, 110.

lower part is made with light brown stones. Its length appears to equal the length of the ship, thus indicating that it is almost parallel to the deck. The yard is attached to the fore side of the masthead by a parrel, but misses the lifts (Figs. 7, 7a). The port yardarm is lowered over the fore deck and the starboard arm is raised above the stern. The tip of the masthead is adorned or covered by a black conical cap with a forward bent tip. Many examples of ship iconography show small banners or flags attached to the tip of the masthead to indicate the wind direction and/or for festive occasions; e.g. several of the vessels depicted on the floor of the shippers and traders' offices at Piazzale delle Corporazioni, Ostia, Italy¹². The Kelenderis sailing ship misses such banners or flags. The cap on the masthead may indicate some decoration or a symbolic lantern, or it may provide protection against damages.

The tapered vertical mast of the Kelenderis ship is stepped a bit forward, with a slight backward rake. Only the lower part of the pole is visible between the starboard gunwale and the middle part of the cabin; this depiction is not correct, it suggests that the mast is attached lengthwise to the middle starboard side of the cabin and seen as an X-Ray image. Actually the mast should go through the cabin's interior and projecting above its roof. The upper mast pole seen as a shade on the lee side of the bunt (a distorted depiction) is rendered by hues of white and light brown tesserae, while the right side is outlined by one row of black stones. On the lower part of the mast there are two black vertical and horizontal lines, probably indicating two lateral stanchions and the ropes for bracing the timbers giving extra support to the lower mast (Fig. 9). Two slightly parallel lines rendered with black tesserae, stretching between the masthead and the port quarter indicates the double-lines backstay. Their lower ends go through two blocks or deadeyes, one attached to the ends of the lines and the second is mounted above the quarter gunwale (Fig. 9). Due to the distorted depiction of the stern, it appears that the backstay may represent the shrouds, but the opposite is the case. The angled line stretching from the masthead to the tip of the port stem is the forestay. Both stays form the standing rigging to secure the mast in place.

The quadrilateral sail billowing forward is viewed from its lee face, thus symbolically indicating that the wind blows from astern or the port quarter. The port leech is rendered with brownish and black tesserae and the starboard leech with a black strip. The bunt is depicted with white, pink and light orange hues. Several longitudinal lines of light reddish-brown tesserae are depicted on the lee face of the sail, probably indicating the shadows of the actual brails running vertically on the fore face of the bunt. On the upper part of the sail, beneath the yard, is depicted a long black angled line with sixteen vertical short strips attached beneath (Figs. 7, 7a). This line indicates a reef-band with the reef-points sown on the lee face of the sail. The short black reef-points were used to hoist the sail when it was furled to the yard. Such an element is a rare representation in any arts.

The steering gear consists of two large steering oars, one mounted on either quarter. The right side of both shafts is outlined with a row of black tesserae while the field is made with dark brown hues, thus giving it a realistic appearance. The shaft of the port-oar seems to be mounted behind the aft-wing extension and probably laid on the cross-beams supporting the wing, while the starboard shaft appears to be laid against the inner side of the starboard aft-wing, and being supported in the same way as the port shaft (Figs. 7, 7a). Their lower ends transverse the blades longitudinally, thus indicating that each blade comprises two wings possibly inserted in a groove cut alongside the lower shaft. The elongated blades have rounded shoulders, while their lower ends angle towards the shafts. Beneath the shoulder of both blades is depicted a single horizontal white strip, probably indicating some kind of reinforcement, or a decoration resembling the preserved fashion on the oars of the Pharaonic Egyptian ships since the Middle Kingdom. Undulating white strips crossing the face of the submerged blades indicate a rough sea. The white single tesserae depicted within these white strips may indicate the foam of the waves breaking on the submerged blades.

¹² Friedman 2001, figs. 9-11, 195-196; Friedman 2011, figs. 3.7.11, 99; 3.7.14, 102; 3.7.15, 103; 3.7.21, 108; 3.7.22, 109; 3.7.29, 115; 3.7.30, 116; 3.7.32, 117; 3.7.33, 118; 3.7.35, 120, 3.7.35, 121; 3.7.38, 123.

