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Work for “Kastra: Architecture and Culture in the Aegean Archipelago” began in Greece several years ago. Research and writing for the book were at that time assisted by the inspiring helicopter-based photography of Nikos Daniilidis and the talents of Dimitris Plivouris who, as art director, eloquently composed text, photographs and diagrams on its pages.

For this digital publication, I am indebted to Andrew Rouner, Director of the Digital Library at the Washington University Libraries in St. Louis, and his staff, Emily Stenberg and Micah Zeller, for guiding graciously the transformation of a traditional “manuscript” into an electronic one.

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Early discoveries of the lessons of the Aegean islands vernacular architecture took place during the author’s student days at the Polytechneion, the National Technical University of Athens (NTU) under the inspiring guidance of Professor Dimitris Pikionis. These discoveries were further enhanced at the Graduate School of Design, Harvard University with the encouragement of Professor Eduard Sekler. I remain greatly indebted to both.

Although “Kastra” was written following my retirement, the book indeed emerged from the creative environment of Givens Hall, the home of the School of Architecture at Washington University in St. Louis. To the countless students who have listened to my lectures and participated in my seminars over the years and to my faculty colleagues, I am deeply grateful for their attentiveness, encouragement and support.

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T

he word “Kastra” derives from the Latin “Castrum,” and stands in Greek “kastri,” or “fortress.” Its plural form is “Kastra.” In Athens, the term gained its meaning but not exclusively in the Cycladic complex of islands. There, it identified a collective fortification or a fortified place such as the seat of the local Latin lord during the Duchy of the Archipelago years and, by implication, referred to the capital or main town of the island. The term is still in use in a good number of islands including Sifnos and Sikinos, where the local ruler or town hall are called Kastro.

Stewart and Revett, “The Antiquities of Athens,” the Parthenon, 1787

Architects and architectural historians argue that architecture expresses the life and culture of the society it serves. “Kastra” suggests that the reverse argument holds true as well, for life and culture in the medieval Aegean archipelago emerge from the building of Kastras, the medieval collective fortifications of the Aegean archipelago.

“The Book at hand, “Kastra: Architecture and Culture in the Aegean Archipelago,” is an sequel to “The Aegean Crucible: Tracing Vernacular Architecture in Post-Byzantine Centuries,” published in 2004. “The Aegean Crucible” focused on the vernacular architecture of the Aegean archipelago, while “Kastra” focuses on the collective fortification, a building type vital to survival in the region, during the thirteenth to eighteenth century period. “Kastra” was also written on the conviction that he who identifies today as the vernacular architecture of the Aegean islands emerged from the building of Kastri, the medieval collective fortifications of the Aegean archipelago.

“Kastra” is a book about architecture and culture, written by an architect and addressed to the general public rather than to specialists. Observations and “notes” in the form of color slides taken during revisits to the region form the basic skeleton of the book which is also enriched by the helicopter-based photographs of Nikos Daniilidis.

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Supported by the London-based Society of the Dilettanti, two British architects, James Stewart and Nicholas Revett, traveled to Athens in 1751. There, for two years they surveyed and produced measured drawings of the buildings of the Acropolis, which were later published, over a period of several decades, as “The Antiquities of Athens.” This recent volume, large-scale publication of drawings dating directly to the sixteenth century, presents excavations, a sense of scale and detail set the tone for the Greek Revival movement in Britain and brought the Acropolis and the Parthenon back to the mind’s eye of the western world, including the United States where President Thomas Jefferson is known to have owned a copy.

The drawing depicted in this prologue, part of “The Antiquities of Athens,” presents both genres of architecture: the formal-epynomous in the illustration of the east elevation of the Parthenon and the vernacular-anonymous in the illustration of the smaller buildings housing the Turkish garrison of the Acropolis citadel during the Stuart and Revett visit. In addition to offering a record of architecture and life for the eighteenth-century Acropolis, the drawing provides an instance of cohabitation and mutually supportive architectural relationship between the remnants of the formal and the improvisations of the vernacular. That relationship was shattered when the newly emerged Greek state, with its deep political and ideological commitment to antiquity, moved to demolish the vernacular-anonymous structures in order to privilege the formal-epynomous on the way to the restoration of the Acropolis to its formal glory. A similar shattering of the relationship between the two genres of architecture occurred more than a century later in the Cycladic architectural space when the basilica of Panayia Kato Poli, on the island of Paros, was restored in the image of its Hellenic glory by shredding all vernacular additions and interpretations of the preceding centuries.

The “Doges, Dukes, Knights, Patriarchs and Protectors” chapter reviews the geopolitics of the Aegean archipelago that contributed to the erection of Kastra and demanded their sustenance. This chapter is divided into four segments. Between the early fourteenth and mid-sixteenth centuries, the Duchy of the Archipelago, centered in Nicosia, and the kings Hospitaler of Saint John, based in Rhodes, emerged as the political powers whose presence, resources, and activities, both military and commercial, contributed most to the development of, respectively, the vernacular and formal architecture of Kastra. The story of the arrival of these two groups of powers, both with particular agendas, is synthesized in the first two segments of the chapter. The Ottomans conquered in the sixteenth century established Turkish National, or Turkic ruler, and united the region politically and commercially. The third segment of the chapter reviews Turkish architecture with particular attention to the “side” system and the toleration of Aegean island self-governed and the “Sublime Porte.” There, Christian and Muslim, which during the centuries following the fall of Constantinople in 1204, emerged as the most potent forces, shaping the material culture in the archipelago. That relationship was shattered when the newly emerged Greek state, with its deep political and ideological commitment to antiquity, moved to demolish the vernacular-anonymous structures in order to privilege the formal-epynomous in the way to the restoration of the Acropolis to its formal glory. A similar shattering of the relationship between the two genres of architecture occurred more than a century later in the Cycladic architectural space when the basilica of Panayia Kato Poli, on the island of Paros, was restored in the image of its Hellenic glory by shredding all vernacular additions and interpretations of the preceding centuries.

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of the typology and materials utilized in the building of Kastra, including dwellings, churches and chapels, windmills, whitewash and others, comprises the second half of the chapter.

The next three chapters assemble the Aegean fortifications in three distinct categories, each determined by the architectural response to external threat. “The Vernacular Response: Collective Fortification” is the heading of the first category, which comprises islands where the fortifications were collective and, at the same time, part of the urban fabric of Kastra. Eleven islands (home to sixteen Kastra, with Paros supporting two and Santorini five) are represented in this category, which lists Sifnos Kastro first and Kimolos Kastro last. Indeed, Sifnos Kastro is one of the oldest, if not the oldest, of the fortifications while we know that Kimolos Kastro was the last to be built. The flow of narrative was the primary consideration in determining the order under which the remaining nine Kastra are examined. In addition, however, this order bears witness to the presumed date of erection of each Kastra.

“The Formal Response: Detached Fortification Walls” is the heading of the second category represented by the city of Rhodes on the homonymous island. Unique in the Aegean region – notwithstanding Crete – the early sixteenth-century walls of the Knights Hospitaller were the last word of the northern Italian art of fortification of the day, and as such were detached from the urban fabric of the city. Financed by the western European resources of the Knights, the walls of Rhodes resisted two Ottoman Turkish sieges of epic dimensions, and are presented here to establish points of comparison between the fortifications of the knights and those of the duchy.

Four islands are included in the third and last group under the heading: “The Hybrid Response: Sharing Lessons.” Two of the islands, Patmos and Hydra, never were parts of the Duchy or the Archipelago. The building of the formidable redoubt of the Monastery of Saint John the Theologian originated in the formal traditions and practices of Byzantium, while the surrounding Patmos Chora, built later on, borrowed heavily from the vernacular building experience of the region. The unique topography of the peninsula site of Andros Kastra forced the separation of the Marino Dandolo fortified residence, built on formal architecture prototypes, from the vernacular manners prevailing on the rest of the fortified settlement, according to a drawing by Tournefort. Including a citadel at the highest point of the site, and apparently designed by military engineers on formal architecture prototypes, Tenos Kastro boasted all-powerful walls and was physically detached from the vernacular urban fabric it protected. All four islands sustained fortifications that utilized elements deriving from both formal and vernacular sources and thus have defined a separate category of their own.

Chapters on Kastra have been written so that each one can stand alone. Reading them all together, however, allows for commonalities to emerge that tie individual Kastra to a cultural and architectural framework particular to the Aegean Archipelago. Kastra protected the citizens of a number of additional Aegean islands like Melos, Ios, Amorgos, and others. However, adequate physical or historical evidence, or both, is not currently available for them to be gainfully included in these pages.

To enrich and enhance the understanding of a particular Kastra and its immediate insular context, some chapters include a discussion of other significant buildings such as Paraskia/Paraportiani in Mykonos and the Hilltop Monastery in Sifnos.

Bernard Maybeck, a California architect (1862-1957), once said, “Architecture is the handwriting of man.” Like “The Aegean Crucible,” the book at hand attempts to decipher the handwriting of the builders of the Aegean Kastra, and, in turn, to illuminate a valuable cultural and architectural heritage that technology and globalization have now made accessible to all.
When elephants fight, it is the grass that suffers.” This African saying poignantly metaphorically and eloquently portrays the sufferings of the native Greek population of the Aegean islands during the long contest for dominance in the area between, on the one hand, the Venetian Republic and other Frankish princes and knights and, on the other, the Ottoman Empire.

The islands of the archipelago share a common culture, with origins traceable to Minoan times and before. However, Kastra, the medieval vernacular collective fortifications we observe today, are best understood in the context of geopolitical developments dating from the beginning of the thirteenth century and, more specifically, the diversion of the Fourth Crusade from its original destination, leading to the sack of Constantinople in 1204. These events inaugurated the decline and disappearance of Byzantine naval and political power from the Aegean Sea, a decline hastened by the creation of the Venetian Duchy of the Archipelago and the establishment of the Knights Hospitaller of Saint John on Rhodes and in the Dodecanese Islands.

The Turkish conquest of the sixteenth century replaced Latin rulership, or “Franco-kratia,” and ushered in the long period of “Tourkokratia,” or Turkish rule, in the Aegean. Politically reuniting the Aegean Sea with both the Greek peninsula and the Asia Minor littorals, Tourkokratia eventually led to the emergence of the Greek state in the 1830s. Frangokratia, Tourkokratia, and national independence together provide the immediate geopolitico-cultural context within which the Kastra of the archipelago acquired their distinctive forms. The following pages present a brief account of this historical context, with special attention to piracy, an institution that threatened the very existence of the islands settlements on several occasions during this more than six-hundred-year-long period.
Venice emerged from the fall of Rome as a lagoon-based asylum and eventually a city-state. During the early ninth century, a treaty between Charlemagne and the Byzantine Emperor Nicephoros allowed Venice to enjoy all the cultural and commercial advantages of a Byzantine city, without any loss of independence. At about the same time, or so the story goes, Saint Mark was traveling through Italy and chanced to be in the lagoon islands, where an angel appeared and blessed him with the words: “Pax tibi, Marce, evangelista meus. Hic requiescet corpus tuum.” (Peace be unto you, Mark, my evangelist. On this spot your body shall rest.) Soon after, and to help this prophecy come true, two enterprising Venetian merchants returned from Egypt with a stolen corpse, which they claimed to be that of the Evangelist. A special chapel was built for its original reception, to be followed more than two-and-one-half centuries later by the Basilica of Saint Mark, which still stands today, a reminder, for better or for worse, of the special relationship of Venice with the Byzantine east. Enwalled in Aegean Kastra, bas-reliefs of the Lion of Saint Mark, holding a book inscribed with the angel’s greeting, “PAX TIBI MARCE EVANGELISTA MEUS,” remind today’s visitor of past Venetian prestige, glory, and presence in the area.

