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Renard Gluzman MA Dissertation

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BETWEEN VENICE AND THE LEVANT: RE-EVALUATING MARITIME ROUTES FROM THE FOURTEENTH TO THE SIXTEENTH CENTURY

By Renard Gluzman

aritime routes in the eastern Mediterranean have attracted the attention of many scholars engaged in geopolitical, technological and cultural studies bearing on the medieval and early modern periods. These studies display extensive uncertainty and lack of agreement in the interpretation of the contemporary evidence regarding maritime trade routes. If we may deduce anything from the range of contradictory sources, it would be that the routes linking Venice to the Levant were not as inflexible and predetermined as much modern research insistently claims. Furthermore, crossing open water was an integral part of any long-distance voyage in the period covered. Venetian vessels sailed greater distances and much further from the coast than previously suggested.

John H. Pryor has made the most recent contribution to the study of these maritime routes, albeit now over twenty years ago. In his book *Geography, Technology, and War*, published in 1988, Pryor asserts that too much importance has been attributed to political and cultural conditions as factors limiting maritime voyages to predetermined coastal routes. Instead, Pryor claimed that a combination of technological constraints and weather patterns, mainly the prevailing currents and north-westerly winds, led seamen to choose a narrow route along the northern shore of the Mediterranean characterized by regular and frequent stops. This, he says, led eventually to European dominance over the Muslim world in the twelfth and thirteenth centuries.² The main thesis of his study won Pryor much acclaim, and he is considered the authority on the subject.³

This paper re-examines Pryor's construct regarding the maritime routes between Venice and the Levant from the fourteenth to the sixteenth century. This period began with the organized commercial voyages to Cyprus and Armenia in 1308 and saw the growth of Venice as the dominant power in the Levant trade. It reached a peak in the fifteenth century with the development of a complex network of merchant galley routes, and ended with the battle of Lepanto and the loss of Cyprus to the Ottomans in 1571. This period also saw significant technological developments in sailing ships such as the cogs, carracks and galleons which gradually replaced commercial galleys by the late sixteenth century.

Based on records of 130 seagoing voyages on 193 different vessels, of pilgrims and other travellers to the Levant over a period of three centuries, as well as on my personal experience of sailing these waters, this paper suggests that Pryor has misunderstood the vagaries of weather at sea and his documentary sources were sometimes misinterpreted. Moreover, the meteorological data upon which much of his thesis is based is inaccurate and in some places simply incorrect.

SEA ROUTES ACCORDING TO THE PRIMARILY GEOGRAPHIC APPROACH

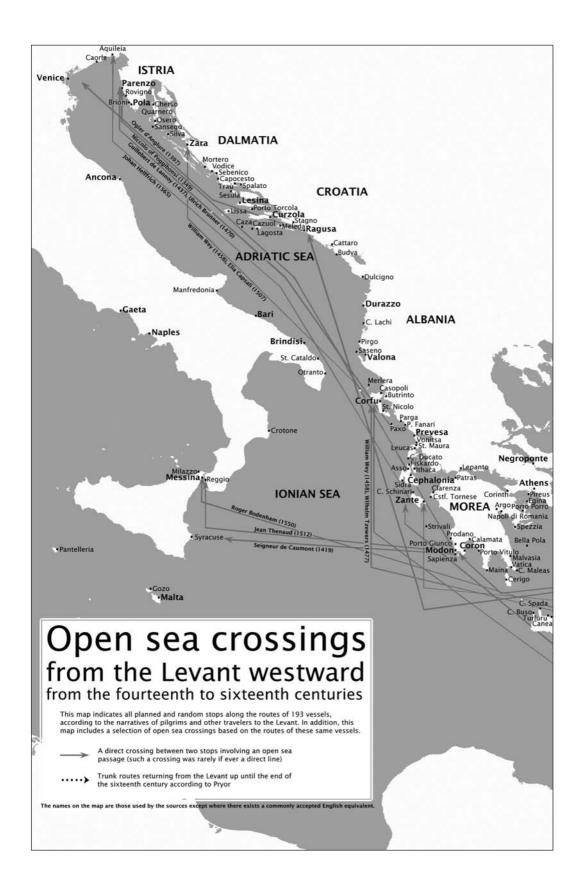
In his famous book on the sixteenth-century Mediterranean, Fernand Braudel linked historical processes to geographic conditions, which is the core of the primarily geographic approach. Braudel claimed that in the Mediterranean of the sixteenth and early seventeenth centuries, vessels sailed along the shores, hugging the coast, hopping from rock to rock as it were. Open waters, he stated, were sailed around wherever this was feasible, or crossed as fast as possible. Braudel based his claim on Tenenti's findings regarding shipwrecks of vessels that sank in the Adriatic Sea between 1580 and 1615, information gleaned from claims for indemnification, based on insurance policies. There is no doubt', wrote Tenenti, 'that all shipwrecks were found along the shores.'5

Historians who favour the primarily geographic approach apply modern meteorological data to earlier periods. This leads them to the conclusion that staying within a narrow strip of relatively comfortable weather along the shores was preferable to struggling with perilous winds on the high seas. Pryor goes even further, and in a series of studies describes the weather and perils along the trunk routes. One of his main contributions concerns the return voyage from Alexandria to the West. Pryor claims that in medieval times and until the sixteenth century seamen sailed in an anticlockwise direction along the shores of the Sinai peninsula, the Holy Land, Lebanon, Syria and southern Asia Minor. An anticlockwise current of 3 knots and the land breeze enabled good progress along the shores. A direct northward crossing from Alexandria or the Holy Land to Rhodes or Cyprus, he states, was bound to fail due to adverse winds.

Scholars also emphasize that weather conditions were not the only reason for hugging the coast. Although technological advances in the construction of ships increased their seagoing capabilities, Venetian captains had to consider other constraints: the need for fresh supplies, water, wood, technical services, refuge from pirates and storms, and sources of political and commercial news to ensure safe and profitable voyages. Besides, Braudel writes, the configuration of the shore invites frequent stops and is still considered to be the best navigational aid. All this, it is argued, compelled ships and galleys to stay close to the coast sailing cape to cape keeping land in sight until the late sixteenth century.¹⁰

ANALYSING THE PILGRIMS' DESCRIPTIONS OF SAILING

For some years I have been sailing the Mediterranean in my 31-foot ketch, *Halcyon*. In the summer of 2007 I set sail for three months intending to follow the Venetian trade routes. I started my voyage from Tel Aviv, near the ancient port of Jaffa, and reached Dubrovnik (formerly Ragusa) in the Adriatic Sea, before returning to Tel Aviv.¹¹ It seemed strange to me that while Columbus, Da Gama, Vespucci and Magellan and their followers were crossing oceans, the sailors of the Mediterranean were still hopping from rock to rock. I therefore began reading accounts of seagoing travellers and collected information from more than 130 travelogues describing the routes of vessels between Venice and the Levant. While other researchers have questioned the validity of Pryor's conclusions, my own survey of these sources, to the best of my knowledge, is the most extensive ever done for the study of these navigation routes.¹²



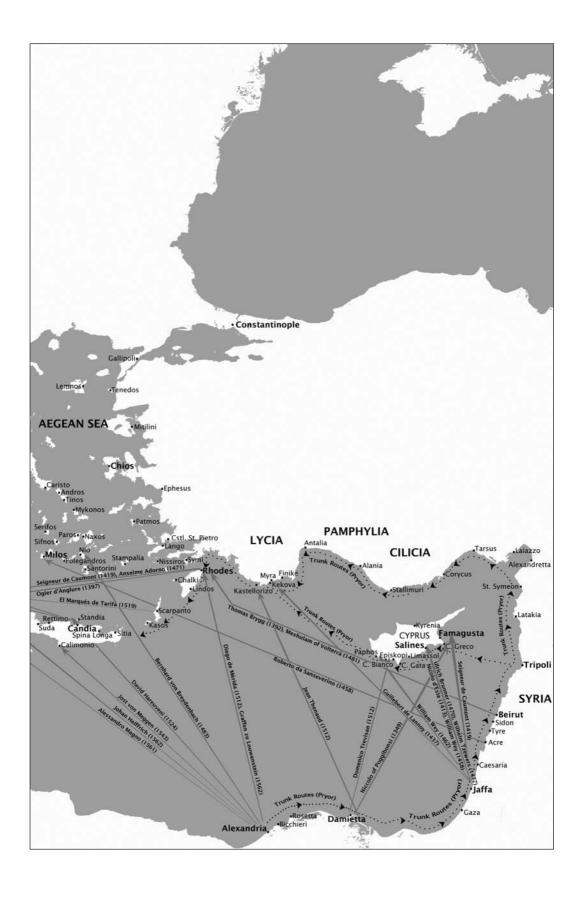




Fig. 1 The author's 31-foot ketch, Halcyon.

All these travelogues are primary sources of travellers, traders, officials and pilgrims (the latter comprising the majority of the sources) who actually undertook the voyage, not 'armchair' travellers, as far as I could ascertain. A full and detailed list is appended to this paper.

J.K. Hyde was the first to use pilgrim diaries for the study of maritime routes. He claimed that other sources such as contracts, book-keeping documents and insurance policies tell only a partial story. For the most part, they are land-based and were written before the voyage began. Second, their focus is on the transportation of merchandise and on matters related to the financing of those operations. Therefore, the route taken by the vessel can be only partially traced. Hyde was also the first to note the extent of flexibility and variations from the initial route plan that can be surmised from these sources. He was right: flexibility and variation from the initial sailing plan represent one of the most striking aspects of diaries and travelogues. In fact, they are a crucial and an integral component of every voyage. In my opinion it is impossible to describe accurately the Venetian maritime routes without taking this component into consideration.

