

# MEDIEVAL MARITIME WARFARE



CHARLES D STANTON

# Medieval Maritime Warfare

Charles D. Stanton



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# Contents

List of Illustrations . . . . .	iv
Preface . . . . .	vi
Introduction . . . . .	1
<b>Part I: Southern Europe – The Mediterranean and the Black Sea . . .</b>	<b>11</b>
1. The Byzantine-Muslim Struggle for Supremacy on the Middle Sea . .	19
The Siege of Constantinople (717–18) . . . . .	42
2. Norman Naval Expansion in the Central Mediterranean . . . . .	48
The Battle of Corfu (November 1084) . . . . .	68
3. The Crusades: The Clash of East and West at Sea . . . . .	73
The Venetian Crusade (1122–5) . . . . .	105
4. Genoese–Pisan Rivalry for the Western Mediterranean . . . . .	111
The Battle of Meloria (August 1284) . . . . .	131
5. The War of the Sicilian Vespers: Angevin versus Aragonese Sea Power . . . . .	136
The Battle of Malta (June 1283) . . . . .	154
6. Venetian-Genoese Competition for Control in the East . . . . .	159
The Battle of Acre (June 1258) . . . . .	182
<b>Part II: Northern Europe – The North Sea, the Baltic Sea and the     English Channel . . . . .</b>	<b>185</b>
7. The Viking Onslaught . . . . .	191
The Siege of Paris (885–6) . . . . .	215
8. The Norman Invasion and the Rise of Anglo-French Naval Warfare .	219
The Battle of Dover (August 1217) . . . . .	236
9. The Hundred Years War: Anglo-French Conflict across the Narrow Sea . . . . .	241
The Battle of Sluys (June 1340) . . . . .	263
10. The German Hanse: Martial Merchants of the Baltic . . . . .	268
The Strange Voyage of the <i>Saint-Pierre de La Rochelle</i> (1462–75) . . . . .	287
Conclusion . . . . .	289
Selected Bibliography . . . . .	349
Index . . . . .	353

# List of Illustrations

## Plates

1. Roman *liburnians*
2. *Olympias*, replica of an Athenian trireme
3. *Dromōn* spewing Greek fire
4. Naval battle between two eleventh-century *dromōns*
5. Sicilian *galea* of the twelfth century
6. Manuscript illustration of an Arab vessel of the thirteenth century
7. Andalusian corsairs en route to attack Crete in 827
8. Sack of Thessaloniki in 904
9. Byzantine invasion of Saracen Sicily in 1038
10. Circular map of the world by al-Idrisi
11. Capture of Constantinople in 1204
12. Siege of Damietta during the Fifth Crusade
13. Capture of Damietta by St Louis in 1249
14. Catalan bireme galley of the late thirteenth century
15. Catalan–Aragonese infantry of the thirteenth century
16. Port of Genoa in the late fifteenth century
17. Model of a Venetian trireme
18. Pillars from the Genoese quarter at Acre
19. Skuldelev 3 Viking ship
20. Bremen cog
21. Dragon post of a Viking ship
22. Oseberg ship
23. Gokstad ship
24. Second wave of Viking invasions on England
25. Construction of the Norman fleet
26. Disembarkation of horses from Norman ships
27. Battle of Dover
28. Two fighting cogs
29. Engraving of a fifteenth-century Flemish carrack
30. Battle of Sluys
31. Battle of La Rochelle
32. Gold noble of Edward III
33. Lübeck town seal
34. *Lisa von Lübeck*, reconstruction of a fifteenth-century Hanseatic caravel
35. Hans Memling's *Last Judgement*
36. *Rumeli Hisar*

37. Dardanelles Gun
38. Ottoman siege of Constantinople in 1453
39. Battle of Zonchio
40. *Henry Grace à Dieu*

### Figures

1. Italo-Norman light bireme galley of the eleventh century . . . . . 8
2. Byzantine *dromōn* of the tenth century . . . . . 14
3. Angevin bireme galley of the late thirteenth century . . . . . 141
4. Overhead illustration of a Venetian trireme . . . . . 171
5. Depiction of clinker and carvel hull construction techniques . . . . . 188

### Maps

1. Mediterranean and Black Seas . . . . . 12
2. Siege of Constantinople, 717–718 . . . . . 45
3. Norman blockade of Bari, 1068 . . . . . 53
4. Port of Palermo in the eleventh century . . . . . 54
5. Battle of Corfu, 1084 . . . . . 71
6. Venetian Crusade of 1122–1125 . . . . . 109
7. Mahdiyah in 1087 . . . . . 116
8. Battle of Meloria in 1284 . . . . . 134
9. Battle of Malta in 1283 . . . . . 156
10. Battle of Curzola in 1298 . . . . . 168
11. The North Sea, English Channel and Bay of Biscay . . . . . 186
12. Viking Siege of Paris, 885–886 . . . . . 216
13. Battle of Dover (Sandwich) in 1217 . . . . . 239
14. Battle of Sluys in 1340 . . . . . 265
15. World of the Hanse in the fourteenth century . . . . . 269

# Preface

When Rupert Harding, my editor at Pen & Sword Books, first approached me with an idea for a book recounting medieval ‘sea battles’, I must admit I was a bit intimidated by the vast scope of the project. Maritime warfare is a fascinating and crucial aspect of medieval military history which has yet to be covered in any comprehensive manner, but, in order to give it the proper perspective, the book needed to embrace a time frame from the fall of the Roman Empire to the dawn of the Renaissance (roughly a millennium) and extend geographically from the northern Baltic to the eastern Mediterranean – a daunting task to say the least. That said, I found inspiration, as I have done so often in the past, from my long-time mentor at Cambridge, David Abulafia, whose *The Great Sea: A Human History of the Mediterranean* accomplished an even more prodigious feat in magisterial fashion. I possess neither his perspicacity nor his deftness at prose, but his example convinced me that it was, at least, possible. What follows is my best effort. Accordingly, I have composed a two-part tome with ten chapters, each addressing a readily identifiable conflict in which war at sea was a major component, from around 500 AD (when the Eastern Empire under Justinian began to recover control of the Mediterranean) to 1500 (about the time that the introduction of gunpowder and the cannon fundamentally altered naval combat). Part I contains six conflicts which occurred in the Mediterranean and Black Seas during the period, while Part II deals with four struggles at sea which took place in the English Channel, the Baltic Sea and the North Sea. Appended to each chapter is an in-depth description of an engagement or encounter representative of the contest under discussion. For the sake of context and accessibility, a chronological narrative was employed throughout. While the work was designed as a historical survey for general public consumption, budding scholars and those interested in delving deeper should find the documentation an adequate starting point. Reference to the endnotes is, however, unnecessary for casual readers. All essential factual information is contained in the body of the work. I have also maintained a strong bias towards translated source materials wherever possible, again in the interests of accessibility. In keeping with that theme, the included illustrations were specifically selected to provide the reader with a visual context for many of the maritime concepts presented in the work. The battle scene from the thirteenth-century Vegetius manuscript (Ms Marlay Add I, fol. 86r), depicted on the cover of the book, is particularly emblematic of that effort. Permission to use it was graciously granted by the Fitzwilliam Museum of Cambridge. A special thanks is owed to the great John Pryor, whose groundbreaking work in the maritime history of the medieval Mediterranean I have long admired. The

reproduction of his unparalleled drawing of a tenth-century *dromōn* in this book is due to his intellectual generosity. Finally, I must offer heartfelt gratitude to Rupert for suggesting the project in the first place and having the confidence in me to carry it out. And, of course, I would be reprehensively remiss if I did not express indebtedness to my lovely bride Kristy, who provided invaluable technical assistance (not to mention moral support) and turned my masses of squiggly lines into legible maps and line drawings.

Charles Stanton  
July 2014

## **DEDICATION**

For my father

Lt. Col. Charles R. Stanton USAF

Tuskegee Airman and Decorated Veteran of

WWII, Korean War, Vietnam

*'Master of his Fate, Captain of his Soul.'*

# Introduction

## The Nature of Medieval Maritime Warfare

### **Western Seas post-*Pax Romana***

When the fleet of Gaius Julius Caesar Augustus (Octavius) crushed that of Cleopatra VII Philopator of Egypt (Cleopatra) and Marcus Antonius (Mark Antony) off a promontory of Epirus called Actium on 2 September 31 BC, the Mediterranean became a Roman lake.<sup>1</sup> The shores which rimmed it were now Roman almost without exception. For the first time, Rome was without major opposition on the Middle Sea. The scourge of piracy had largely been quelled a few decades earlier in 67 BC when Gnaeus Pompeius Magnus (Pompey the Great), backed by the entirety of the Republic's military might, cleared both the Mediterranean and the Black Sea of corsairs in the course of a brilliant three-month campaign.<sup>2</sup> The Mediterranean, the heart of the 'known world', had become the *mare nostrum* ('our sea') of Rome and the *Pax Augustus* (or, as it would later come to be called, the *Pax Romana*) had been established. It would prevail for more than 200 years.<sup>3</sup> Rome maintained fleets at Misenum (near Naples) on the Tyrrhenian and at Ravenna on the Adriatic essentially to keep piracy in check and the sea lanes open, especially for grain shipments from Sicily and Egypt.<sup>4</sup> After Actium there would not be another major naval encounter until 324 AD, when Constantine's 200 *triacontors* (thirty-oared war galleys) and *pentecontors* (fifty-oared warships) prevailed over the 350 triremes (galleys with three files of oarsmen per side) of Valerius Licinianus (Licinius) in the Dardanelles.<sup>5</sup>

As Rome's power waned amid the Germanic invasions of the fifth century, so too its control of the seas receded. The shipyards at Misenum and Ravenna fell into disrepair and the notion of a standing navy became, like the *Pax Romana*, a distant memory. Rome's dominance of the sea had ended long before Odoacer (a German general) snuffed out the last vestiges of imperial authority in 476.<sup>6</sup> And there was no great naval entity to take its place. Without an overarching power to maintain stability, the sea lanes became no safer than Rome's unguarded roads. Piracy, never fully vanquished, returned with a vengeance. The Vandals, an east Germanic people, crossed the Pyrenees in the early fifth century and migrated down the Iberian peninsula to Andalusia, from where they crossed to North Africa. Once there, they advanced eastwards, capturing Carthage in 439. Under their king, Gaiseric, they built a formidable fleet and established a virtual pirate kingdom centred on Carthage, an ancient Phoenician city-state and former maritime power which ironically had once vied with Rome for control of the central Mediterranean (i.e., the three Punic Wars). Numbering 120 warships, their fleet enabled the Vandals eventually to hold sway over Sardinia, Corsica and

the Balearics while raiding as far east as Illyria and the Peloponnesos. In 455 Gaiseric even sailed the Vandal fleet up the Tiber and ravaged Rome itself.<sup>7</sup> The Mediterranean was no longer the *mare nostrum* of the 'Eternal City'.