Venice was never a big city, its sixteenth and seventeenth century population being stable at about 150,000. Venice attained its power and riches by securing trading rights in many of the cities of the Levant. Transporting the products of the East back to the lagoon, Venice became a locus for distributing products from the Orient throughout Western Europe. The ports of Constantinople, the Black Sea, Alexandria, and the coast of Syria determined the trading routes of the “Serenissima Repubblica,” the Most Serene Republic, as Venice called itself. A city of merchants well equipped with war galleys, Venice eventually formed an ever-shifting overseas empire of coastal settlements and islands, including those of the Aegean archipelago, and her possessions, ports, and fortifications dotted her trading routes. In the empire’s glory days during the fifteenth century, a Venetian ship could travel from its owner’s quay all the way to the warehouses of the Levant, without stopping at a foreign port. According to Fernand Braudel, the Dalmatian and Ionian Islands, taken together, thus provided, “a stopping route from Venice to Crete...[as such] islands running along the axis of her power, were Venice’s stationary fleet.”

In the summer of 1198, Pope Innocent III declared the Fourth Crusade naming Egypt as its destination. Egypt was the power base of Saladin, a Kurd from what is now Iraq, who had recently reclaimed for the Muslim world most of Palestine from the crusader kingdoms. Only Venice had the knowledge and the naval resources to transport the crusader army to its destination by sea. Agreement was soon reached between the crusaders and the Venetians on the substantial sum of 84,000 silver marks. Yet only a fraction of this amount was available when the crusader force assembled in Venice in October 1202. At this critical moment, Venice’s octogenarian doge, Enrico Dandolo, took over. Using a dynastic crisis in the Byzantine Empire as a Machiavellian pretext, the doge shamelessly suggested Constantinople as the new destination for this predominantly French crusade, attributing the need for diversion to the crusaders’ failure to raise the specified sum of money. Venetian commercial interests, rather than the crusaders’ religious commitments, were to be served by the new destination and task—that is, Constantinople and its pillage.

Accordingly, in the spring of 1204, the crusaders, under the guidance of Dandolo, stormed and looted the city, the capital of the Greek-speaking, Orthodox Christian eastern half of the Roman Empire, thus confirming what the Venetians used to say about themselves: “Prima semo Veneziani e poi Cristiani.” (“We are Venetians first and Christians second.”)

The sack of the great city of Constantinople established Venice as the undisputed mistress of the eastern Mediterranean wilderness.
Thus, Doge Enrico Dandolo led the Fourth Crusade to Constantinople, a city that according to John Julian of Norwich, "had been not just the greatest and wealthiest metropolis in the world, but also the most cultivated both intellectually and artistically and the chief repository of Europe's classical heritage; both Greek and Roman." Dandolo also presided over the division of the Byzantine Empire into many smaller feudal kingdoms, the continuous rivalries amongst which brought about a state of anarchy that lasted until the sixteenth century when the Ottoman Turks ruthlessly imposed their will over the region. Long-term policy, statescraft, and the art of governing an empire were beyond the crusader nobility's expertise. Only the Venetians could match the political experience and exploitation of the Byzantines. To the Venetians, the crusaders were innocent children to be manipulated, and Venice benefited enormously from their naivete, gaining the most in land and commercial privilege and retaining it the longest. Indeed, Dandolo's political intuition led him to recognize that the resources of the Venetian Republic were limited in contrast to the burden of managing the captured territories; therefore, retaining Crete, he parceled out the Aegean islands to like-minded adventurers and equip a flotilla of galleys. He then crossed the Dardanelles to Constantinople, possessed just such qualifications and was the first to muster a company of Venetian citizens to run as personal foes, saving Venice the administrative and defense costs of direct rule.

The fate of seventeen Aegean islands thus fell into the hands of Venetian overlords, remaining there for the next three hundred and fifty years. But the sack of Constantinople was not totally due to Dandolo's manipulations; it was also the consequence of a religious rift and the atmosphere of mistrust and enmity that had been escalating for centuries between the western and eastern halves of the Roman Empire. This enmity, heightened by the events of 1204, influenced the relationships between overlords and subject when parts of the Byzantine Empire, including the Aegean islands, came under the rule of the so-called Latins.

In 1205, the year after the capture of Constantinople, Dandolo died. His successors, Doge Pietro Zani, offered the Cycladic islands to "qualified" individuals. Thus, entering younger sons of leading Venetian families—preparing no one for the life and fortune and ability to areas enough men and ships were encouraged to take island titles to hold as a fee. Such entrepreneurs were not required to acknowledge Venetian sovereignty. They were expected, however, to remain loyal to the mother city and to her commercial ventures. Marco Sanudo, who had served his uncle, the Doge Dandolo, in the expedition against Constantinople, possessed just such qualifications and was the first to muster a company of like-minded adventurers and equip a flotilla of galleys. He then crossed the Dardanelles and, beginning with Naxos, captured a number of the Cycladic islands, declaring himself the Duke of the Archipelago. The Greek population of the undefended islands offered no resistance. Indeed, fighting occurred only at Nafplio, against an occupying band of Saracen pirates, the perennial antagonists and maritime rivals of the Venetians in the region. Naxos, the largest and most fertile of the Cyclades, provided the seat for the capital of the new duchy. In a shrewd political move, Sanudo offered his homage to Henri, the Latin Emperor of Constantinople. As a reward, Henri confirmed Sanudo's title and the implicit abandonment of his duchy's formal allegiance to Venice.

In addition to Naxos, Sanudo kept for himself the islands of Amorgos, Ios, Kythnos, Melos, Paros, Sikinos, Skyros, and Syros. Other Aegean islands went as sub-fiefs to his comrades, thereby beginning the association of some of the most celebrated Venetian family names with the Cyclades: a Dandolo with Andros, a Querini with Astypalaia, a Barozzi with Santorini, a Ghisi with Tenos, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well asSymi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Ghisi brothers took Tenos and Astypalaia from the Cyclades, as well as Symi, Skiathos, and Skopelos in the northern Aegean. Beyond the Cyclades, Kythera, one of the mythological birthplaces of Aphrodite, was granted to a Vivarini, a Foscolo with Anafi, and a Gustiniani with Serifos. The Gh...
The adventure, aspiring lifestyle of Marco Sanudo and his contemporaries was sustained by the geography of the Cycladic islands and the limited resources available to small island states. The duchy of Naxos, subject to Venice, did not discourage Sanudo from another try. The following year, with only eight ships under his command, he seized the port city of Smyrna on the coast of Asia Minor, claiming it for the duchy. The prize was clearly stolen goods, and provoked an invasion and siege of Smyrna by the Ghizi. Venetian arbitration eventually reconciled the feuding families and restored peace in the duchy. Apparently, there were no casualties, so perhaps the two-part collective fortunes of the Antiparos fief were effective in keeping the small forces of opposing island clans at a safe distance from one another.

Sanudo, his comrades, and their successors over the long life of the duchy derived their livelihood and wealth primarily from the sea. Making the most of the islands’ strategic location at the mouth of the Aegean Sea, Sanudo, his comrades, and their successors over the long life of the duchy derived their livelihood and wealth primarily from the sea. Making the most of the islands’ strategic location at the mouth of the Aegean Sea, the Latin lords advanced their commerce and international commercial enterprises and simultaneously preyed upon the commerce of others. From the fringes of the empire, Sanudo created new, insular states that would survive all others in the region, surviving continuous internal and external conflict for a remarkable 350 years, until the eleventh century conquest of Ottoman rule. The existence of these parallel religious institutions may explain the numerous double-chapel buildings seen on many of the Cycladic islands. The existence of these parallel religious institutions may explain the numerous double-chapel buildings seen on many of the Cycladic islands.

The Latin lords, along with their contemporaries, fell in line with their neighbors among the Ionian and Dorian Greeks, who chose to enhance the value of the Antiparos fief. To appreciate the magnitude of the problem one needs to remember that, in 1571, the all-important naval battle of Lepanto (the modern Greek Napieras) was the last major Mediterrenean engagement to be fought with hundreds of oared galleys on each side. Some islands were reconquered, with provisions made for the security of the new inhabitants and cultivators. The building of the Antiparos Kastro between 1440 and 1446 provides a record of reconstruction of an island, the Kastro itself being erected to protect the new inhabitants whom their work to enhance the value of the Antiparos fief.
Insecurity made life nearly intolerable on the islands. In the 1480s matters came to a climax under the rule of Duke Giovanni II. By this time the Ottoman Turks had established themselves on both sides of the Aegean littoral, forcing the duke to purchase his independence by paying “baksheesh,” or a gratuity to the sultan. This payment became an excuse for the duke to impose even heavier taxes on his own people, taxes that he apparently pocketed without providing the much-needed protection in return. In 1484 a revolt led by the Archbishop of Naxos got out of hand, ending in the assassination of the despised duke. The people of Naxos then persuaded Venice to take over the administration of the duchy, which the Venetians returned to the late duke’s son when he came of age.

During the Venetian-Turkish war of 1537-40, the Ottoman admiral, Kheireddin Barbarossa, brought fire and sword to the islands. To this day, the magnitude of his cruelty is remembered in the folklore of the Aegean. Expelling the barons of most of the islands, including those of Astypalaia and Andros, Barbarossa sacked and depopulated Pyrse, sailed east to Naxos, and compelled the duke to surrender and pay an annual tribute of 5,000 ducats. John Julius Norwich, in his erudite “Middle Sea,” states that Barbarossa was the son of a retired Greek-born janissary and his wife, who was formerly the widow of a Greek priest, and as a result “he possessed not a drop of Turkish, Arab or Berber blood,” a point which illuminates the thin and confused lines defining religious and national loyalties of the era.

The Treaty of 1545, which ended the war, did not return any of the islands to their previously independent kings, but when Giacomo IV succeeded his father as duke in 1564 the islanders of Naxos petitioned the sultan to replace their local ruler, “a notorious debauch.” Although it is not known whom the islanders would have preferred, they were apparently surprised when the new sultan, Selim II, appointed as duke Joseph Nasi, a Portuguese Jewish banker who had served Selim well as his financial and political manager. Nasi remained in Constantinople and never visited his ducal domain, sending Francesco Coronello as his representative on Naxos. When Nasi died in 1579, the duchy disappeared as a political entity and was replaced by direct rule from the Sublime Porte, the Ottoman government. Having successfully resisted the offer of Barbary corsairs in the 1520s, Naxos remained the last Venetian outpost and observation point in the Aegean archipelago until 1715.
While Dandolo and his associates from the Fourth Crusade were busy carving up Byzantine territory in Greece and the Aegean, the Kingdom of Jerusalem in the Holy Land continued to fight for survival. At the end of the thirteenth century, this battle ended in the loss of Jerusalem and the expulsion of the crusaders from the Levant. Among those expelled were the Knights Hospitaller of Saint John, who retreated to the Latin kingdom of Cyprus, where the Order had estates and properties. For the next twenty years, the brethren would rethink their mission and plan the future of their Order.