I have also noted a number of pitfalls within these sources awaiting the unwary scholar. Primarily, travellers used different terms referring to a port at which they stopped as opposed to one they merely passed by. It has often been mistakenly stated that a ship anchored at a certain location for which the writer merely noted that it had been left behind. Italian terms, such as toccare, essere, gionta al and dimorassimo, and the German lagen all mean that a stop had been made. On the other hand, the expression 'from [one place] we have reached [another place]', or the expression 'we have approached' were generally meant to indicate that a certain location had been

passed without a stop. Likewise the Italian costegiare, sorgere and scapular, and the common German phrase camen (= kamen) do not imply a halt. For example, Stefan von Gumpenberg, who sailed in a galley, did not stop at Pola and Zara, which were only passed by. On these occasions he uses the phrases 'gen Bolen camen' and 'von Bolen gen Saders'. However, he did stop at Corfu and at Modon in the Peloponnese, where he uses the German word lagen, and notes in his diary the sea miles travelled since his last halt. In cases when a stop had indeed been made, pilgrims also used the phrases 'we disembarked' or 'we stayed', meaning that they had been hosted in the town. The Jewish traveller Meshulam of Volterra, who sailed in a pilgrims' galley, did not stop at Sapienza, as stated in the modern interpretation of his diary. The

There is another common error found in modern maps illustrating the route along which pilgrims travelled. Meshulam of Volterra wrote that on his return journey from Jaffa to Italy, Cyprus was left to starboard of the ship, indicating that he sailed along the southern shore of the island, yet modern research has him sailing along the northern coast. 17 A similar mistake has been made in a map illustrating the travels of Jacques Lesage in a Venetian ship. The route proposed by Ivon Bellenger follows the northern coast of Cyprus, while it is clear from the text that Lesage made his way to the Levant and back along the southern shore of the island.¹⁸ Michel Balard who examined documents of the ship's clerk Lorenzo Bozzio from 1368-9, concludes that the Genoese vessel hugged the Lycian shores all the way from Rhodes to Famagusta in Cyprus and back. Reading the sources as presented by Balard, however, we find no evidence for this route in the text. Balard himself states that this text is far from being a logbook, and that Bozzio aimed only to keep a record of voyage expenses.¹⁹ Balard's description and sketch of the routes between Rhodes and Cyprus along the Lycian shores, are based partly on Pryor's thesis and partly on other logbooks which he does not specify.20 Despite his cartographical reconstruction of the vessel's progress along the Lycian shore, it remains unclear where the vessel did not sail along the southern shores of Cyprus on its route to and from Famagusta.

The two most common inaccuracies contributing to the false impression that all maritime routes hugged the coast are erroneous interpretations of landmarks and places noted by travellers. For example, Satalia Bay along the southern shore of Asia Minor, mentioned in many narratives, does not have the same meaning as the modern Alanya Bay, the area around the cities of Alanya and Antalya. Thus, when pilgrims wrote that their vessel entered Satalia Bay, they did not mean that they sailed along the coast of modern Alanya Bay, as Pryor claims.²¹ In fact, Satalia Bay included a much more extensive area stretching from Rhodes all the way to Cyprus, and vessels crossing these waters were very often out of land sight. Stefan von Gumpenberg in 1449 and Pietro Casola in 1494 went even further and included the waters between Jaffa and Cyprus as part of Satalia Bay. Jacopo di Verona recorded that in 1335 he entered Satalia Bay immediately after sailing along Scarpanto (modern Karpathos), one of the Dodecanese islands, located in the southern Aegean Sea, as did Niccolò of Poggibonsi in 1346, Moshe Basola in 1522 and Hans von Hirnheim in 1569.²²

Those who have never sailed far from land are liable to make another error. Sailors commonly point to the horizon and say that 'such and such a place is over there'. Pilgrims would often do the same, and wrote in this way in their travelogues

in accordance with what they had heard from mariners. This did not imply that they had actually seen those places. For example, Ulrich Brunner, who sailed back from the Levant to Venice in 1470 close to the island of Milos in the Aegean Sea, reported that Negroponte and Constantinople were located on the starboard side.²³ Martin Baumgarten recorded in 1507 that the islands of Nio, Paros, Servi, Naxos, Milos and Falconera, all part of the Southern Cyclades, were to be found to starboard. It is highly improbable that all these islands were spotted from a galley sailing between Crete and the southern Peloponnese.²⁴

Various names and locations in the writings of pilgrims were only meant to describe stages in the monotonous description of a voyage on the high seas. This way of writing may be compared to the method used by a ship's captain, who in the sixteenth century would often note various locations in the logbook only in order to indicate the position and progress of his vessel. Many examples can be found in the diary of Alessandro Magno, who copied from the captain's log the progress of his three voyages to Cyprus and Alexandria between the years 1557 and 1561:

At sunrise the Gulf of Cattaro lay to the north at a distance of 20 miles, Malonta to the north-west by north, Budua to the north-east, Trasto to the north-east by North, Dulcigno to the east and Antivari to the east-north-east, and it was cloudy all day.²⁵

It is very unlikely that Magno's captain was able to see all these places at the same time. This is also true for the yet unpublished diary of the *Giustiniana*'s voyage to Cyprus in 1567. The captain kept an exact record of the progress of the ship at sea and the places he passed. When a place was seen from a great distance, he used specific terms like *scopriva*, *si vedeva* or *da largho*, while closer places were noted with phrases such as *costizava* or *sotto i tereni*. On other occasions where no land was sighted the captain indicated the ship's position by noting the wind direction, estimated mileage covered, and bearings.²⁶

Another look at Tenenti's above-mentioned interpretation is warranted. As noted, Tenenti claims that vessels sailing in the Adriatic hugged the shores, since nearly all shipwrecks found in the region are located along the eastern and western coasts.²⁷ I should like to offer a different interpretation, namely that the findings are evidence that vessels were swept to the shore by strong winds, especially the Bora wind blowing in the summer from the north-east and east. Drifting in adverse winds is an inseparable component of sailing. What scholars have commonly failed to acknowledge is that for all types of vessels, going aground is the most common cause of shipwreck. Sailing along the shore is far more treacherous than sailing the high seas.

WEATHER PATTERNS ALONG THE ROUTES TO THE LEVANT

Without going into detail about weather conditions along the routes to the Levant, I wish to point out some inaccuracies that are bound to creep into any attempt to draw far-reaching conclusions from a general weather analysis. Inaccuracies such as these cast doubt on the conclusions, especially those drawn by advocates of the primarily geographic approach.

Pryor has claimed that mariners stuck close to the coast to take advantage of the anticlockwise current of 3 knots running in this region. He bases his conclusions on

geographical studies and schematic maps at basin scale drawn from data collected mainly by Nilsen between 1908 and 1910.28 More recent studies based on images taken from National Oceanic and Atmospheric Administration (NOAA) satellites as well as in situ observations suggest that the case is far more complex than previously assumed.²⁹ In fact, it is still debatable whether Atlantic waters flow across the central parts of the eastern basin, or counterclockwise along the coasts. Various clockwise and anticlockwise gyres, eddies and jets, like the Mersa-Matruh gyre north-west of Alexandria, and the recurrent Shikmona gyre west of Haifa, as well as some smallerscale features, that originated from the instability of the flow along coasts together offer a far more complex picture. 30 We should also take into consideration that the surface currents vary in direction and force due to the winds, as demonstrated by a model drawn by Gerges in 1976.³¹ In addition, all modern navigation aids state that changes in the direction of sea current are often due to the prevailing winds and the complexity of the shoreline.³² While Pryor bases his claims on a steady 3-knot current, modern research points to a current of 0-0.3 knots at most.³³ There is no reason to believe that a strong steady current as mentioned by Pryor ever flowed along these shores, even if we surmise that the Aswan Dam's effect on the flow of the Nile has been to weaken it.

Some other inaccuracies can be found in relation to the land breeze effect that Pryor often mentions. The land breeze is caused by temperature differences between land and sea during the day. In the Levant, the wind stops blowing from the northwest in the evening and starts to blow from the opposite direction during the night. Pryor claims that this makes coasting preferable. However, the night breeze does not exceed 10 knots, being just 1 to 2 on the Beaufort scale. Such a gentle breeze is not strong enough to move a vessel at sea against the adverse waves left over from the previous day's prevailing north-westerlies. The strong enough to move a vessel at sea against the adverse waves left over from the previous day's prevailing north-westerlies.

Pryor uses schematic seasonal weather maps that illustrate the dominant winds in various locations in the Mediterranean. These maps, however, are intended to give a general impression, and are not used for forecasting or navigation. Much more detailed climatology studies used for military purposes divide the force and direction of the winds during each month of the year, using monthly wind-rose charts or tables. This data indicates that the data Pryor uses is not sufficiently detailed to allow for unequivocal conclusions.³⁶ But this has little bearing on a coast-hugging vessel. Indeed, Pryor's assumptions about prevailing winds and currents cannot be used to support the theory of coasting. Air flows along the path of least resistance - the topography of the shore redirects the initial direction of the wind in such a way that every mountain or island alters the wind direction and force.³⁷ For example, according to Pryor's seasonal weather maps, the Etesian wind along the northern shores of Crete comes from the north or north-east. This leads him to claim that sailing westward or eastward along Crete is easy with the northerly summer winds.³⁸ In reality, when the wind comes into contact with the northern coast of the island, it changes direction to blow from the west. Sailing westward along the shores in the summer is therefore extremely difficult. This effect is not indicated in seasonal weather maps which, as noted, are prepared for general reference only. In short, local wind conditions, as affected by topographical features, are far more significant for the practical seaman than general wind patterns.