The Boats

Astern of the large sailing ship two small boats are towed or moored (Figs. 7, 7a). The upper craft is a sailing-boat, depicted with its fully open quadrilateral sail, while the lower one is a rowboat minus the oars. A tow or mooring line secures each boat to the stern of the large sailing ship. The sailing-boat is seen from above in bird eye's-view, while the open sail is viewed from its lee side (Fig. 10). The elongated banana shaped hull has a pointed stem and a rounded raised stern. The gunwale is outlined with one row of light yellowish tesserae. The fore and aft ends are partly decked at the gunwale level. Four thwarts rendered with dark brown tesserae are set across the gunwale. Due to the bird eye's view of the hull from above, not much is visible of its sides. The top strake, visible on the port side is depicted with dark reddish-brown tesserae, while the strake beneath is indicated by a black strip (Fig. 10). This coloring may indicate the pitch or bitumen coating to make the hull watertight and also protect it from the *teredo navalis* (ship worms). The sailing rig is very similar to that of the large sailing ship, but much reduced in its size. It comprises a fully open quadrilateral sail viewed from its lee side. The rounded vertical mast stepped amidships is rendered with light and dark brown tesserae; it is secured in place by the forestay stretching from the masthead to the tip of the bow, and the double-lines backstay, stretching from beneath the yard to the port quarter gunwale (Fig. 10). The tip of the masthead projecting above yard seems to be covered by a black conical cap with a forward bent rounded tip, and resembling the same masthead decoration of the large sailing-ship. A slightly downward curving yard is secured by the parrel indicated by the white loop surrounding the masthead just above the yard (Fig. 10). The lifts are missing. The length of the yard equals the length of the hull, thus indicating that the sailing rig is parallel to the deck. The tip of the starboard yardarm and the upper corner of the sail are damaged. The sail is rendered with white and light brown tesserae. The head of the sail is attached to the yard by brail-fairleads. The port leech is outlined by black tesserae. The tack of the starboard sheet, pulled backwards, seems to coil around the tip of the sternpost (Fig. 10). The foot of the sail is hidden by the starboard gunwale, due to the billowing of the sail on that side, suggesting symbolically that the wind blows from the port quarter. On the upper part of the sail is depicted a slightly angled black reef-band with nine short vertical reef-points attached beneath. This element is very similar to the one depicted on the sail of the large sailing ship (Figs. 7, 7a). These reef-points were used to hoist the furled sail to the yard, when the sailing rig was not used. The static position, and the tow or mooring line looped around the upper tip of the port wing of the sailing ship augment that the boat is not sailing rather it is moored (Figs. 7, 7a).

The tow or mooring line of the small rowboat is looped around the upper end of the port oar's loom (Figs. 7, 7a). The hull is very similar to that of the sailing-boat, but slightly shorter (Fig. 10). The boat is seen from above in bird-eye's view. Apparently the rounded end of this boat, facing the stern of the large sailing ship may indicate an angled transom stern, while the pointed end is the stem (Fig. 11). The bow and the stern are partly decked above the gunwale. Two thwarts are placed across the hull. The part-decks and the thwarts are rendered with dark brown tesserae. Both boats appear to be the ship's boats towed astern, whereas they lack their steering and rowing gear. The water within the harbor is not calm as indicated by the short strips depicted in a crisscross pattern, probably shown intentionally by the mosaicist who wanted to give some "dramatic effect" to the harbor scene. This depiction is anachronistic, because in a protected harbor basin the water body is calm with almost no waves, and providing the adequate protection for the ships anchored within such basins.

Discussion

The Kelenderis harbor panel described above is a rare representation of such complex scene, especially in mosaics from Turkey. Depictions of harbor scenes with waterfront colonnades with pitched tile roofs following the shore line and boats engaged in fishing activities were common decorations in Nilotic scenes. They were popular themes on wall paintings at Pompeii and in the villas around the Bay of Naples. One of the earliest depictions of a harbor scene in mosaics with an arching colonnade facing the water front is found in the mosaic floor of the tepidarium