Still in existence today, the Sovereign Military and Hospitaller Order of Saint John of Jerusalem, Rhodes, and Malta is the only institution remaining from the era of the crusades. The Order was first formed in the Holy Land and later spent more than 200 years in Rhodes (1309–1522) and nearly 260 in Malta (1530–1798), playing an impressive role in Aegean geopolitics despite its small size, whether from the proximity of Rhodes or later, from the distance of Malta. The sovereignty, however, dates from the conquest of Rhodes in 1309, making the Order one of the oldest sovereign states in Europe.

The trade routes to the eastern Mediterranean ports established by the Italian cities in the eleventh century opened the door for Western Europeans eager to make pilgrimages to the Holy Land. A certain Brother Gerard emerges from the obscure early history of these medieval pilgrimages as the founder of a hospice devoted to providing food and shelter to pilgrims. Dedicated to Saint John, Brother Gerard’s hospice was well established when the crusaders conquered Jerusalem in July 1099.

The tradition of Greek medicine that had survived in the area for centuries became of great value to the brethren in their treatment of the sick. Beginning in the early twelfth century, the mission of the Order of Saint John expanded to include military protection for pilgrims as they traveled the road from the coast to Jerusalem. This military function of the Order took on a grand symbolic resonance: the Knights Hospitaller acquired the title “soldiers of Christ” to go with “servants of the poor.” They were assigned to garrison castles, including, by 1140, the awesome Crac des Chevaliers, described as “a great bone stuck in the throat of the Saracens.”

By the time of the fall of Acre, their last stronghold in the Holy Land, and their retreat to Cyprus in 1291, the Hospitallers had established the military reputation of their crusading Order. More important for their future in the Mediterranean, however, was that they also had secure revenue-producing bases and lands in Europe, whatever disasters might befall them in the East. This particular strength was to preserve the Order of Saint John during the challenging centuries that followed.
Their years in Cyprus allowed the knights to rebuild their ranks after the massive bloodletting in Acre, which had resulted in only seven of them escaping alive. Their new island location occasioned a major shift in their war-making strategy, transforming the knights from a land-fighting force to a sea-fighting one, a change that was to characterize their war against the Moslems for the next several hundred years.

Their lot was not always easy in Cyprus. The Knights Hospitaller were uneasy “guests” of the Latin King, Henry. Securing a territory of their own remained a major goal, and, naturally, the knights and their master, Foulques de Villaret, looked to the Aegean, where other Latins—Venetians, Genoese, Catalans, and so on—had recently made significant conquests. In 1306, securing papal approval and wishing to exploit Byzantine weakness, the knights joined Vignolo dei Vignoli, a Genoese adventurer to begin a combined assault on Rhodes. Three years later the city of Rhodes opened its gates to them; by the end of 1310, the Knights Hospitaller controlled the island.

After the conquest of Rhodes the pope conferred on the Order of Saint John independent sovereign status with an obligation to serve the Holy Father, a very important advance over the knights’ former ecclesiastical and military duties in the Holy Land. With the pапacy as its spiritual overlord, the religious republic of the knights owed no other political loyalty in the modern sense.

However, throughout the existence of the Order the involvement of the pope in the temporal affairs of the knights required very careful diplomatic handling. Exploiting the advantages of the location, relatively large size, and fertility of Rhodes, Foulques de Villaret’s administration improved the structure of the Order. In addition, he ensured its future by building a formidable fortress-city, a base that helped to transform the Knights Hospitaller into the master seamen of the eastern Mediterranean.

The knights’ lifestyle in Rhodes was the culmination of a long trajectory of change and improvement in the Order. In Acre all the knights had lived together in a sizable auberge, a large lodging house commanded by an officer. But in Cyprus, with no such facility available, groups of brethren lodged together in smaller residences according to their various nationalities, a practice formalized in the Tongue (or Langue) structure that governed military and communal life in the Order. By the time the knights established themselves in Rhodes, they were already organized into seven Tongues, which were, in order of precedence, Provence, Auvergne, France, Spain, Italy, England, and Germany. The head of a Tongue was its Pilier (or Pillar). Specific responsibilities were also reserved for the Pilier of each particular Tongue. The Pilier of England, for example, was also the “Turcopilier”—that is, the commander of the light cavalry. The title might have originated from the Greek “Turcopulos” suggesting that the light cavalry consisted of young/Moslem recruits.

The island of Rhodes. Helicopter-based photograph of the acropolis, Acropolis, the medieval fortifications, and the present-day town. Located on the northeast coast of the island, the medieval fortifications of Lindos, together with other strongholds on the island and on a number of other islands of the Dodecanese, served as the outer defenses of the city of Rhodes.
Rhodes. Expanded by the Knights Hospitaller, the fortification illustrated above controlled the principal port of the island of Kos (known to the Knights as Lango) and served as the Order’s main military stronghold after Rhodes.

This helicopter-based photograph captures the special features of the site on the northern tip of the island on which cities were consecutively built during the fifth century B.C., the Middle Ages, and contemporary times. The farthest north point of the island is at the top, while the modern city appears at the bottom of the illustration.

Each Tongue maintained an inn, where members dined under their Pillar and offered hospitality to eminent visitors from abroad. Performing their military watches at the walls and gates and turns of duty in the Hospital, knights in the city of Rhodes lived in twos and threes in private houses in the Collachium, most of which were located off the present-day Street of the Knights. The Tongue structure was reflected in the primary responsibility of the Order: the defense of the walls of the city of Rhodes. Each of the seven Tongues was assigned to guard a particular segment of the fortifications, as indicated on the diagram, covering the years from 1465 to 1522.

The Order, or the “Holy Religion” as the knights liked to call it, was divided into classes—knights, chaplains, and sergeants—supporting an aristocratic, religious republic and reflecting the general division of Western European society from which the Order derived. Authority was concentrated in the hands of the knights, the sons of the great houses of Europe, who filled all major military and administrative offices, including that of the grand master, the prince of this sovereign state. Each grand master ruled with the consent of a council and the whole Order. Characteristically, L’Isle Adam consulted the council before the surrender of Rhodes at the end of the second siege in 1522.

The knights’ connections to the Roman Catholic Church and to the baronial families of Western Europe, whose extensive possessions produced men and revenues along with religious and political support, sustained the Order in Rhodes and, later, in Malta. The total number of knights throughout their over two-hundred-year residency in Rhodes remained small. Reliable sources indicate the presence of eighty knights in the early fourteenth century and a maximum of 551 in 1513 when the Order was actively preparing to face its final, and successful, assault by the Ottoman Turks.
Around 1390, the knights, together with Greek and Venetian forces, caught a raiding Turkish fleet off Meganissi unprepared and burned thirty-five of its galleys. Juan Fernandez de Heredia of Aragon (1377-96), one of the preeminent grand masters of the knights, undertook operations in western Greece where, landing to claim territory for the Order, he was ambushed and taken prisoner by John Bosa Spata, a minor Albanian prince. A large ransom was demanded for his release, which was settled at the end of a year's captivity, when he arrived to take over his position as grand master in Rhodes. These and many other recorded incidents concern the knights' involvement in political affairs and military operations beyond the geographic limits of their Rhodian and Dodecanesian holdings.

The archives carried away from Rhodes at the time of its surrender in 1522 are preserved at the Royal Malta Library in Valetta on Malta. Research into the material in the archives conducted by Professor Zacharias N. Tsirpanlis has yielded important information on the relationship between the Knights of Saint John and the Rhodian population. This research, still in progress at the time of the writing of this book, allows certain observations. The administrative structure inherited from Byzantium survived during the presence of the Order on the island as the knights acknowledged and cooperated with local representatives, particularly in matters regarding defense. Where jurisprudence was concerned, the knights exhibited understanding and showed flexibility toward the local population, rati-

These figures are surprisingly low considering the major role the Order played in eastern Mediterranean geopolitics. This major role, however, would not have been possible without the extensive religious, political, and economic support that Latin Europe provided the knights during their Rhodian residency. Protected by his body armor the individual knight came into his own in hand-to-hand fighting, which occurred for example, during the breaching of the walls in Rhodes. There the knight stood like a one-man panzer handling his favorite battle weapon, the two-handed sword with its crushing double edge. Bowmen and harquebusiers supported the knight by firing from his sides against the advancing enemy. Full armor was apparently not worn on the streets, where a breastplate and helmet allowed greater freedom of movement.

The fortified city and the islands of Rhodes, together with the ring of smaller islands and castles around them, served as the base for the military operations of the knights against their Moslem enemies.

The “Rhodes: Fortifications and Sieges” chapter in this volume presents the well-recorded edages of 1480 and 1522, highlighting the detached fortifications of the city during the most critical times of the Knights Hospitaller’s presence in Rhodes and the vicinity. Not as well known is the presence of the knights in the Greek peninsula as exterior key holders in the Mose (Peloponnesus), or as the owners of the castle of Syconamion near Oropos, facing the channel of Euboea from the mainland. In league with the Venetians the knights raised the castle of Kanali on the north shore of the Aegean, an inviting location for piracy, as the important caravan route from Constantinople to Morea ran along the coast.

These fortifications were constructed in the 12th century and were expanded and reinforced during the knights’ tenure on the island. After the fall of Acre in 1291, the knights in the Near East turned their focus toward the island of Rhodes. From here they were able to wage campaigns against Moslem and Turkish coastal settlements and corsairs. During their early years on Rhodes, the knights appointed a Latin archbishop, thereby cutting off the local population’s spiritual connection to the patriarch of Constantinople. Religious conflicts between the knights and the citizens of Rhodes were minimized, however, by agreements between the archbishop and the Orthodox metropolitan. It seems,
too, that the large number of urban Rhodians who embraced the new Western way of life became Uniates, which meant that they retained their Orthodox rites but were in communion with the pope. However, the population at large clung faithfully to the traditions of the Greek Orthodox Church as an expression of their national consciousness and their resistance to the Roman Catholic masters.

According to Elias Kollias, ephor of Byzantine antiquities in Rhodes, the Order’s fleet not only fought the Moslems, but also transported merchants. Forced to serve in this fleet, the Rhodians put this experience to good use by sailing their own vessels to other Mediterranean ports. While the knights were in power, Rhodes emerged not only as a commercial distribution center between East and West but as a manufacturing center, too, producing textiles, pottery, soap, sugar, and other goods. The economic interests that the Moslems of Asia Minor and the Christians of Rhodes had in common meant that they became Uniates, which meant that they retained their Orthodox rites but were in communion with the pope. However, the population at large clung faithfully to the traditions of the Greek Orthodox Church as an expression of their national consciousness and their resistance to the Roman Catholic masters.

