ISBN: 978-960-7709-41-7

PALAIOPOLIS, ANDROS THIRTY YEARS OF EXCAVATION RESEARCH

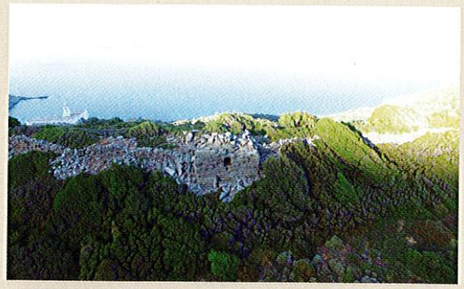
PALAIOPOLIS, ANDROS

THIRTY YEARS OF EXCAVATION RESEARCH

Edited by

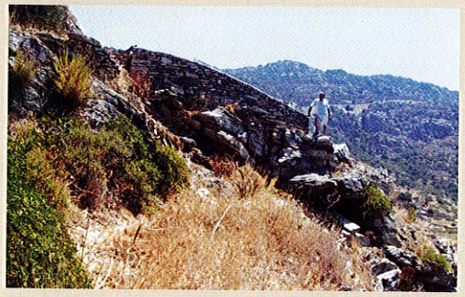
Lydia Palaiokrassa-Kopitsa

5.

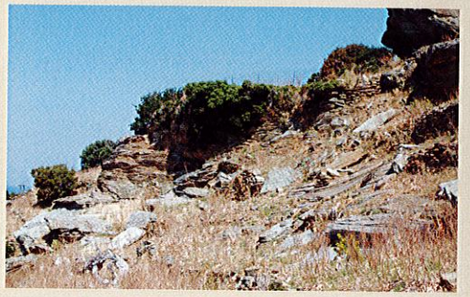


5a.1

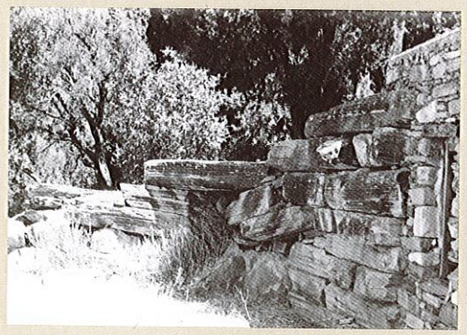
5a.2



5a.3



5a.4



5a.5

5a.6

5a.1. Tower on the north side of the acropolis.
5a.2. Part of the west branch of the fortification wall. Area of the acropolis.
5a.3. Detail of the fortification wall at the 'Katatomi' promontory.
5a.4. Part of the west branch of the fortification wall, in which the bedrock is incorporated.
5a.5. Ruins of a gate in the east branch of the fortification wall (Tentes field).
5a.6. The 'Porta', the gate in the east branch of the fortification wall.

5.

THE MONUMENTS

5a. The fortification

Lydia Palaiokrassa-Kopitsa

The ancient city was girt by a mighty wall, which in several places survives in good condition, to a height of over 4 metres.

The city **(figs 3a.10, 4b.6)** occupied the hillside below the summit with the chapel of Agios Demetrios, where the acropolis existed, at an altitude of 350 metres. In this space the fortification wall embraces the natural terrace, curving to east and west towards the sea (south). At the mid-point of the north side, a square tower stands to considerable height **(fig. 5a.1)**. In continuation two branches of the wall are created, the west and the east, both in the direction of the sea, the distance between which widens gradually.

The west branch has been located for most of its length **(fig. 5a.2)** and survives as far as the present road between Gavrio and Chora in good condition and to an appreciable height. It is directed southwards with angulations at large intervals, as far as the small 'Katatomi' promontory which closes from the west the shore of Palaiopolis **(fig. 5a.3)**. As was ascertained in 2006, the fortification wall ended at the now-submerged west part of the harbour installation, thus protecting the harbour basin (chapter 5b).

The east branch of the fortification wall also opens out gradually in its course towards the sea. A short distance above the Gavrio-Chora road, immediately beyond the modern cemetery, it turns to the southeast and then continues, with a small turn, towards the southwest, in the direction of the sea. It crosses Tourlos hill, including the greater part of this to the west. A little lower down, the last surviving small part of it is encountered, but its possible

course is documented by the relief of the ground and the existence of graves. As is well known, in antiquity the cemeteries were *extra muros* of fortified cities. The east branch of the fortification wall terminated at the shore, possibly slightly south of the estuary of the Komvos torrent, as was noted in 2006.

A lightly-curved section of the wall that was located below the Gavrio-Chora road seems to have separated the acropolis from the lower part of the city, perhaps functioning as a *diateichisma* (cross wall), thus reinforcing, as second line of defence, the acropolis.