(2.93 x 1.2m), in the Nile Villa at Leptis Magna, dated to the 2nd century CE (Fig. 12). The villa and the mosaic were discovered and excavated between 1916 and 1939¹³. The harbor is seen from behind the colonnade, as being viewed from inter-land towards the sea. The depiction in bird eye's view and lower perspective, suggest that the mosaicist wanted to give a three dimensional appearance to the scene. The arched shore is emphasized by the colonnade extending on the right-hand upper panel. A perpendicular jetty extending into the harbor basin is reached through the entrance of the taller structure flanked by two columns with Ionic capitals and topped by a pitch roof with a triangular tympanon; this structure is placed almost in the center of the upper colonnade. Within the harbor, facing the inner colonnade there are three upraised masts, probably indicating three ships anchored alongside the quay. Only the top part of the masts and the yards are visible above the roof of the colonnade. The sails are furled beneath the yards and the masts are still stepped in their vertical position. The standing rig of each vessel comprises the fore-and-back stays and the shrouds. The yards are supported by lifts stretching from each masthead to the tips of the yardarms. The braces or the sheets of each sail hang vertically to the deck. At the tip of two mastheads is attached a small flag that indicates the wind direction. The maritime scene is inhabited by putti engaged in fishing activities; they are all winged, and are much larger and not proportional to the harbor scene. Two putti in the larger sailing ship (with a projecting pointed cutwater) sail towards the harbor (Fig. 12). The billowing sail appears to be made of two bunts, probably a misinterpretation of the mosaicist, or thus he wanted to emphasis the billowing sail forwards. At the tip of each yardarm is attached a small strip or a short narrow flag billowing forward, thus emphasizing that the wind blows from astern or the port quarter. The tapered mast is stepped amidships. It is secured in place by the standing rig comprising a forestay stretching from the masthead to the stempost, which appears to passes between the partitions of the sail. The almost vertical line stretching from the the starboard tip of the yard to the aft point of the quarter deck may indicate the starboard brace (Fig. 12). The vertical line parallel to the right side of the mast may indicate the halyard used to lower or raise the yard and the sail. Both parallel lines to the left side of the mast may indicate the shrouds. The starboard sheet stretches behind the head of the sited putto facing the mast, whereas its lower end is tight to the quarter gunwale. The port sheet is probably tight to the quarter gunwale. The sailing rig also comprises the triangular topsail set above the yard. Likewise the ship is shown with its rowing and steering oars. The shafts of fifteen oars project from beneath the lower edge of the outrigger plank attached to the starboard gunwale. The blades of the oars are submerged beneath the water. The starboard steering oar is symbolically indicated by the short shaft projecting through a square oarport. The broad blade has rounded shoulders and its lower end has a horizontal cut. The same rowing and steering arrangement was true on the port side. We may deduce that the vessel was rowed by thirty oars, each worked by a sited rower on the bench beneath the gunwale, and steered by two steering oars worked by the sited helmsman on a raised quarter bench. The rowoars are symbolic; no rower or helmsman are shown to work them. This ship is a Roman merchantman built with a hull of c. 20m long and 4-5m broad, (introduce the footnote): The size of the vessel was deduced from the 15 rows per side. The space between one rower to another is 2 cubits (c. 90-100 cm). and propelled by two types of gearing, sailing rig used with favorable winds, and rowing oars used when the winds ceased and/or entering/leaving a harbor. An oculus with eyelashes is depicted on the side of the starboard stem. A similar oculus was true on the port stem. The sternpost is adorned by a stylized aplaston. Both winged putti are symbolic representations of the crew. Neither of them is engaged to work the rowing or the sailing gear. Apparently, the mosaicist intended to put the focal point on this ship (Fig. 12). Other examples, illustrating a harbor scene with waterfront colonnade and adjacent ships are found in the maritime panels of glass opus sectile from Kenchreai, in Greece (4th century CE)¹⁴, in Room 29¹⁵

¹³ Aurigemma 1960, 48.

¹⁴ Ibrahim – Scranton – Brill, 1976, figs. XVI, XVII, XVII and XIX. The panels dated to 350 – 375 CE, were found underwater in the building where they were meant to decorate the walls. A severe earthquake struck the site during the restoration of the building and the great destruction led to its abandonment. Detailed study of these maritime panels and the vessels, in: Friedman, 2011, 50-68.

¹⁵ Carandini – Ricci – de Vos 1982, pl. XXVII.

and in the semi-circle atrium¹⁶, at Piazza Armerina, Sicily (early 4th century CE)¹⁷. The waterfront colonnades and some of the structures in the Kelenderis and the Kenchreai mosaics have some similarities. The harbor scene in the Nile mosaic from Leptis Magna and the large ship sailing into the harbor are not similar to the Kelenderis harbor mosaic, rather the thematic of the mosaic is alike. Neither the Kelenderis large sailing vessel is similar to the Leptis Magna vessel with the projecting pointed cutwater. The Leptis Magna sailing ship is depicted from its starboard side and lacks any perspective view. Only the sided putti on either side of the mast, rendered almost realistically, suggest a three-dimensional view of the sailing ship. The Kelenderis vessel has rounded ends and lacks the projecting pointed cutwater. No human figure is associated with the Kelenderis sailing ship or the harbor scene. The ship is depicted only with its sailing gear; probably four to eight auxiliary rowers were among the gear carried on board and they may have been used when entering/leaving the harbor or when the winds ceased and the sailing rig comprised a burden. The oculus is not rendered on the stem of the Kelenderis sailing ship. To give perspectives to the Kelenderis harbor scene, the mosaicist made attempts of fore-shortening technique that resulted in quite distorted representations. These distortions mostly are emphasized by the prow of the large sailing ship seen almost in the same plane with the port hull, and its full stern (Figs. 7, 7a). The misinterpretation of the starboard aft-wing edge and the distorted stern resulted in a depiction that any viewer may see two transom boards between two sternposts, whereas the proper depictions may refer to a broad stern and a wide square shaped sternpost.

