

Introduction

Ignoranti quem portum petat, nullus suus ventus est¹

I take the liberty of commencing this introduction on a personal note: I grew up on the shores of the Mediterranean and for the last 60 years I have sailed across it and along most of its shores, except, where, unfortunately, I was banned because of my Israeli citizenship. I have sailed in and out through the Straits of Gibraltar, the Pillars of Hercules and crossed the Atlantic in my yacht, sailed in the Pacific to and around Bora-Bora, cruised in Thailand, in the Andaman Sea, sailed in a replica of a Viking boat in the Baltic Sea, got caught in fishing nets near Tangier, and went deep-sea fishing on the Grand Banks of Newfoundland.

But for me, the Mediterranean – with its blue waters and fickle winds, the Aegean with its unpredictable, fierce Meltemi gusts, the Adriatic with its Bora, which starts without prior warning, the Gulf of Lyon with its Mistral, or the Levanter that blows through the Straits of Gibraltar – is the king of all seas. It is because I became familiar with the difficulties that can be encountered in all these seas that I became so intrigued by the Crusades: How did they manage their extraordinary acts of seamanship – transporting tens of thousands of people, equipment, pilgrims, knights and their horses in the small ships at their disposal? Some of these were sailing vessels; some were propelled by oars, dependent on manpower and, occasionally assisted by sails, none of which could advance against the wind for any substantial period of time.

In the lines below I shall try to raise some questions that, to the best of my knowledge have not been addressed to date in other scholarly works, or, at least, have not been fully addressed, and to advance some theories in response to these questions.

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Sailing across the high seas, rather than along the coast, from the late twelfth century, shortened the trans-Mediterranean voyage (Jacoby et al. 2007b, 62), and this involved the question of navigation on the high seas, out of sight of land.² This merits separate research, and is not treated in detail in this work. Nevertheless, I will briefly describe the sea routes taken by the Crusaders, the fact that sailing also at night could not be avoided as related, for instance, by Ambroise in describing how Richard the Lionheart entered the sea, hoisted his sails to the wind and rushed during the night under the stars:

¹ 'If one does not know to what port one is steering, no wind is favourable' – Lucius Annaeus Seneca <http://www.brainyquote.com/quotes/quotes/l/luciusanna100585.html>

² Sailing across the open sea gains momentum at the 14th century (Gluzman 2010, 273, 276).

Qui encore crt mult deshetiez:
Entra en mer a lor congíez,
E fist al vent lever les veilles,
E curut la-nuit as esteilles³
(Ambroise 12288–12290)

The possibility that Crusader mariners made use of the recently introduced magnetic compass will be mentioned, and proposals will be made concerning possible methods of dead-reckoning navigation, and celestial navigation that may have been employed by the Crusaders.

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In November 1095, Pope Urban II preached his historic sermon in Clermont, calling for an expedition to liberate Jerusalem from the yoke of the Saracens and to save the Christians in the East. Western Christendom immediately heeded the papal call and between 1096 and 1099, the first expeditions set out overland, via the Balkans and Anatolia, for the East. However, soon enough the need for naval support became apparent. The navies of the Italian maritime cities played an essential part in the support of the military operations for conquest of the Holy Land (Dotson, 2006, 64; Balard and Picard, 2014, 58). It was only by sea that forces could maintain contact with the West, receive logistical support, supplies, reinforcements and equipment and, at a later stage, horses and mounted knights. The Genoese, who arrived at Jaffa in June 1099 with a number of galleys, supplied the besiegers of Jerusalem with equipment and tools taken from their ships, as well as with timber (Asbridge 2012, 95; Balard and Picard 2014, 58; Grousset, vol. I, 1934, 215). They even supplied the Crusaders with food:

The ships, laden with food, put an end to their hunger
But could do nothing to extinguish their desperate
thirst
(Sweetenham 2005, 198)⁴

The conquest of Haifa, Caesarea, Arsuf and Acre (Jacoby et al. 2007b, 58) could not have been achieved without the assistance of the Italian fleets, which were given many privileges in compensation, in some cases one-third of the conquered cities.

³ Ambroise was probably a clerk, some say an itinerant musician. He was the chronicler of the Third Crusade, author of *L'Estoire de la Guerre Sainte*, which describes in rhyming Old French verse the adventures of Richard Coeur de Lion as a Crusader.