Stone blocks of assorted size, mainly of schist, were used in constructing the fortification wall, in which the bedrock was also incorporated in places **(fig. 5a.4)**. The masonry of the towers and the gates has been reinforced and consists of large rectangular stone blocks. The thickness of the structure ranges from 2.40 to 3.90 metres. Apart from the tower on the acropolis, five other towers of smaller dimensions have been identified on the west branch of the wall, which seems to have been the most vulnerable, as well as one gate and two steeply-pointed posterns. In the east branch there were evidently three gates **(fig. 5a.5)**, which are linked to corresponding roads connecting the city with the countryside and settlements to south and east. Two of the gates in the environs of the acropolis are linked to an ancient street that ran through the city and continued westwards towards the settlement at Ypsili and on to Gavrio. The gate in the east branch, popularly known as 'Porta', stood *in situ* until 1940 **(figs 3a.6, 5a.6)**.

The robust and durable construction of the enceinte was reinforced further by the nature of the terrain in the area, which is naturally fortified due to the steep gradient and the sheer rocky ground in many places. The fortified character of the position was pointed out by the Roman historian Titus Livius (XXXI 48).

The date of the wall is not clear. However, excavation in two of its gates has given us some indications of its dating in Classical times. This research was limited and carried out in the course of the surface survey at the two gates in the wall, one in the west branch and the other in the east branch, the 'Porta'.

The gate of the west branch was simply cleaned, in order to ascertain its form, date and relation to the aforesaid street, which bisected the city as its other end is at a corresponding gate in the east branch of the wall.

Fragments of a lekythos of the first half of the fourth century BC, which were found under the threshold of the gate are a clue to its dating to these years.

At the 'Porta', the gate situated upon the path leading to the sea, a limited excavation was conducted in order to clarify its relation to the fortification wall **(figs 3a.6, 5a.6)**. This gate was formerly believed to be the entrance to a magnificent building. Its two jambs have fallen on top of and to the side of the threshold, while the lintel lies upon the east jamb. These architectural members, like the threshold, are monolithic and of local schist. From investigation of the foundation under the threshold and to the west of it, inside the Manalis plot, it was ascertained that the gate is associated with part of the fortification wall that was revealed to the west of it. Thus it was confirmed that this is a gate in the fortified enceinte. Moreover, on the basis of pottery from the foundation of this section of the fortification, mainly part of a lamp of the second half of the fifth century BC, this wall should be dated to the Classical period.

Last, constructional details at certain points of the west branch point to repairs made to the fortification wall in Hellenistic times, and at other points in Late Roman times. Certainly, however, the Athenians' futile attempts to capture Andros – recounted by the ancient authors –, led by the victor of Salamis, Themistocles, and later, successively by Alcibiades, Konon and Phanosthenes in the late fifth century BC, corroborate our view that the mighty fortification of ancient Andros already existed from the beginning of that century.

Bibliography: Tiverios 1993.

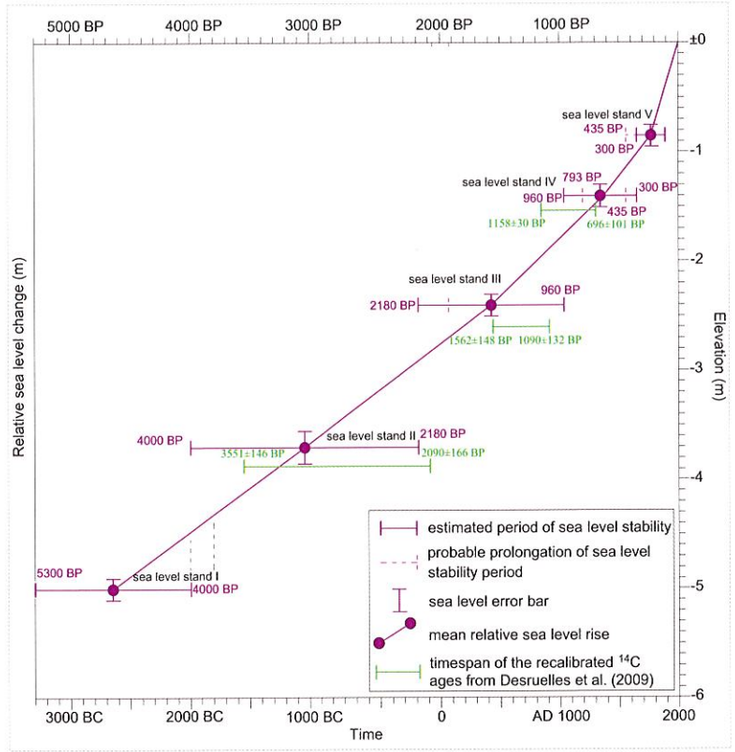
5b. Palaeogeographic reconstruction of the coast of ancient Andros

Nikos Mourtzas

i. The relative changes in sea level in the Archipelago of the Northern Cyclades (fig. 5b.1)

The Late Holocene history of sea level change in the Northern Cyclades begins with the sea level at -5.0 ± 0.10 m (sea level stand I) lower than the present one (wherever depths are mentioned in the text, these are measured below the present mean sea level, corrected for tide, wind and pressure at the time the measurements were taken). Little evidence of this earlier sea level is available and is limited to the deepest beachrock generation found in the bays of Poles (SE Keos), Kavia (Koundouros, SW Keos) and Mesa Steno at the southernmost tip of the island of Andros. The dating of this level seems to be associated with a time interval between the end of the Neolithic or the very beginning of the Early Bronze Age and the end of the Early Bronze Age, from 3300 BC to 2000 BC (5300 - 4000 BP). The earliest traces of habitation in the bays of Mikres and Megales Poles, found at the depth of -3.10 m to -4.10 m, between the oldest and the next younger beachrock generation and the earliest sudden abandonment, with no trace of violence, of the Early Bronze Age settlement of Agia Irini (NW Keos), around 2000 BC, are most likely related to this earlier sea level stand and the abrupt change to the following stand.