A claim commonly heard regarding visibility is that in the Mediterranean land

can be seen nearly at all times, which makes coasting a safe and easy option. However, this claim fails to take into account the effect of salt haze during the summer and early autumn on the Ionian, Aegean, and eastern Mediterranean waters. Salt haze scatters and reflects light rays much more than dust haze, causing poor visibility. Surface visibility in salt haze may be as little as 4 to 6 nautical miles. If one sails towards the sun the visibility is even worse.³⁹

I do not claim that geographical conditions have no significant effect on the nature of maritime routes; on the contrary, they play a key role, but the picture is complex – the wind cannot be represented by a single arrow over a large area. Errors made in analysing weather conditions have led scholars to specious conclusions, which in turn have influenced the investigation of historical developments.

A CASE STUDY: THE PRIMARILY GEOGRAPHIC APPROACH APPLIED TO SAEWULF'S VOYAGE

What happens if we apply Pryor's theory to the narrative of a single voyage? Does it fit? It may be tested by using Pryor's own analysis of the travels of Saewulf.⁴⁰ This pilgrim sailed to the Holy Land in 1102–3, two centuries before the period examined above, which should have made the ship carrying him even more reliant on coast-hopping, according to Pryor's theory. Pryor claims that Saewulf sailed along the coast all the way from Italy to Jaffa and back, as was the custom during that period. Saewulf travelled aboard a commercial vessel. He records that the ship could not continue its route directly through the open sea owing to some technical problems. Therefore, he boarded a small craft of local traders at Monopoli in Southern Italy. The vessel had business at three stations along the coast of the Ionian Sea. It is clear from Saewulf's narrative that the main route from Italy to the Levant was across the open sea, yet Pryor fails to mention this fact.⁴¹

In another part of the text Saewulf describes the difficulties of sailing northward from Corinth to Riva d' Ostria (modern Livadostro Bay). Indeed the winds and currents around this area are remarkably strong due to the unique terrain which creates an air channel. However, Pryor claims that the word *contraria* refers to difficulties raised by local officials.⁴² Since the text continues to deal with navigation, this claim makes little sense.

Another section of Saewulf's voyage began in Negroponte, the main city of Euboea in the Aegean Sea, aboard a commercial Byzantine ship. Pryor claims that the fierce Meltemi winds running down the Aegean Sea during the summer months make sailing northward impossible, yet the vessel did in fact sail against the winds to reach certain trading posts. Indeed, if we take into account that pointing high into a fierce Meltemi wind is impossible, we can see that as much as half of this part of his voyage was made in adverse winds.⁴³ In fact, sailing against the Meltemi winds is unavoidable in the Aegean. Another example of sailing against the strong winds is offered by Ruy Gonzalez de Clavijo, who rented a small craft of local traders in the summer of 1405 and sailed from Rhodes to Chios in adverse winds.⁴⁴

Later Pryor describes some navigational hazards, based on data collected from modern pilot books. One such example is the danger of going aground on the reef north-west of the entrance to the port of Mandraki in Rhodes (the Kolona Shoal). Pryor asserts that ships travelling eastward sailed close to the Turkish coastline until they had passed Rhodes, then turned toward the south-west to enter that port. ⁴⁵ In

fact, the reef is an extension of the shore and is clearly observable. Most of the day, fishermen are happily casting their lines from it. A distance of few metres is enough to pass it safely. The suggestion that vessels continued as far as the Turkish side of the channel, a distance of 15 miles, illustrates the hazards of what might be called armchair navigation.

The last part of Saewulf's travels eastward also offers little support to Pryor's theory. Pryor implies that the vessel carrying Saewulf intended to hug the Lycian coast in southern Turkey on its way to Paphos in south-western Cyprus. In fact, Saewulf clearly states that the ship had fled to those shores to escape bad weather. It is therefore doubtful that this was the primary intention of her captain. Pryor also claims that during the passage from Paphos to Jaffa, Saewulf's vessel sailed first along the Cypriot coast, then crossed to Tripoli and Beirut before turning southwards to Acre, because of the Meltemi winds. Yet there is no evidence of this route in the text. Quite the opposite: it is evident from the account that the ship crossed directly from Paphos to Jaffa:

After leaving the isle of Cyprus, we were tossed about by tempestuous weather for seven days and seven nights, being forced back one night almost to the spot from which we sailed; but after much suffering, by divine mercy, at sun-rise on the eighth day, we saw before us the coast of the port of Joppa, which filled us with an unexpected and extraordinary joy.⁴⁸

A direct crossing between southern Cyprus to Jaffa in both directions out of land sight was the custom throughout the period examined here. Almost no cog, carrack, galleon or galley chose the coastal route over a direct crossing. For most pilgrims, the coast of the Holy Land became visible north or south of Jaffa, depending on the conditions of the voyage. For example, on the one hand, Jacopo di Verona crossed in 1335 on a ship from Famagusta to Jaffa and was swept by adverse winds towards Caesaria. On the other, in 1483 Felix Fabri crossed directly from Paphos without sighting land until reaching Jaffa.⁴⁹

Pryor claims that on the return voyage Saewulf sailed along the shores of Lebanon, Syria and Cilicia to avoid the adverse winds between Cyprus and Rhodes.⁵⁰ Again, I prefer to let Saewulf speak for himself:

But, fearing to meet the fleet of the Saracens, we did not venture out into the open sea by the same course we came, but sailed along the coast by several cities . . . ⁵¹

It is clear from Saewulf's account that the ship was compelled to take the coastal route to avoid a possible encounter with enemy ships and not, as Pryor claims, because of the weather. Among the numerous reports I have examined, I found only one vessel that chose the coastal route over sailing along the southern shore of Cyprus. All other vessels crossed the open sea directly from Jaffa or Egypt, tacking their way against the wind for approximately a week. Their goal was to go as far north-west as they could. In most cases vessels which departed from Egypt chose a port tack, owing to adverse winds, heading north-east until they reached one of the ports in southern Cyprus. On rare occasions they got as far as Anatolia or Rhodes, as Guillebert de Lannoy did in 1437 on a small ship from Jaffa to Cyprus and Denis Possot in 1532 on a commercial ship from Jaffa to Limassol. Both of them mentioned their decision to skip Cyprus and continue over the open sea directly to Lycia to take advantage of favourable winds.⁵²

Ships sailing from Alexandria northwards or westwards tacked repeatedly in high seas until reaching the northern shores of the Mediterranean. As time went by, and more commonly during the late fifteenth and sixteenth centuries, we find an increasing number of vessels able to point higher into the wind and reaching Crete, Modon and even Zante directly. However, luck was always a crucial factor, and during that period some vessels reached only the southern shore of Cyprus. All of the following travellers completed a direct crossing from Alexandria northward. Some were pushed towards the east by adverse winds: Niccolò of Poggibonsi in 1349 aboard a brigantine from Damietta to Famagusta; Bernhard von Breydenbach in 1483 aboard the galleys of Trafego from Alexandria to Crete; Jean Thenaud in 1512 from Alexandria to Kastellorizo; Domenico Trevisan in 1512 aboard a galea bastarda from Damietta to the southern shores of Cyprus; David Hareuveni in 1524 aboard a merchant galley from Alexandria to Candia; Daniel Ecklin von Arow in 1553 aboard a ship from Alexandria towards Famagusta; Alessandro Magno in 1561 aboard a ship from Alexandria to the proximity of Corfu; Albrecht Graffen zu Louwenstein in 1562 aboard a ship from Alexandria to Scarpanto.⁵³ Throughout this period, the duration of the crossing from Alexandria to some point on the northern shores did not change, and was between one and two weeks.54

The merchant ship carrying Alessandro Magno, which sailed from Alexandria on 19 October 1561, tacked her way against adverse NW and NNW winds and did not stop until it reached the Corfu area on 7 November – a much faster route than the alternative suggested by Pryor. Magno also left us detailed information about his vessel's progress in relation to the winds and course chosen. From his account it seems that his ship tried to point as high as possible into the NW wind, heading towards the west. When the wind backed, becoming more westerly than northerly, the ship altered course to port tack, heading NE or ENE. Magno writes that on rare occasions when the wind veered to the NE or even E, all sails were set and they headed directly to the NW. From his description it appears that the crew greeted any change in wind direction with elation. Indeed, a good wind could give them a few hours of sailing at speeds of 4.5 to 8 knots.

In conclusion: Pryor's analysis of Saewulf's travel shows how inaccurate interpretations of weather and navigational hazards have resulted in a flawed theory. His thesis also fails to hold water when examined in the light of all other travel narratives included in the present research. It follows that Venetian vessels sailed greater distances and much farther from the coast than assumed so far. Moreover, crossing the open sea was an integral part of any long-distance voyage.

The model suggested by historians supporting the primarily geographical approach fails to give a satisfactory explanation to the question of sea routes. This does not imply that meteorological conditions fail to have bearing on maritime routes – quite the opposite. However, the 'deterministic' element dictated by the weather was not the need to hug the shore, but the constant need for flexibility. The present research suggests that an improved basis for discussion must take into consideration the type of vessel and the purpose of the voyage, as well as the extent of flexibility granted to the operators in all kinds of voyages. This flexibility allowed the vessel to navigate in accordance with economic and political constraints and variable sea conditions.

TABLE OF SOURCES

The following table consists of the routes of 193 different vessels, based on records of 130 seagoing voyages, according to the narratives of pilgrims and other travellers to the Levant over a period of three centuries. Sources are listed at the end of the table in the order in which they occur.

The table includes only the stops and omits all information between stops (regarding storms, calms, drifting, piracy and other information). It is important to note that the route between two stops was rarely, if ever, a direct line.

The table does not indicate the size or age of vessel, though these factors also affected the route.