Rome's maritime fortunes suffered a similar reversal in the northern seas at the hands of barbarian pirates. Roman historian Ammianus Marcellinus described a '*barbarica conspiratio*' in which an alliance of Attacotti, Franks, Picts, Scots and Saxons collaborated against Roman rule in Britain in 367. According to John Haywood, an expert on early Anglo-Saxon seafaring, this 'barbarian conspiracy' presaged a scourge of Saxon piracy which plagued both sides of the English Channel in the late fourth century.<sup>8</sup> The raiding became so intense that the string of Roman coastal fortifications along the Channel became known as the *Litus Saxonicum* ('Saxon Shore'). Some modern historians have even referred to this period, which lasted for nearly two centuries, as 'the first Viking Age'. Indeed, Haywood flatly asserts that the Romans 'had effectively lost control of the seas to the Saxons and other pirates by the end of the fourth century'.<sup>9</sup>

To be sure, commerce continued on the waves of the western seas, despite the dangers. Syrian, Coptic, Jewish and Greek merchants persisted in plying their trade in the Mediterranean,<sup>10</sup> while Celts, Franks and Saxons engaged in cabotage commerce along the coasts of Britain, Ireland, Frisia and Brittany.<sup>11</sup> In a world of bandit-besieged byways and great disorder, the sea was increasingly the stage upon which the human struggle of western civilization was played out. The violent competition among the various so-called barbarian tribes to fill the void left by Rome's fall regularly spilled out over its shores and onto its waters. It was the medium upon which commerce was carried and power was projected. And frequently the two activities merged, practised by the same players on the same vessels. Merchants often became combatants and sometimes even corsairs, while merchantmen became men-of-war.<sup>12</sup> Such was the setting from which stemmed medieval maritime warfare.

### **Maritime Technology**

Nautical architecture and navigation remained rudimentary, having hardly changed since classical times. Maritime technology evolved only gradually throughout the medieval era. A Roman mariner of the fourth century would have noticed only a few subtle advancements in the ships of the tenth century. Climatic and cultural variations between northern and southern Europe caused ship construction to develop differently in the two regions, but at the outset of the Middle Ages many parallels persisted. Warships were almost all galley-type vessels characterized by a high length-to-width ratio (as much as 10:1) and a minimal keel, producing a shallow draught and a low freeboard. Propulsion was principally provided by oars, augmented on occasion with one or two sails, while side-mounted steering oars supplied directional control.<sup>13</sup>

A probable prototype was the Roman *liburnian*. Adopted from the Liburni pirates of the Illyrian coast in the first century BC, it became the mainstay of the Roman fleet throughout the Imperial period, according to the late fourth-century Roman strategist Publius Flavius Vegetius Renuatus (Vegetius).<sup>14</sup> Measuring just

under 20m (about 65ft) in length and a little under 4m (around 13ft) in breadth, it was propelled by fifty oars, a large square sail and a small artemon foresail. Relatively nimble, it could manage about 7 knots in a sprint, but probably averaged less than 3 knots.<sup>15</sup> (PI. 1) It was almost certainly the forerunner of the fifty-oared Byzantine *dromōn* of the sixth century which would eventually evolve into the model for nearly all Mediterranean war galleys until the late eleventh century.<sup>16</sup>

While there is scant evidence that northern shipwrights copied Roman models, the *liburnian*, nonetheless, may even have had some influence on the early warships of northern Europe. Having been used on the Rhine and in the English Channel during the first and second centuries, they appear to have shared some common characteristics with later ships of the Angles and Saxons. The five Roman wrecks from the late fourth century discovered on the Rhine at Mainz seem even more similar. The *naves lusoriae*, as they were called, were light river galleys about 18.3m (60ft) long and nearly 3m (about 10ft) broad, propelled by thirty rowers and a single sail.<sup>17</sup> A representative reconstruction of a *navis lusoria* is currently on display in the *Museum für Antike Schifffahrt* (Museum of Ancient Seafaring) in Mainz. Correspondingly, the fourth-century oak ship (probably Anglian) found at Nydam Moss in Denmark was about 21.3m (70ft) long with 3.6m (12ft) of beam, manned by around thirty oarsmen. And the early seventh-century Sutton Hoo ship of an Anglo-Saxon king unearthed near Woodbridge in Suffolk was 27.13m (89ft) long by 4.27m (14ft) wide with a crew of twenty-eight oarsmen.<sup>18</sup> The narrow, shallow-draught hulls and low freeboards of all these vessels rendered them easily swamped and thus susceptible to the vagaries of weather – particularly in northern climes.

Navigation remained equally primitive. It was primarily celestial and coastal. The compass had not yet been invented and usable maritime charts did not exist in the early Middle Ages. Steering was limited by what could be seen from the deck or mast of a ship. Hence, most vessels sailed within sight of land as much as possible, which meant evading such attendant hazards to maritime traffic as shoals, rocks and reefs. Visibility, therefore, was of paramount concern. This, of course, meant that mariners were, again, at the mercy of the elements. Accordingly, Vegetius devoted four of his six chapters on nautical navigation in the *Epitoma Rei Militaris*, his fourth-century manual of military operations and strategy, to such meteorological phenomena as wind, rain and storms, because ‘under their attack the seas, which are naturally tranquil and quiet, rage with boiling waves’. And he insisted that the seas should be scrupulously avoided during the winter months due to ‘minimal daylight and long nights, dense cloud-cover, foggy air and violence of winds doubled by rain and snow’.<sup>19</sup> Thus, galley fleets generally got under way only during daylight hours and almost exclusively during the spring and summer months. Even so, contemporary accounts are rife with reports of fleets decimated by tempests.

When conditions permitted vessels to venture out of port, they did so at a snail’s pace. Although galleys usually possessed at least one sail, their shallow keels and low freeboard normally prevented its use unless there was a light,

following wind. John Guilmartin, an expert on late medieval warships, estimates that '[a] galley could maintain its maximum speed under oars of some 7 knots for no more than twenty minutes and the best sustained speed which it could manage was only about 3 knots or a little more'.<sup>20</sup> In fact, after studying the accounts of dozens of ancient and medieval voyages, maritime scholar Lionel Casson concluded that 'with unfavourable or very light winds, a fleet usually could do no better than 1 to 1½ knots'.<sup>21</sup> These agonizingly slow speeds, combined with limited visibility (probably less than 20km or around 12 miles from a masthead), made interdiction at sea unlikely,<sup>22</sup> prompting Guilmartin to declare the notion of maintaining naval superiority through control of the sea lanes espoused by the great nineteenth-century naval strategist Alfred Thayer Mahan<sup>23</sup> a 'fallacy' in the era of oared vessels.<sup>24</sup> The technology of the time simply would not permit it.

### Crew Conditions

Crew conditions fluctuated from merely onerous to utterly appalling. Even under the best of circumstances, rowing was gruelling work, particularly in the Mediterranean where temperatures during the prime sailing season, the summer months, hovered around 35 degrees centigrade (95 degrees Fahrenheit). Much has been learned of the challenges facing galley crews from the sea trials of the *Olympias*, an authentic replica of an Athenian trireme constructed by the Hellenic Navy in 1987. **(Pl. 2)** Dehydration was, by far and away, the most serious danger. Appended to that was the menace of foul air brought on by the lack of ventilation below decks. Reeking with the stench of sweat and urine, this fetid and claustrophobic environment was probably as much of a deleterious factor as the suffocating heat and enervating exertion. It was found that galley crews required enormous quantities of water to function: at least one litre per hour per oarsman.<sup>25</sup> Accordingly, every man could be expected to consume eight litres a day at a minimum, meaning that the standard crew complement of a tenth-century *dromōn*, 108 oarsmen plus officers and marines, needed no less than a metric tonne of water per day.<sup>26</sup>

The standard sustenance for galley crews offered them scant compensation for their labours. It consisted primarily of ship's biscuit.<sup>27</sup> This desiccated concoction of wheat grain, called *panis biscotti* ('twice-baked bread') by the Venetians, had to be ground up with water or some other liquid into a sludge-like stew in order to be rendered palatable.<sup>28</sup> Marino Sanudo Torsello, the fourteenth-century Venetian nobleman who penned a comprehensive plan for the recovery of the Holy Land called the *Liber Secretorum Fidelium Crucis* ('Book of the Secrets of the Faithful of the Cross'), specified that each galley crewman should receive 1.5 pounds (680 grams) of biscuit per day as his basic food ration. He also stipulated that every man should be allocated 1 ounce (28 grams) of cheese per day as well as about 1.6 ounces (45 grams) of salt pork and around 3.5 ounces (100 grams) of beans or 'any other vegetable' (probably dried).<sup>29</sup> And, of course, all these foodstuffs had to be consumed with ample quantities of water.

Water was, thus, the fuel upon which all galley fleets operated. Yet limited cargo space restricted onboard reserves of water to a mere four-days' worth.<sup>30</sup> Constant replenishment was required. Consequently, it was this perpetual

prerequisite for mammoth amounts of water which dictated the operating limitations of galley fleets throughout the medieval era. Galley crews had to have ready access to friendly or at least neutral shores in order to obtain the needed water supplies along with victuals, shelter from storms and, of course, the occasional rest from exhausting labour. While under way, oarsmen ate and slept on the rowing benches, rising only occasionally to relieve themselves. Accordingly, galley fleets had to put into shore almost daily. This is why John Pryor, a leading authority on galley warfare, contends, 'Control of the land meant control of the sea, because control of the land carried with it both control of the refuges to which all galley fleets had to have recourse in inclement weather and also control of the water supplies, without which no naval forces could operate for more than a few days.'<sup>31</sup> In other words, whosoever controlled the shorelines also controlled the seas.

### **Battle Tactics**

The low state of medieval maritime technology ensured that battle tactics were just as basic. They had hardly progressed since Roman times. Confrontations at sea remained messy affairs that almost invariably devolved into unpredictable ship-against-ship *mêlées*. This helps explain why large-scale naval engagements were rare during the Middle Ages. Few naval commanders were willing to risk all in a single battle subject to so many uncontrollable variables. As on land, clashes at sea normally occurred only when one side or both could not avoid it.

The fact that there was no reliable ship-killing weapon compounded the uncertainty surrounding the outcome. The waterline ram or *rostrum* of the classical era was ineffective against the sturdier, frame-first hull construction which began to develop in the Mediterranean as early as the seventh century and found full implementation by the eleventh century.<sup>32</sup> It proved utterly futile against the more robust ship architecture of the northern seas, even in Roman times. In his *Commentarii de Bello Gallico* ('Commentaries on the Gallic War'), Julius Caesar said of the dense oak vessels of the Gauls, 'Our ships could not damage them with the ram (they were so stoutly built).'<sup>33</sup> As a result, no warship in either the north or the south was known to have sported a ram by the seventh century. It was replaced on the Byzantine *dromōn* by a spur, a sort of reinforced bowsprit used to assist in seizing and boarding an enemy ship.<sup>34</sup> The only weapon developed in the medieval period capable of destroying an entire vessel was 'Greek fire', a secret petroleum-based incendiary invented by a Syrian artificer named Kallinikos in the seventh century. Documentary and graphic sources indicate that it was spewed from specially constructed siphon tubes mounted on the bows of *dromōns*.<sup>35</sup> (PI. 3) Unfortunately its utility was extremely restricted. It had limited range and could only be deployed in calm or following winds.<sup>36</sup> The most practical onboard armament of the Middle Ages was the swivel-mounted ballista, a large crossbow contraption which used torsion to fire iron quarrels called 'mice' or 'flies', but none of these was large enough or powerful enough to sink a ship.<sup>37</sup> It was more of an anti-personnel weapon.