The Kelenderis large sailing ship is depicted with an intricate sail (Figs. 7, 7a). The forward billowing bunt symbolically indicates that the wind blows from astern or from the port quarter. The shortened port side and the fully open starboard side of the large quadrilateral sail apparently point to the mosaicist's intention of showing the vessel and the harbor scene in perspective view. The pronounced lower rake of the port yardarm to the bow and the shortened leech may also suggest a lateen sail, but the opposite is the case. The angled reef-band with the sixteen reef-points is thought to be a distinct element of a lateen rig, especially that not much is known about this type of rigging in the 5th – 6th century CE¹⁸. The sail of the large sailing ship is an elongated quadrilateral bunt apparently set diagonally to the hull (indicating a fore-and-aft sail) and not parallel as would be expected in a vessel rigged with a lateen sail; the starboard sheet stretching backward is attached to the starboard quarter gunwale, which also justifies a square sail rigging. The angled reef-band was intentionally made by the mosaicist to emphasize the perspective and to endorse a three-dimensional appearance of the billowing sail forward. Apparently an additional reef-band with the seventeen reef-points was sewn on the lower lee face of the bunt. The free foot of sail is in the process of furling whereas the lower reef-points already hoist it (Figs. 7, 7a). Bowen Le Baron mentioned that when dipping the lug with short luff, the tack is set forward and then the sail appears to be triangular from a distance. Such a sail could be copied by any artist as being almost triangular, thus an indicator of a lateen sail¹⁹. The sail of the Kelenderis large sailing vessel apparently is similar to LeBaron's observation. Such an image is augmented by the Kyrenia Liberty's trail sailing in the harbor of Larnaka, Cyprus (Fig. 13). In a square rig the mast is generally stepped amidships. The Kelenderis ship shows clearly the function of the standing rigging and the bracing timbers at the lower end of the mast. The mast-partners (bracing-timbers) of the Kelenderis ship is augmented by the Black Sea Shipwreck D, which still carries the intact vertical mast stepped amidships (4th century CE). Adjacent to the lower part of the mast was revealed the upper part of the bracing-timber with some rope still coiled around (Fig. 14)²⁰. The ship is still submerged on the sea bottom at the depth of -320 m.

¹⁶ Carandini – Ricci – de Vos 1982, pl. XXXVII. These maritime scenes and the vessels were studied in detail by the present author, in: Friedman 2011, 164-158.

¹⁷ These maritime scenes and the vessels were studied in detail by the present author, in: Friedman 2011, 134-158.

¹⁸ Friedman – Zoroğlu 2006, 114, 115 and n. 1.

¹⁹ Bowen LeBaron 1956, 241.

²⁰ Ward – Ballard 2004, fig. 12a, 10; Friedman – Zoroğlu 2006, fig. 5, 111.

The static view of the Kelenderis vessels suggest that they are anchored rather than sailing, though that no anchor or mooring lines are shown. The vessels and the harbor scene lack any human figures. Apparently the large vessel is anchored in the inner harbor's basin close to the entrance where the water was deep enough to accommodate the ship's draught. This observation is also emphasized by both steering oars hanging freely on either quarter with a backward rake; in shallow waters the steering oars would break and therefore they had to be lifted or removed. Both sailing and row boats towed astern the large sailing ship indicate their function, ordinarily used for communicating with the shore when the ship was anchored off shore²¹. They were used to transport the passengers from the large ship to the shore or vice-versa. The thwarts in both boats indicate that only passengers could be transported in them along with their personal belongings. Carrying cargo in such boats was inefficient because the thwarts limited the hold capacity.

There are many ancient written sources referring to large merchant vessels towing a small boat astern. Apparently the Kelenderis large ship represents a late Roman merchantman that could carry cargo and passengers as well. The large cabin on the mid-deck could accommodate passengers, the crew and some cargo as well. This ship may be associated with a more specific type known as phaselos, especially suited to carry travelers as well as cargo²². They were in use in the Mediterranean in the 1st century BCE. The Kelenderis mosaic was dated to the 5th - 6th century CE. There are no indications or any written references of phaseloi ships used in later periods. Traditional construction techniques of ancient ships were maintained for very long periods without major changes. We may assume that the Kelenderis sailing ship represents a phaselos type that continued to be built and sailing during the 5th - 6th centuries CE in the eastern Mediterranean.