Researchers consider a direct crossing to be an open sea passage out of sight of land, such as the crossing from southern Cyprus to Jaffa which is about 200 miles at sea, measured in a more or less direct line without any intermediate stops. To this, I have added direct crossings of more than 250 miles during which regular stops have been skipped, which involve open sea passages but are not necessarily all open sea. I have not included cases where a vessel passing between two relatively close stations was forced to remain at sea for an extended period owing to adverse conditions. An example would be all passages from southern Cyprus to any stop in Lycia which involved an open sea crossing lasting one to two weeks. Passages of this kind are not included in the following table.

In addition, the table illustrates the extent of flexibility and deviation from the planned route, and consists of all random stops along the routes of the same 193 vessels. I have included a station as a random stop only if the writer clearly stated it himself or if this could be understood from his description. No doubt there are many other random stops, but from the data presented here we can get a first impression of how flexibility and deviation from the planned route were an integral and principal part of any voyage throughout this period.

LEGEND

Modon-Famagusta A crossing is indicated by two stations in bold type separated by a rule

Beirut Other stations

♦ Indicates an unplanned stop

Indicates a stop near a station but not actually at the indicated portIndicates that continuation of the route is not mentioned by the source.

Badia (Pola) Name in parentheses following place name indicates region or closest main port

Stop Indicates that a stop was made but location unclear

Pilg. Vessel intended mainly for pilgrims

Comm. Vessel intended mainly for commercial purposes

Local ship Small craft of local traders

as well as sailing

Short-handed/Unarmed/No oars indicates a galley with short-handed sailing

Abbreviations:

C. Cape; Cstl. Castle; F. Fort; Is. Island; P. Port; St Saint

Stops Venice Pola Zara Ragusa Durazzo—Modon Cerigo ◆Contarin (Candia) Candia—Alexandria	Venice—Otranto—◆Candia—Famagusta	Famagusta—Jaffa	Brindisi Otranto Corfu	Coron—Rhodes		Rhodes ♦Myra (Lycia) ♦»Paphos ?Famagusta	Famagusta → * Caesaria Jaffa	Venice Pola ♦Pola – Modon – Famagusta	Famagusta—Jaffa		Beirut Tripoli — Damietta Tanis			Tanis Damietta – Famagusta	Beirut Famagusta-◆Kekova-◆Tripoli (Africa)-	♦Sapienza (Modon)—♦»Parenzo Venice	Venice Pola Ragusa Corfu Modon Coron—	Negroponte—Gallipoli Constantinople	Constantinople Gallipoli – Negroponte – Coron Modon Clarenza Corfu Durazzo Ragusa Lesina Vodice	(Sebenico) Zara Pola Rovigno Venice	Constantinople Heraclea Marmora Is. Gallipoli	Gallipoli Str. Lemnos Milos Chios – Khodes Epnesus Miltos Milas Pratia Myra Antalia Alania Coricos Tarsus	Antiochia S. Cyprus – Jaffa	Venice-♦»Zante Modon Coron-Alexandria
Dir. E	闰	щ	H	뙤		口	Щ	H	ы		Щ			\gg	\gg		Ы		\geqslant		田			ы
Time Mar 1322	May 1335	Jul 1335	Feb 1345	Mar 1345		Mar 1345	Apr 1345	Apr 1346	Feb 1347		Win. 1349			Sum. 1349	Aug 1349		Jun 1366		Jun 1367		1370			Sep 1384
Vessel Comm. ship (Venice)	Comm. galley (Venice, no oars)	Local ship (grepperia)	Comm. galley (private)	Local ship (Greek, long ship)	Comm. ship	(Genoa, round ship)	Comm. galley (?Genoa)	Comm. ship (private)	Comm. galley	(soten, using oars)	Comm. galley	(Tarsus, unarmed,	no oars)	Local ship (brigantine)	Comm. ship	(Venice, coca)	Caravan of galleys	and ships	Caravan of galleys and ships	4	Comm. ship			Comm. ship (Pola, private, coca)
Traveller/source Simon Fitzsimons	Jacopo da Verona	Jacopo da Verona	A Certain Englishman	A Certain Englishman	A Certain Englishman)	A Certain Englishman	Niccolò of Poggibonsi	Niccolò of Poggibonsi		Niccolò of Poggibonsi			Niccolò of Poggibonsi	Niccolò of Poggibonsi		Amedeo VI di savoia		Amedeo VI di savoia		Arkhimandrit Agrefenīi			Frescobaldi, Gucci & Sigolı

Beirut-+Stop-Venice	Venice ? Candia – Alexandria Beirut – Rhodes ? Venice – Zara Lissa Corfu Modon – Rhodes – Jaffa	Jaffa — Famagusta Paphos Rhodes ♦ Lango ♦ Stop ♦ Stop Modon Coron Corfu Ragusa Lesina Zara Pola Venice	Gaeta → Cerigo – Rhodes – Alexandria	Jaffa Beirut Famagusta → Lango	Rhodes ♦Lango ♦Kythnos ♦Athens Corinth Patras	Patras ♦Leucas ♦Stop ♦»Preveza ♦P. Fanari Corfu ♦Casopoli (Corfu) St Cataldo (Lecce)	Venice Pola *Insule Is. (Pola)—Corfu *Cephalonia Modon—Rhodes—Beirut Iaffa	Alexandria → Limassol → Kastellorizo → Courrans Is. (Lycia)?	Kastellorizo &Stop (Lycia) Rhodes	Rhodes-◆»Ragusa-Venice Cadiz (Spain) Malaga Ibiza-Gaeta Messina-Rhodes	Rhodes ♦Rhodes ♦Lango ♦Animal Is. ♦Leros Chios
\geqslant	ы⊗п	\geqslant	H	$\geqslant \geqslant$	$\geqslant \geqslant$	\geqslant	口	\geqslant	\geqslant	$\mathbb{E} $	Ħ
Apr 1385	Sep 1392 Jan 1392 Dec 1392	Feb 1393	Jun 1394	Oct 1394 Jan 1395	Feb 1395 Apr 1395	Apr 1395	Aug 1395	Dec 1396	Feb 1396	Ápr 1397 May 1403	Aug 1403
Comm. ship (private. coca)	Comm. galley (private) Comm. ship Comm. galley (Venice, using oars)	Comm. galley (Venice, using oars)	Comm. ship (Gaeta, Genoa, caravan (4))	Local ship Comm. ship	(Genoa, pinace) Comm. ship (Messina) F Local ship A	Local ship (Corfu. barca)	Comm. galley (Venice)	Comm. ship (Venice, nave grosse)	Local ship (Kastellorizo, barcheta	Local ship (Greek) Comm. ship (Castilia, carrack)	Local ship
Frescobaldi, Gucci & Sigoli	Thomas Brygg Thomas Brygg Henry Earl of Derby	Henry Earl of Derby	Nicolai de Marthono	Nicolai de Marthono Nicolai de Marthono	Nicolai de Marthono Nicolai de Marthono	Nicolai de Marthono	Ogier d'Anglure	Ogier d'Anglure	Ogier d'Anglure	Ogier d'Anglure Ruy Gonzalez de Clavijo	Ruy Gonzalez de Clavijo

Stops Constantinople Gallipoli Chios→*Stop (Sicily) Gaeta ♦Gaeta ♦Corsica Genoa	Genoa – Seville	Venice ◆Badia (Pola) ◆Cherso ◆Neume (Dalmatia) Zara—◆Casopoli Corfu ◆Cephalonia Modon— ◆Stampalia ◆Stop (Lycia) ◆Symi ◆Stop ◆Stop Rhodes Paphos—◆*Iaffa Iaffa	Jaffa—Salines ◆Limassol ◆C. Bianco ◆Vengra (Rhodes) ◆St Ormo ◆Nio ◆Stop Is. (C. Maleas) ◆P. Giunco Corfu ◆Casopoli ◆Castello (Albania) Ragusa ◆Stop(Zara) ◆Silva—Venice	Constantinople Chios Patmos Ephesus—Jaffa Barcelona—&Boutes (Sardinia) &F. Caille (Sicily) Svracuse (Sicily)—Rhodes—Iaffa	Jaffa – Famagusta – Rhodes – Modon ♦ Modon – Syracuse (Sicily)	Jaffa—S Cyprus Rhodes ? Candia—Cadiz (Spain) ?	Venice Pola Zara ◆Curzola ◆Ragusa Corfu Modon Candia Rhodes Paphos—Jaffa	Jaffa-◆Kekova (Lycia) ◆Kastellorizo Rhodes- Modon Corfu ?	Corfu ♦Casopoli (Corfu) ♦»Bari Venice Parenzo Pola Zara Sebenico – Corfu Modon Candia Rhodes Paphos – Jaffa
Dir. ≪	\geqslant	口	≽	ഥഥ	\gg	≥ ≥	ഥ	≽	E≪
Time Nov 1405 !k)	Feb 1405	Apr 1413	May 1413	1419 Mar 1419	Jul 1419	Aug 1420 Apr 1431	Apr 1431	Jun 1431	Jul 1431 May 1432
Vessel Comm. ship (Caffa, Genoa, carracl	Comm. ship (Genoa)	Pilg. galley (Venice, caravan, using oars)	Pilg. galley (Venice caravan (2), using oars)	Comm. ship Comm. ship	Comm. ship	Comm. ship Comm. ship (private, coca)	Pilg. galley (Venice, caravan (2), short-handed)	Pilg. galley (Venice, caravan (2), short-handed)	Local ship (barca) Pilg. galley (Venice, caravan (2))
Traveller/source Ruy Gonzalez de Clavijo	Ruy Gonzalez De Clavijo	Nicolò d'Este	Nicolò d'Este	Zosimy Seigneur de Caumont	Seigneur de Caumont	Zosimy Piero Quirino	Mariano da Siena	Mariano da Siena	Mariano da Siena Bertrandon de la Broquière