Besides, the goal of medieval maritime combatants was not to sink or destroy opposing vessels. Most often it was to capture them as prizes, if at all possible. After all, the chosen vocation or avocation of most seafarers of the age was piracy. The parcelling out of prizes was how crews were often compensated – even merchant crews.<sup>38</sup> Accordingly, combat at sea routinely commenced with exchanges of missiles. Usually these were crossbow bolts, arrows, lances, stones, caltrops, etc., but the chronicles also contain reports of more atypical projectiles, such as clay pots filled with vipers, scorpions, quicklime, naphtha (a highly flammable petroleum distillate) and so on.<sup>39</sup> The idea was to clear the deck of an opposing vessel as much as possible prior to closing. The next phase of the encounter was grappling, followed by boarding. The outcome of the engagement was almost always decided by hand-to-hand combat on the decks of engaged ships.<sup>40</sup> (Pl. 4)

This is not to say that strategy was not involved. It often was, at least at the outset of an engagement. Some naval commanders may even have heeded the advice proffered by Vegetius in Book IV of the *Epitoma Rei Militaris*, which covers naval warfare.<sup>41</sup> But if any military manual was consulted at all, it was more likely the early tenth-century *Taktika* of Emperor Leo VI or those of other Byzantine tacticians of the period. First of all, in Constitution XIX of the *Taktika* which concerned naval warfare, the emperor counselled caution: ‘Certainly, apart from some urgent necessity forcing you to do so, you should not throw yourself into a pitched battle. For many are the reversals of so-called fortune. What happens in battle is not what one expects.’<sup>42</sup> Along those lines, a ninth-century treatise by a certain Syrianos Magistros (perhaps a naval *strategos* or commander) advised anticipating any encounters with enemy fleets through the deployment of scout ships: ‘There should be four of these, two keeping about six miles ahead of the main fleet and the other two in between so that the second group are informed of the disposition of the enemy by the former through certain signals which they will have arranged with each other, and should have done the same with the fleet.’<sup>43</sup>

If, however, it turned out that conflict was unavoidable, it was considered imperative to draw all vessels up into battle formation. (There are multiple contemporary accounts of ships being linked together with chains or cables in order to ensure formation integrity, though the wisdom and practicality of this practice has been questioned.)<sup>44</sup> The favoured formation was what Leo VI called ‘crescent-shaped’, i.e., a semi-circle line abreast with the flagship in the concave centre and the larger, more formidable ships at the tips of the horns.<sup>45</sup> The objective was to effect an envelopment of the enemy fleet, if possible. The larger or taller ships were selected for the wings, because height mattered in the missile exchanges which ensued. Once ships were engaged with grapples and pikes, caltrops and stones were generally dropped from masthead platforms of one kind or another in an attempt to hole the hull of an opposing vessel.<sup>46</sup> Nonetheless, despite whatever stratagem was initially employed, the clash inevitably degenerated into a chaotic free-for-all on the decks of the conjoined ships, much like in a land battle.

In point of fact, medieval fleets were hardly ever assembled for the purpose of engaging in pitched battle at sea. The intent of almost all medieval naval actions was amphibious assault, logistical support for land operations or the blockade of a hostile port. This is why John Pryor contends, ‘Appreciation of the fact that all medieval naval warfare was essentially coastal and amphibious warfare is important since many of the recommended strategies and tactics were devised in that context.’<sup>47</sup> This is particularly true when one takes into account that the primitive state of nautical navigation at the time, the vulnerability of galleys to inclement weather and the need for constant resupply constrained medieval fleets to cling to coastlines anyway.

### The Sources

Unfortunately, uncovering the story of medieval maritime warfare has proven challenging for historians because it is mostly contained in a disparate anthology of annals and chronicles written by clerics, ignorant of nautical matters. Theophanes the Confessor, a chronicler of some early Byzantine encounters with the Muslims at sea, is a case in point. An ascetic, orthodox monk who founded his own monastery, Theophanes died in exile in 818 because of his staunch opposition to iconoclasm.<sup>48</sup> His description of how the Byzantines broke the second blockade of Constantinople in 718 is typically bereft of detail and shaped by his spiritual vantage point: ‘With God’s help, thanks to the intercession of the all-pure Theotokos [“God-bearer” – the Virgin Mary], the enemy were sunk on the spot.’<sup>49</sup>

Worse still, most medieval writers, particularly in the Mediterranean, were trained in the classics and had a tendency to fill in gaps in their knowledge of maritime matters with classical tropes. As a result, the terminology they used to describe vessels and shipboard equipment was often misleading and inaccurate. William of Apulia, an eleventh-century Norman chronicler, described the ships that Robert Guiscard used to defeat the Venetians at Corfu in 1084 as ‘triremes’, referring to the ancient Hellenic vessel which boasted three banks of oarsmen per side.<sup>50</sup> The trouble is there is no corroborating testimony of any kind that the Normans ever operated triremes in any of their fleets. Guiscard’s ships were probably light bireme galleys (i.e., two banks of rowers).<sup>51</sup> (See Fig. 1.) To William, trained in the Greek classics, all galleys were triremes. Matthew Paris, an English chronicler and Benedictine monk, suffered from a similar parochial perspective. He portrayed the English vessels at the 1217 Battle of Dover as sporting iron rams (*‘galeas ferio rostratas’*),<sup>52</sup> yet there is no physical evidence of any English ship ever being fitted with a ram of any sort. Matthew had obviously imputed his vision of how naval battles were to be fought from classical accounts.<sup>53</sup>

Compounding the problem is the lack of reliable graphic representations of medieval vessels in general and warships in particular. The images found in medieval manuscripts and artwork are rudimentary and fanciful. The sixth-century *Ilias Ambrosiana* manuscript at the Biblioteca Ambrosiana of Milan (Cod. Ambros. F. 205 Inf.) contains some of the earliest known depictions of *dromōns*,

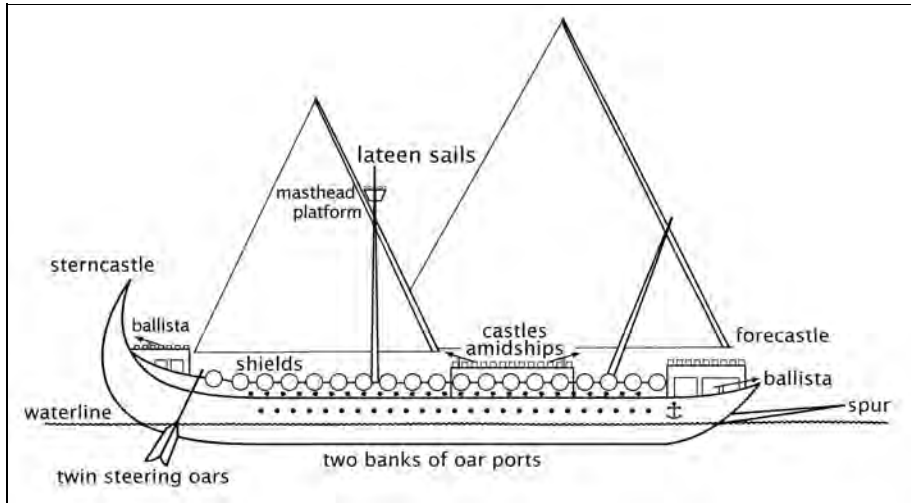


Figure 1. Italo-Norman light bireme galley of the eleventh century. (C. Stanton with P. Judge with permission of Boydell Press)

but the images are so unsophisticated and dilapidated that it is difficult to distinguish any detail.<sup>54</sup> The first known illustrations of the twelfth-century Italian *galea* are a set of seven highly stylized, monochrome miniatures placed in the margins of the Paris manuscript of the *Annales Ianuenses* of Genoa (Bibliothèque Nationale, Ms. Suppl. Lat. 773).<sup>55</sup> To the inexpert, they appear to be nothing more than banana-shaped outlines. Nautical archaeology has only been partially productive at filling the void. Few medieval vessels have ever been recovered and discoveries of warships have been rarer still.

That said, marine archaeologists have had some rather spectacular successes of late. In the early 1960s George Bass and Frederick Van Doorninck excavated the seventh-century wreck of a small coastal trader off Yassi Ada Island near Bodrum, Turkey, which appears to show the transition from shell-first ship construction to the stronger skeleton-first style.<sup>56</sup> From 1977 to 1979 the same pair, along with Richard Steffy, salvaged the remains of another small merchant vessel at Serçe Limani, Turkey, this one from the eleventh century. It exhibited no evidence of the mortise-and-tenon joints of the late Roman period: proof that the conversion to frame-first hull construction had been completed.<sup>57</sup> In the north a late fourteenth-century cog, the workhorse of the Hanseatic League, was discovered in the Weser river near Bremen in 1962 and a fifteenth-century version was reclaimed from the Zuiderzee at Almere in the Netherlands in 1986.<sup>58</sup>

Nautical archaeology has made numerous other finds of some significance in the last few decades, but almost all of these have been merchantmen of one kind or another. What has been sorely lacking is some physical evidence of fighting vessels from the medieval period, particularly in the Mediterranean. The most important finds to date have been Viking longships, like the late ninth-century Gokstad ship unearthed at Sandefjord, Norway in 1880 and the eleventh-century

Skuldelev 2 recovered near Roskilde, Denmark in 1962.<sup>59</sup> There have been no comparable discoveries in the Mediterranean – that is, until very recently. In 2004 conservationists working under Sait Başaran in Istanbul uncovered thirty-one shipwrecks in the fourth-century Theodosian Harbour of Constantinople. While excavation is ongoing, four of these appear to be war galleys from the mid-Byzantine era.<sup>60</sup> The project seems quite promising.