⁴ '...Took leave and lingering no more/ Boarded his ship and left the shore/with sails spread to the wind. That night/ He sailed having the stars for light.' (Translation: Merton Jerome Hubert)

⁴ Quotation from Robert the Monk, *History of the First Crusade*, Book IX.

Once the coastal area was taken, the Italian vessels remained for surveillance and to help counteract the Egyptian fleet based in Ascalon until the conquest of that city in 1153.

While the first two Crusades chose the land routes as the main avenue of approach, and had to cross the Balkans and Anatolia, by the end of the twelfth century transport by sea was preferred not only for logistic support, but above all, for the passage to Outremer of major reinforcements. In 1191, during the Third Crusade, Philippe-Auguste approached Genoa to transport his troops, whereas Richard the Lionheart used the English *nefs*, cogs from northern Europe, the *busses* from Marseilles and the galleys of Genoa and Messina. In 1203 Venice built and armed approximately 230 vessels in order to fulfil its obligations under a contract concluded with the delegates of the Fourth Crusade. Frederic II used the naval resources of Puglia (Apulia) and Sicily for his expedition of 1227–1229. In 1247 Louis IX (Saint Louis) appointed two Genoese admirals to negotiate the charter of ships he required for his Egyptian Crusade. All these maritime projects enhanced ship-building in the maritime cities of Marseilles, Genoa, Venice and, to some extent, also Pisa. These activities and mass travel to Outremer generated profits for the maritime cities and to their ports, as well as to the ports of Puglia and Barcelona.

The requirements of the Crusades also generated new navigational techniques and new organization and management of the various fleets, which some scholars describe as a maritime revolution (Pryor, 2015).⁵ Ships with greater carrying capacity began to be built in the second half of the twelfth century.

There has been much research into the Crusades, including the study of transport by sea of horses, pioneered by Pryor, and Dotson.⁶ However, it seems that some questions concerning Crusader seamanship remain unanswered. For example, Ambroise and others describe how Richard the Lionheart attempted to save the Christians from Saracen massacre by sailing from Haifa to Jaffa in only 12 hours. They even describe how he removed his leg armour and jumped into the water, which reached up to his belt (or groin, depending on the version). But how did Richard manage to sail from Haifa to Jaffa in about 12 hours? And where in Jaffa did he land? The beach is now, and probably was then, north of the port.

Among the questions research has not sufficiently answered is how horses and knights were landed from ships. Clari describes how the mounted knights descended from their ships during the invasion of Constantinople (Clari 1966, 68); but there is little information on how such landings took place in the Holy Land, and which ports, if any, were

able to accommodate the huge Christian fleets. A theory is advanced in the present book.

Despite the extensive study of the port of Acre, it seems that some issues about that city have yet to be addressed. For example, how could such a small port accommodate a fleet of many dozens of galleys, assuming that each galley or ‘round ship’ measured over 30 m in length, and a fleet consisted of thirty to fifty galleys and round ships bringing the total length of the vessels to more than 1 km (even mooring ships side-by-side)?

The so-called ‘Port of Apollonia’ may have played an important role in establishing a connection between the Crusader castle and the sea, but what was that role, and was it indeed a port?

A substantial research project in and around the ‘port’ of Apollonia used boat-mounted, ground-penetrating sonar to locate underwater finds in its vicinity.

An additional underwater search involving more than 30 volunteer divers was carried out inside the ‘port’ itself.

Answers to some of these and other research questions can be found only by actual experience at sea. For example, I endeavoured to simulate King Richard’s voyage from Acre to Jaffa in a yacht, during approximately the same dates and covering the same distances, solely under sail, in order to examine the veracity of the story, as told by Ambroise, at least in terms of the time Ambroise said it took.

I studied medieval texts and illuminations to understand the use of various rigs, modes of fleet operation and the use of small vessels. I tried to reach conclusions by studying medieval pictures and illuminations as, for example, Figure 1, that of a fleet sailing to conquer Troy:



Figure 1. A fleet sailing to conquer Troy. *Les Livres des Histoires du commencement du monde* (fourteenth century?) British Library, Stow 54, fol. 82v

⁵ The beginning of this introduction is based on the chapter entitled *Les croisades et la mer* in Balard and Picard, 2014, 58–59.