The next younger sea level (sea level stand II) is detected throughout the area of the Northern Cyclades, today at a depth of -3.70 ± 0.15 m. Widespread beachrock formations are located in southeast and southwest Keos (Poles, Kavia, Ligia bays), on the island of Syros (Psachno coast) and in the insular group of Mykonos (Kalafati, Agios Ioannis), Rheneia (Kormou Ammos, Steni and Lazaret) and Delos. The dating of this sea level to between the end of the Early Bronze Age *ca* 2000 BC (4000 BP) and the mid-second century BC (2180 BP) is made indirectly by comparison with the functional elevation of the prehistoric settlement at Agia Irini (2000 -1300 BC), the harbour installation in Otzias bay (4th c. BC) on the north coast of Keos, the functional level of the extensive harbour installations of ancient Karthaia in southeast Keos (8th c. BC - *ca* 180 BC) and the submerged Classical archaeological layers at -3.65 m to -3.85 m in the ancient harbour at Vryokastro in Mandraki bay, on the west coast of Kythnos.



5b.1. Curve of the relative change in sea level during the Upper Holocene, in the northern Cyclades.

The sea level at -2.40 ± 0.10 m (sea level stand III) was established by the beachrock formations that developed at this depth on the northeast, southeast and southwest coasts of Keos (in the Gulf of Agios Nikolaos, the bays of Orkos and Poles, and the coves south of Koundouros), on Syros (Finikas and Psachno coast), on the southeast coast of Andros (in the Gulfs of Korthi and Exo Steno), on the northwest coast of Delos, the southwest coast of Mykonos (Agios Ioannis bay) and the east coast of Rheneia (Lazaret). This sea level stand, which seems to have been formed after the mid-second century BC, has been dated on Delos after the end of the Hellenistic period, *ca* 30 BC, but it seems to be prolonged after 41 AD in Andros, according to a testimony that the harbour of Palaiopolis was in use at that time. The dating was arrived at by correlating this stand with the functional elevation of the Hellenistic-Roman shipshed on

the south coast of Poises bay (west Keos), the submerged Roman structure in the Gulf of Exo Steno at the southernmost tip of Andros, the Roman harbour of Palaiopolis (west Andros), the Hellenistic coastal defensive constructions on the seafront of ancient Delos, and the submerged at -2.45 m Roman harbour installations in Mandraki bay (west Kythnos). However, this sea level stand could be prolonged until the Early Venetian period in Cyclades, based on the recalibrated radiocarbon dates, giving a latest date of 960 BP.

The next sea level at -1.40 ± 0.10 m (sea level stand IV) is dated to the period of Venetian rule in the Cyclades (1207-1566). The tidal notches in Poles bay (southeast Keos) and Plaka bay (west Andros) and the beachrocks along the entire coast of Keos (Spathi, Agia Irini, Orkos, Kavia, Ligia, Kampi bays), Syros (Psachno coast), Andros (Vlychada, Agios Petros, Anerousa, Palaiopolis, Gyalia, Kremmydas, Mesa Steno bays), Mykonos (Kalafati, Agios Ioannis bays), Delos (Fourni coast) and Rheneia (Kormou Ammos and Steni coast), all at about the same depth with minor deviations, clearly indicate this younger level. The dating was reached by comparison with the functional height of a sea defence wall and a shipshed of the Venetian period on the coast of Nimborio at Chora Andros. This sea level stand could be prolonged to the period in which there was a series of strong earthquakes, between 1649 and 1735, which also includes the eruption of the Kolumbo volcano in 1650.

Finally, the sea level at -0.85 ± 0.15 m (sea level stand V) was determined on the basis of the depths of the most recent beachrock phase on the coast of Keos, Andros, and Delos. The sea level rise to the present stand can be related to the strong seismic sequence that hit the island of Kythnos between 29.4.1891 and 11.5.1891.

On the basis of a comparison of the local sea level stands resulting from the interpretation of the geomorphological and archaeological indicators and historical evidence from the islands of Keos, Syros, Andros, and Kythnos, and the insular group of Mykonos, Rheneia and Delos, five distinct sea level stands for the area of the Northern Cyclades were defined. The relative sea level change prediction curve for the Northern Cyclades during the Late Holocene is shown in **fig. 5b.1**.