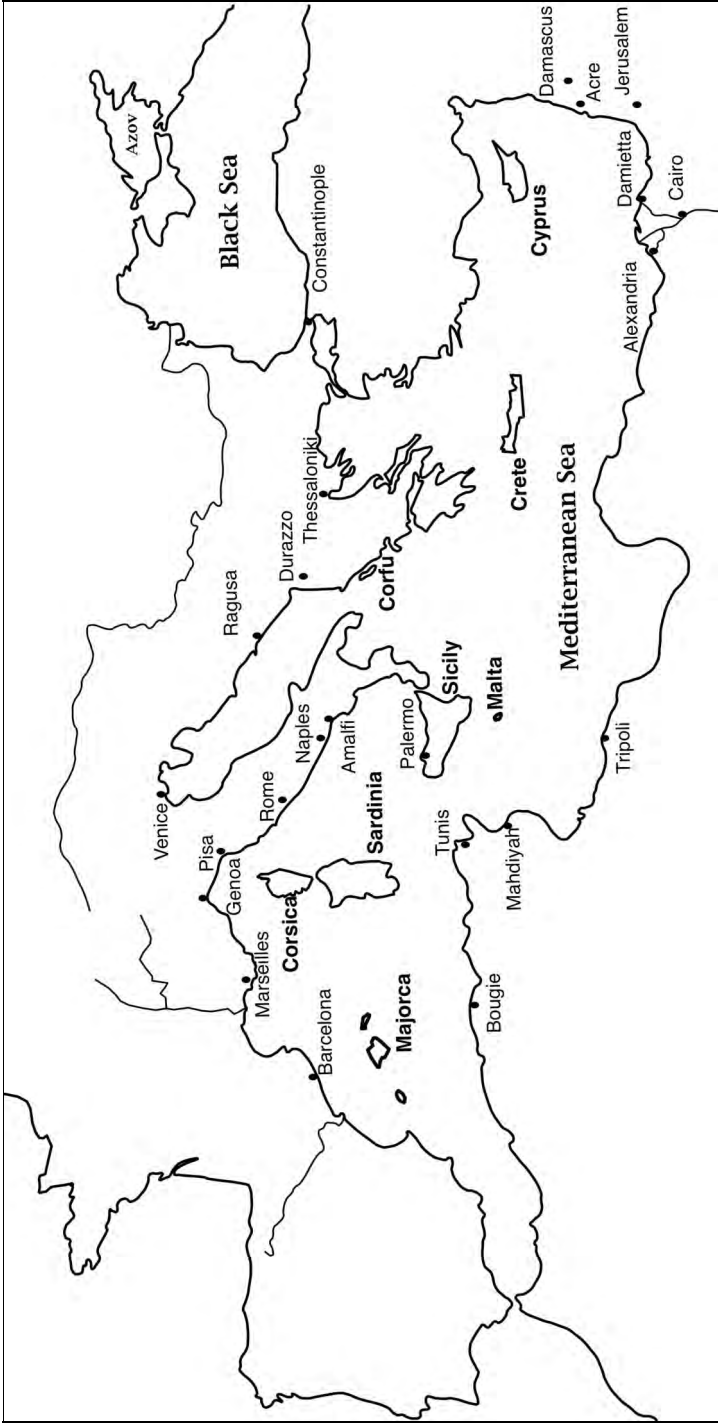
Despite the inherent impediments, a number of gifted scholars have been quite successful in interpreting the available evidence. Bernard Bachrach's scrutiny of ship images on the Bayeux Tapestry, for instance, permitted him to make some intriguing observations on the logistical challenges of William the Conqueror's amphibious assault on England in 1066.<sup>61</sup> John Pryor's painstaking examination of vessel illustrations in the Bern manuscript (Codex 120 II) of Peter of Eboli's *Liber ad honorem Augusti sive de rebus Siculis* ('Book to honour the Emperor or concerning the affairs of Sicily') in the Burgerbibliothek allowed him to convincingly identify key characteristics of the twelfth-century Italian *galea*.<sup>62</sup> (Pl. 5) And Lawrence Mott's careful reading of the *Capitula pertinentia ad Officium Ammiratae* ('Capitularies pertaining to the Office of Admiral')<sup>63</sup> of Frederick II and the *Capitula officii ammiratae* ('Capitularies of the office of the Admiral')<sup>64</sup> of Charles of Anjou enabled him to extrapolate critical information concerning fleet command and control.<sup>65</sup> Perhaps the most stimulating recent project has been that of the Dibner Institute for the History of Science and Technology at the Massachusetts Institute of Technology, which sponsored an exhaustive examination of the manuscript of Michael of Rhodes, a Venetian mariner who, in the early fifteenth century, compiled 'the world's first extant treatise on ship-building'.<sup>66</sup>

Moreover, maritime historians have learned a great deal about the performance capabilities of medieval vessels from a host of meticulous ship recreations, many of which have undergone extensive sea trials. As mentioned earlier, the reconstructed Athenian trireme *Olympias* has provided modern researchers with a cornucopia of data on real-world galley operations in the medieval Mediterranean.<sup>67</sup> In northern waters scrupulous reproductions of both the Gokstad and Skuldelev Viking ships have been tested.<sup>68</sup> An exact reconstruction of the Gokstad, christened *Viking*, was sailed from Bergen in Norway to the 1893 World's Columbian Exposition in Chicago. No fewer than three full-scale replicas of the Bremen cog have been built with subsequent sea trials held under full sail.<sup>69</sup> Even a half-scale model of the Sutton Hoo ship has been sailed.<sup>70</sup>

All of this is to say that, taken as a whole, there is enough data, despite the challenges, to paint a plausible picture of combat at sea in the Middle Ages. Accordingly, a comprehensive survey of medieval maritime warfare is both possible and desirable. And since distinct environmental and cultural factors shaped the development of naval tradition in northern Europe differently from the south, the picture must be presented in two parts, as was indicated in the Preface. But because both traditions sprang, at least partially, from Roman roots, it is appropriate to begin the story in the south: specifically, in the Mediterranean.



**PART I**  
**SOUTHERN EUROPE**  
*The Mediterranean and  
the Black Sea*



Map 1. The Mediterranean and Black Seas. (Kristy Stanton)

Medieval sea power in the Mediterranean sprouted from seeds sown by the Roman Empire and those seeds were nurtured in an environment that favoured the galley. John Pryor adroitly sums up that environment in a single sentence: 'For ancient and medieval man, the Mediterranean had a deserved reputation for benevolence.'<sup>1</sup> Tidal effects were minimal, and the winds were more predictable and less blustery, while the temperatures were milder and more consistent across a relatively narrow band of latitudes, engendering fewer storms. These more benign climatic conditions produced comparatively placid sea states, devoid of the giant rollers so prevalent in the North Atlantic. Moreover, the sailing season was longer (March to late October), with relatively clear skies, enabling greater reliance on celestial navigation.<sup>2</sup> The topography of the Mediterranean itself aided navigation: the northern coasts generally boasted lofty profiles with numerous landmarks. Safe havens in the form of bays, inlets and gulfs were abundant, and several large, well watered islands dotted the sea from west to east.<sup>3</sup> All of these attributes promoted the development of the oared warship.

Galleys required relatively calm conditions because their hulls had to be long and narrow in order to bring as many oars to bear as possible and the freeboard (the distance from the waterline to the deck amidships) had to be fairly low so that the oars could enter the water at a nearly flat angle for the sake of efficiency. The downside of these design constraints, of course, was that they made the ship susceptible to being swamped. Simply put, southern shipwrights built these swift but vulnerable vessels because the conditions permitted it. Thus, the environment fostered the evolution of classical oared warships like the Greek trireme.

In antiquity, these vessels were constructed shell-first, by fixing the longitudinal planks of the hull to one another with tenons fastened into mortises with pegs. The shell was then reinforced with interior ribbing. This method made for a light, sturdy hull, but proved labour-intensive, time-consuming and expensive.<sup>4</sup> It also caused the hull to be quite rigid, which made it vulnerable to the ram. Judging by the Athlit ram (the only one ever found), the waterline *rostrum* or *embolos* was specifically designed to defeat this type of hull construction by springing the timbers inwards.<sup>5</sup> Thus, most war galleys of the era were fitted with rams.

As speed and manoeuvrability slowly became prized over size during Rome's reign, ships grew smaller and more agile. Accordingly, the fine-lined *liburnian* emerged from its piratical beginnings to become the principal warship of the late Roman Empire. With just fifty oarsmen, this bireme galley was about half the length (around 20m or just over 65ft) of an ancient Greek trireme, probably a bit faster and certainly more agile.<sup>6</sup> By the early Byzantine period this progression towards supple speed produced the *dromōn* (meaning 'runner'). The *dromōn*

appeared in the late fifth century/early sixth century as a cataphract monoreme – that is, a fully decked, single-banked galley.<sup>7</sup> Gradually, as shipbuilding techniques improved, the vessel grew longer and more sophisticated. The mortise-and-tenon technique was phased out from the seventh century to the eleventh century in favour of the more flexible, frame-first hull design, rendering the ram obsolete. By the tenth century the *dromōn* had become a fully decked bireme, roughly 30.5m (100ft) by a little less than 4m (13ft), propelled by a standard *ousia* (crew complement) of 108 rowers augmented as necessary by two lateen sails and directed by twin steering oars mounted on either side of the stern.<sup>8</sup> (See Fig. 2) The waterline ram had been replaced by a ‘spur’, which John Pryor (the prevailing expert on the *dromōn*) says was specifically designed to immobilize an enemy

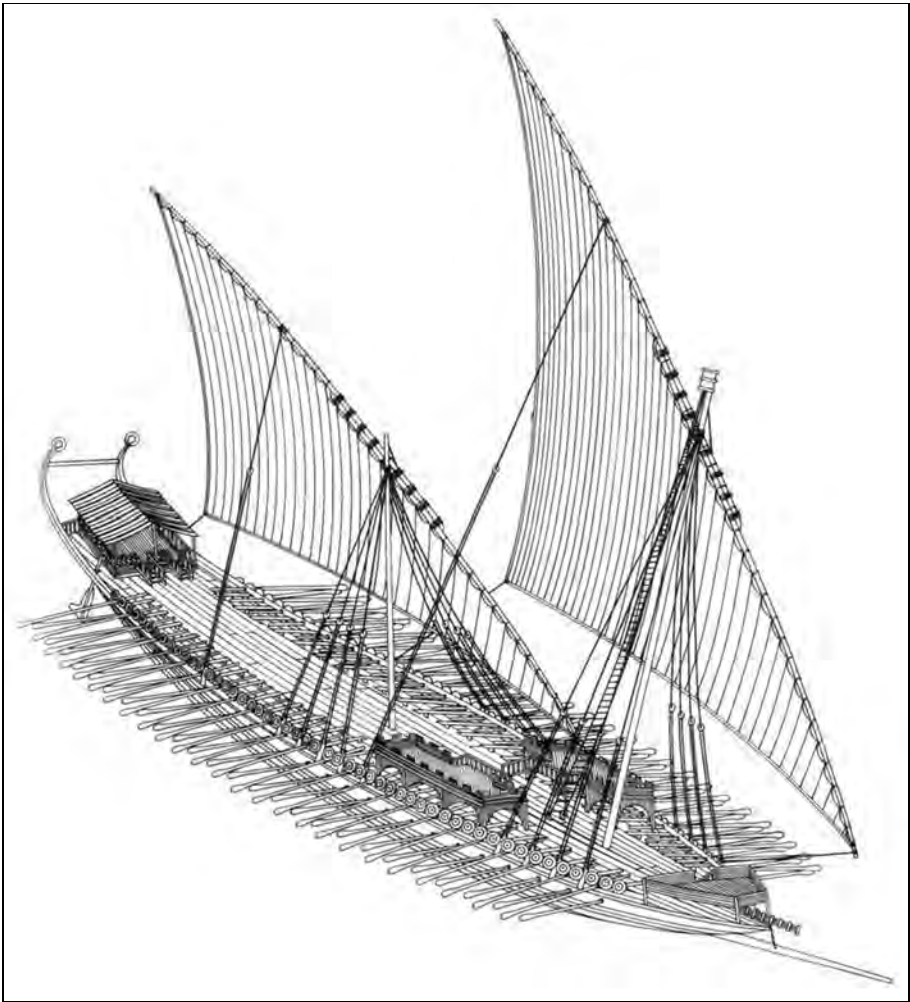


Figure 2. Byzantine *dromōn* of the tenth century. (John Pryor, copyrighted with all rights reserved)

galley by riding up over its oars, smashing them.<sup>9</sup> Siphons for spewing ‘Greek fire’ were eventually mounted on protected platforms at the bow and possibly amidships.<sup>10</sup> The parapeted forecastle (*xylokastron*) housed the main siphon, called the ‘raven’ (*katakorax*), while the castle amidships was the *kastelloma*. The aftercastle contained the *kravatos*, a structure to shield the *kentarchos* or captain.<sup>11</sup>

The *dromōn* would spawn a host of variants under a welter of names. For instance, there was the *chelandion*. Derived from the classical Greek word *kelēs* (meaning ‘courser’, as would be applied to a swift riding horse), Pryor believes that ‘*chelandion* almost certainly originated as a term for horse transports’.<sup>12</sup> The term eventually came to refer to a larger version of a *dromōn*. The late tenth-century German chronicler Thietmar of Merseburg described the *chelandion* as ‘a ship of marvellous length and speed, having two banks of oars on each side with space for one hundred and fifty sailors’.<sup>13</sup> In fact, medieval maritime historian Frederick Hocker is convinced the name became synonymous with the largest type of *dromōn*, one which could accommodate as many as 200 oarsmen.<sup>14</sup> Another *dromōn* derivative vessel was the *pamphylos*, apparently a large, oared vessel on the order of a *chelandion*, which was initially configured as a transport but may later have evolved into a warship in the hands of fearsome Mardaite mariners who were settled in the province of *Pamphylia* (on the Gulf of Antalya) by Justinian II.<sup>15</sup> The smallest variation of the vessel was the early *galea* (plural: *galeai*), a monoreme galley with only around fifty oars used primarily for reconnaissance.<sup>16</sup> Most, if not all, of these iterations could presumably be equipped with ‘Greek fire’ siphons.