Conclusion

The Kelenderis harbor mosaic is unique, especially in the mosaic themes in Turkey. It provides us with significant details that are indicative to our understanding of ship iconography in any arts and especially in mosaics. Due to the complexity of the harbor scene the mosaicist used two kinds of illustrations, lower perspective and bird-eye's view, which resulted in some distortions, especially distinct in the large sailing ship and particularly its sail, as well as the laid building on the straight lower quay (Fig. 6). The fore-shortening technique used by the mosaicist, and showing the bow of the large sailing ship close to the quay is inaccurate because it would be impossible for such a large vessel to anchor in the vicinity of the quay where the water depth would be too shallow for its draught. The angled yard and reef-band with the sixteen reef-points, shortened port leech and fully open starboard leech are thought by many to suggest a lateen rig of the large sailing vessel. The evidences presented above show the opposite. The angled reef-band could not be taken as a conclusive evidence for a lateen rig. This element is typical for the square rig to reef the sail beneath the yard when a ship is anchored or moored, or when the wind conditions were not favorable to use this rigging. The sailing merchantman used to embark exotic African animals to be transported to Rome, and depicted in the Dermech mosaic from Carthage (dated 4th century CE), is shown with its square sail furled to the yard²³. The free hanging lower ends of the reef-points augment that the reef-bands and points were an integral element of the square/quadrilateral sail of ships dated to the 4th - 6th centuries CE. A similar reef-band and reef-points are depicted on the square bunt of the Kelenderis small sailing-boat, neither parallel to the yard or to the head of the sail; it was meant to indicate the perspective view of the vessel, as well as augmenting that this element was typical for square sails. The yard and the billowing bunt of the Kelenderis large sailing ship are set almost diagonally to the sheer of the vessel and not parallel as expected in a lateen rig. Bowen²⁴

²¹ Torr 1964, 103 and n. 226.

²² Torr 1964, 120.

²³ Blanchard-Lemeé et al., 1996, fig. 158, 159.

²⁴ See note 19, above.

mentioned that when dipping a lug with short luff, the tack is set forward and then the sail appears to be triangular from a distance. Such a sail could be copied by any artist as being almost triangular, which is assumed to indicate a lateen sail. The Kelenderis sail is similar to Bowen's observation, as also augmented by the Kyrenia Liberty's trial sailing (Fig. 13). The intention of the mosaicist who produced the Kelenderis harbor mosaic was to show a common late Roman merchantman with a full rounded stern and quadrilateral sail true to the period of the mosaic surface (5th – 6th century CE). The Kelenderis sailing ship represents phaselos type, used to transport passengers and cargo that continued to be built and sailing during the 5th – 6th centuries CE in the eastern Mediterranean. The sailing and the row boats are the ship's boats used to carry passengers and cargos from/to the ship to/from the shore when the vessel was anchored in open sea where the depth suited the vessel's draught, and the steering oars could be left in place hanging freely on either quarter. This harbor scene is a sophisticated representation of the complex activities carried out in such sites. The structures within the harbor scene mosaic may augment the complex constructions at Kelenderis through further studies in a different context.

With careful consideration, and the detailed study of the Kelenderis harbor scene mosaic, we may suggest that the building where this mosaic surface was revealed probably served as shippers and traders' office. The mosaic floors with ship depictions in the offices of the shippers and traders at Piazzale delle Corporazioni, Ostia, provide the best reference for the function of the building paved with the harbor mosaic at Kelenderis, but in a much reduced scale than Ostia. This office may have provided the adequate harbor facilities for the shippers and traders on the southern coast of Cilicia and the eastern Mediterranean.

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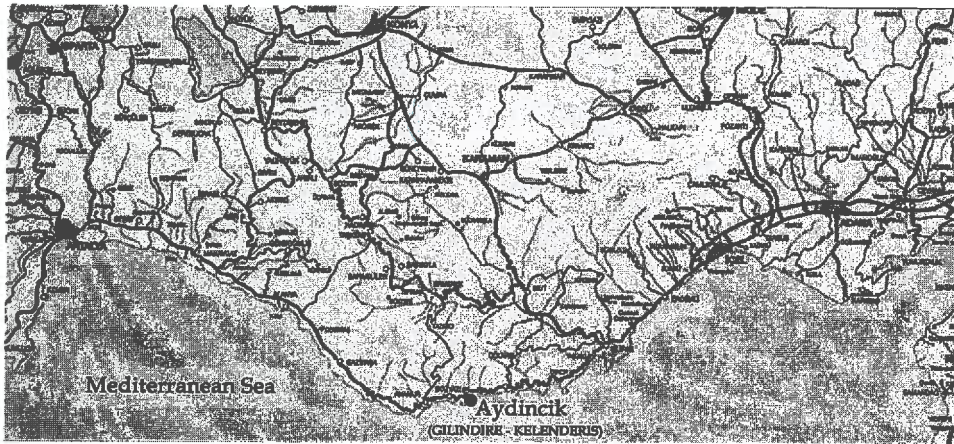