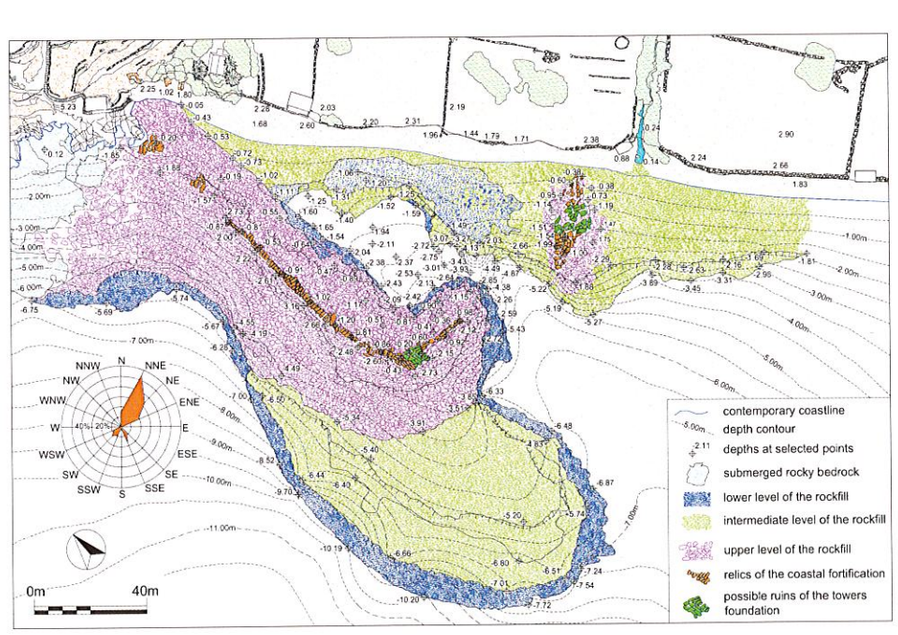
Bibliography: Caskey 1971; Caskey 1981; Spyropoulos 1997; Papazachos – Papazachou 1997; Mourtzas – Kolaiti 1998; Dalongeville et al. 2007; Weisman 2008; Desruelles et al. 2009; Simantoni-Bournia – Mendoni – Panagou 2009; Mourtzas 2010; Mourtzas, 2012; 1990 – 2014 Kythnos Excavation Project; Mourtzas – Kolaiti, forthcoming.

ii. Description of the ancient waterfront harbour installations on the coast of Palaiopolis

The coast of ancient Andros, where the ancient harbour installations are identified, is developed in a northwest-southeast direction for a length of approximately 180 m, between the rocky outcrop to the northwest and the torrent that flows into the sea to the southeast. This was a rockfill of a length of 218 m, width 163 m, and maximum thickness 10 m **(fig. 5b.2)**, which occupied an area of 22,400 m^2, while the volume of the rockfill is roughly estimated at 100,000 m^3.

On the basis of the materials of the fill and the depth of its development, the rockfill is distinguished into three different layers.

The most extensive and lowest layer of the rockfill is constructed of rocks of average size 0.40 m x 0.25 m x 0.15 m, with maximum depth of the top and base at 7.00 m and 10.20 m, respectively. The middle layer consists of stones of average size 1.00 m x 0.60 m x 0.20 m and starts at a distance of 90 m from the rocky coast, covering the lowest layer as far as its southeast end. The upper layer of the rockfill consists of schist slabs, 3.00 m x 1.00 m x



5b.2. Ancient harbour works on the coast of Palaiopolis, as seen today.

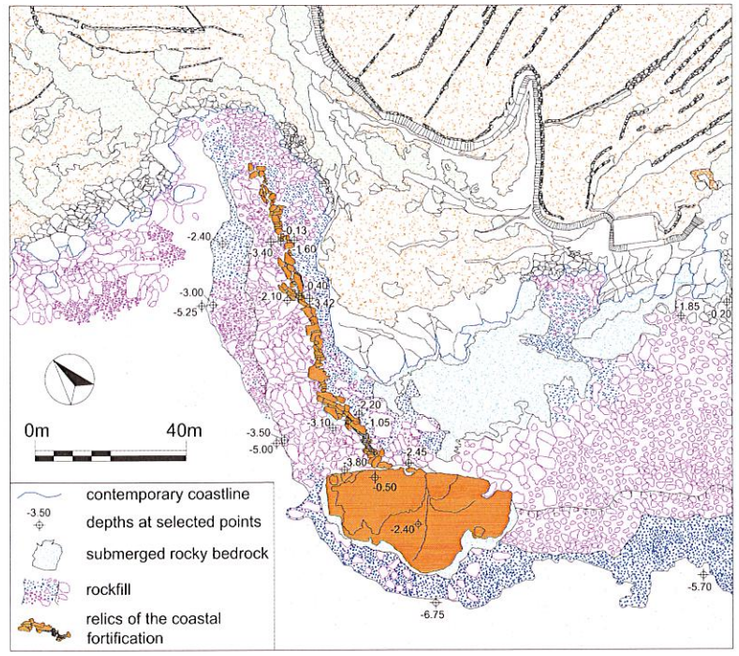
0.30 m in average size. The maximum depth of the base and the top of the layer is 5.30 m and 3.20 m, respectively.