The *dromōn* almost certainly served as a prototype for the war galleys of Byzantium’s adversaries, the Arabs in particular. Muslims sometimes referred to the vessel using names derived from Greek, like *dromonarios* or *dermin*. Similarly, a *chelandion* was called a *shalandi*. But often they simply used generic Arabic terms for warships, such as *maraqib harbiyya* (‘ship of war’).<sup>17</sup> Whatever they were called, these warships seemed to have shared the same basic characteristics as their various Greek *dromōn* equivalents: they ranged roughly from 35 to 40m (115 to 130ft) long and up to about 6m (20ft) of beam, while sporting two lateen sails, two stern quarter rudders and around 100 oars.<sup>18</sup> The oared horse transport of the Arabs was normally known as a *tarida*, a name later adopted by Latin mariners for their own horse-carrying galleys. In addition, it is thought, based on some documents of the Cairo Geniza (‘storeroom’) of the Ben Ezra Synagogue of Fustat, that the Arabs also had some sort of trireme called a *koumbaria*, which was said to be slow and cumbersome. And a Muslim version of the ‘fireship’ (i.e., one capable of launching some form of ‘Greek fire’), called the *barraqa*, made its appearance in the ninth century. It may have lacked Byzantine-style siphons, however, relying instead on catapults and grenades to deploy its incendiary.<sup>19</sup> In the same general timeframe the *dromōn* is also seen to have inspired the principal fighting ship of such emerging Italian maritime powers as the Normans, Pisans, Genoese and Venetians: the *galea*. Enlarged and updated as a speedy bireme galley, its oarsmen rowed *alla sensile* – that is, each man manipulating his own oar in a stand-and-sit stroke fashion from the main deck.<sup>20</sup>

In any event, it was an early version of the *dromōn* which proved so instrumental to Byzantine aspirations of regaining control of the Mediterranean in those first decades following the fall of the Western Empire. They were among the some 600 ships in the fleet of Belisarios, the great Byzantine general whom Emperor Justinian dispatched in 533 to destroy the pirate kingdom of the Vandals. The court scholar Procopius, who accompanied Belisarios on the expedition, wrote in his *History of the Wars*: ‘And they also had ships of war prepared as for sea-fighting, to the number of ninety-two, and they were single-banked ships covered by decks, in order that the men rowing them might if possible not be exposed to the bolts of the enemy. Such boats are called “*dromones*” [“runners”] by those of the present time; for they are able to attain a great speed.’<sup>21</sup>

Justinian clearly understood that the best hope of realizing his dream of a revitalized Roman *mare nostrum* was to eliminate the empire’s most formidable rival at sea: the Vandals. The fact that the Arian Vandals (who believed that the Son of God was subordinate to God the Father) viciously persecuted the Orthodox clergy of North Africa (who considered the Son as consubstantial with the Father) only added incentive. Accordingly, he sent an envoy with ships and soldiers to the Vandal governor of Sardinia to support the latter’s revolt against Gelimer, the Vandal king. The diversion worked. Gelimer dispatched most of his 120-ship fleet with 5,000 men to Sardinia.<sup>22</sup> Thus, when Belisarios’ armada disembarked his 15,000-strong army at Caput Vada (modern Chebba, near Mahdiah, Tunisia), about five days’ march south of Carthage, it was unopposed.<sup>23</sup> The Byzantine fleet then shadowed the army as it trooped up the coast. Unable to recall his own fleet in time, Gelimer attempted to ambush Belisarios at Decimum, 16km (10 miles) south of Carthage, but was heavily defeated. As a consequence, Belisarios soon claimed Carthage and captured Gelimer a few months later, destroying the remnants of the Vandal army in the process. Its home-port conquered and its leader in chains, the Vandal fleet eventually dispersed.<sup>24</sup> The Byzantine general completed the campaign by dispatching infantry units to impose Byzantine authority all along the northern shores of Africa as far as Cherchell (Algeria), while sending flotillas to seize Sardinia, Corsica and even the Balearic islands.<sup>25</sup> The Vandal maritime empire was effectively at an end.

With the menace of the Vandal fleet vanquished, Justinian set his sights on Italy, then controlled by the Ostrogoths who were in upheaval following the death of King Theodoric in 526. In 535 the emperor again dispatched Belisarios with a fleet, this time to Sicily, which the general quickly subdued for the Eastern Empire.<sup>26</sup> Belisarios then crossed to Calabria and began working his way up the Italian peninsula, but the expedition stalled after capturing Rome owing to Justinian’s reluctance to send reinforcements. Under the inspired leadership of Totila, who ascended to the kingship in 541, the Ostrogoths reversed most of the Byzantine gains in short order. What was worse, Totila managed to assemble a fleet of some 400 warships to counter Imperial naval power. He used it to destroy a pair of Byzantine fleets at Naples in 542, eventually forcing the city’s surrender, and again in 546 to starve Rome into submission, despite an attempt by Belisarios

to relieve it with 200 fortified *dromōns*. Belisarios' position soon became untenable and he was recalled to Constantinople in 548. Justinian replaced him in 551 with the palace eunuch Narses.<sup>27</sup>

While the latter was marching overland to Italy, two Byzantine generals (John of Salona and Valerian of Ravenna) broke an Ostrogothic blockade of Ancona with an overwhelming naval victory. Fifty East Roman vessels lined up against forty-seven of the East Goths at *Senogallia* (modern Senigallia, 25km or 16 miles north of Ancona). The superior seamanship of the Byzantines carried the day. The Goths apparently could not control their vessels and fight at the same time, while the Greeks could. The Goths lost thirty-six ships in the course of the battle; the remaining eleven escaped only to be burned on the beach afterwards by their own crews. It was a devastating defeat. 'This engagement especially broke the spirit and weakened the power of Totila and the Goths,' wrote Procopius.<sup>28</sup> A few months later, in the summer of 552, Narses thrashed Totila at *Busta Gallorum* (near present-day Gualdo Tadino), terminating Gothic rule in Italy.<sup>29</sup>

Justinian completed his quest to reconquer the Mediterranean for the Eastern Roman Empire in 554 when he dispatched another amphibious expedition that managed to expel the Visigoths from most of Andalusia as well the opposite shores of North Africa. From West to East the *mare nostrum* of Rome had been restored and the Byzantine maritime thalassocracy had begun.<sup>30</sup>



## CHAPTER 1

# The Byzantine–Muslim Struggle for Supremacy on the Middle Sea

The ‘revived Romania’ of Justinian did not remain unchallenged for long.<sup>1</sup> Its very nature made it vulnerable to assault. The Byzantine Empire at the time was essentially a maritime one. With the exception of Anatolia (Asia Minor), it was only shoreline deep in most places, buttressed on the landward side by a system of frontier forts. It depended on naval power to hold it together. Instead of the old Roman network of roads, Constantinople relied on sea lanes to communicate with its far-flung provinces and gather nourishment from such grain-producing regions as Egypt.<sup>2</sup> Thus, aside from the main fleet at Constantinople, it maintained smaller flotillas at Cherson on the Black Sea, at Tyre and possibly Acre on the Syrian coast, at Alexandria in Egypt, at Ravenna on the Adriatic, at Syracuse on Sicily, at Carthage and possibly Ceuta in North Africa, and perhaps even a squadron in Andalusia or the Balearics. Byzantium used these fleets to rush its limited land forces to troublespots in order to quell rebellions or staunch invasions.<sup>3</sup>

That is how the empire dealt with simultaneous pressure from the Avars (fierce Turkic nomads who had swept into the Balkans in the sixth century) and the Sassanid Dynasty of Persia. Emperor Maurice, a former general who famously penned a manual of war called *Strategikon*, managed to hold the line for two decades with a firm military mind, but it all began to unravel after his assassination in 602.<sup>4</sup> The very next year the Sassanid monarch Chosroes II launched a massive offensive against Byzantium which Phokas, Maurice’s cruel and incompetent successor, was helpless to stem. By 608 Persian forces were at Chalcedon across the Bosphorus from Constantinople. Antioch fell to them in 611, Damascus in 613, Jerusalem in 614 and Alexandria in 619.<sup>5</sup> Meanwhile, the Avars had moved into Macedonia and were advancing through Thrace. Heraklios (610–41), Phokas’ more reliable replacement, succeeded in forestalling the Avars with a truce in 622 while stymieing the Sassanids with a brilliant Anatolian campaign, but ultimately the two imperial adversaries struck an alliance to besiege the Byzantine capital. In the summer of 626 Sahrvaraz, the great Persian general, mustered his armies at Chalcedon, while the Avars, according to the early ninth-century Byzantine chronicler Theophanes the Confessor, ‘filled the gulf of the [Golden] Horn with an immense multitude, beyond all number, whom they had brought from the Danube in carved boats’.<sup>6</sup> Byzantine naval power, however, easily prevailed. The emperor gathered a great fleet of war galleys which had no difficulty dispersing the primitive *monoxyla* (dugouts) of the Avars, and the siege fell apart after a mere ten days. The next year Heraklios used his fleet to support

an invasion of the Persian Levant, finally crushing the remnants of Chosroes' armies near Nineveh.<sup>7</sup>

The empire's hold on its Mediterranean domains, nonetheless, remained tenuous and susceptible to large-scale incursions from the interior. And certainly such a security system was never designed to withstand the sort of massive shock-wave that emanated from the Arabian peninsula at the beginning of the seventh century. Ironically, the emperor himself prepared the way for the onslaught. Like his predecessors, and so many of his successors, he dabbled in the religious controversy that would plague the empire until its fall nearly a millennium later. It was Justinian who had begun the practice. Without the restraining influence of the Empress Theodora, who died in June 548, Justinian sought to impose Dyophysite Orthodox dogma (that Christ had two natures: one divine and one human) on the Monophysite churches of Syria and Egypt (which believed that the Son of God had a single divine nature).<sup>8</sup> His successors followed suit with heavy-handed policies designed to enforce state-mandated religious conformity throughout the empire. Heraklios attempted to mend the empire's religious rupture by imposing a ham-fisted compromise between Orthodox Dyophysitism and Monophysitism but it satisfied no one. While conceding that Christ indeed had two natures, one human and one divine, he insisted that the Son of God had only one will and thus one energy (later termed Monothelitism). This view was raucously rejected by both Rome and the Monophysite churches of Syria and Egypt.<sup>9</sup>

To make matters worse, Heraklios declared Greek as the official language of the empire. He then subjected the Monophysite Christians of Syria and the Copts of Egypt to the punishing persecution of his governors and the fiscal tyranny of his tax collectors. Instead of unifying the empire, Heraklios had hopelessly debilitated it with further philosophical dissonance. This caused a fatal rift which rendered the entire region ripe for invasion. The Semitic peoples on the southern and eastern borders of the empire doubtless had a greater affinity with Muslim monotheism than with the Greek Orthodoxy of Constantinople, in any case. As a consequence, they were more inclined to view the Islamic invaders as liberators to be welcomed openly rather than as potential oppressors to be resisted.<sup>10</sup> The timing could not have been worse.