Candia—S Cyprus—Jaffa E Candia—Alexandria	437 E?Napoli Messina – Modon ♦ Crete ♦ Crete ♦P. Malfetan (Lycia) – Famagusta		W? Rhodes—Coron? W? Modon ♦Cephalonia ♦Paxo Corfu—Parenzo	E Venice Parenzo Zara—Corfu Modon Candia Rhodes		144 W Limassol−Modon 49 F Vanice Confu ♦\$+ Nicolo (Confu) Modon ♦Conon	1	≫	E Kiev Belgrad Constantinople—Crete Rhodes Cyprus Latakia (Syria) Tripoli Beirut	Щ	458 E Venice Parenzo – Ragusa Durazzo Casopoli (Corfu) Corfu – Candia – Paphos – Jaffa	58 W Jaffa—S Cyprus Rhodes—Venice
1437	Dec 1437	1437 1437) 1437	1444	Sep 1444	Oct 1444 Sep 1449	Jep 14	Mar 1449	1456	May 1458	May 1458	Jul 1458
caravan (2)) Local ship (Constantinonle)	Comm. ship (Genoa)	Local ship (grepperia) Local ship	Comm. ship (Catalonia) Comm. ship (Venice)	Pilg. galley (Venice)	Local ship	Local ship	ing. gamey (veinee)	Comm. galley (Venice, using oars)	Comm. ship	Pilg. galley (Venice, Loredana II, using oars)	Pilg. galley (Venice, caravan (2), Contarina)	Pilg. galley (Venice, Loredana II, using oars)
de la Broquière Guillebert de Lannoy	Guillebert de Lannoy	Guillebert de Lannoy Guillebert de Lannoy	Guillebert de Lannoy Guillebert de Lannoy	Ein Pilgerbüchlein	Ein Pilgerbüchlein	Ein Pilgerbüchlein Staffan won	Gumpenberg	Steffan von Gumpenberg	Varsonofii	Roberto da Sanseverino	William Wey	John Tiptoft

Stops Jaffa – Salines – Rhodes Candia – Corfu – Zara – Venice	Acre—◆Milos—◆Modon—Ragusa ◆Ancona? Venice	Constantinople Gallipoli—Crete Rhodes S Cyprus—Damietta (Egypt)	Venice Parenzo Zara—Candia Rhodes—Jaffa	Venice Parenzo Rovigno Zara Sesula (Dalmatia) Curzola Ragusa Corfu Zante—Chalki Is. (Rhodes) Rhodes Paphos—Iaff a	Jaffa - Paphos Rhodes Candia Modon - Lissa - Venice	Venice ♦ Venice — Modon ?	Venice—Ragusa Corfu Modon Candia Rhodes ◆Paphos—Jaffa	Genoa Corsica Sardinia – Tunis	Tunis ♦Sousa — Alexandria	Jaffa—Salines Rhodes Candia ◆Milos—Corfu— Parenzo	Beirut Cyprus Rhodes	Rhodes—Modon—Brindisi	Venice—Zara—Corfu—Rhodes Famagusta
Dir. ≪	≽	曰	ഥ	田	\gg	Ы	田	口	田	\geqslant	\geqslant	\geqslant	띠
Time Jul 1458	Oct 1458	1461	May 1461	May 1462	Aug 1462	Aug 1468	Jun 1470	May 1470	Jun 1470	Aug 1470	Oct 1470	Nov 1470	Feb 1471
Vessel Pilg. galley (Venice, caravan (2), Contarina)	Ŏ	Comm. ship	t Pilg. galley (Venice, Contarina, no oars)	Pilg. galley (Venice)	Pilg. galley (Venice)	o Comm. ship (Venice)	Pilg. galley (Venice)	Comm. ship (Genoa, grand nef, armed)	Comm. ship (Genoa, grand nef)	Pilg. galley (Venice)	Comm. ship (Venice, private)	Comm. ship (Spain, armed)	War galléy (Venice, caravan (4), galea sottile)
Traveller/source William Wey	Roberto da Sanseverino	Varsonofii	Louis de Rouchechouart Pilg. galley (Venice, Contarina, no oars)	William Wey	William Wey	Giovan Maria Angiolello Comm. ship (Venice)	Ulrich Brunner	Anselme Adorno	Anselme Adorno	Ulrich Brunner	Anselme Adorno	Anselme Adorno	Giosafat Barbaro

Venice—S Cyprus—Jaffa	Venice St Pietro (Quarnero) Zara Lesina Curzola Agamsa Corfu Modon Candia Rhodes Salines—Iaffa	Jaffa—Salines Famagusta Beirut Beirut Famagusta & Lamoy (Rhodes) Rhodes Candia—	Venice Parenzo Zara Stop (Dalmatia) Curzola Ragusa Corfu	Venice Parenzo &»Lesina &Curzola Ragusa Corfu Modon Candia—Limassol—Laffa	Jaffa—Salines & Limassol & Paphos & Rhodes Rhodes Candia & Candia & Candia & Modon Corfu— & Lesina	▼stop ▼stop rarenzo venice Venice—◆Modon—Beirut	Genoa – Napoli? Chios – Rhodes – Alexandria	Jaffa Beirut – Rhodes Candia Modon ♦P. Giunco (Ionian) Corfu ♦Ragusa ♦St Pietro (Dalmatia) ♦Pola Parenzo Venice	Venice—Corfu Modon Candia Rhodes—Jaffa	Jaffa—Salines—Rhodes Crete Modon—Ragusa— Parenzo Venice	Venice ◆Rovigno ◆Osero (Dalmatia) ◆Zara ◆Oneum (Croatia)—Modon Crete Rhodes Salines ◆» Limassol	Venice Parenzo—Corfu Modon—Rhodes ♦Paphos Salines—Jaffa
日	Щ	$\geqslant \geqslant$	ഥ	口	\geqslant	日	Ħ	\geqslant	曰	\geqslant	口	口
1475	Jul 1477	Sep 1477 Dec 1477	1480	Jun 1480	Aug 1480	Aug 1480	Apr 1481	Aug 1481	Jun 1481	Jul 1482	Jun 1483	Jun 1483
Comm. ship (Venice,	.	Pilg. galley Comm. galley (Venice,	Pilg. galley (Venice, Loredana. using oars)	Pilg. galley (Venice,	Pilg. galley (Venice, Contarina, using oars)	Comm. ship (Venice,	private) Comm. ship (Genoa, round ship)	Pilg. galley (Venice, Contarina)	s Comm. ship (Venice,		Pilg. galley (Venice, biremes, using oars)	Pilg. galley (Venice, triremes, Contarina)
Alessandro Ariosto	Wilhelm Tzewers	Wilhelm Tzewers Wilhelm Tzewers	Felix Fabri	Brasca & Anonymous	Brasca & Felix Fabri	Francesco Suriano	Meshulam of Volterra	Meshulam of Volterra	Information for Pilgrims Comm. ship (Venice,	Information for Pilgrims Comm. ship (Venice,	Felix Fabri	Bernhard von Breydenbach

 Dir. Stops W Alexandria → Nio ◆Stefano (Aegean) ◆Milos ◆Milos Modon ◆Sapienza Corfu »Stagno (Ragusa) ◆» Curzola ◆P. Torcola ◆» Capocesto Larmo Zara Rovigno Parenzo Venice 	W Jaffa—Salines ◆Limassol ◆Paphos ◆Finike (S. Anatolia) Rhodes Candia ◆Modon Corfu Ragusa Curzola ◆Lissa Zara Parenzo Venice	E Venice ♦» Venice Parenzo ♦ Parenzo ♦ Pola Zara ♦» Sebenico Curzola ♦» Ragusa ♦ St Andrea (» Ragusa) Ragusa Corfu Modon Candia Rhodes Limassol — Iaffa	W Jaffa—Salines? Venice	E S France Palermo Messina— Stop Is. (Aegean) Lango St Pietro (Lango) Rhodes — Stopichieri Alexandria	E Venice Pola—Ragusa Corfu Modon Coron—Rhodes Paphos Limassol Beirut Acre Jaffa	W Jaffa—S Cyprus ? Venice E Venice Parenzo Zara ♦Stop (Dalmatia) ♦ »Sebenico ♦Fara Is. (Lissa) Ragusa Corfu Modon ♦ » Candia Candia Rhodes ♦Limassol Limassol ♦Sauta	W Jaffa—Salines ♦» Limassol ♦ Limassol ♦ C. Biancho ♦ Stop (S. Cyprus) ♦ Stop (S. Cyprus) Rhodes ♦ Nio Candia Modon—♦ Curzola ♦ Lesina Capocesto (Dalmatia) Mortero ♦ Zara ♦ Zara ♦ St Jerome (Istria) ♦ Brioni Parenzo » Venice	E Venice Pola—Corfu—Modon—Rhodes—Famagusta Beirut	E Venice Parenzo Zara Ragusa – Modon – Rhodes Paphos Limassol Salines – Jaffa
Time Nov 1483	Aug 1484 1)	Jun 1486	Sep 1486	Sep 1488	c. 1490	Sep 1492 Jun 1494	Aug 1494	Aug 1495	Jun 1496
Vessel Comm. galley (galleys of Trafego, no oars)	Pilg. galley (Venice, caravan (2), Contarina	Pilg. galley (Venice, no oars)	Pilg. galley (Venice, no oars)	Comm. galley (France, no oars)	Comm. galley (Venice)	Pilg. galley (Venice) Pilg. galley (Venice, triremes, Contarina)	Pilg. galley (Venice, triremes, Contarina)	Comm. galley (Venice, caravan, no oars)	Pilg. galley (Venice)
Traveller/source Bernhard von Breydenbach	Francesco Suriano	Konrad von Grünemberg	Konrad von Grünemberg	Obadiah of Bertinoro	Jerusalemspilger	Bernardino di Nali Pietro Casola	Pietro Casola	Pupil of Obadiah of Bertinoro	Jehan de Cucharmoys