In a later period, section of the rockfill was removed from the north part towards the coast and an elongated harbour basin was formed, with entrance from the east-northeast. It occupies an overall area of 2.250 m^2. The maximum depth of the basin at its centre is now 2.50 m, while the depth at its entrance ranges between 4.00 m and 5.50 m.

Bedded upon the upper layer of the rockfill are the ruins of a built structure that today stands to a height of 2.50 m and is 4.50 m wide. This is the shallowest and most carefully-constructed part of the harbour installation. It starts from the rocky coast to the northwest and runs in a southeast direction for a length of 120 m, then turns to the northeast and continues for a length of 26 m. It comprises schist slabs, ranging in size from 1.80 m x 0.80 m x 0.20 m to 2.50 m x 1.20 m x 0.20 m, bonded together in places with mortar. The maximum depth at the base and the top of the built structure is 2.75 m and 0.20 m, respectively. Ruins of the built structure are also located upon the rockfill to the east of the entrance of the basin, some 20 m west of the estuary of the torrent. Its orientation here turns towards north-northeast to south-south west, and it develops for a length of 35 m. The masonry of the built structure, in terms of construction method and material, refers to that of the land fortification. Indeed, it is the continuation of this upon the manmade rockfill, in front of the then coastline. At the point of curvature, there where the southwest section of the fortification wall turns to the northeast, as well as in the the east of the entrance of the basin, its width is almost doubled and reaches 7 to 10 m. Fortification towers had probably been built at these points.

Described in **fig. 5b.2** are the ancient harbour installations on the coast of Palaiopolis, as visible today.

Northwest of the rocky outcrop and within 100 m from the harbour installations lies the sunken part of a fortification wall, which surrounds the sheer rocky coast **(fig. 5b.3)**. It consists of boulders and stones which are bedded upon the rockfill and runs in a north-northeast to south-southwest direction for a length of about 90 m, to end at a schist rock of the now submerged bedrock with widened surface. Between the northwest precipitous side of the rocky outcrop and the fortification walls is a passage 3.00 - 4.00 m wide, today totally submerged. At the south-southeast end of the fortification wall, mortar was found between the building stones. The base of the rockfill



5b.3. Part of the fortification wall, northwest of the rocky outcrop, as seen today.

is at a depth of 2.40 to 5.00 m, while its top at 3.10 to 3.80 m. The upper surface of the fortification wall is at a depth of 0.15 to 1.05 m and the floor of the passage from 1.60 to 2.20 m. The widened surface of the bedrock, which has a seaward slope, is today at a depth of 0.50 to 2.40 m, while the seabed at its base lies at -6.75 m.

Fig. 5b.3 presents the part of the fortification wall northwest of the rocky outcrop.

iii. Palaeogeographic reconstruction of the coast of ancient Andros

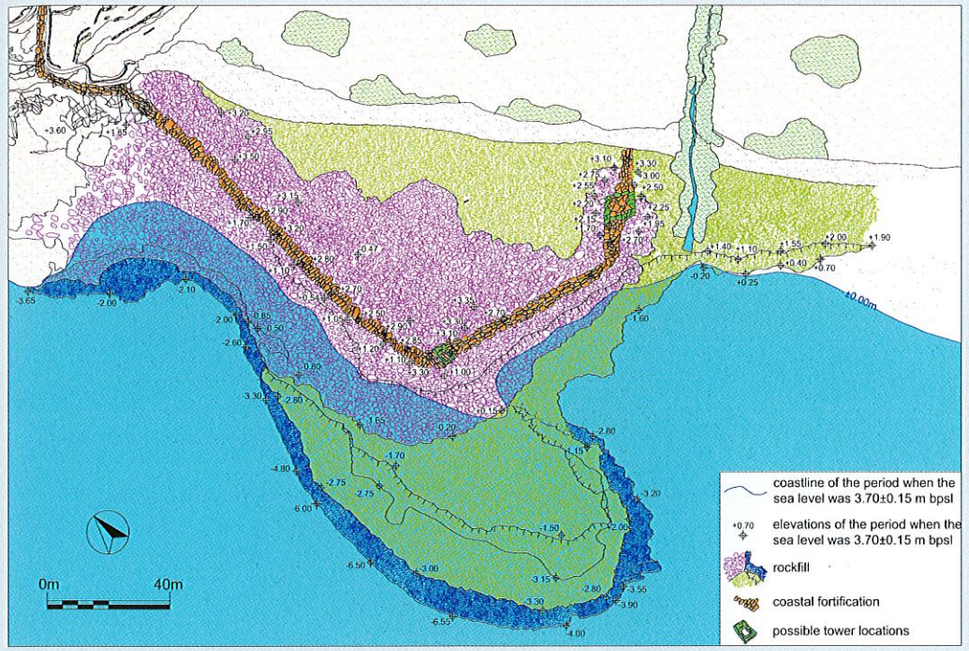
The palaeogeography of the coast of ancient Andros (Palaiopolis) is based on the co-assessment of geomorphological, archaeological and historical indicators of sea level changes at the narrow research area and their inclusion in the dated Late Holocene sea level stands in the wider area of the Northern Cyclades.