### **Sandstorm out of the East: the Rise of Muslim Maritime Might (632–55)**

Muhammad died in Medina on 8 June 632. By 634 the storm that was Islam (which means 'submission') was already sweeping into Syria. Damascus fell to the forces of the Rashidun Caliphate of Arabia in September that year. They came by land, of course, in the initial stages, for they had no navy at that point and no need of one. In all fairness to Heraklios, he moved to meet the threat as soon as it had become apparent, but the onslaught was too swift and utterly inexorable. That said, the emperor made a respectable effort to stem the tide, fielding a force of some 80,000 allied soldiers at Antioch under his personal leadership in the spring of 636 against a Rashidun army roughly half its size under the command of Khalid ibn Walid. The two forces faced each other at the Yarmouk river

southeast of the Sea of Galilee in August. Theophanes described the denouement of the six-day engagement: ‘And as a south wind was blowing in the direction of the Romans, they could not face the enemy on account of the dust and were defeated.’<sup>11</sup> The annihilation of the Byzantines caused the entirety of Syria to devolve to the Arabs.<sup>12</sup>

Metaphorically speaking, the sandstorm continued unabated. Palestine soon suffered the same fate as Syria. Jerusalem was captured in April 637, followed by Caesarea Maritima the next year. By the end of 639 most of Persia, including Ctesiphon and all of Byzantine Armenia and Mesopotamia, was in Muslim hands. At the beginning of 640 the Arabs surged into Egypt behind their brilliant commander Amr ibn al-ʿAs, a contemporary of Muhammad. They seized Heliopolis and Babylon (both near modern Cairo) in July. When Heraklios died of dropsy in February 641, Amr was already marching on Alexandria. It surrendered in September, making the Arabs masters of Egypt.<sup>13</sup>

Still, Byzantium remained a force to be reckoned with on the seas and thus had the means to threaten Arab conquests in the Fertile Crescent. Constans II, Heraklios’ heir, dispatched a naval expedition in 645 under an Armenian named Manuel to recover Alexandria. Manuel succeeded with such unexpected ease that it must have alarmed Caliph Uthman ibn Affan. The latter had previously relieved Amr as governor of Egypt, but now hastily reappointed him. The highly effective field commander quickly gathered an army of 15,000 and forced Manuel to withdraw.<sup>14</sup> The experience was a valuable one, nonetheless. It had impressed upon these conquerors from the desert the value of sea power and the vulnerability of their gains to Byzantine fleets. Accordingly, the Rashidun Caliphate became determined to rectify the weakness. First of all, the Egyptian capital was relocated from Alexandria over a hundred miles up the Nile to Fustat in the environs of modern Cairo. Of even greater significance for the future of the Byzantine–Muslim struggle was the decision to develop a naval capability to rival that of Constantinople. Abdullah ibn Saʿad ibn Abi as-Sarh, a successor to Amr as governor of Egypt, began by building a shipyard on al-Rawdah, an island in the Nile abeam Fustat.<sup>15</sup> It came to be called *dar al-sinaʿa*, meaning ‘house of work’, which medieval Italian mariners later adopted as *darsena*, denoting a ‘dock’, or *arsenale*, referring to a ‘dockyard’ – and hence the modern term ‘arsenal’ in the sense of a shipyard.<sup>16</sup>

Little is known about the nautical architecture of these early Arab vessels. No reliable ship descriptions or depictions appear until the thirteenth century. (Pl. 6) It is presumed, however, that they were much like their Byzantine counterparts. After all, the shipwrights that the Caliphate relied upon to construct its ships in the newly conquered lands of the Levant were the same Syriac Christians and Coptics that the Byzantines had called upon to build their vessels in these formerly imperial territories. In fact, some of the Arab ships bore names that sounded similar to their Greek equivalents. The *chelandion*, for instance, was sometimes called the *shalandi* in Arabic. John Pryor offers an explanation: ‘These terms were used by Greek-speaking functionaries in the chanceries of their Muslim rulers writing directives to fellow Greek-speaking functionaries of other

Muslim officials.<sup>17</sup> Thus, warships were often referred to as *dromons* in both Arabic and Greek sources.<sup>18</sup> An Arabic translation of the Emperor Leo VI's *Naumachika*, a treatise on naval warfare, is actually contained in the *Al-abkam al mulukiyya wa'l dawabit al-namusiyya* ('Royal rules and customary regulations for the art of naval warfare') of Muhammad ibn Mankali, a fourteenth-century court official of Mamluk Egypt.<sup>19</sup> Accordingly, Arab fleets were probably composed of ships quite similar to the Byzantine vessels described earlier with the exception that, in the view of medieval maritime specialist Frederick Hocker, 'The main Arab ships were considered to be larger, higher, heavier, and slower than their Byzantine opponents.'<sup>20</sup> The truth is that there is no way of knowing for certain.

Command structure and crew composition also seemed to have shared parallels with their Byzantine counterparts. An *amir* (*emir* = leader) was normally designated a fleet commander and eventually came to be known as an *amir al-rabl*, at least in the West. A ship's captain was a *ra'is*, who was responsible for navigation and anchorage, but direct supervision of the sailors, *nawatiya* (from the classical word *nauta* for 'mariner'), was assigned to the *qa'id al-nawatiya* ('chief of the sailors'). In the early stages the mariners themselves were recruited from local Coptic and Syrian Christian populations, but embarked soldiers or marines were Muslim.<sup>21</sup>

At about the same time as the governor of Egypt was building his fleet at al-Rawdah Island, the governor of Syria, Muawiyah ibn Abi Sufyan, began assembling a fleet at Tyre and Acre.<sup>22</sup> At first, much of the fleet was composed of merchantmen confiscated from Syriac Christians. Muawiyah was clearly quite successful. Theophanes attested that by 649 he was able to launch an armada of some 1,700 ships on a *razzia* (raid) of Cyprus which enabled him to impose a covenant of neutrality on the island's populace.<sup>23</sup> In 652 some 200 Syrian ships swooped in on Sicily and sailed off with a surfeit of spoils, and in 653 Muawiyah's fleet raided Rhodes, supposedly 'casting down the Colossus'.<sup>24</sup> In the same year the great Arab historian Ahmad ibn Yahya ibn Jabir al-Baladhuri insisted that Muawiyah again invaded Cyprus, this time with 500 vessels, in order to chastise the inhabitants for having violated the conditions of their neutrality agreement.<sup>25</sup>

The most telling blow to the notion of Byzantine maritime supremacy, however, came in 655 off the coast of Lycia in south-central Anatolia. Emperor Constans II had learned that Muawiyah was planning an offensive on Constantinople itself, so he gathered an armada of 500 to 1,000 vessels (according to exaggerated contemporary estimates) and proceeded southeastwards along the coast of Asia Minor. Muawiyah was, in fact, leading a land force towards Cappadocia (Central Anatolia) while his Egyptian counterpart, Abdullah ibn Sa'ad, commanded a combined Egyptian–Syrian fleet of perhaps 200 vessels westwards along the south shore of Anatolia. The latter came upon Constans' fleet at Phoinix (present-day Finike).<sup>26</sup> According to Theophanes, the emperor gave the order to engage but 'had taken no measures to draw up his battle line'.<sup>27</sup> The consequences were calamitous. The Arabs maintained formation integrity by linking their ships with chains. They then reportedly used long hooks to cut or tangle the rigging of the Greek vessels.<sup>28</sup> From a distance, the engaged fleets

must have appeared as a forest of masts. It was probably for this reason (or perhaps because the area was a source of cypress trees for producing masts – *sawari*) that the Arab sources called the encounter ‘*Dhat al-Sawari*’ (‘The Battle of the Masts’).<sup>29</sup> ‘When the two sides engaged,’ reported Theophanes, ‘the Romans were defeated and the sea was dyed with Roman blood.’ Constans himself barely managed to escape by exchanging clothes with the son of a *boukinator* (trumpeter) and fleeing on a swift ship.<sup>30</sup> As a consequence, the eastern Mediterranean had been laid open to Muslim sea power.

### Byzantine Fleet Reorganization (656–71)

Fortunately for Byzantium, the assassination of Caliph Uthman in 656 and the resultant power struggle for the caliphate gave Constans II the breathing space he needed to reorganize his military forces, particularly his navy. Muawiyah, anxious to ensure no interference from Constantinople during the Arab civil war, agreed to a truce in 659, which included a generous tribute: 1,000 *nomismata* (gold coins, each weighing about 4.5 grams), one horse and one slave per day.<sup>31</sup> The respite was a godsend to the emperor who used it to restructure the empire’s military establishment into districts called *themata* (‘themes’). The closest to the capital, and the most powerful, was the *Opsikion* (Opsician) Theme, composed of the old imperial retinue. Based at Ancyra (present-day Ankara), it covered southern Thrace and northwestern Asia Minor. The *Anatolikon* (Anatoliac) Theme, headquartered at Amorion in western Anatolia, included south-central Asia Minor. The *Armeniakon* (Armeniac) Theme controlled eastern Anatolia from Euchaita (today’s Beyozu, Turkey), while the *Thrakesion* (Thracian) Theme guarded the west coast of Asia Minor from Chonae (modern Kona). More significantly for the empire’s maritime capability, the emperor created a naval theme called the *Karabisianoï* (Karabisian – derived from *karabis*, meaning ‘ship’ in Greek) centred on Samos, which protected the Aegean Islands, the southern shores of Asia Minor and the all-important approaches to the Dardanelles.<sup>32</sup>

The army of each theme was commanded by a *strategos* (‘general’) with the exception of the *Opsikion*, which had a *komes* or ‘count’ in charge. Beneath these served *tourmarchai*, who led divisions of soldiers called *tourmai*, and, in turn, their subordinates were called *droungarioi*, who headed smaller units of around 1,000 troops known as *droungoi*. Soldiers and sailors were normally recompensed, in part, with plots of land within the geographical confines of the theme.<sup>33</sup>