Venice ♦Venice ♦»Parenzo ♦»Zara ♦»Zara Vecchio Ragusa—Corfu ♦»Modon Modon Candia Rhodes Limassol—Iaffa	Jaffa—Salines S Cyprus Paphos •Ralzamo (Satalia Ray) •I amov (»Rhodee) Rhodes Candia Moden Corfu	Jaffa—Salines & Limoues), randers, Cantal a mount of the Salines & Limassol & Finike (Lycia) Rhodes Candia & Flaschea (» Candia) & Flaschea & Cstl. Rapana (Morea) Modon & Corfu Corfu & Butrinto & Stop (Albania) & Budva Ragusa Curzola C. Cesto (Dalmatia)	Mortero Zara Parenzo Caorle Venice Corfu Otranto Venice— *Modon *Modon Candia Rhodes	Jaffa—S Cyprus Rhodes Candia Modon—Venice Venice Parenzo ◆Brioni (Istria) ◆Pola Zara Lesina ◆Curzola Ragusa Dulcigno ◆Durazzo Sazeno Corfu Modon ◆S Morea Candia ◆Rhodes ◆Lindos	(Khodes) — Alexandria Venice ♦Parenzo ♦Lesina — Modon ♦» Modon ♦Coron — Rhodes ♦Panhos I imassol — Iaffa	Jaffa - S Cyprus Salines Paphos Rhodes - Modon	Venice ♦Pola Curzola — Candia Rhodes — Jaffa Venice ♦Parenzo Zara — Corfu — Candia Rhodes Limassol — Iaffa	Jaffa—Salines Limassol &»Paphos &Duirgen (Lycia)	Jaffa—Salines—Rhodes ◆Lango ◆»Lango ◆Stop Candia ♦»Candia ◆Candia ◆Milos ◆»Milos ◆Milos ◆Milos ♦»Modon ◆»Cephalonia ◆»Corfu Corfu ◆Mezzo Is. (Meleda) ◆»Curzola Lesina ◆Lesina ◆»Zara ♦Zara ◆» Unie ◆»Pola Parenzo ◆»Parenzo Venice
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Jun 1496	Aug 1496	Sep 1496	Nov 1496 1496	1496 Apr 1497	Jun 1498	Aug 1498	Jun 1506 Jul 1506	Aug 1506	Sep 1506
Pilg. galley (Venice)	Pilg. galley (Venice)	Pilg. galley (Venice)	Local ship (grippo) Comm. ship (Venice)	Comm. ship (Venice) Comm. galley (Venice, caravan, full crew)	Comm. ship (Venice)	Comm. ship (Venice)	Comm. ship (Venice) Pilg. galley (Venice, no	Comm. ship (Venice)	Pilg. galley (Venice, no oars, short-handed)
Pfalzgraff Alexander	Jehan de Cucharmoys	Pfalzgraff Alexander	Jehan de Cucharmoys Herzog Bugislaus	Herzog Bugislaus Arnold Von Harff	Herzog Heinrich	Herzog Heinrich	Caspar von Mülinen Sir Richard Guylforde	Caspar von Mülinen	Sir Richard Guylforde

♦Fiskardo ♦St Nicolo (Corfu) ♦Stop (Cephalonia) Zante ♦Prodano Is.♦P. Vitulo ♦P. Porro ♦P. Quaje

♦C. Lachi Durazzo ♦Durazzo Corfu ♦P.Giunco

Curzola ♦C. Lachi (Durazzo) ♦Pirgo ♦Saseno

♦» Damietta ◆Bicchieri ◆» Alexandria Alexandria

♦Turluru Is. Candia ♦Standia Is. ♦Standia Is.

Stops Venice ♦N. Italy ♦»Rovigno Pola ♦»Pola —Corfu— Candia — Alexandria	Jaffa?Candia ♦C.Ducato (Leucas) Corfu — Zara—Venice	Tripoli Salines Rhodes Candia &Flaschea (Candia) &Candia	Candia ♦Flaschea (Candia) ♦Bella Pola Is. (E. Morea) ♦Zante ♦Cstl.Tornese ♦Zante Antipaxo Corfu ♦Casopoli ♦Meleda ♦»Curzola ♦Lesina ♦Sesula	(Laumana) sebenico reorigno Aigues Mortes & Hyères & Vado Ligure (Savona) Livorno & St. Fstienne & Ponza Is Nanoli	Napoli Messina—	S Cyprus – Jaffa	Alexandria - Rhodes Crete	Damietta → • Kastellorizo Rhodes Rhodes • Symi → • » Modon → • » Reggio (Calabria)	Messina ♦Milazzo (Sicily) ♦Senoys (Italy)—Nice Venice ♦Umag ◆Rovigno ◆P.Verdura (»Pola)	♦C. Promontore (Pola) ♦Silva Zara ♦St Maria (Dalmatia) ♦P. Cain (Zara) ♦Sesula ♦Spalato ♦P. Torcola
Dir. E	\geqslant	\geqslant	≽	Щ	щщ	田	\geqslant	≥	Ħ	
Time Jul 1507	Oct 1507	Feb 1507	May 1507 W	Nov 1511	Jan 1511 1512	1512	1512	Oct 1512 Dec 1512	Jan 1512	
Vessel Comm. galley (Venice,	Pilg. galley (Venice)	Comm. ship (Venice)	Comm. ship (Venice)	Comm. ship (Rhodes)	Comm. ship (Ragusa) Comm. ship (Venice)	Comm. ship (Genoa, brigantine)	Comm. ship	Comm. ship Comm. ship (Portugal,	caravel) Comm. galley (Venice,	bastarda, using oars)
Traveller/source Martin Baumgarten	Elia Capsali	Martin Baumgarten	Martin Baumgarten	Jean Thenaud	Jean Thenaud Jean Thenaud	Ďiego de Mérida	Diego de Mérida	Jean Thenaud Jean Thenaud	Domenico Trevisan	

Alexandria »Damietta—+Episkopi (Limassol) +C.Bianco +Paphos +Paphos +»Rhodes Rhodes +Sitia (Crete) Candia +Flaschea (Candia)—Zante Corfu +Casopoli—Curzola +»Lesina +Sesula +Traù +»Sebenico Zara +Stop +P.Cichala (Quarnero) Parenzo	Venice Parenzo Pola ♦»Quarnero Zara—Coron Candia	Venice Rovigno-Zante-Candia-Cyprus-Jaffa Jaffa-Salines-Rhodes?	Rhodes ♦Calamo (Aegean) ♦Milos —♦Cephalonia ♦Swafana (Ionian) ♦Corfu ♦Casopoli (Corfu) ♦Calabria ? Sicily	Venice ◆Rovigno—Zante—Candia Rhodes Limassol—Iaffa	Venice—Zante—Candia—S Cyprus—Jaffa Venice—Zante—Rhodes—Jaffa	Jaffa—S Cyprus—Rhodes ◆Lango ◆Scarpanto	(Aegean)—Zante—Zara—Venice Jaffa—◆Famagusta Salines ◆Paphos Rhodes—	Zante→*Curzola Zara Parenzo Venice Venice Rovigno—Zante—Rhodes—Iaffa	Jaffa-Salines Rhodes-+Strivali Is. (Zante) Zante-	Farenzo Venice Pola — Corfu — Zante — Famagusta Tripoli Beirut	Venice Rovigno ♦»Pola – Famagusta Salines Beirut	Venice Rovigno—Candia—Paphos »Salines—Jaffa Jaffa—Famagusta
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Aug 1512	Jan 1514	Jun 1517 Jul 1517	Nov 1517	Jun 1519	Jun 1519 Jul 1519	Aug 1519	Aug 1519	Jun 1521	Aug 1521	Aug 1522	Jul 1523	Jul 1523 Oct 1523
Comm. galley (Venice, bastarda, using oars)	Comm. galley (Candia, unarmed. piracy acts)	Comm. ship (Venice) Comm. ship (Venice)	Comm. ship (Rhodes)	Comm. ship (Venice, Dolfina)	Comm. ship (Venice) Comm. ship (Venice,	Coreça) Comm. ship (Venice,	Coreça) Comm. ship (Venice,	Dolfina) Comm. ship (Venice)	Comm. ship (Venice)	Comm. galley (Venice,	Comm. ship (Venice,	Pilg. galley (Venice) Pilg. galley (Venice)
Domenico Trevisan	Elia Capsali	Sir Richard Torkington Sir Richard Torkington	Sır Kıchard Torkıngton	Jacques Lesage	Jacques Lesage El Marqués de Tarifa	El Marqués de Tarifa	Jacques Lesage	Zwei Berichte	Zwei Berichte	Moshe Basola	Íñigo de Loyola	Íñigo de Loyola Íñigo de Loyola