The ancient city of Andros developed in the seventh-sixth century BC. It was the fortified capital of the island of the same name, of which it was the sole city in the Classical period. It seems that contemporaneously with the land fortification of the city, the coastal section of the fortification was constructed upon the rockfill, in order to gain living space, since the coastal lowland between the city's agora and the shore was confined to a narrow zone less than 200 m wide. In that period sea level was at -3.70 ± 0.15 m, with the shoreline then developed upon the upper part of the rockfill, 10 to 25 m away from the base of the fortification wall and at a height difference of 1.00 to 1.70 m from this **(fig. 5b.4)**. The visible surface of the fortification wall now preserved must have projected 2.70 to 3.10 m above the then sea level. After the terminus of its north land section, the fortification wall continued towards the south-southeast upon the rockfill for 130 m, then turned east and ran for 65 m, and turned anew to the northeast for a visible length today of 36 m **(fig. 5b.4)**.

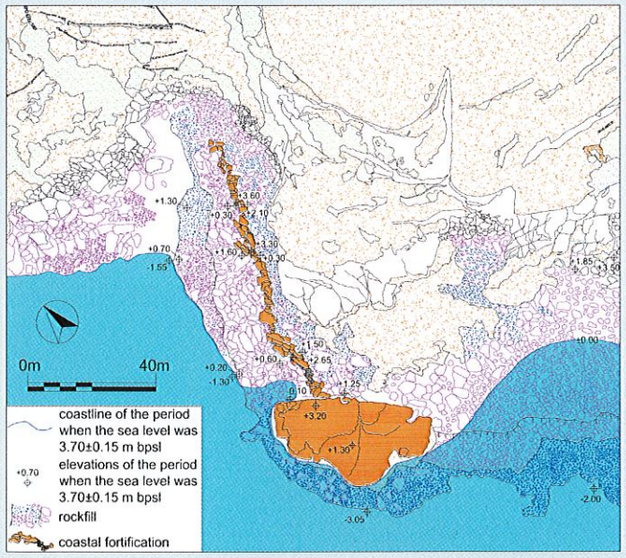
The coastline in front of the fortification wall northwest of the rocky outcrop was about 15 m away from the base of the fortification wall and at a height difference of 0.30 to 1.60 m. The surface of the fortification wall was 2.65 to 3.60 m above the then sea level. The floor of the passage between the cliff and the fortification wall was 1.50 to 2.10 m above the then sea level. The widened surface of the bedrock at the south end of the fortification wall was 1.30 to 3.20 m higher than the then sea level **(fig. 5b.5)**.

After the mid-second century BC, sea level rose about 1.30 m and was stabilized at -2.40 ± 0.10 m. The shoreline then shifted to the base of the fortification wall. In this period part of the rockfill was removed and a small harbour basin was created, with the upper part of the rockfill and the fortification wall upon this constituting the breakwater of the harbour, which now took shape. The visible surface of the fortification wall must have projected 1.40 to 2.20 m above the then sea level. The entrance to the harbour basin ranged in depth from 1.55 to 2.50 m, while the interior of the harbour basin was extremely shallow, with its north part only 0.30 to 1.15 m above the then sea level. Obviously ships entered through the sufficiently deep entrance and were then dragged to the inner land part of the basin **(fig. 5b.6)**.

The coastline in front of the fortification wall northwest of the rocky outcrop also reached to the base of the said wall. The surface of the fortification wall was 1.35 to 2.30 m above the then sea level. The floor of the