The *Karabisianoï* and succeeding naval themes seemed to follow the same basic command structure, although naval commanders were customarily considered subordinate in prestige to their land counterparts. None was ever noted at the top of imperial precedence lists. That said, admirals of naval themes were *strategoï* (like their land equivalents) and commanders of subordinate fleets were often given the title *droungarios*. A ship’s captain was a *kentarchos* (centurion) and his equivalent of an executive officer was a *bandophoros* (banner-bearer). Serving in the capacity of first mate was the helmsman or *protokarabos* (‘first man of the ship’). There were normally two of these. Other key crew members were the *prorēus* (bow officer), the *boukinator* (trumpeter) and the *protelatai* (‘first oarsmen’

or stroke oarsmen) and, from the end of the seventh century, the *siphonatores* (siphon operators for deploying ‘Greek fire’). Ordinary oarsmen were called *elatai*. Embarked soldiers were heavily armed and armoured *kataphractoï* or *stratiotai*.<sup>34</sup>

Having arranged a hiatus from Umayyad pressure and seen to the defence of the empire’s eastern borders, Constans II looked to the security of his western domains. Since the Levant and Egypt had already been lost to the Arabs, he seemed to realize that imperial control of the entire western Mediterranean was in jeopardy if the central coast of North Africa should also fall to the Arabs. Consequently, sometime around 662 he embarked troops from the *Opsikion* Theme on the ships of the *Karabisianoï* and set sail for Italy. After a brief campaign in Apulia and Calabria to affirm his authority over the local Lombard lords, he settled in Syracuse on Sicily. His intention was evidently to strengthen his hold on the crucial central Mediterranean and, most importantly, the Exarchate of Carthage. Two events, however, conspired against him: first of all, Muawiyah won the dynastic struggle for the Umayyad Caliphate in 661 and resumed his campaign against Byzantium; secondly, Constans himself was assassinated in his bath by a servant in Syracuse in 668.<sup>35</sup>

### **The First Siege of Constantinople and the Advent of ‘Greek Fire’ (672–7)**

Once Muawiyah had moved his capital to Damascus and consolidated his grip on power, he began preparations for an enormous expedition against Constantinople itself. In 672 he was ready. The caliph unleashed at least two separate fleets on the south coast of Asia Minor. Their activities must have kept the Karabisian fleet fully occupied. Both Crete and Rhodes were raided. One Arab fleet wintered in Cilicia (the southeastern coast of Anatolia) and the other in Lycia (on the south-central coast). Word of these incursions galvanized Constans’ son and successor, Constantine IV, into action. According to Theophanes, the emperor ‘built large biremes bearing cauldrons of fire and *dromones* equipped with siphons and ordered them to be stationed at the Proclianesian harbour of Caesarius [Constantinople’s Theodosian harbour]’.<sup>36</sup> In 673 Muawiyah’s fleets surged into the Sea of Marmara and ravaged the Hebdomon district just southwest of Constantinople, then captured Kyzikos on the south shore of the sea. Here they established a base camp for incessant attacks on the city.<sup>37</sup>

Constantinople would endure this maritime assault for the next several years, but the emperor was in possession of a terrible new weapon which would finally – and precipitously – end it. Residing in the city at that time was a Christian refugee from Heliopolis in Syria (modern Baalbek in Lebanon) named Kallinikos. Theophanes described him as an ‘architect’ or ‘artificer’ who had ‘manufactured a naval fire [or sea fire]’ which floated on the surface of the sea and could not be extinguished by water.<sup>38</sup> Its precise ingredients were kept a closely guarded state secret and remain a mystery to this day. This has led to endless speculation through the ages and repeated attempts at replication. A similar Muslim concoction of the twelfth century was said to have included ‘dolphin’s fat’ and ‘grease of goat kidneys’. Early scholarly conjecture centred on saltpetre as the main

component (as in gunpowder) or some form of quicklime, but recent empirical investigations, particularly by renowned Byzantinist John Haldon, have revealed that its primary ingredient was probably petroleum-based – most likely naphtha or light crude oil. The Byzantines had access to the oil fields of the Caucasus region northeast of the Black Sea where crude seeped to the surface. The theory is that Kallinikos may have distilled this into a paraffin or kerosene, then added wood resins as a thickening agent. The mixture was then heated in an air-tight bronze tank over a brazier and pressured by use of a force pump. The final step was the release of the flammable fluid through a valve for its discharge from a metal-sheathed nozzle, affixed with a flame ignition source. In a 2002 clinical test of this theory, Haldon and his colleagues, Colin Hewes and Andrew Lacey, were able to produce a fire stream in the neighbourhood of 1,000 degrees Celsius that extended at least 15m (49ft).<sup>39</sup>

It was very probably a compound similar to this that Constantine caused to be loaded onto his *dromōns* in the autumn of 677.<sup>40</sup> The fearsome new weapon was unleashed from swivel-mounted siphons in the forecastles with horrific results. Theophanes testified almost matter-of-factly that it ‘kindled the ships of the Arabs and burnt them and their crews’.<sup>41</sup> To the Arab victims of his frightful invention, it must have seemed like some early version of ‘shock and awe’. The fact that they would have had no idea of how to combat the weapon must have compounded their panic. Water would have been ineffective. At that point they could not have known that the only way to extinguish the ‘liquid fire’ was with sand, vinegar or urine.<sup>42</sup> The siege soon collapsed. What was left of the Arab armada withdrew, only to be severely mauled by a violent winter storm while passing abeam Syllaem in Pamphylia (on the south coast of Asia Minor between Lycia and Cilicia). Theophanes said, ‘It was dashed to pieces and perished entirely.’<sup>43</sup>

### **The Founding of the *Kibyrrhaeot* fleet and Arab Expansion Westward (678–716)**

These events evidently emboldened the Mardaites (Christian marauders who inhabited the Mount Amanus region between Cilicia and Syria) to rebel against their Muslim overlords and migrate south towards Mount Lebanon. They created a path of devastation all the way to the walls of Jerusalem. Believing them to be proxies for the Byzantines, Muawiyah was unnerved enough to seek a peace with Constantinople, which entailed a humiliating annual tribute of 3,000 pounds of gold, fifty slaves and fifty horses.<sup>44</sup> The Mardaites, however, remained a persistent problem for the caliphate. In 689 Abd al-Malik ibn Marwan, one of Muawiyah’s successors, was compelled to again petition the *basileus* (the emperor) for relief. He renewed the aforementioned treaty with Constantine’s heir Justinian II, with some generous embellishments in return for the relocation of at least 12,000 Mardaites to Byzantine territory.<sup>45</sup>

Most of these Justinian resettled in southern Asia Minor, where they were enlisted into the Karabisian Theme as oarsmen. Around this same time frame the emperor seems to have detached central Greece from the Karabisian Theme to

create the *Hellas* Theme based in Corinth. The *Karabisianoi* retained responsibility for the Aegean and the south coast of Asia Minor. Its *strategos* continued to maintain his headquarters at Samos, but his subordinate *droungarios*, accountable for the southern shore of Anatolia, was based at Kibyrrha, home port of what became known as the *Kibyrrhaeot* fleet. Most of the Mardaites served here.<sup>46</sup>

Regrettably, the reign of Justinian II degenerated into sadistic insanity shortly thereafter, ushering in a chaotic period in Constantinople's palace politics, during which no fewer than six different rulers in a score of years would claim the diadem of the Byzantine *basileus*.<sup>47</sup> The Umayyad Caliphate took full advantage to extend its power westwards. Abd al-Malik dispatched an expeditionary force of 40,000 soldiers under Hassan ibn Nu'man al-Ghassani to conquer North Africa.<sup>48</sup> The latter took Carthage in 695, the same year that Justinian II was deposed by Leontios, the *strategos* of the *Hellas* Theme, and banished to Cherson (in southern Crimea).<sup>49</sup> Leontios sent the *Kibyrrhaeot* fleet under *Patrikios* John to recover Carthage in 697. The latter actually accomplished his mission, but only because Hassan ibn Nu'man was distracted by a Berber uprising in the interior. Once the Umayyad general had successfully dealt with the insurrection, he chased the Byzantines off and reclaimed Carthage in 698.<sup>50</sup> The *Kibyrrhaeot* crews, fearing retribution for their failure from the notoriously unforgiving Leontios, murdered *Patrikios* John and named their own *droungarios*, Apsimarios, as emperor. With the help of the *Kibyrrhaeots*, the latter was able to depose Leontios and claim the throne for himself as Tiberios III.<sup>51</sup>

In the meantime, Hassan ibn Nu'man, recognizing the continued vulnerability of Carthage to Constantinople's sea power, elected to move the region's capital slightly inland to Tunis, located on a lake of the same name. Subsequently, Abd al-Aziz, the governor of Egypt and the caliph's brother, appointed Musa ibn Nusayr as governor of Ifriqiyah (north-central Africa) and sent a thousand Coptic shipwrights to construct a fleet. As a consequence, a canal was dug between the Gulf of Tunis and the Lake, permitting a new Arab arsenal to be built at Tunis. By 704 Musa's shipwrights had produced a hundred vessels, which he used to raid Sicily and Sardinia.<sup>52</sup> Worse yet for the Byzantines, Musa's maritime muscle allowed him to continue the Umayyad expansion westwards, exposing all the empire's western provinces to eventual conquest.

And Constantinople was helpless to prevent it. Palace disarray persisted. In 705 Justinian, having struck a marriage alliance with the Bulgar khan Tervel, used the latter's military support to seize the throne once again and executed both Leontios and Tiberios III. His erratic and murderously vindictive behaviour resulted in wholesale purges of key military officers and senseless aggression against his neighbours. When he ungratefully attacked Cherson, his former refuge during his exile, the whole of Crimea revolted and foisted an ousted general named Bardanes onto the throne as Philippikos. Justinian II was executed on 4 November 711.<sup>53</sup> While all this was going on, Musa moved inexorably across the Maghreb ('Land of the Setting Sun'), capturing Ceuta in 711. He then directed his lieutenant, Tariq ibn Zariq, to cross the strait between what the ancients called the 'Pillars of Hercules' (the headlands of modern Morocco and

Iberia) and begin the conquest of Visigothic Spain. Tariq landed with 12,000 troops on a monolithic limestone promontory that became known as *Jabal Tariq* ('Mountain of Tariq', i.e., Gibraltar), and soon extended Musa's control all the way to the Tagus river, establishing the al-Andalus – Muslim Spain.<sup>54</sup> Byzantium's grip on the western Mediterranean was broken for ever.

Nonetheless, the Byzantine military establishment remained totally distracted by matters of imperial succession. In June 713 the army of the *Opsikion* Theme deposed Philippikos in favour of a *protosekretis* ('first notary' – head of the chancery) named Artemios, who assumed the title Anastasios II. To his credit, Anastasios became concerned about increasing Arab encroachment and ordered Constantinople's stores to be fully stocked and the city's walls repaired. He also commanded the construction of additional *dromōns* to stave off any intended Arab invasion. Unfortunately Anastasios precipitated his own undoing by ordering the same troops who had placed him on the throne to man these *dromōns* and confront the enemy. When he learned that an Umayyad fleet from Alexandria had landed at Lycia to harvest cypress trees (presumably to build ships), he dispatched a flotilla crewed by soldiers of the *Opsikion* Theme. These soon mutinied, however, and murdered their commander, John the Deacon. The *Opsikions* then conscripted a tax collector from Adramytion (modern Edremit), whom they ensconced in the imperial palace in November 715 as Theodosios III after a six-month siege by land and sea.<sup>55</sup>

### **The Second Siege of Constantinople and the Fall of the Umayyad Dynasty (717–50)**

The continuing turmoil in Constantinople could not have gone unnoticed in Damascus. Earlier that same year Sulayman ibn Abd al-Malik assumed the caliphate and inaugurated his rule by propelling his brother, Maslamah ibn Abd al-Malik, into Asia Minor at the head of 80,000 troops, while a huge armada of reportedly 1,800 vessels made its way around the south coast.<sup>56</sup> Constantinople was about to experience its most dire confrontation with Islam until its final fall over seven centuries later.