Early in the fifteenth century, when an interest in Greek antiquity began to develop in Italy, Cristoforo Buondelmonti visited Rhodes around 1414 and, subsequently, made the island his base for exploring most of the other Aegean islands, producing in manuscript form, his “Liber Insularum Archipelagi,” a major contribution to geographical knowledge of the Aegean archipelago. Rhodes also attracted another important figure in the long process of the rediscovery of Greece by the western world, Cyriacus of Ancona, who reportedly visited the island, carrying with him one of the Buondelmonti manuscripts about the region in the forty-two years of relative peace between the two sieges (1480-1522) of the city of Rhodes. The benefits of this harmonious coexistence disappeared when Rhodes fell to the Turks on January 1, 1523.

Although the Knights Hospitaller played a significant role in the Aegean, the Duchy of the Archipelago predated and outlasted them in the area. For a considerable time in the fourteenth, fifteenth, and sixteenth centuries, the two groups inhabited the same geographic space, having come to the archipelago from different directions in pursuit of different interests. Expanding trade and profit brought the Venetians of the duchy, whereas the knights, by contrast, did not marry, except in the case of those who followed them into exile in 1523.

The Venetians of the duchy intermarried with the local population, and their descendants remained on the islands during the Tourkokratia, the long period of Turkish rule. Today, their origin can be traced only in the Hellenization of their original Italian names. Because of their religious vows and commitment to celibacy, the knights, by contrast, did not marry, except in the case of those who followed them into exile in 1523.

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Modern Arabs sailed through the Aegean sea on their way to besiege Constantinople only decades after the death of Mohammed in Mecca in June 632. Crete suffered raids in the seventh and eighth centuries and fell to Saracens expelled from Al-Andalus, Spain, in 827. Nevertheless, the Byzantine fleet using its most effective weapon, "Greek Fire," re-imposed control in the Aegean, and a Byzantine army reconquered Crete in 961.

One hundred and ten years later, in 1071, Byzantium lost the decisive battle of Manzikert, which opened the gate for the first Turkish conquest of Asia Minor. Turkish tribes, recent converts to Islam, established independent emirates in the area, until one of the emirate leaders, Orhan, assumed the title of sultan in 1326. By the time of Orhan’s death his armies had established a permanent Moslem presence on the Asia Minor coast and had crossed the Dardanelles to capture Gallipoli in 1354, making it the first Turkish base on European soil.

The capture of Rhodes in 1522 and the collapse of the Duchy of the Archipelago in 1566, both of which occurred during the reign of Suleyman, brought all of the Aegean islands except Crete and Tenos under Ottoman rule. As a result, the Aegean islands were incorporated into the same political structure as the other Greek-inhabited lands, where Tourkokratia, or Turkish rule, had begun in the preceding century.

For the lower Greek peninsula Tourkokratia lasted from the dissolution of the multinational Byzantine Empire during the middle of the sixteenth century to the Greek War of Independence, the latter leading to the formation of a national state in 1830. As Richard Clogg, a leading authority on modern Greece, points out, Tourkokratia had “a profound influence in shaping the evolution of Greek society” and an equally profound influence on the shape of life and vernacular architecture in the Aegean islands. It isolated the Greek world from such major historical movements in the West as the Renaissance and the scientific and industrial revolutions, although by the mid-eighteenth century, a nascent Greek mercantile class within the Ottoman Empire had begun to reestablish commercial and cultural contacts, allowing the ideologies of the Enlightenment and the French Revolution to filter through. The merchant fleets of the Aegean islands became carriers of these new and inspiring messages.

Ottoman rule over the vast area of the empire comprising the Balkan Peninsula, Asia Minor, and the coast of North Africa, was based, according to Islamic concepts, on the “millet” system, or the grouping of people by religious affiliation rather than by ethnic origin. First came the privileged Moslem millet, and then came the non-Moslem “people of the book,” who were assembled into an Armenian millet, a Jewish millet, and an Orthodox millet, the last being the largest after the Moslem grouping.

Soon after the Turkish capture of Constantinople in 1453, Sultan Mehmet II, “the Conqueror,” chose Georgios Gennadios Scholarios as the first patriarch under Ottoman rule, making him the head of the Greek Orthodox millet. The selection of Gennadios, an active opponent of reunifying the Orthodox and Roman Catholic churches, served the Ottoman interest in sustaining the rift between the two. The policy also had widespread support among the conquered Greek population of the Ottoman Empire, particularly in the Aegean region, where Latin rule had been despised, as was commonly said, to prefer the Prophet’s turban to the hat of the Cardinal.

The patriarch’s authority as head (millet bashi) of the Orthodox millet extended beyond religious affairs to regulating the daily life of Orthodox Christians and was granted in the expectation that the patriarch would guarantee the loyalty of the Orthodox millet to the Ottoman state. The consequences of infidelity could be brutal. As Richard Clogg again points out: “When the sultan’s authority was challenged then the hierarchs of the Church, in their role as both religious and civil leaders, were the prime targets of reprisals. Thus I have that, on the outbreak of the war of independence in 1821, the ecumenical patriarch, Grigorios V, together with a number of other religious and civil leaders was executed in circumstances of particular brutality.”
The millet system accepted the existence of a non-Muslim population, but it also imposed heavy taxes and subjected the captive Greek population to indignities meant to underscore their inferior status. The main tax on non-Moslems was the kharaj, or capitation-tax, which literally entitled the tax-payer such as in some places and not in others, depending on the whims of the local Turkish administrative officials. Granting tolerance to the “people of the book” in return for tax payment, as in the account of the time when Aegina, an island in the Saronic Gulf, yielded Barbarossa six thousand prisoners and was left bare of inhabitants.

The revocation of the Edict of Milan in 1534, the reprinting in Greek of Polybius’ Histories, and the plan to construct a Christian university at Constantinople by Sultan Suleiman the Magnificent in 1538, all contributed to a process of gradual repopulation of deserted islands. The devastations of the 1530s led by Kheireddin Barbarossa, the Greek-born and Algerian-trained Ottoman corsair, were of particular importance for the islands. The devastations of the islands, which were responsible for the high rank in the Ottoman state. Several even became grand vizier.

As a result, was not as devastating as the devsirme was to the mainland. Yet the harshness of life in the Ottoman Empire was such that even high-ranking officials, like the janissaries, were not immune to the hardships of life in the Ottoman Empire. The main tax on non-Moslems was the kharaj, or capitation-tax, which literally entitled the tax-payer such as in some places and not in others, depending on the whims of the local Turkish administrative officials. Granting tolerance to the “people of the book” in return for tax payment, as in the account of the time when Aegina, an island in the Saronic Gulf, yielded Barbarossa six thousand prisoners and was left bare of inhabitants.

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At the Dark Age [piracy] had been practiced by Christian and Moslem alike, whether or without the excuse of war and often with the clearest of consciences. This chapter looks at piracy as a distinctly Mediterranean institution and one that challenged the very existence of the Aegean island towns. For centuries, the threat of piracy remained the major threat to shaping Aegean urban and rural architecture, forms which survive today in the Cycladic Kastra. This critical threat to the archipelago’s settlement is best understood when examined, as it is in the following pages, over the period between the naval battle of Lepanto (Nafpaktos in modern Greece) in 1571 and the fall of Algiers to the French in 1830.

By the end of the sixteenth century, following centuries of jihad and crusade, the horizon for the corsairs was the city-state: a small-scale, undeclared, eternal war, fought sum-
Indeed, the Italian term “corsare” identifies a person who is a corsair by profession and not a criminal nor a buccaneer. In maritime courts, a man would identify himself as such as readily as another would call himself a cooper, baker, or tailor. The corsair was more often than not a lifetime profession, which the corsair entered at a young age. Good fortune offered rapid advancement. A young recruit with navigational skills and personal daring might soon become a corsair captain and go on to breed his profit in commerce, banking, and politics. 

The preeminence of the Barbary Coast and Maltese corsos was eventually challenged as other flags increasingly penetrated Mediterranean waters. The growth of English, Dutch, and French trade after 1700 was paralleled by an increase in these nations’ naval strength. Commercial rivalry among the newcomers led them to negotiate treaties with the Barbary Coast corsos, which obligated the Western powers to pay tribute, often in kind (naval stores, guns, powder, etc.). In return for the corsos’ promise not to attack their shipping, these commercial advantages could be paid for by the tribute-paying nations.

The young United States was soon caught up in this web of tribute payments and trade rivalries. As early as 1785, the British encouraged the Algerian corsairs to declare war on the United States, in the hopes of driving American commerce from the Mediterranean. By 1796, Americanresistance had grown so strong that the corsairos of Tripoli had decided to seek a peace treaty. The corsairos had agreed to pay a ransom for captured American sailors and, in order to build a navy to block and punish the Barbary Coast corsos. After being acrimoniously debated in the Congress, the issue was finally resolved in 1805. The United States Navy besieged Tripoli, and the marines marched across the Libyan Desert, forcing a peace treaty to end the war. The victory over Tripoli...
The century or so before Greek independence, when the Dutch and the English, with their purchased immunity from Barbary corsair attacks, increasingly carried goods from the Ottoman empire to the western Mediterranean and Atlantic ports, the local eastern Mediterranean trade fell largely into Greek hands. This post-Porte commerce within the Ottoman Empire was traditionally the main target of the Christian Maltese corsairs. The passing of the local trade into Greek hands raised difficult questions for both the Latin Christian corsairs and the Orthodox Christian Greek ship captains. In the context of the war against the Moslem “infidel,” the pope, who also held religious authority over the Maltese corsairs, would readily seize cargoes as Turkish trade. The corsairs began to challenge the Greek Orthodox captains as schismatics and heretics unworthy of the pope’ protection and thus liable to Maltese corsair depredations. In this complicated and ambiguous circumstances, any side involved – Turkish merchants, Greek captains, and Maltese corsairs – took risks in playing their roles within the local trade. In these circumstances, the profits from the local trade were so great that the corsairs could not ignore them completely.

Given their unusual autonomy from direct Ottoman authority, the islands and towns of the Aegean were also regular prey for Maltese corsairs from the Barbary regencies, for whom onshore landing was a favored tactic. One or two ships would normally conduct such raids by landing a party of a few dozen corsairs. This small group would march inland for whom onshore landing was a favored tactic. One or two ships would normally conduct such raids by landing a party of a few dozen corsairs. This small group would march inland for a few hours, searching for loot, then depart. In such cases, the only remedy for Greek captains was to play their roles within the commercial life of the eastern Mediterranean and Aegean seas. In the same circumstances, the corsairs began to leave the collective fortiﬁcation for less conspicuous and, presumably, equally safe accommodations nearby. A trend that led to Skaros’s complete abandonment after the 1830s. The fortiﬁcations, or Kastra, of the islands of Sikinos and Antiparos have been continuously inhabited. Chora, a settlement beyond the fortifications, now exists as the life of the abandoned enclosure of Kastra on the island of Skakia. But only the powerful characteristic of the site and the overgrown foundation walls conﬁrm the evidence of fortiﬁed settlements in Skaros on Santorini and in Kastra on the northern Aegean island of Skakia, which, like Skaros, was deserted after the 1830s. Historical and literary documents referring to both fortiﬁcations provide insights into the life and architecture of these now deserted Kastras.