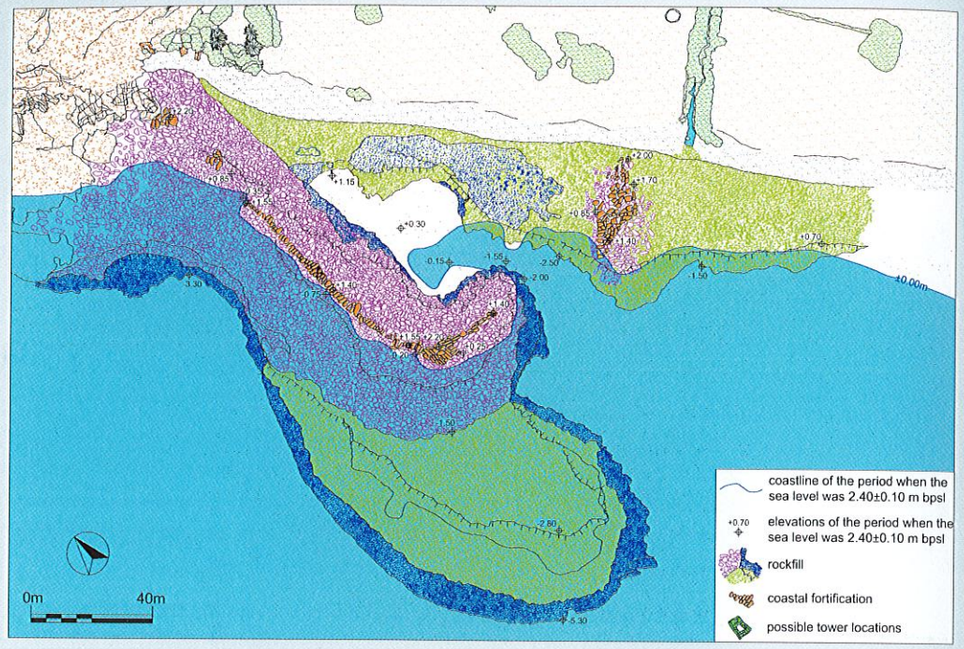


5b.4

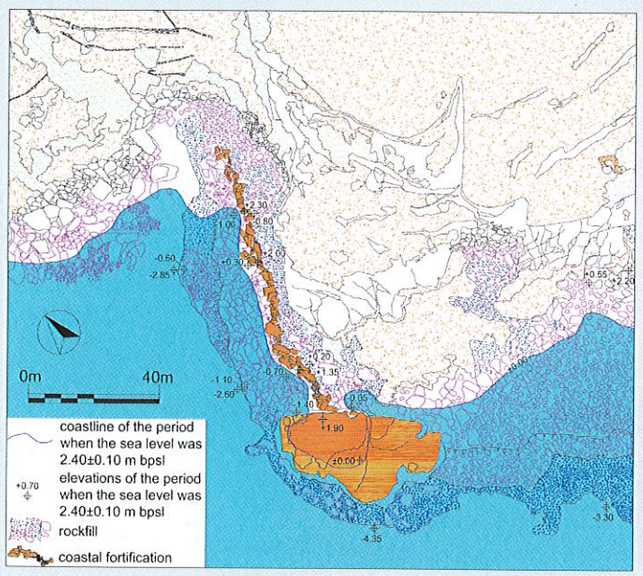


5b.5

5b.4. Palaeogeographical restoration of the coast of Palaiopolis when sea level was 3.70 ± 0.15 m. lower than today.
5b.5. Palaeogeographical restoration of the fortification wall northwest of the rocky outcrop when sea level was 3.70 ± 0.15 m. lower than today.