Stops Famagusta Limassol &C.Gata &Limassol &Limassol Stop — Scarpanto (Aegean) &Suda (Crete) &Zante Cephalonia —Parenzo	Famagusta ♦NW Cyprus—Crete ♦Milos—Zante ♦Merlera Is. (Corfu) ♦Manfredonia?	»Apulia—Venice	Venice—Cattaro Corfu—♦Cerigo ♦Napoli (Morea) Mykonos Gallinoli Constantinonle	Alexandria—Candia? Venice	Venice Rovigno-Otranto-Candia-Limassol-	Jaffa	Jaffa-Salines Limassol-Corfu-Rovigno Venice	Venice »Rovigno ♦Stop (Dalmatia)—♦Cstl. Tornese	(Cephalonia)—◆C. Bianco (Limassol) Salines	Salines—Jaffa	Jaffa-Limassol ♦»Limassol-Candia		? Candia \$ Seryne (Morea) \$ Seryne \$Zante —	♦Ragusa ♦Lesina?	Venice Parenzo—Corfu—◆Zante—Candia—	Limassol—Jaffa	Venice Parenzo – Alexandria	Beirut Salines—Parenzo Venice	Venice - ◆Casopoli Zante - Candia - ◆Limassol	♦Salines—♦»Jaffa Jaffa	Jaffa → ◆ » Famagusta ◆ » Salines Salines ◆ Limassol	◆C. Bianco ◆C. Bianco ◆»Paphos—◆»Crete—	♦» Alexandria • Alexandria	Alexandria & Alexandria — & Calimonio (S Crete)	◆Calimonio ◆Canea (Crete)—◆»Zante ◆Crotone
Dir.	\geqslant	\otimes	H	\otimes	ы		\geqslant	Ы		Щ	\geqslant		\geqslant		Щ		Щ	\geqslant	щ		\geqslant			\geqslant	
Time Nov 1523	Nov 1523	Dec 1523	Mar 1523	Nov 1524	Jun 1531		Aug 1531	May 1532		Jun 1532	Jul 1532		Aug 1532		Apr 1533		Jul 1533	Aug 1534	Jun 1542		Sep 1542			Feb 1542	
Vessel Comm. ship (Venice, Malipiera)	Comm. ship (Venice, Galión)	Local ship (Apulia)	War galley (Venice)	Comm. galley (Venice)	Comm. ship (Venice)		Comm. ship (Venice)	Comm. ship (Venice,	armed)	Comm. ship (nave)	Comm. ship (?Gaeta,	private, galeon)	Comm. ship (Venice,	caravan)	Pilg. galley (Venice)		Comm. ship (Marseille)	Comm. ship (Venice)	Comm. ship (Venice)		Comm. ship (Venice)			Comm. ship (Ragusa)	
Traveller/source Íñigo de Loyola	Íñigo de Loyola	Íñigo de Loyola	Pietro Zeno	David Hareuveni	Dom Loupvent		Dom Loupvent	Denis Possot		Denis Possot	Denis Possot		Denis Possot		Greffin Affagart		Greffin Affagart	Greffin Affagart	Jost von Meggen		Jost von Meggen			Jost von Meggen	

Venice ♦»Pola ♦Zara Sebenico Ragusa	Rhodes—Alexandria Venice Parenzo—◆Flaschea (Candia) Candia Chania Milos—Chios—Constantinople	Constantinople—Athens—Rhodes—Alexandria Dover—Cadiz—Messina—Crete ♦Mykonos Chios	Chios—Candia—Messina ? London	Venice ♦Stop Is. (Istria)—Corfu—Candia Tripoli—Paphos Rhodes Candia—Malta—Corsica Marseille	Candia — Alexandria — Famagusta Venice Rovigno — ◆Meleda (Ragusa) — ◆Zante — Limassol — Iaffa	Jaffa—Salines—Zante Corfu—Parenzo Venice Jaffa—♦»C. Greco (Salines) Salines ♦Stop ♦Limassol ♦C. Bianco—♦Modon Zante Corfu—♦Meleda	(Croatia) Curzola Rovigno Parenzo •Caorle Venice Venice—Zante—Cstl. Tornese (W. Morea)—Salines	Venice-◆»Corfu ◆»Zante-Salines	Paphos — Scarpanto (Aegean) Candia Sapienza	Venice— Cephalonia—Salines	Salines Limassol Paphos—Zante—Rovigno Venice	Venice—◆Lagosta (Ragusa)—Zante ◆Zante— Alexandria
口	цшц	шш	\geqslant	E ⊠	шш	$\geqslant \geqslant$	闰	口	\geqslant	Ħ	\geqslant	ப
Feb 1546	1547 Jun 1549 Nov 1549	Nov 1549 Nov 1550	Jan 1550	Mar 1552 1552	Jan 1552 Jul 1553	Sep 1553 Sep 1553	Jun 1556	Apr 1557	May 1559	Mar 1560	e) Jun 1560	Apr 1561
War galley (Venice, caravan (3))	Comm. galley (Venice) Comm. ship (Genoa)	Comm. ship Comm. ship (England,	private) Comm. ship (England,	ŬŬ	Comm. ship (Venice) Pilg. ship (Venice,	Pi Pi	Comm. ship (Venice,	Comm. ship (Venice,	Comm. galley (Venice,	Comm. ship (Venice,	Comm. ship (Venice,	Comm. ship (Venice, private)
Monsieur d'Aramon	Piere Belon André Thevet André Thevet	André Thevet Roger Bodenham	Roger Bodenham	Daniel Ecklin von Arow André Thevet	Daniel Ecklin von Arow John Locke	Daniel Ecklin von Arow John Locke	Melchior von Seydlitz	Alessandro Magno	Alessandro Magno	Alessandro Magno	Alessandro Magno	Alessandro Magno

Stops	Alexandria → ** Corfu → ** Rovigno Parenzo Venice	Venice ♦»Parenzo—Ragusa—♦»Candia Candia— Limassol—♦»Jaffa Jaffa	Alexandria → Rhodes ♦ Milos ♦ Cerigo (Aegean) ♦ » Coron ♦ P. Vitulo (Morea) Zante → Ragusa Ancona	Venice Pola—Corfu Zante—Famagusta Tripoli Beirut	Venice—S Cyprus	Venice—Zante—Salines Tripoli	Alexandria – Zante – ◆Aquileia (N. Italy) Venice	Venice ♦»Parenzo – Zante – ♦N. Cyprus ♦Famagusta	Salines ♦»Salines Limassol — ♦»Gaza Jaffa	Jaffa &»Caesaria &Stop (Caesaria) Salines Limassol	♦» Paphos ♦ Paphos — ♦» Candia ♦ Candia ♦ Scandia — ♦ Zante — ♦ Boxina Baronzo	Vzante—Varvoigno Falenzo Marseille—Salines Tripoli	Tripoli - Stop Is. (Candia) - Argostella	(Cephalonia)—	Venice—Limassol	Salines — Jaffa	Tripoli Salines *\Limassol Limassol - \\$\text{Stop} (Istria)	Venice
Dir.	\gg	口	\geqslant	田	Ħ	口	\gg	Щ		\geqslant		Ы	\geqslant		Щ	Щ	\geqslant	
Time	Oct 1561	Jul 1562	Feb 1562	Aug 1563	1563	Jul 1565	Feb 1566	Jun 1569		Sep 1569		Apr 1573	\tilde{N} ov 1575		Jul 1581	Aug 1581	Sep 1581	
Vessel	Comm. ship (Venice, private)	_	n Comm. ship (Ancona)	Comm. galley (Venice,	Comm. ship (Venice,	private) Comm. ship (Venice)	Comm. ship (Venice)	Comm. ship (Venice,	private)	Comm. ship (Venice,	private)	Comm. ship (France)	Comm. ship (Venice)		Comm. ship (Venice)	Local ship (Cyprus)	Comm. ship (Venice)	
Traveller/source	Alessandro Magno	Graffen zu Louwenstein	Graffen zu Louwenstein	Elijah or Pesaro	Cesar Frederick	Johan Helffrich	Johan Helffrich	Hans von Hirnheim		Hans von Hirnheim		Leonhart Rauwolff	Leonhart Rauwolff		Laurence Aldersey	Laurence Aldersey	Laurence Aldersey	

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 - 8 Huygens, *Peregrinationes tres*, 51–2.
- 9 Following Pryor, Balard claims that a voyage along the southern shores of the Mediterranean was considered a high-risk adventure throughout the twelfth and thirteenth centuries. Commercial ships found it difficult to sail against the NNW winds, and were frequently swept back to go aground on the shores of Egypt and Africa. Galleys with a shallower draught, he writes, took advantage of the coastal routes as in ancient times. See respectively Pryor, *Geography*, 73; Balard, 'Les transports', 8–9.
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- 11 As was the case for pilgrims and travellers in past times, my voyage was not uneventful. Progress westward from the Levant was thwarted by the Meltemi winds which carried my modest vessel towards the southernmost islands in the Aegean, only to narrowly escape going aground on the southern shores of Kasos Island due to confused winds in the proximity of the shore. Fierce gusts near Spina Longa in Crete tore one of the sails, and the passage north-westward from the SW tip of the Peloponnese demanded much patience, as it had demanded from mariners 500 years ago. Close to Ston in Croatia, the fierce Bora winds tearing down the mountain slopes were also a danger to my craft. One night in an open anchorage the wind was so ferocious that again we were at risk of grounding. In his diary the traveller Sir Richard Torkington mentioned a similar case where the sailors opened all hatches and doors to allow the wind to pass through the vessel as much as possible, thereby reducing the tension on the anchor - information I found very useful. The homeward voyage was not all plain sailing either, and I was compelled to spend five days in Ios Island due to a storm in the Aegean Sea.
- 12 This paper is based on research carried out for a masters degree under the supervision of Prof. Benjamin Arbel at Tel Aviv University's Faculty of History. Those with reservations about Pryor's conclusions include: N.M.H. Fourquin, 'Review Article', *Mariner's Mirror*, 75 (1989), 104; P. Horden and N. Purcell, *The Corrupting Sea: A Study of Mediterranean History* (London, 2000), 137–43.
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- 15 The same terminology is used in other diaries included in that collection. S. Feyerabend, 'Beschreibung der Wallfahrt zum H. Grab Herrn Steffan von Gumpenberg', in *Reyssbuch des Heyligen* Landes (Frankfurt, 1584), 236r–7r.
- 16 A. Ya'ari, ed., Meshulam of Volterra: A Voyage in Eretz Israel (Jerusalem, 1948), 83 (Hebrew).
 - 17 Ya'ari, Meshulam of Volterra, 25, 80-1.