Alexandros Papadiamantopoulos (1851-1911), the son of a Greek Orthodox priest, was perhaps the greatest Greek prose writer of his time. His stories, set on his native Skiathos, are notable for their careful observation of daily life, their loving description of folk traditions and the natural environment, and their powerful portrayal of the dignity and harshness of traditional Greek island life. “Papadiamantopoulos did for his island what Thomas Hardy... did for [his] homeland,” as Elisabeth Constantinides observes in “Tales From A Greek Island.” Papadiamantopoulos describes Kastro as being built on a craggy and forbidding promontory at the extreme north point of the island. A Randall gate over a deep ravine is said to have connected the promontory to the island and controlled the only entry into the town. A guard performed the daily duty of raising the Randall gate before sunrise and lowering it again after sunset.
Papadiamantis’s island tales were not illustrated, but there is a picture of a settlement similar to the Sklakos Kastro, as Papadiamantis describes it, in a drawing of a contemporary settlement, the “View of Skalos,” found in the collection of Thomas Hope (1769–1831).

Hope, a Dutch-born British traveler, student of architecture, and collector and patron of the arts, visited Greece twice before the end of the eighteenth century and produced a large collection of watercolors and sepia drawings, 350 of which are in the collection of the Benaki Museum of Art, Athens. So powerful was his eye for form that he took a field in 1794 and 1795 as he roamed around the Aegean islands, and only some sleeping chamber could find protection, gazing at the ground and folded around them.

Indeed, when I saw a child, nearly thirty stories were still surviving, visible and around the old fortification. Remnants of praise old days, most of them in ruins but with all four walls still standing, and others missing parts, while some kissing as they were, only a few offering dance shapes. Some were ringed. Suddenly there were men, on proud stage and teeth most to the ancient, torn by abundant light during the summer, dressed in the white by the mountain, cold Great North which plowed relentlessly in the winter by the waves, drenched in the summer, abundant light during the winter, turning gold by the sun. From where the Great North blows, the sea, shining, at the bottom of the sea, planting shipwrecks on the shore, grinding rocks to sand, spraying sand to rock and stalactite, spraying foam in radial patterns.

“Santorini, Skaros, A View of Skaros from the East,” Thomas Hope, pencil drawing on paper, c. 1795. Unlike eighteenth-century engravings, this drawing was produced by the artist “in situ,” and presents an authentic visual document communicating the distinct architectural character and density of building of the Aegean collective fortification. The steps leading to the entry gate of Skalos, in the lower right of the drawing, have survived, as shown in the photograph on the opposite page.

Important and enlightening similarities exist between Papadiamantis’ story and Hope’s drawing in the portrayal of the landscape and of the man-made settlements. Papadiamantis calls the Kastro “a nest of seagulls,” a rock rising abruptly 200 meters above the sea, separated from the sea by a narrow ridge providing access to the gate of the settlement; the Skalos of the Hope drawing could also be said to resemble “a nest of seagulls.”

There was, indeed, a pressing need to do so: the fear of the Barbary corsairs and of the Venetians and the Turks crowded and piled them up on this naturally unconquerable promontory. But as Papadiamantis explains, there was a “pressing need to do so: the fear of the Barbary corsairs and of the Venetians and the Turks crowded and piled them up on this naturally unconquerable promontory.”

In fact, Skalos was situated at the top of a promontory rising nearly three hundred meters from the sea and in the caldera of the Santorini volcano, due east of the present-day village of Merovigli. Today’s water to the swale, confirmed by the fortifying topography and surrounded by the unexpected emptiness of the settlement, would readily agree with Papadiamantis that it is “a wonder” that people “managed to live on this waterless and inhospitable rock.” But as Papadiamantis explains, there was a “pressing need to do so; the fear of the Barbary corsairs and of the Venetians and the Turks crowded and piled them up on this naturally unconquerable promontory.”

In his pencil drawing of the Kastro of Skalos during the last decades of its occupancy, the drawing is of particular merit and quality, clearly the work of an accomplished artist sensitive to issues of scale, proportion, and perspective as well as to the intricate interplay of structure and subject.

“Santorini, Skaros, The 1995 Photograph confirms the accuracy of the drawing, including the outline of the large boulder, the horizon line, and the shoreline of the Skaros in the background. The photographer apparently occupied the very spot where the artist had executed the drawing two hundred years earlier. Today’s visitor to the site, confronted by the forbidding topography and astounded by the unexpected emptiness of the settlement, would readily agree with Papadiamantis that it is “a wonder” that people “managed to live on this waterless and inhospitable rock.” But as Papadiamantis explains, there was a “pressing need to do so: the fear of the Barbary corsairs and of the Venetians and the Turks crowded and piled them up on this naturally unconquerable promontory.”
Hope’s drawing confirms this description. It depicts, crowding against one another, heavy masonry-walled, barrel-vaulted houses typical of the vernacular architecture forms of present-day Santorini. Mineral in square footage, they form a distinctive pattern over an abrupt site that falls to the sea on both sides of the pictured settlement. Church cupolas with the characteristic Santorini lantern, which can be seen on today’s Ayios Menas in Fira-Santorini, enrich the building typology of the settlement and together with the dwelling units compose the enclosed town.

According to a seventeenth-century visitor, Skaros contained nearly two hundred houses sheltering as many as one thousand people. Messing as many units within the tight confines of the Skaros rock was only made possible by constraining the size of the individual dwelling units, which were similar to those comprising the external defense walls of the Sifnos, Antiparos, and Astypalaia Kastra. Flights of steps for negotiating the uneven site are recorded in the Hope pencil drawing as scaling elements and are integral to the architecture of the Skaros Kastro.

The Aegean climate allows outdoor living for most of the year. Scarce resources and limiting economic conditions dictated dwelling units of minimal size in any case. These small units, together with the high building density within the collective defense enclosure of Skaros Kastro, made for a shortened and, consequently, more easily defended perimeter—all conditions accurately observed and recorded in the Hope drawing with a degree of truthfulness and understanding not always found in illustrations by other eighteenth-century visitors. The authenticity of Hope’s drawing is also underscored by the outline of the Skaros rock and of Therasia island in the background, both elements of the unaltered natural landscape easily recognized by today’s observer.

The feeling of authenticity is strengthened by the artist’s use of pencil, which suggests that the drawing, unlike the lithographs that illustrated other travel accounts, was executed “in situ,” allowing for accurate measurement and the portrayal of both the natural landscape and of man-made architecture forms. At the lower left side, Hope’s drawing depicts the entry to the fortification. A drawbridge leads to an arched gate flanked by two tower-like structures, the only flat-roofed buildings in the drawing that form ramparts from which defenders could direct fire from below. Small openings in the larger tower on the right provide for observation and firing and perhaps identify a room for the guard. A nearly identical entry gate is described by Papadiamantis in “Ftochos Ayios” in the scene where the shepherd rushes to warn the gatekeeper of the corsairs’ appearance on the island.

Excerpts from “Ftochos Ayios” by Alexandros Papadiamantis

1 Forced by reality, those inside Kastro followed the custom of raising the drawbridge daily just before sundown and lowering it in the morning soon after sunrise. In the following excerpt, Papadiamantis explains these two particular parts of the Skiathos Kastro:

2 ....... Built above the iron gate, Taratsa was a flat-roofed tower, with embrasures and the indispensable boiling oil hole over the gate, which as a last resort threatened to scald any raider who managed to get near in an attempt to force open the iron gate. Kiosk [Kiosk] was a small space where prominent citizens were getting together for discussion or for making idle talk while smoking their long pipes, wearing their elaborate shirts and embroidered sashes.
In the story, the shepherd finds himself in front of the fortification at daybreak. Anxiously, he observes the rocky gap between the island and the site of the town: “a land abyss hovering above a watery abyss,” where “vertigo conquers a person.” To his relief and despite the sun’s rise, the drawbridge is still up! He calls the gatekeeper who eventually climbs up unnoticed by the shepherd to ask whether he wants a rope and net dropped so that he can be pulled up to the rampart. The shepherd refuses and shouts a warning to the gatekeeper not to drop the bridge that morning and then rushes back to tend his goats. As he returns to his flock, the corsairs, who by now realize that it was he who frustrated their raid, seize him and kill him on the spot. Hence the legend that the earth was colored red and turned fragrant and holy by his sacrifice.

In other parts of “Ftochos Ayios,” Papadiamantis provides useful information about corsair raids, typical of Byzantine corsair operations throughout the archipelago and confirms that the Skiathos Kastro and similar fortifications were designed for defense against such operations rather than against naval and land siege by regular military forces. The raid described in “Ftochos Ayios” involves a small corsair ship, which lands a third of its crew of fifteen to eighteen just before daybreak in a small, distant, and uninhabited bay invisible from the Kastro. The plan is to surprise the islands at sunup by sailing the corsair ship before the Kastro to provide a diversion for the land party, which is to cross the drawbridge, breach the gate, and enter the town.

Tales of hidden treasure circulating as a result of the endless conflicts in the Aegean and Mediterranean Seas motivate the corsairs. They also hope to enrich themselves by capturing men, women, and children to be sold in the Algerian and Turkish slave markets. Indeed, the capture of slaves, common practice throughout the Aegean archipelago for centuries, had devastating effects on the population and economies of the islands and the towns for which defenses had been breached.

Note: The work of Alexandros Papadiamantis has been brought to the attention of the English-speaking world as “Tales from a Greek Island” in an excellent translation by Elizabeth Constantinides. The volume is a selection consisting of twelve works of short fiction. Unfortunately, “Ftochos Ayios” is not among them. The translations of the quotations from “Ftochos Ayios” appearing above are mine.
T he history and geology of the Aegean archipelago have a unique relationship. Historically, the Aegean Sea is one of the oldest regions of the globe – it is one of the youngest. Its numerous islands, the mountain peaks of a collapsed landmass, provide physical evidence of its geological provenance.

The Aegean islands and Crete nurtured the great civilizations of antiquity from which much of contemporary European culture derives. The islands comprised the southeasternmost geographical point of the European Union for the last two decades of the twentieth century and up until 2004, when the Republic of Cyprus became a member, with the island of Kastellorizou in the Dodecanese complex serving as its southeasternmost area between the peninsula of Greece and the coast of Asia Minor. The Dutch cartographers, whose work facilitated the trading privileges acquired from the Ottoman Empire by Dutch, French, and English traders, also used the term “archipelago” on their seventeenth-century maps. Chios, Chios, Kayalies, the late-eighteenth-century French ambassador to the Sublime Porte, likewise designated the Aegean Sea “Egiopelago ou Archipel.”

Today the term “archipelago” has acquired a more generic usage and refers to any body of water abounding with islands or, more specifically, to any group of islands and interconnecting waters that form an intrinsic geographic and political entity. In this sense there are a number of archipelagos in the Mediterranean. Those with a relatively large number of islands are grouped around the Balkan Peninsula and the Eastern Mediterranean, including the Dalmatian coast islands and the Ionian Islands off the west coast of Greece. An encircled archipelago, the Aegean Sea boasts the largest number of islands in the region, grouped into such distinctive clusters as the Cyclades and the Dodecanese. Kastra, or collective fortifications, built on these two groups of islands provide the focus for this book. Writing in the 1980s, Kai Curry-Lindahl, a distinguished European ecologist, has best summed up, and with a prophetic touch the perennial self-transforming. This visual and aural image inspired Odysseus Elytis, the “poet of the Aegean” and the 1979 Nobel laureate, whose verse, as Yiorgos Yiatromanolakis of the University of Athens notes, celebrates the “luminous Aegean” archipelago, “intertwoven with the wind, the waves, the pebbles, the weather, and the vegetation.”