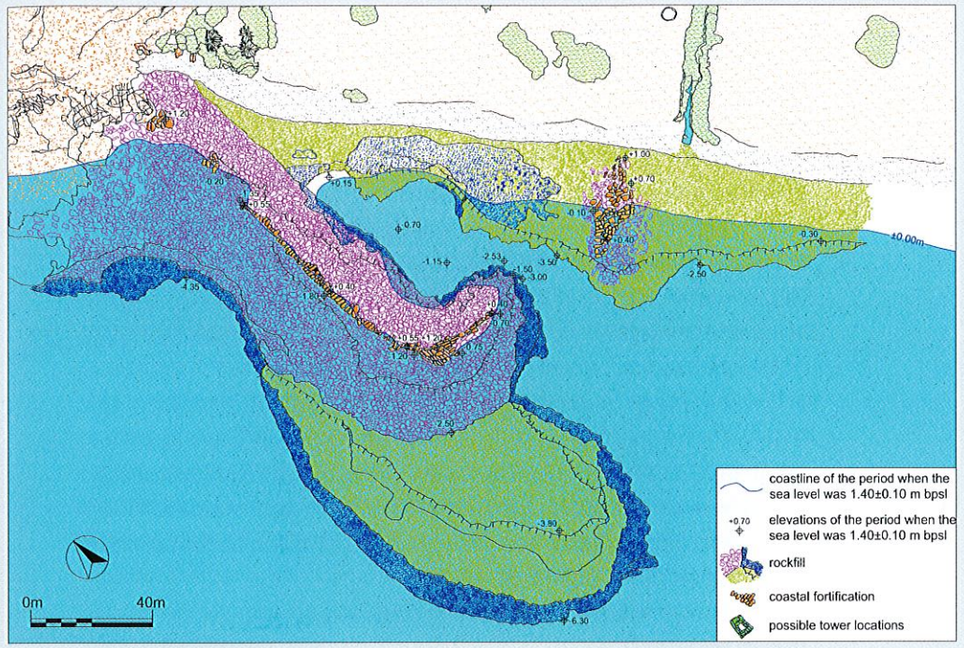


5b.6

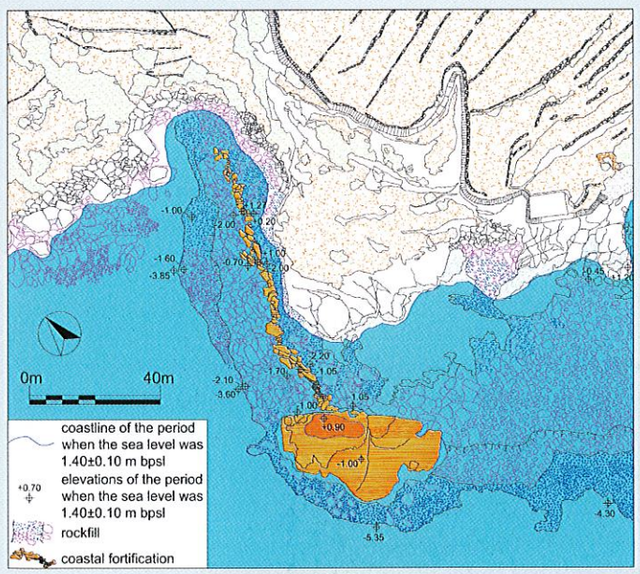


5b.7

5b.6. Palaeogeographical restoration of the coast of Palaiopolis when sea level was 2.40 ± 0.10 m. lower than today.
5b.7. Palaeogeographical restoration of the fortification wall northwest of the rocky outcrop when sea level was 2.40 ± 0.10 m. lower than today.



5b.8



5b.9

5b.8. Palaeogeographical restoration of the coast of Palaiopolis when sea level was 1.40 ± 0.10 m. lower than today.
5b.9. Palaeogeographical restoration of the fortification wall northwest of the rocky outcrop when sea level was 1.40 ± 0.10 m. lower than today.

passage between the cliff and the fortification wall was 0.20 to 0.80 m above the then sea level and obviously a large part of it was inundated by the sea due to waves. Most of the widened surface of the bedrock at the south end of the fortification wall was submerged and only the higher part of it projected 1.90 m above the then sea level **(fig. 5b.7)**.

The first testimony of the existence of a harbour on the seaboard of ancient Andros dates from the first century AD and is in the treatise of Philo of Alexandria *Against Flaccus* (AD 38-41). Philo describes Andros as an island with one settlement and harbour. This sea level was kept until the late tenth-early eleventh century.

The change in sea level by about 1.00 m raised its stand to -1.40 ± 0.10 m. The harbour basin was flooded with water over its entire extent and was from 0.70 to 1.15 m deep. The depth at the entrance to the harbour basin ranged from 2.50 to 3.50 m. The surface of the fortification wall was flooded for the most part, while only sections of it projected above the then sea level, to a height of 1.20 m **(fig. 5b.8)**.

The fortification wall northwest of the rocky outcrop was mostly submerged below the then sea level and the passage between the cliff and the fortification wall was flooded with water **(fig. 5b.9)**.

The later changes in sea level, initially by 0.55 m and subsequently by 0.85 m, submerged even further the ancient constructions, gradually shifting the coastline by 15 m and forming the present morphology of the coast.

Bibliography: Mourtzas 2007.

5c. The agora

Lydia Palaiokrassa-Kopitsa

i. The site in antiquity

The agora of ancient Andros developed on a flat area beside the seashore, in close proximity to the harbour, towards which it faced. There is no doubt that its creation and development went hand in hand with that of the harbour.

The earliest finds from the area, pottery and stone tools, date back to at least the Early Bronze Age (3200-2000 BC), whereas the latest ones are dated to the first half of the seventh century AD. Finds proliferate from Late Geometric times, when the pre-existing settlement seems to have been organized and the *polis* was founded, after the synoecism of the inhabitants of the island's Geometric settlements, *ca* 700 BC. The site of what is now Palaiopolis was chosen for the capital of Andros because it was more advantageous than that of the other Geometric settlements on the island. It had abundant water, fertile soils, a safe anchorage and, above all, plenty of space for the city's growth. The quality of the pottery from these times, both local and imported, points to the existence of a community that participated in the trading networks of the period.

The space of the agora, like the entire city, was arranged in terraces. The University of Athens excavations have uncovered parts of buildings and streets on two terraces **(figs 5c.1a-b)**. On the upper terrace, parts of three paved streets (I, II, IV) and of five buildings (A, B, Γ, Δ, I) have been brought to light, dating from Classical times into the second century AD **(figs 5c.2-3)**, while on the lower terrace one further street (III) and one building (ΣΤ) have been revealed, which date from the late fourth century BC into Roman times **(figs 5c.4-5)**.

There is epigraphical testimony of the existence of a *bouleuterion*, a *macellum* (food market, particularly for meat and fish) **(fig. 5c.6)**, a temple of an unidentified deity, of worship probably of Hermes and of Zeus Maimaktes (chapter 5d), as well as the presence of statues of eminent citizens.

The earliest remains are dated to the fifth century BC, as evidenced by Street IV and Building I **(figs 5c.7 and 3)**, as well as by two marble antefixes **(fig. 6a.i.2)** and 11 poros column drums **(fig. 5c.8)**, built into the apse of the Early Christian basilica that was constructed on top of the earliest edifices. It would appear that the area had been laid out as the city centre already by the fifth century BC.