⁶ For example: J. E. Dotson, Ship Types and Fleet Composition, *Logistics of Warfare in the Age of the Crusades*, ed. J. H. Pryor, Aldershot, 2006, pp. 63–75, and J. H. Pryor, “Transportation of Horses by Sea during the Era of the Crusaders: Eighth century to 1285 A.D.”, *Mariner’s Mirror* 68.1, 1982, pp. 9–27. 68.2, 1982, pp. 103–126.

This painting has, obviously, nothing to do with Troy, and is the fruit of the imagination of the medieval artist. One should approach the medieval images contained in manuscripts or otherwise (for example in mosaics) with caution. However, the reservations as to the accuracy of the details in such images notwithstanding, one can learn a lot from any such image. From this particular one we could learn that the ships used to tow small boats, that they had stern rudders (as opposed to quarter rudders), and that they had square sails rather than lateen rigs.

I attempted to trace the use of floating sea anchors, or regular anchors meant to dig into the seabed in ancient writings. I found it astounding that the seamen, manning the ship in which the Apostle Paul was transported, to Italy, took action similar to that which modern sailors would take when facing the risk of running aground. Because they were afraid they would run aground on the sandbars of Syrtis, they lowered the sea anchor and let the ship be driven along. (*Acts 27:17*, New International Version).⁷ On the other hand, when faced again with the danger of being smashed against the rocks, these ancient sailors preferred to anchor with the stern facing the elements, a choice that would seem strange to the modern skipper: ‘And they took soundings and found *it* to be twenty fathoms; and when they had gone a little farther, they took soundings again and found *it* to be fifteen fathoms. Then, fearing lest we should run aground on the rocks, they dropped four anchors from the stern, and prayed for day to come.’ (*Acts 27:28*). The episodes described in the Acts took place well before Crusader times, but they serve as examples of ancient seamanship, which developed slowly until it reached the sophisticated capabilities of the medieval seaman. The storms suffered by Apostle Paul were typical of the area, and may be similar to those that dispersed the fleet of Richard the Lionheart when he sailed to Cyprus.

It is known that medieval ships could not efficiently beat upwind. Actually, even modern sailing yachts cannot sail directly against the wind, but they can advance in the general direction against the wind by tacking. Medieval ships could only sail with the wind behind them or, in the best case, with the wind abeam. So how did they reach their destinations in the Mediterranean, where the winds are notoriously fickle?

How much could they advance by rowing? What kind of sails did they have? Did they use small boats for assisting them in their manoeuvres?

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The three-pronged approach I have used, viz. studying primary literary and iconographic sources, secondary sources, and organizing field projects, resulted in the discussion of the following main topics, in two parts:

Part 1 deals with the following points:

- General discussion of seagoing vessels used by the Crusaders.
- Vessels of the Third and the Fourth Crusades.
- Study of iconographic sources reflecting various kinds of maritime transport, which also presents a theory concerning the use of the lateen rig, and use of small liaison boats.
- A sailing passage simulating descriptions from primary sources of Richard the Lionheart’s passage from Acre to Jaffa.
- Crusader fleet seamanship and management. Naval support of land operations, landing and beaching techniques and their applicability to Holy Land ports

Part 2 is devoted to the maritime structure located at the foot of Apollonia-Arsuf Castle ArsufArsufft ArsufArsufis the subject of the following studies:

- General description and photographs, including GIS scans and drawings.
- Sub-bottom profiling with ground penetrating sonar near the reefs surrounding the ‘port’.
- Water-jetting targets located by the sonar, and sending finds for carbon 14 analysis. Underwater excavation in the ‘port’ by volunteer divers, clearing debris, measuring and drawing the structures.
- Studying two granite columns found underwater off the shore, and discussing petrographic analysis performed in Italy.

⁷ Although in some versions, as, for example, in the New English Bible, they lowered the sail rather than a floating anchor: ‘Then, because they were afraid of running on the shallows of Syrtis, they lowered the mainsail and let her drive.’ in the French translation: ‘... dans la crainte de tomber sur la Syrte, on abaissa les voiles’ (La Sainte Bible, Paris, 1954).