Beginning in the Renaissance, the term “archipelago” came to be identified with the area defined by the Aegean Sea. “Archipelago” derives ultimately from the combination of the Greek “arkhi” (chief) with “pelagos” (sea). Eymolotzoes and his contemporaries have speculated that, rather than coming directly from the Greek “arkhipelagos,” the Italian term could have been a corruption of “Aigion Pelagos.” Greek for “Aegean Sea.”

The Aegean Sea is one of the oldest regions of the globe – it is one of the youngest. Its numerous islands, the mountain peaks of a collapsed landmass, provide physical evidence of its geological provenance. Homer describes it – but, geologically, it is one of the youngest. Its numerous islands, the mountain peaks of a collapsed landmass, provide physical evidence of its geological provenance. The Aegean islands and Crete nurtured the great civilizations of antiquity from which much of contemporary European culture derives. The islands comprised the southeasternmost geographical point of the European Union for the last two decades of the twentieth century and up until 2004, when the Republic of Cyprus became a member, with the island of Kastellorizou in the Dodecanese complex serving as its southeasternmost area between the peninsula of Greece and the coast of Asia Minor.

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As an arm of the Mediterranean, the Aegean Sea can be seen as a bay, with the mainland of Greece defining its western and northern edges and the Aegean Turkish coast delineating its eastern edge. To the south, a chain of islands – named, from east to west, Kythira, Antikythera, Crete, Kasos, Karpasos, and Rhodes – articulate entry and form the largest body of the Mediterranean Sea. At its north–eastern corner the Aegean is connected by a water chain formed by the straits of the Daradello (the Hellespont), the Sea of Marmara (Propontis), and the Bosphorus, which leads to the Black Sea (Euxine Pontos). This connection to the Black Sea has been historically important to the life, commerce, and culture of the Aegean islands. A meridian twenty-five degrees east of Greenwich runs through the middle of the Aegean. Extended northward, this meridian passes through downtown Helsinki, Finland; extended southward, it reaches Johannesburg, South Africa.
Roughly four hundred miles from north to south and two hun-
dred miles at its widest, the Aegean contains some eighty-
three thousand square miles of land and water. By compar-
sion, the land area of Greece, including all of the islands, is
about fifty-one thousand square miles. Crete, the largest is-
land in the region, supports a number of mountain summits
higher than two thousand meters. Mountains of 1,000 meters
are not unusual and can be found on such islands as Andros
and Naxos in the Cyclades; Rhodes and Karpathos in the
Dodecanese; and Ikaria, Samos, and Chios in the northern
Aegean; sea depths of 1,000 meters are frequent. Greater
depths occur north of Crete, with the deepest perhaps thirty-
five hundred meters.

A submerged block of the earth’s crust forms the floor of the
Aegean Sea. Folded rocks of limestone extending from
the mountains of Greece to the mountains of Turkey mold subma-
rine ridges. The transition from these four thousand feet proclides
the surface as island chains. The chain of Kythera, Amblyythera,
Crete, Karystos, Karpathos and Rhodes is one the easiest to
identify on the map. Almost touching Attica and Evvia, the
Cyclades extend south and then easterly towards the prom-
onitories of Asia Minor.

From early geological and historical times, volcanic activity
has convulsed and remade the region. Santorini island, the
home of two Kastria (Skaros and Pyrgos), discussed in other
parts of the book, is an extreme and unique example of the ef-
facts of this volcanic activity.

The collapsed landmass that produced the Aegean Sea has al-
so given us, sui generis, the Aegean shoreline, which mediates
between landscape and seascape and between the visible
and invisible worlds that compose the Aegean archipelago.

Land and water meet in an extensive, undulating shoreline that
meanders to yield bay after bay, inlet after inlet, beach after
beach, and port after port, all geographic features on both
sides of the shoreline that have supported a visible network of
islands and towns and challenged the navigators of an invis-

"Map of Modern Greece,” engraving from Voyage Pittoresque de la
Grece, a publication of the work of Choiseul-Gouffier. The Aegean
Sea is identified as “Egiopelageo ou Archipelago.”

Marie-Gabriel-August-Florent, the Comte de Choiseul-Gouffier
(1752-1817) first visited Greece in March 1776 at the age of twenty-
four aboard the royal frigate Atalante, as a member of the French
Scientific Expedition to the Mediterranean. Eager to cover as much
territory as possible, Choiseul-Gouffier took along three artists
and a personal secretary and produced, complete with illustrations,
the richest record of contemporary life in the Aegean archipelago.

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ible network of sea-lanes. These two networks have historically facilitated the tasks of seamen who sailed in the archipelago and built the medieval collective fortifications on the island heights and promontories that we see today.

No other area of the Mediterranean has a shoreline as extensive as the Aegean’s in comparison to the size of land it encloses. This unique ratio is essential to understanding the visual implications of the archipelagic landscape/seascape. A similar ratio of shoreline to enclosed land describes the larger surrounding region—that is, the continental shores that delineate the Aegean Sea as well as the islands within. The same is true of the peninsula of Greece, a medium-sized country that nevertheless accounts for approximately thirty-five percent of the total length of the Mediterranean shoreline. This thirty-five percent equals 17,000 kilometers, a surprisingly extensive length that is nearly one-half the 37,000-kilometer shoreline of the continent of Australia. Islands account for two-thirds of the length of the total Greek shoreline, while Aegean island shorelines make up a major percentage of that figure.

Subtropical in climate, the islands experience hot, dry summers and mild, wet winters. Temperatures in the Cyclades complex can range from the low forties (Fahrenheit) in the winter to the low nineties in the summer. Light afternoon breezes make for cooler nights even in the hottest summers. Rainfall is extremely rare in the summer and heaviest in December and January. In its plant and animal life, the archipelago affords numerous examples of species isolation and adaptation to a space-limited environment.

The sun is almost ever-present throughout the region, as high-contrast black-and-white and color photographs confirm, and Greece claims the largest number of cloudless days per year of any country in Europe. But it is the wind that has the greatest impact on Aegean life. The Mediterranean is an intense wind forum where the northerly

Kythera, part of the island chain (including also Antikythera, Crete, Kasos, Kea, Patmos and Rhodes) which from west to east defines the southern boundaries of the Aegean archipelago.
In the days of sailing ships, the Aegean winds determined the maritime calendar. Mild weather in May began the season for trade, coin, or birth; to avoid winter storms, the sailing season ended in late October. Ernle Bradford, a historian of the region, suggests this wind made it easier to produce the clarity of light characteristic of the archipelago. "In July and August the Etesian winds (called from the Greek etos, a year, because they were regular annually) blew from between northwest and northeast strong and steady, declining slightly at nightfall but picking up again shortly after sunrise and reaching their maximum in the early afternoon. It was then that the islanders and the gallery benches could take their ease, while the Rhodian seamen hoisted the large, abraded lateen sails and the galley plunged forward at top speed. Because this was the season of fair weather, Bel Tempo, the Etesians were also called beltemp (later corrupted to belp Everyday,循环性的，链状的经济系统 enhance the interdependence of the islands. The Aegean archipelagic environment, with its isolated islands and mobile network of sea lanes, led each island to focus on its own resources, on the one hand, and allowed all to share products, attitudes, and traditions, on the other. In this context, one can admire the unity of a shared vernacular architecture and at the same time appreciate the uniqueness of each island, as expressed in the handrails of Mykonos, the dovecotes of Tenos, or the bell towers of Sifnos.

Sixteenth-century migratory movements, including Muslim colonization of the islands, helped to replenish populations devastated by war and piracy. Venetians and other Italians were absorbed during the existence of the Duchy of the Archipelago, from the thirteenth to the sixteenth centuries, as family names from the Cyclades Islands confirm. Often coerced, migration from one island to another readjusted the balance between natural resources and the number of inhabitants, as was apparently the case in the colonization of Antiparos in the fifteenth century. Turbulent times often resulted in population movements, and available data indicate deprivation within the Aegean occurring periodically.

The focus on sponge diving on Kalymnos, Symi, Chalki, and Kaselorizo is an example. The men of Melos were known as the best pilots, and those of Symi, as the best divers; both groups were much sought-after for the recovery of sunken ships. The ship-owners of Melos took building timber from Mount Athos (Ayion Oros) to Alexandria and, on their way back, carried coffee and rice to sell not only in the islands but also on the mainland.

These exchanges enhanced the interdependence of the islands. The Aegean archipelagic environment, with its isolated islands and mobile network of sea lanes, led each island to focus on its own resources, on the one hand, and allowed all to share products, attitudes, and traditions, on the other. In this context, one can admire the unity of a shared vernacular architecture and at the same time appreciate the uniqueness of each island, as expressed in the handrails of Mykonos, the dovecotes of Tenos, or the bell towers of Sifnos.

Sixteenth-century migratory movements, including Muslim colonization of the islands, helped to replenish populations devastated by war and piracy. Venetians and other Italians were absorbed during the existence of the Duchy of the Archipelago, from the thirteenth to the sixteenth centuries, as family names from the Cyclades Islands confirm. Often coerced, migration from one island to another readjusted the balance between natural resources and the number of inhabitants, as was apparently the case in the colonization of Antiparos in the fifteenth century. Turbulent times often resulted in population movements, and available data indicate deprivation within the Aegean occurring periodically.

Information on the population of the Aegean islands during the Tourkokratia, or Turkish rule, period is limited. We can be certain, however, that the numbers remained relatively small. Fortified towns, kastries, protected populations numbering mostly in the hundreds. For example, population of Pirgos, capital of the island of Folegandros, appears to have dipped below 3,000 people at any given time. Antecedent to this new reality was a time of the social structure transcription of Santorinian gene pools of populations, fluctuating between 1,000 and 3,000 in the sixteenth to the early nineteenth centuries, including a number of peaks as well as valleys. In 1770, at the beginning of its great adventure as a major Aegean naval power, France of Hydra counted only 5,000 people.

Historically, most of the islands possessed only one or two products: "moderate agricultural wealth," writes Professor Spyros Asdrahas, prompting the inhabitants to exchange agricultural wealth as manufactured products and to provide services to one another in order to produce additional wealth. Shores, once relatively fertile and self-sufficient in cereals, are traditionally made plant-cloth that absorbed the cotton production of nearby islands. It exported honey, wax, onions, cheese, wine, and was exported by Samos, soap, hides, sponges, cotton, canvas, and sail. Its Symi, olive oil, by Crete and Kyklades; refers and planks, from Kaselorizo, and so the list goes on. Some of the islands specialized in one main activity, according to the climate and the market.
E
tensive and undulating island shorelines provide ample space for the long summer maturation required by olives and vines, primary products of the islands. The central location of the Aegean traders and the traditional north-south, Black Sea–Egyp
tic pattern of trading olive oil and wine for grain became important again as the eighteenth-century trade of the Ottoman Empire passed into Aegean hands. The captains of Hydra were following the same pattern when they broke the British blockade of Western European ports during the Napoleonic Wars, an enterprise with spectacular consequences for the vernacular architectural forms of Hydra.