Fig. 1 Location map of Kelenderis [Guide Aydıncık 2000, 11]



Fig. 2 The Beaufort Map of the Cilician harbors with the location of Kelenderis



Fig. 3 Engrave of Kelenderis Harbor by W. H. Barlett, 19th century
(<http://www.mersinaydincik.bel.tr/1/images/stories/aydincikimages1/tarih1.PNG&imgrefurl>)



Fig. 4 Plan of the excavation site [Zoroğlu 1994, fig. 1, 41]

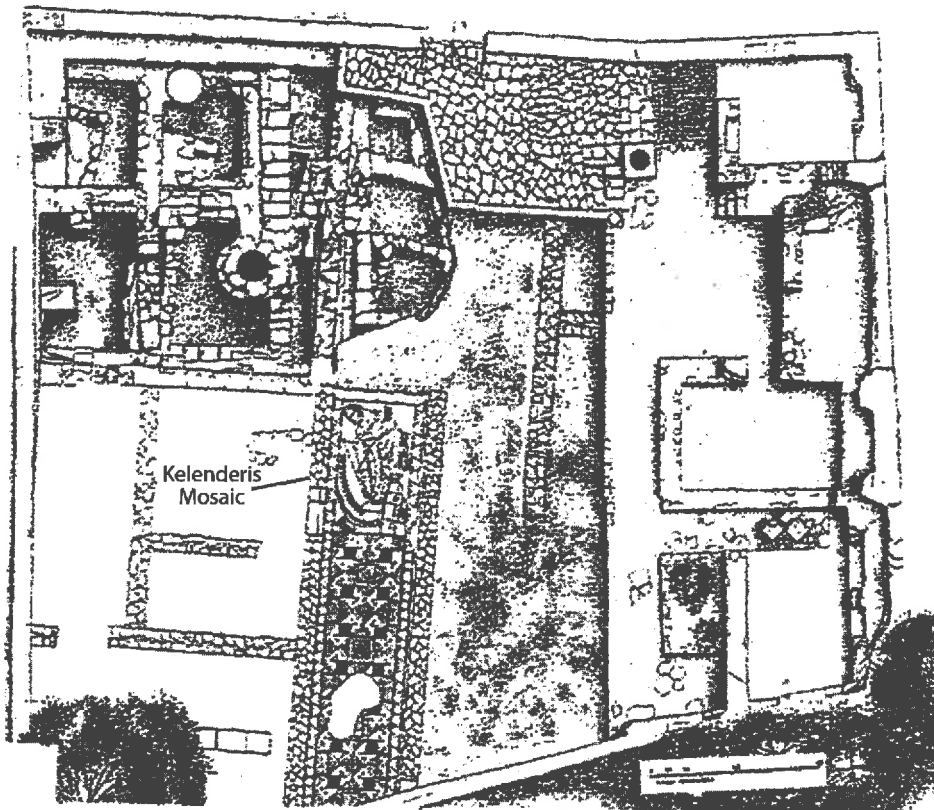


Fig. 5 Plan of the complex with the mosaic floor (<http://fen.selcuk.edu.tr/arkeoloji/KelenderisIng.htm>)



Fig. 6
The harbor scene
(photo: L. Zoroğlu)