The details of the ensuing epic engagement are discussed in a separate section at the end of the chapter as an example of sea combat in the period, but it suffices to say here that it unfolded in a manner similar to the siege of 672–8, with much the same result. As the Arab forces approached Constantinople in the spring of 717, Leo the Isaurian, the *strategos* of the *Anatolikon* Theme, engineered a coup to replace the ill-suited Theodosios III on the throne. Under his inspired leadership as Leo III, the Byzantines then used *dromōns* spewing 'Greek fire' to break up an Umayyad attempt to blockade the Bosphorus. The besieging Arab army fared even worse. A particularly harsh winter ravaged it with deprivation and disease. And the following spring offered little relief. Nearly 800 supply ships arrived from Egypt and Ifriqiyah, but their Coptic Christian crews switched sides en masse. Without the precious provisions which these ships carried, Maslama's troops fell easy prey to the Bulgars of Khan Tervel, with whom Leo had formed a propitious

alliance. The Bulgars butchered some 22,000 of the Arabs. Umar ibn Abd al-Aziz, the new caliph, had little choice but to recall his forces. It was a battered Umayyad army that retreated across Asia Minor in the autumn of 718 and only five vessels of the once massive Muslim armada managed to run the gauntlet of autumn storms in the Hellespont and Aegean to reach their home port.<sup>57</sup>

It was a disastrous Muslim defeat, which should have put Islam on the defensive for decades to come, but inexplicably Leo chose this time to delve into the religious controversy that was to be the bane of Byzantium. In 726 he inaugurated Iconoclasm (literally, ‘the smashing of icons’) by ordering the removal of the icon of Christ over the *Chalke* entrance to the imperial palace in Constantinople. In 730 he followed up this action with an imperial decree against all icons. This polemical policy was to rend the fabric of the empire for the next fifty-seven years. It proved particularly unpopular in Italy and the Aegean areas. In early 727 the fleets of the *Hellas* and Karabisian Themes revolted and proclaimed a certain Kosmas as emperor. Leo managed to devastate and disperse these fleets with his own, again using ‘Greek fire’, the secret of which was apparently restricted to Constantinople at the time.<sup>58</sup>

The episode, nonetheless, prompted the emperor to dissolve the troublesome Karabisian Theme and restructure the provincial fleets in order to dilute their threat to the throne. Leo placed the south coast of Asia Minor, formerly a responsibility of the disbanded Karabisian Theme, under the authority of the more tractable *droungarios* of the *Kibyrrhaeot* fleet, whose headquarters was transferred to Attaleia (present-day Antalya).<sup>59</sup> Land-based themes, like the *Hellas* and *Peloponnesos*, were also allowed to maintain fleets of their own.<sup>60</sup> These modifications to fleet organization were probably intended to help defuse naval power and make it more subservient to the emperor.

Despite their humiliating failure before the walls of Constantinople, the Umayyads took advantage of continued Byzantine upheaval both in the palace and in the Church to nibble away at the edges of the empire. A long period of raid and counter-raid ensued between Damascus and Constantinople, mostly involving either Egypt or Cyprus.<sup>61</sup> But ultimately the Byzantines’ advantage in naval organization, possession of ‘Greek fire’ and virtual monopoly of such critical shipbuilding materials as wood and iron ensured they would prevail, at least in the eastern Mediterranean.<sup>62</sup> The climax of the contest came in 747, when the *Kibyrrhaeot* fleet surprised an enormous armada from Alexandria in a harbour on Cyprus called *Keramaia* (exact location unknown).<sup>63</sup> ‘Out of 1,000 *dromōns* it is said only three escaped,’ professed Theophanes.<sup>64</sup> This was undoubtedly a chauvinistic exaggeration, but Umayyad naval power was evidently broken by the outcome of the battle and never again posed a serious threat to the Byzantine Empire. The Umayyad Dynasty came to an end just three years later when the Abbasids led by Abu al-Abbas as-Saffah crushed Caliph Marwan II at the Battle of Zab (Mesopotamia) in late January 750. The subsequent Abbasid Caliphate moved its capital from Damascus to Baghdad and focused its initial attention on the East.<sup>65</sup>

### **Byzantium's Naval Resurgence amid Islamic Dissonance (751–826)**

The Abbasid Caliphate's distraction with its eastern provinces allowed Islamic Spain and North Africa to become more autonomous. Constantinople's resurgence at sea only exacerbated the process by obstructing Baghdad's lines of communication with the West. As a result, it was powerless to prevent the establishment of the Umayyad Emirate of Cordoba in 756 by Abd al-Rahman, who had escaped Syria following the Abbasid victory at Zab.<sup>66</sup> By 800 Caliph Harun al-Rashid, lacking any naval capability of his own, was forced to concede the Maghreb (essentially north Africa west of Egypt) to Ibrahim ibn al-Aghlab, who subsequently founded the Aghlabid Dynasty of Kairouan (122km/76 miles south of Tunis).<sup>67</sup>

The fracturing of Islam in the Mediterranean meant that Muslim maritime power became decentralized and regional. Thus the only viable naval force on the Middle Sea in the latter half of the eighth century was that of Byzantium. 'Possessing such islands as Sicily, Crete, Cyprus, Sardinia and perhaps the Balearics, as well as all the most important strategic straits on the East–West trade routes,' comments Lewis, 'Constantinople's naval control could be strict and total, as its ships patrolled hostile coasts and prevented Byzantium's enemies from using the waters of the Mediterranean.'<sup>68</sup> While later historians such as Pryor contend that it was technologically impossible to impose 'strict and total control' of the sea lanes,<sup>69</sup> anecdotal evidence suggests that Byzantium was certainly able to discourage competition. The extent to which Constantinople now commanded the Middle Sea is indicated by the fact that the Muslim capitals of the late eighth century (Baghdad, Fustat, Kairouan and Cordoba) were all located inland. In recounting the events of the Maghreb in the year 752, Ibn al-Athir observed, 'The Rum [Byzantines] had put themselves in a state of readiness everywhere, had built strongholds and places of refuge; each year, their vessels cruised the coasts to ensure their security and more than once had captured Muslim merchant ships who had found themselves in their way.'<sup>70</sup> Moreover, the court of Constantinople effectively curtailed Muslim access to the markets of the Empire, thereby hampering the acquisition of such key ship-building materials as timber and iron.<sup>71</sup>

But the revival of Byzantine dominance at sea proved only a brief respite. The situation had begun to deteriorate dramatically by the end of the eighth century. First, there were reverses in Italy. The Lombards under King Aistulf captured Ravenna in 751, only to be supplanted by the Franks of Pepin the Short, who in 756 conferred Rome and the Exarchate of Ravenna upon the Pope. And, in a lasting blow to the prestige of the Eastern Emperor, Pope Leo III crowned Pepin's son Charlemagne as 'Holy Roman Emperor' on Christmas Day 800.<sup>72</sup>

At about the same time the Abbasids, having consolidated their authority in the East, began to exert pressure on the Empire. In 790 their Syrian fleet raided Cyprus, prompting an immediate response from the *Kibyrrhaeot* fleet. The two flotillas encountered each other in the Gulf of Antalya. The Syrians carried the day when they captured the Byzantine *strategos*, a certain Theophilos, whom they subsequently executed.<sup>73</sup> In 806 Theophanes reported that Harun al-Rashid

flung a gargantuan force (300,000-strong) against Byzantine Bithynia, just east of the Propontis or Sea of Marmara. The Emperor Nikephoros I eventually bought him off with an annual tribute of 30,000 *nomismata*, but when he subsequently reneged on the deal the Abbasid caliph ‘dispatched a fleet to Cyprus, destroyed the churches there, deported the Cypriots, and, by causing much devastation, violated the peace treaty’.<sup>74</sup>

Perceiving a weakened and vulnerable empire, Krum, Khan of the Bulgars, pounced on a Byzantine army at Strymon in Macedonia in 809 and utterly destroyed it.<sup>75</sup> Three years later he ambushed the imperial army led by Nikephoros himself in a mountain pass near Pliska, Bulgaria, and slaughtered it. Krum subsequently had the emperor beheaded.<sup>76</sup> ‘After that,’ testified Theophanes grimly, ‘he bared the skull, riveted it on the outside with silver and, in his pride, made the chieftains of the Sklavinians [Slavic peoples of the Balkans] drink from it.’<sup>77</sup> Krum even attacked the outskirts of Constantinople itself in 813 before dying of a seizure in 814.<sup>78</sup>

Ultimately, however, it was the interminable internal strife that caused Constantinople to relinquish its hold on the seas. And, once again, the usual suspect was religious controversy. The Empress Irene had revoked iconoclasm in 787, but Leo V reinstated it in 815, essentially to placate the iconoclastic eastern provinces that bore the brunt of Muslim pressure. Leo probably regarded the pronouncement as a pragmatic measure to shore up the empire militarily. Its unintended consequence, however, was to breed dissension and disunity. Most of the western themes remained staunchly iconodule (venerating images), so their loyalty to the court became tenuous at best. Thus when Thomas the Slav, a senior military commander from the *Anatolikon* Theme, took advantage of a murderous palace coup engineered by Michael II ‘the Stammerer’ to foment a revolt against Constantinople in 820, the Aegean provincial fleets and elements of the *Kibyrrhaeot* fleet quickly joined him.<sup>79</sup>

These fleets coalesced into a single force in the *Helladikon* (Hellas) Theme centred on Corinth, so that when Thomas began the siege of Constantinople in 821, it was readily available to answer his summons. ‘Making the voyage, the fleet came quickly and anchored off a place called Berydes [location unknown, but presumably somewhere near the capital], three hundred and fifty warships and supply vessels in all,’ reported John Skylitzes, an eleventh-century Byzantine historian. ‘When the commanders of the imperial fleet learned of their arrival, they attacked by night while the enemy ships were riding at anchor,’ continued Skylitzes, adding grimly, ‘So sudden was the attack that they were able to capture several panic-stricken vessels, crews and all, and to burn the other ships with Greek fire.’<sup>80</sup> The rout effectively eviscerated the revolt. In the spring of 823 Michael II, in alliance with the Bulgar Khan Omurtag, scattered the remnants of Thomas the Slav’s army and eventually executed him.<sup>81</sup>

The timing of these events could not have been worse for the empire. The destruction of the provincial fleets laid bare Byzantium’s Mediterranean interests at a time when the various Islamic fleets were burgeoning in confidence and increasing their activity. Harun al-Rashid’s Syrian fleets raided not only Cyprus