Sea-lanes, rather than land paths, have provided historically a less expensive and relatively safe transportation within the Hellenic world. The passenger-carrying ferries, hydrofoils, and catamarans of recent decades have altered the nature of travel, opening up the Aegean islands to local and international tourism, which, in turn, has radically transformed the islands’ economies, saved their towns. Some islands have been affected more than others. Distance by sea from the Athens (Piraeus) metropolitan complex has played an additional role in the reduction of tourism into the islands. Some of the more distant islands, which in the past served as places of political exile, have been spared the consequences of rapid development, but, as a result, have suffered heavy population losses. More recently, airstrips and airports built on land formerly reserved for cultivation have made some islands more accessible. Aristocrats on Melos, Antiparos, Skiros, Sifnos, and other islands have shortened travel times from Athens considerably. Chios, Rhodes, Mykonos, Skopelos, and several of the other islands feature international airports with their own connections to major European cities, which have begun to render the islands independent of Athens. And helipads for emergency medical evacuation serve almost every inhabited island as part of a national health-care system.

A naturally formed area of land that is surrounded by water and remains above water at high tide is the geographic and legal definition of an island. By this defini
tion, numerous islands, large and small, whitewashed and unlabeled, emerge from the Aegean’s waters, particularly in the Cyclades region, to form an intricate relationship between land and sea. The proximity of the islands to one another accentuates a relationship in which the sea clearly predominates and further defines the physically unique and visually inspiring character of the region.

Greece contains 9,830 islands and islets within its borders, according to Yeorgios K. Yiangakis. This figure includes islands in both the Ionian and the Aegean sea, with a majority in the latter. Of these islands, 110 have year-

round populations ranging from fifty people to 100,000. With a population of 500,000, Crete is unique among the group. Of the 115 inhabited islands, eighty-three lie in Aegean waters and constitute such geographic and adminis-
tative groups as the Cyclades, the Dodecanese, the Northern Sporades, the islands of the Northern Aegean, and others.

Farther from the Athenian metropolis than the Cyclades, the islands of the Dodecanese, as a group, registered an overall thirty-five percent increase in population, from 121,000 to 163,000, during the period from 1951 to 1991. Within the Dodecanese, however, smaller islands experienced population declines during that period, while larger islands like Kos, Kalymnos, and Leros have seen substantial population increase. Rhodes, the largest and most accessible island, blessed with attractive living conditions, tourism, and archaeological riches, has experienced a remarkable population increase of sixty-seven percent, from 59,000 to 98,000, during the same forty-year period from 1951 to 1991. By contrast, Patmos, where there is only one settlement on the island, the relationship between settle-
ment and port becomes clearer from a bird’s-eye perspec-
tive, as does the remote interdependence between a settlement and its specific site. Such islands also offer commen
ting views of the sea, as seen on the island of Ios, where from the waving, shifting, and rewarding expe-
rience, accoustically, spatially, and visually.

The islands’ summits are almost always windy. The mas
tive whitewashed monastery structure of a deserted mon-
estery or nunnery can provide much-needed protection from the wind, particularly when it reaches buffeting propor
tions. The wind also carries the sounds of people, animals, and machinery, as well as the aromas of the sea, salt, and the evergreen bushes—on donkey trails and occasionally on endless terraced fields—testimony to the labor of countless generations of islanders attempting to extract sustai-
nance from an arduous land.

Most islands feature more than one high point, with a whitewashed and easily detectable building at the sum-
mit reaching the top, however, can be difficult. A few to the summit demands a start very early in the morning, particu
darly during the hot and dry summer months. An hour or two of climbing in treeless terrain covered by the typically Mediterranean macchia—that is, shrub and evergreen bushes—on donkey trails and occasionally on cobblestone paths, ends in a revealing, uplifting, and reward-
ing experience, accoustically, spatially, and visually.

Reaching a summit yields an amazing view of the island’s topography, its ridges and valleys, its size and scale, and its distance from other islands. Where there is only one settlement on the island, the relationship between settle-
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The east coast of Sifnos from the summit of Profitis Elias

Exposure craggy ridges and bare hills contain occasional green patches and valleys in a terrain crisscrossed by endless terraced fields—testimony to the labor of count-
less generations of islanders attempting to extract sustai-
nance from an arduous land.

48

49

Sitting in a commanding position at the edge of a precipitous drop of two hundred meters, Folegandros Kastro, at the very center of this step-like island’s topography, engages the landscape and makes a case of its islands in a creative and respectful manner.
Kastra, typology and materials

Kastra, the collective fortifications of the Aegean archipelago, were a successful response to preserving life and culture when piracy was a constant, daily and nightly threat. Later, when geopolitical conditions shifted, the same fortifications were transformed with equal success into springboards for the release of a remarkable and sustained burst of human energy that recaptured for the islanders control of the Aegean and Mediterranean lanes of commerce. The collapse of the feudal system imposed by Latin rule, and its replacement by the island self-government tolerated by the Ottoman Turks, offered opportunities eagerly seized by the islanders. What began as small-scale, island-to-island trade, in their hands gradually developed into control of the sea-borne trade of the Ottoman empire.

Data about this broadly outlined development is still fragmentary. However, near the end of the Napoleonic wars and just before the beginning of the Greek War of Independence, Pouqueville, a French visitor to Greece, reported the following numbers for twenty-two Aegean islands: ships owned, 545; tonnage of ships, 140,000; ship’s crews, 36,000; ship-borne cannon, 5,500. These figures record the impressive growth of the islands’ merchant fleet during the eighteenth century and underscore the shift of the islands’ economies to sea-borne trade. More telling is the number of cannon carried by this growing commercial fleet, an average of ten per ship, although some of the larger vessels were armed with as many as twenty. Cannon were costly and reduced a ship’s carrying capacity and speed, but they were also necessary for defense against the corsairs. Acquired with the reluctant permission of the Ottoman authorities, this large number of cannon suggests the willingness of the Aegean captains to use them and the islanders’ skills and determination to meet the corsairs on equal terms and, eventually, to turn the tables on them. Self-confidence at sea, acquired at considerable human and material cost, found equivalent expression on land as the island communities burst out of their Kastra to accommodate a larger, more enterprising, and prosperous citizenry.

An inherent characteristic of the palette of vernacular architecture is its limited number of building types, a characteristic that is indeed evident in the Aegean island towns, where the inhabitants, instead of producing new building types, incorporated new functions into preexisting architectural forms. A limited building palette, in fact, at the heart of the visual unity of the Aegean settlements.

Variety and richness are introduced within this unity by the adaptation of building types to site and vice versa. In addition, firm architectural attachment to human scale underlines this richness, as manifested by the ever-present steps and railings, the size and composition of doors and windows, and other, smaller-scale architectural enrichments.

The Aegean Archipelago
Dwellings

The building types have determined the urban forms of the Aegean Kastra: dwelling units and churches or chapels. Rectangular building forms enclose the churches and chapels. Thus, by and large, rectangular forms have come to identify secular functions, and curvilinear ones to identify religious functions. The dwelling unit, which, repeated vertically and horizontally, produces the external defenses and determines the overall high-density of an Aegean Kastra, is the ‘monochoro.’ The term, a combination of ‘mono’ (single) and ‘choros’ (space), defines a living module within Kastra, accommodating the needs of a single family. Kastra, the collective fortification, and monochoros, its constituent dwelling unit, developed an inseparable and mutually supportive architectural relationship, crucial to life and culture in the medieval Aegean archipelago.

Local stone and poor-quality wood, mostly ‘fithes,’ were the basic building materials of the monochoros. These materials determined in size and form within the Kastra. In nearly all the surviving collective fortification examples, sixty-centimeter-thick, parallel stone-walls form the long sides of the rectangular plan of the monochoros. The spacing of these two long walls depends on the locally available ‘fithes,’ with a spanning capacity that does not ordinarily exceed four to five meters. One of the short sides of the rectangle becomes part of the continuous external defense wall. The entry door, located on the other short side, faces the internal path of the settlement, as is the case, for example, in the Sifnos Kastra.

The typical proportions of the monochoro plan are close to a 1:2 ratio, yielding an eight-to-nine-meter-depth. The party walls are blind. For defense reasons, the window on the back wall are small, but nonetheless are adequate for cross-ventilation. In addition to access for light and ventilation, the absence of partitions, an elevated platform in the back serves as the unit’s sleeping area and suggests a division of space, with daily functions concentrated in the lower two-thirds and bath. The elevated platform also necessitates a ceiling height more generous than the other two dimensions of the monochoro. Other daily and seasonal functions occur within the articulated space of the monochoro, leasing no unused or uncared-for wall or floor space. Folkloric studies have extensively documented the inspiring design accomplishments represented by the monochoro, whose thick, solid masonry walls, stuccoed and whitewashed, insulate an internal space that is thermally comfortable both in summer and in winter.

Repeated vertically, the narrow-fronted monochoro dwelling unit produced the high building density characteristic of all Aegean Kastra. From the interior of a collective fortification, a single property extends vertically, each upper level monochoro becomes a separate horizontal property with direct access from the street. Solid masonry, multiply exterior staircases provide access to the upper-level units. Elevation at the entry-door level effectively extends the limited square footage of the dwelling unit and enhances the social life of the street. As active links between the public and the private domains, these solid masonry staircases articulate the street visually and serve as reminders that the juxtaposition of many individual units assembled the long, continuous, and massive external defense wall.

Variations in the configuration of the monochoro dwelling unit appear as early as the Antiparos Kastra. There, the units are aligned with their long axes parallel rather than perpendicular to the external fortification wall. Extensions of individual property (involving more than one monochoro bay) also occur within some fortified settlements. When the extension is central, the monochoro utilizes four monochoro units above, below, for steep places under a trap-door to facilitate internal communication. But even with this limitation, direct external access to each of the combined monochoro units is almost always possible. Variations occurred most often, of course, when the monochoro units began to be built outside the confines of the collective fortification. In those circumstances, the monochoro continued to be an important dwelling unit type in the new towns developing beyond the fortified periphery of a Kastra. The current practice of uniting three or four monochoro units into a single property to create the greater square footage expected today bears witness to the architectural versatility of the original building type.