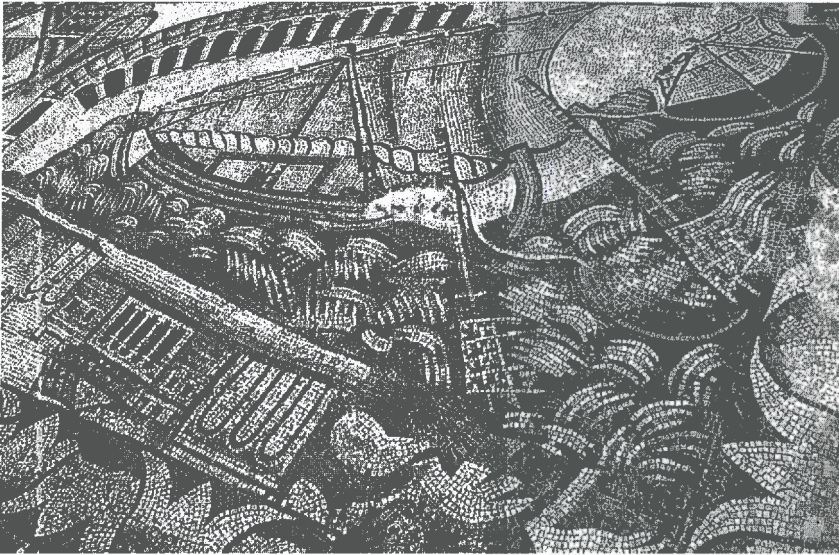


Fig. 7
The vessels
(detail after: L. Zoroğlu)