- 18 See 'L'itinéraire du Saint Voyage', in Y. Bellenger, Jacques Lesage: voyage en Terre Sainte d'un marchand de Douai en, 1519 (Paris, 1989).
 - 19 Balard, 'Navigations génoises', 782-3.
 - 20 Ibid., 784-5, 793.
- 21 Pryor, 'Winds', 80; Huygens, *Peregrinationes tres*, 52.
- 22 M.M. Newett, Canon Pietro Casola's Pilgrimage to Jerusalem in the Year, 1494 (Manchester, 1907), 236; **'Steffan** Gumpenberg', in Feyerabend, Reyssbuch des Heyligen Landes, 237v; V. Castagna, Pellegrinaggio ai luoghi santi: Liber peregrinationis di Jacopo da Verona (Verona, 1990), 52; Niccolò of Poggibonsi, A Voyage Beyond the Seas, 1346-50, T. Bellorini and E. Hoade, eds., (Jerusalem, 1945), 5; A. Ya'ari, Travels in Palestine (Jerusalem, 1946), 131 (Hebrew); Hans von Hirnheim, Des Ritters Hans von Hirnheim: Reisetagebuch aus dem Jahre, 1569, mit einem Nachworte heraugegeben von Ferdinand Khull (Graz, 1897), 25.
- 23 R. Röhricht, 'Die Jerusalemfahrt des Kanonikus Ulrich Brunner vom Haugstift Würzburg, 1470', in Zeitschrift des Deutschen Paläftsführenden Ausschub, 29 (1906), 49.
- 24 Martin Baumgarten, The Travels of Martin Baumgarten, a Nobleman of Germany, Through Egypt, Arabia, Palestine, and Syria in Three Books (London, 1732), 496.
- 25 '... a sol a monte ne stava bocca di Cattaro per Tramontana largo miglia 20. Malonta per Maestro Tramontana, Budua per Greco, Trasto alla quarta di Greco ver Tramontana, Dulcigno per Levante, et Antivari per Greco Levante, et fu tutto il giorno nuvolo.' Alessandro Magno, *Voyages*, 1557–65, Wilfred Naar, ed., (Fasano-Paris, 2002), 606.
- 26 Biblioteca del Civico Museo Correr, Venezia, MS Cicogna 3596/29. ['Viaggio per Cipro della Nave Giustiniana, 1567'] I am currently preparing a full transcription of the text for publication.
- 27 Tenenti bases his thesis on data extracted from insurance policies. However, in any case, most wrecks are to be found along the shores, where shoals and rocks are often a cause of damage or sinking: Tenenti, *Naufrages*, 45–65, pl. II. Pertes de Mer (Échouages ou Naufrages).

- 28 Pryor, *Geography*, 13–4, 35, 95, 119, fig. 2, fig. 27; Huygens, *Peregrinationes tres*, 51.
- 29 POEM Group, 'General Circulation of the Eastern Mediterranean', Earth-Sciences Reviews, 32 (4) (1992), 285–309; C. Millot, 'Circulation in the Mediterranean Sea: evidences, debates and unanswered questions', Scientia Marina 69 (Suppl. 1) (2005), 5–21; N. Hamad, C. Millot, I. Taupier-Letage, 'The Surface Circulation in the Eastern Basin of the Mediterranean Sea', Scientia Marina 70 (3) (2006), 457–503.
- 30 Hamad, 'The Surface Circulation', 490, 496.
- 31 M. A. Gerges, 'Preliminary Results of Numerical Model of Circulation Using Density Fields in the Eastern Mediterranean', *Acta Adriatica*, 1976, 18, No. 10, 165–76.
- 32 R. Heikell, Greek Waters Pilot (Cambridgeshire, Imray, 2004), 25–6; T. and D. Thompson, Adriatic Pilot: Albania, Montenegro, Croatia, Slovenia and the Italian Adriatic coast (Cambridgeshire, Imray, 2004), 7, 53.
- 33 Hamad, 'The Surface Circulation', 460, 468, 486–7, 496–7, 500.
- 34 Pryor, *Geography*, 92; Pryor, 'Winds', 73, 82; See also, Huygens, *Peregrinationes tres*, 43, 51-2.
- 35 Y. Goldreich, The Climate of Israel, Observation, Research and Application (Heidelberg, Springer, 2003), 48–51; R. Heikell, Mediterranean Cruising Handbook (Cambridgeshire, Imray, 2004), 122.
- 36 Compare Pryor's claims with data collected by the US Navy Weather Research Facility regarding prevailing winds in different stations along the shores of the Mediterranean: E. R. Reiter, *Digest of Selected Weather Problems of the Mediterranean*, The Navy Weather Research Facility (Virginia, 1971), Appendix C: 'Statistics of the Etesian, Frequency (%) and strength (Beaufort) for the three most frequent wind directions at selected island and coastal stations (average of observations at 08:00, 14:00 and 20:00 LT) (Metaxas)', 1–3.
- 37 If the wind is strong enough to pass over an obstacle such as an island, it will blow with great force down the leeward slopes of the obstacle. Otherwise, the wind will alter its

direction up to 90 degrees from its original course, as is the case with the Etesian winds in the Aegean sea and the Bora winds in the Adriatic during the summer months: Heikell, *Mediterranean*, 118, 122–3.

- 38 Pryor, Geography, 93, 95; Heikell, Greek Waters, 25-6.
- 39 See for example the US Navy conclusions regarding visibility and the haze effect in different parts of the Mediterranean: L. R. Brody and J. R. Nestor, *Handbook for Forecasters in the Mediterranean, Part 2: Regional forecasting aides for the Mediterranean basin*, Naval Environmental Prediction Research Facility (California, 1980), VII-13, V-19, VI-33.
 - 40 Huygens, Peregrinationes tres, 34–57.
- 41 In addition, Saewulf's stop at the island of Cephalonia was due to a storm ('we were driven by a tempest...') and was not predetermined for trade purposes as implied by Pryor: T. Wright, *Early Travels in Palestine* (London, 1848), 31.
 - 42 Huygens, Peregrinationes tres, 37–8.
 - 43 *Ibid.*, 40–1, 43; Pryor, *Geography*, 98;
- 44 Ruy Gonzalez de Clavijo, Narrative of the Embassy of Ruy Gonzalez de Clavijo to the Court of Timour at Samarcand, 1403–6 (New York, 1970), 18–21.
 - 45 Huygens, Peregrinationes tres, 45.
- 46 Pryor, Geography, 98; Wright, Early Travels, 33. Other travellers also mention a similar event: see 'The Itinerary of a Certain Englishman, 1344/5', in E. Hoade, ed., Western Pilgrims (Jerusalem, Rpt. 1970), 58; Guillebert de Lannoy, Voyages et ambassades de Messire Guillebert de Lannoy, chevalier de la Toison d'or, seigneur de Santes, Willerval, Tronchiennes, Beaumont et Wahégnies, 1399–1450, C.P. Serrure, ed., Société des bibliophiles de Mons (Mons, 1843), 127.
- 47 See Huygens, *Peregrinationes tres*, 48; Pryor, 'Winds', 81.
- 48 Wright, Early Travels, 34. Huygens, Peregrinationes tres, 48.
- 49 Castagna, *Pellegrinaggio*, 55; Felix Fabri, *The Wandering of Felix Fabri*, vol. 1, Palestine Pilgrim's Text Society, VII (London, 1887), 202.
 - 50 Pryor, 'Winds', 73, 81.

- 51 Wright, Early Travels, 47; Huygens, Peregrinationes tres, 51-2.
- 52 Lannoy, *Voyages*, 128; Denis Possot and Charles Philippe, *Le voyage de la Terre Sainte*, composé par maître Denis Possot et achevé par messier Charles Philippe, C. Schefer, ed., (Paris, 1890), 188.
- 53 See respectively, Niccolò of Poggibonsi, A Voyage, 127; Bernhard von Breydenbach, Peregrinations: un viaggiatore del quattrocento a gerusalemme e in egitto, Ristampa anastatica dell'incunabolo (Roma, 1999), 245-6; Jean Thenaud, Le Voyage d'outremer (Égypte, Mont Sinay, Palestine) de Jean Thenaud suivi de La Relation d l'Ambassade de Domenico Trevisan auprès du Soudan d'Egypte, 1512, C. Schefer, éd. (Genève, 1971), 121–3, 216; A.Z. Aescoly, ed., *The Story* of David Hareuveni, copied from the Oxford Manuscript (Jerusalem, 1993), 31 (Hebrew); 'Beschreibung der Reyß ins heylig Land, Daniel Ecklins von Arow', in Feyerabend, Reyssbuch des Heyligen Lands, 401; Magno, Voyages, 297-306; 'Beschreibung der Wallfahrt zum H. Grab Herrn Albrechts Graffen zu Louwenstein', in Feyerabend, Reyssbuch des Heyligen Lands, 205.
- 54 In earlier times it is probable that most of the vessels tacked mainly to the NE just to reach Rhodes or the Lycian shore. Even so, crossing northward from Egypt was the common route for the return voyage. See also the article by Abraham Udovitch and comments by Eliyahu Ashtor: A.L. Udovitch, 'Time, the Sea and Society: Duration of commercial voyages on the southern shores of the Mediterranean during the high middle ages', in La Navigazione Mediterranea nell'Alto Medioevo, Centro italiano di studi sull'alto Medioevo (Spoleto, 1978), 503, 509, 541–5, 558–9.
 - 55 Magno, Voyages, 297-301.

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