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This and the Santorini chapter. Tokyo, Japan. More of Professor Hata’s drawings appear in the extensive study of Cycladic vernacular architecture by... of worship. This elegant drawing is borrowed from the iconostasis, a sine qua non for a Greek Orthodox place and demonstrates the importance and location of the... is of a typical single-nave, barrel-vaulted chapel in Astypalaia. Iconostasis in the interior of a barrel-vaulted church... the nearby Sifnos Kastro. The chapel on the left is incorporated into the urban fabric of Mykonos, while the chapel on the right stands free outside... exceed five. Often, and in Sifnos in particular, is again today lovingly whitewashed and maintained by the citizens of the town of Kimolos. The presence of churches and chapels as historical components of the urban fabric of Kastra is underscored today by the examples of Astypalaia and Kimolos Kastra. In the former the church of Ayios Georgios has outlasted the abandonment of the Astypalaia Kastra. It stands free, lovingly whitewashed and maintained by the citizens of Kastra, who in the late 1940s moved to Chora below. Built during the seventeenth century, Panagia church, also in Astypalaia Kastra, sits on the base of a medieval guard tower, confirming the earlier departure of Latin lords and the presence of Greek Orthodoxy in the affairs of the community during the Turkish occupation years. Kimolos Kastra, completed at the end of the sixteenth century, is the only Cycladic Kastra built on the initiative of a Greek merchant after the departure of Latin lords. Symbolically replacing the Latin sepulchre at the center of the double enclosure of Kimolos Kastra, the church of Christos, in an immediate environment of ruinous Greek Orthodox chapels, is again today lovingly whitewashed and maintained by the citizens of the town of Kimolos. Enclosed by two-foot-thick heavy masonry walls, the majority of these chapels are constructed on the single-space, single-nave, monochoro principle adapted to a religious rather than a secular purpose. The aedicula attached to one of the narrowing sides of the enclosure is always oriented towards the east, as required by the Byzantine Greek Orthodox tradition. The entry door is located on the opposite, or western, end of the chapel. No matter how minimally endowed the building is, an iconostasis (a screen separating the chancel from the sanctuary) is again today lovingly whitewashed and maintained by the citizens of the town of Kimolos.
After the collapse of Latin rule in the Aegean, the islands’ culture continued to be nurtured by the Greek Orthodox Byzantine tradition, as the islanders remained true to their religious rites and the architecture that housed them. In the past the formal culture that emanated from Constantinople had sponsored such major and innovative buildings as Panayia Katapoliani in Paros and the Monastery of Saint John the Theologian on Patmos. When such state endowments disappeared, Aegean religious building was forced to rely on the islands’ own limited means. Materials were restricted to those that could be found locally, and for economic and political reasons, the scale and scale of buildings were reduced from the monumental to the domestic. Families expressing their religious devotion by building small chapels were less likely to provoke Turkish rapacity than communities building sizable, richly appointed churches. Left to their own devices, the Aegean island communities adhered to their traditional religious architectural forms and relied on proliferation rather than on innovation.

Aegean island chapels and churches are thus apparently ageless. It is difficult to discern the century in which a particular church or chapel was built, whether the seventeenth, the eighteenth, or the nineteenth, nor does it make much difference, since their spiritual and earthly virtues are diachronic and incorporate traditional post-Byzantine forms that fostered the inventiveness of their vernacular builders. The forms, materials, and details of these chapels and churches yield little archaeological evidence of the dates they were built, and dendrochronology is unhelpful where door lintels have been created from recycled pieces of marble. Occasionally, a dedicatory inscription dating from the erection or rededication of a chapel will shed some light, although most of these chapels date from the eighteenth century or later, when the Aegean island towns saw a rapid rise in maritime and commercial activity and prosperity. Economic growth meant that a vigorous and enterprising middle class of captains and merchants with money to spend began to develop and celebrate their culture and religion under the watchful eyes of the Ottoman Turkish authorities.

Larger than the typical island chapel, the church of Ayios Konstantinos in Artemon, Sifnos, is composed of three barrel-vaulted naves, the central one wider than the other two. Unique to Sifnos and rare in the Aegean archipelago, the building utilizes, in addition to the barrel vaults, the typical vocabulary of chapels, including thick masonry walls, small openings, and whitewash.

 Joined together, two single-nave chapels stand free in the landscape of Mykonos island. The axonometric drawing of these two chapels is borrowed from the extensive study of Cycladic vernacular architecture by Professor Soichi Hata.

Two single-nave, single-dome chapels joined into one in Vathi, Sifnos. The view is to the west, and the cross in the middle section of the stone bell tower is an upward extension of the westwardly wall to the chapel.
Built either as single units or in linear formations, windmills were strategically located on heights and ridges above the communities they served to harness the power of the ever-present Aegean winds and provide energy to grind grain for flour. Located by necessity outside the urban fabric of Kastro, windmills nevertheless were important contributors to community functions, since waiting for the grain to be ground created opportunities to gossip, sing, exchange news, find brides, and pass along folktales.

Windmills were built of the same native materials as dwellings and chapels but were configured differently, in massive cylindrical forms. It is not clear how or where windmills originated, although they may have been inspired by the ancient watermills used to harness the power of the water. The earliest known windmill dates from tenth-century Persia, which supports the conjecture that windmills were brought to Europe by crusaders returning from the Middle East. In Western Europe the earliest reference to windmills dates from the end of the twelfth century. In France and the Netherlands, where the windmill found wide application, detailed descriptions and working drawings date from the eighteenth century.

Buondelmonti in the 1420s, Sankey in the 1720s, Château-Guiffier in the 1770s, Thomas Hope in the 1790s, and many subsequent travelers found the windmills in the Aegean archipelago important enough to include in their drawings. Windmills were, in fact, integral parts of Aegean communities in both form and function. In an extensively researched and documented study, "Windmills of the Cycladic Islands," Charalambous Poursinos and D. Komorela state, "All the necessary conditions for windmill development existed in the Cyclades: scarcity of water, sufficient wind power for over 310 days in a year, suitable wind and air humidity, dry conditions which contributed to the upkeep of the sails and wooden mechanism, and finally, the existence of millstones of excellent quality.

WINDMILLS

Several hundred individual remnants confirm the windmill’s widespread presence throughout the Aegean archipelago. Windmills were valuable pieces of real estate to be maintained, improved, sold, bequeathed, and, at times, vandalized and destroyed by corsair raids and warfare. Built as they were on exposed sites, windmills could fall victim to the destructive power of the wind they were built to catch. By the end of the nineteenth century, with the coming of industrialization and the changing island economies, windmills were on the decline. Following World War II they disappeared altogether, supplanted by nationwide electrification. More recently, experimental wind turbines have been placed on a number of the islands to generate electricity, the very phenomenon which had earlier caused the demise of the evocative windmill building type.

Heavy masonry walls, between half and one and one-half meters thick, formed the cylindrical body of a windmill. The height of this cylinder averaged about five and one-half meters, and the usual exterior diameter was about seven meters. The diameters of the base and the top were almost always different. However, it is difficult to determine standard proportions for these dimensions. A podium provided the base for the cylindrical tower, serving also as a transitional element from the usually rocky terrain and as a platform from which to operate the windmill’s sails. Located on the lee side, an entry door was often the only opening into the massive cylindrical tower. Two and, occasionally, four small openings lit and ventilated the windmill, whose exterior and interior surfaces were whitewashed annually.

Where islands lacked the proper quality or type of timber, millwrights might have to travel as far as Mount Athos (Ayion Oros) or Asia Minor to locate, select, and transport the wood appropriate to their commissions. The transportation of the wind shaft, the longest and heaviest part of the windmill mechanism, presented a particular challenge, as it had to be towed by sea and then carried by men and mules to a mill site at a high point on an island. As a specialized structure, the windmill required materials and talents different from those needed to build the more common dwelling unit or chapel.
Transactions with customers and workshop repairs took place on the ground floor of the windmill tower, which also served as temporary storage for grain and flour. Depending on the size and design of the tower, millstone grinding occurred on an upper level or in a mezzanine space. The location, form, and parts of the building all helped to harness the power of the wind to turn the millstones. The millstones, the pivotal parts of any windmill, did not have to be brought from afar; for centuries quarries, mostly in Melos but also in the islands of Kimolos and Poliaegos, produced millstones for most, if not all, of the archipelago windmills.

Olympos (known locally as Elympos), a settlement located in the northern half of Karpathos, a mountainous Dodecanesian island, is also known for the large number of “horseshoe” type plan windmills. A cone-shaped, thatched roof protected the wood frame of the cap, which housed the windmill mechanism and was the most demanding and time-consuming part of the building to construct. The need to rotate the cap in the direction of the prevailing wind made the mechanism of a cylindrical windmill relatively complex.

The particularly steady winds that prevailed at a number of island sites, including Sifnos in a location near Kastro, produced an unusual and rare “horseshoe” plan for their windmills. Because such winds made rotating the cap unnecessary, horseshoe-plan windmills used a fixed wind shaft instead of one that rotated, making for a windmill that was simpler and less expensive to construct and operate. The fixed wind shaft once more suggests that the mutually informing relationship between site and building was a salient feature of the vernacular architecture of the Aegean islands.

Visits to the life and architecture of the archipelago, the power of the wind was harnessed by sail—sails to move ships and sails to rotate millstones. Although today diesel-powered vessels mark the invisible lanes of the Aegean Sea, the relics of windmills that dot the island ridges are visible witnesses to an earlier time and a different way of life.
DOVECOTES, MONASTERIES AND WHITEWASH

Dovecotes exist only on a small number of islands, and notably on Tenos. A detailed pre-

sentation of this unique and delightful building type, erected to shelter pigeons, is part

of the segment of this book devoted to Tenos. During the years of Venetian and Ottoman

domination, the dovecote and the windmill developed on sites lying outside Kastra. By

contrast, monasteries had a Byzantine provenance and their function, form, and archi-
teutical scale and size that came to resemble those of Ayion Oros monasteries. De-
tails on this subject are available in segments of this book devoted to Sifnos and Hydra.

Whitewash, the most distinctive feature of the vernacular architecture of the Ae-
gean archipelago, is of uncertain historical origin. Some scholars believe that

the exterior elevations of early settlements were built of exposed stone without

decor and whitewashed so that they might more easily blend into the natural environ-

ment and conceal the buildings from potential raiders. The buildings of Anavatos, a settlement

within the fortified settlements were hardly ideal. The absence of sewers, with street drain-

age only in a high-building-density environment that also housed pack animals, posed a

critical threat to public health. Thus whitewash may have been applied as a disinfectant in

an attempt to reduce the threat. Whitewashing for hygiene goes on today as, for example, in

most island public spaces and cemeteries, where tree trunks are whitewashed up to a (hu-

man) height of six feet to ensure public health, cleanliness, and good maintenance.

Repeated applications of whitewash over stuccoed masonry or stone and mortar pr

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most island public spaces and cemeteries, where tree trunks are whitewashed up to a (hu-

man) height of six feet to ensure public health, cleanliness, and good maintenance. A fresh layer of whitewash also impressively increases the heat-

reflective capacity of the exterior surface of the walls, as can be easily confirmed by a visitor

who crosses from a cool, dark interior to a sun-drenched, hot summer day outdoors.

These functional uses of whitewash continue today, but social and aesthetic consider-

ations have also become prominent. A fresh layer of house whitewash often extended to

daylight, pedestrian pavements, and pedestrianized streets and at the same time represent a fresh and ingenious attempt to recover them.

Successive layers of whitewash applied annually on buildings of variable typology, unity

surfaces, whether vertical or horizontal, heavily textured or smooth, stuccoed or not, and

create a plastic continuity that enhances the engaging qualities of the island’s vernacular

architecture by creating a continually changing play of light and shadow. This plastic con-

tinuity of form together with the changing light of the Aegean archipelago brings to mind

Aegian Le Corbusier and his poetic definition of architecture as “…the mastery, correct and

magnificent play of masses brought together in light…”

 advent...