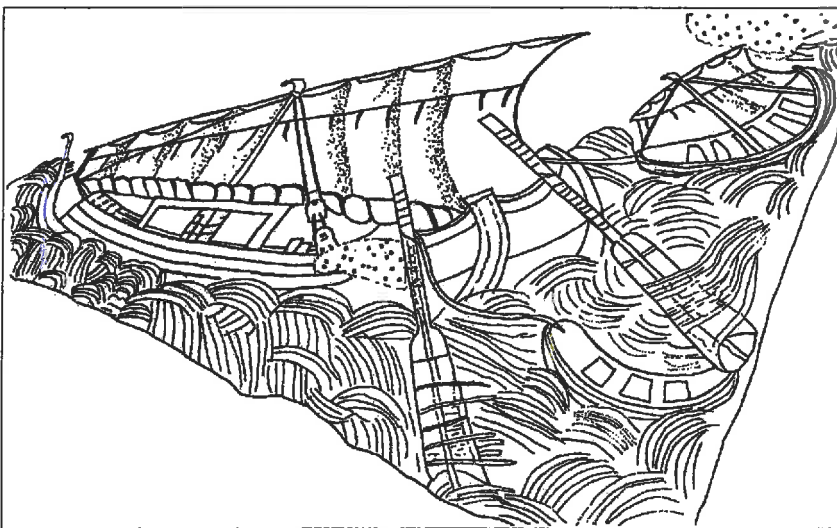


Fig. 7a
Drawing of the vessels

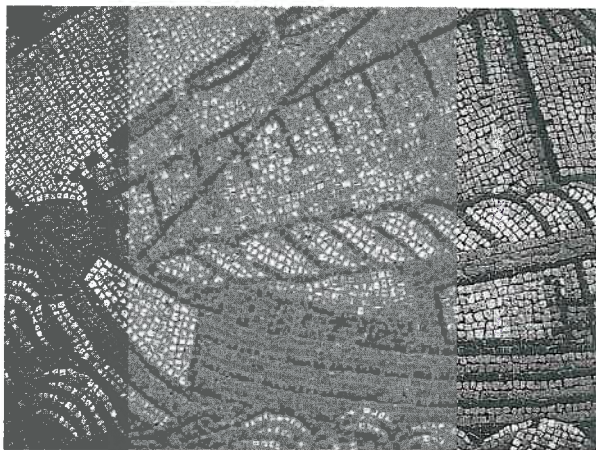


Fig. 8 Close-up of the bitts

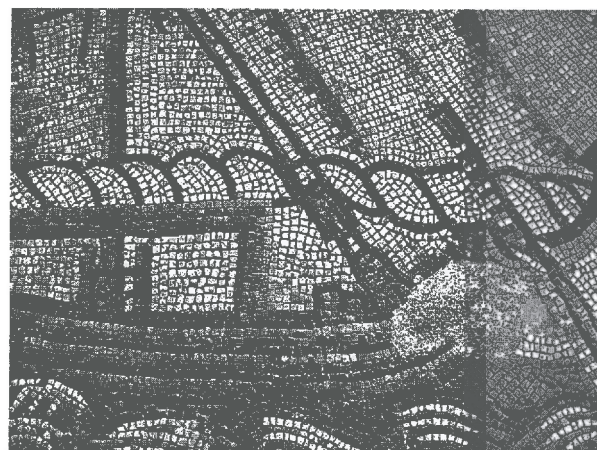


Fig. 9 Detail of the mast bracing-timbers, the deadeye and the block-sheave



Fig. 10 Kelenderis sailing-boat

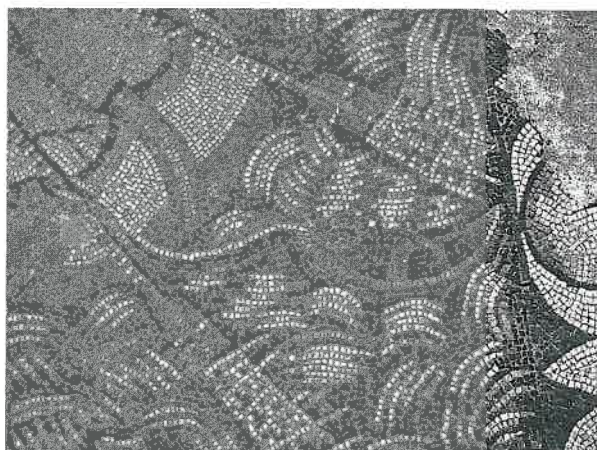


Fig. 11 Kelenderis rowboat

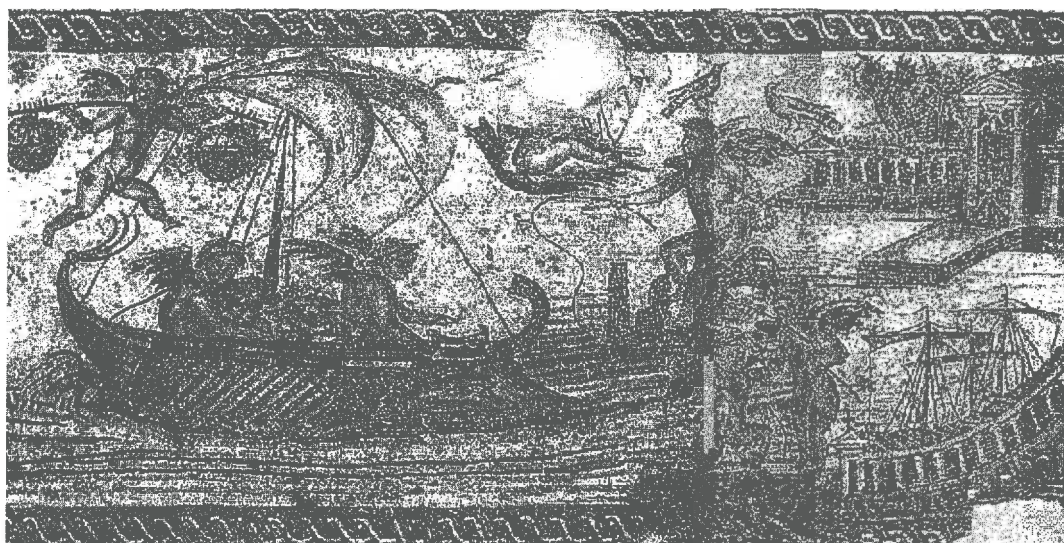


Fig. 12 Harbor scene in the Nile Villa at Leptis Magna,
(<http://mathildasanthropologyblog.files.wordpress.com/2008/12/nile-1.jpg>)

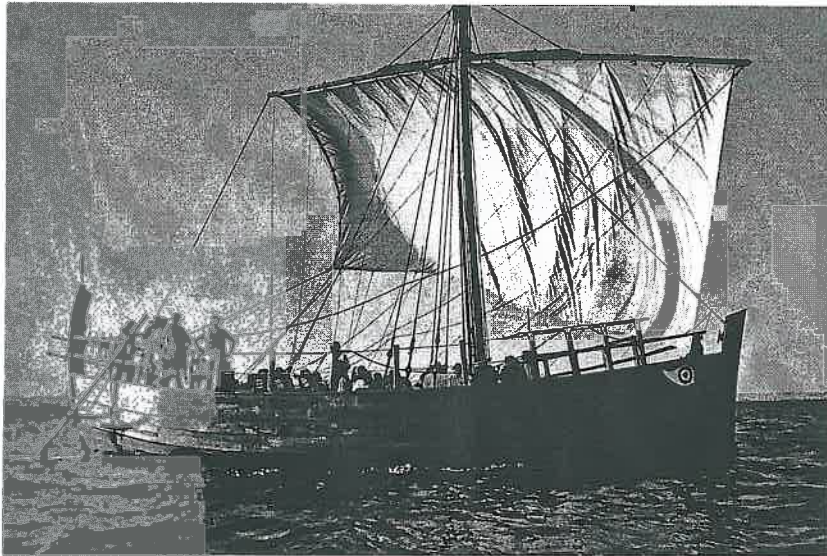


Fig. 13 Kyrenia Liberty trial sailing



Fig. 14 Mast bracing-timber; the Black Sea Shipwreck D
(courtesy of Dr. Cheryl Ward and Dr. Bob Ballard)