

Miniatures of meaning – interdisciplinary approaches to the miniature frescoes from the west house at Akrotiri on Thera

Annette Højen Sørensen, Walter L. Friedrich, Samson Katsipis and Kirsten Molly Søholm

Zusammenfassung

Die Ausgrabungen in Akrotiri auf Thera (der Hauptinsel Santorins) haben eine Fülle von bildhaftem Material hervorgebracht, das von der Kultur und den Bräuchen der Inselbewohner um 1600 v. Chr. Zeugnis ablegt.

Dieser Aufsatz thematisiert die Miniaturwandmalereien des Westhauses von Akrotiri. Das gesamte Bildprogramm der Räume 4 und 5 des Hauses scheint ein gemeinsames Thema zu haben: Wasser – sowohl Salz- als auch Süßwasser. In Raum 5 ist der obere Bereich der vier Wände mit einem Fries aus Miniaturfresken verziert, auf dem Wasser mit verschiedener symbolischer Bedeutung dargestellt ist: als Bedrohung, als verbindendes und/oder trennendes Element, als Voraussetzung von Leben sowie als Nahrungsquelle. Das Augenmerk in diesem Beitrag soll zum einen auf dem Schiffs-Fresko, das sich ursprünglich auf der Südwand dieses Raumes befand, und zum anderen auf den Fresken der Nordwand liegen. Das Wasserthema ist Hauptgegenstand des Schiffs-Freskos, auf dem Schiffe dargestellt sind, die zwischen bestimmten Häfen auf Thera segeln. Des Weiteren werden die Süßwasserquellen des bronzezeitlichen Thera und in diesem Zusammenhang auch die restlichen Miniaturmalereien behandelt. Insbesondere ein Detail auf dem Fresko der Nordwand könnte als eine Höhlenquelle, die sich ebenfalls auf Thera befindet, interpretiert werden.

Summary

The excavations at Akrotiri on Thera (the main island of Santorini) have yielded rich iconographic material that bears witness to the culture and habits of the islanders around 1600 B.C.

The miniature wall paintings from the West House at Akrotiri are the main theme of this paper. The entire iconographic programme of Rooms 4 and 5 of this house seem to have one common theme: water, both salt and fresh. In Room 5, the upper part of the four walls is adorned with a miniature fresco frieze in which water is depicted with various symbolic meanings: as a threat, as a connection and/or barrier, as a prerequisite for life and as a supplier of food. In this context the paper focuses partly on the Ship Fresco – originally painted on the southern wall of the room – and partly on the frescoes of the northern wall. Water is the main theme of the Ship Fresco, in which ships are depicted as sailing between two specific harbours on Thera. Furthermore, the fresh water sources of Bronze Age Thera and in this context, the remaining miniature wall paintings, will be discussed. In particular a detail on the north wall fresco might be interpreted as a cave spring, also located on the island of Thera.

Introduction

The wall paintings from the Akrotiri excavation on Thera provide a unique chance to analyse thoughts, beliefs, and customs of the inhabitants of Thera during the Late Bronze Age. For this reason, the paintings have been the subject of several studies, which resulted in the discussion of many different theories.

An example of this is the iconographic programme of the West House, which will be discussed in this paper.

The intended messages of the frescoes were tied to the cultural coherence of Bronze Age Thera. We only know fragments of this civilization through its material culture, and we obtain our fragmented knowledge by »peeping through the keyhole«, as it has been described by C. Palyvou (2004, 89 ff.). When we aim to interpret these fragments, such as the frescoes, we need to understand, and be conscious of the cultural code within the paintings. This code was sent at least 3600 years ago and would most probably have been easily decoded by the recipients of the message, i.e. the Bronze Age population of the Aegean.

Culture has been described as a public web of meanings through which we communicate with those who are familiar with the code (Geertz 1973). Uncertainties and errors naturally occur when a cultural symbol or statement is interpreted in a context where the codes are unknown – and this is in fact the case in our reception of the iconographic programme of the West House. We know very little of the cultural unit that shaped the meanings of the codes represented in the wall-paintings. It is therefore impossible not to reinterpret the figural paintings with other cultural codes and in doing so possibly give the frescoes new meanings.

The frescoes of the West House seem to depict a large epic tale in pictures – a cultural narrative lost to us.

This paper is written with these points in mind. The interpretation deals with geological and archaeological data in combination with iconographic and cultural studies. In this way we attempt to pull together several disciplines to study and interpret the landscape and cultural behaviour of the islanders in the Bronze Age.



Fig. 1 The Aegean with the island of Thera (Santorini).

Around 1600 B.C.

The Akrotiri Excavation on Santorini, with its rich archaeological material bears witness to an intensive network of contacts and trade connections in the Eastern Mediterranean around 1600 B.C.¹ This trade network was dependent on access to the sea, tail winds, currents, forces of nature, abilities of the ships, diplomatic relations, and political strategies (see below).

The interpretation of the period around 1600 B.C. in the Eastern Mediterranean is troubled by discussions on how one can match up the different chronologies², but it seems that Egypt experienced a period of unrest during the Second Intermediate Period, and in West Asia, the former

power of Yamhad was under attack from the Hittites of Anatolia, culminating in the sack of Babylon in the 16th century B.C.³

Minoan Crete and Santorini were highly centralised societies with trade and diplomatic connections in the Aegean and Eastern Mediterranean during the Late Minoan IA (LM IA) period around 1600 B.C. (Fig. 1). Aegean wall paintings have been uncovered in the palaces of Tel Kabri and Alalakh in the Levant, providing evidence of continued diplomatic relations, which seem to have been operating since at least the Middle Minoan Period (Højén Sørensen 2009; Højén Sørensen 2012). These paintings date to the late 17th century B.C.⁴, which corresponds well with the heyday of Theran paintings prior to the Minoan Eruption.

1 Cf. Højén Sørensen 2009 for an overview of Minoan contacts.

2 Cf. e.g. Bietak 2000; Bietak 2003; Bietak/Czerny 2007; Warburton 2009.

3 Cf. e.g. Højén Sørensen/Friedrich 2009, front endpaper, for some of the chronologies in use.

4 Cline/Yasur-Landau 2007, 160; Yasur-Landau/Cline 2009; Niemeier/Niemeier

2000, 780; cf. also Bietak 2007 for alternative dates.



Fig. 2 Thera. Plan of the settlement with indication of the West House. No scale.

The West House paintings

The West House in Akrotiri has yielded, among other paintings, a miniature fresco frieze (S. Marinatos 1974; Dumas 1992), which originally surrounded the upper part of all four

walls of Room 5 on the first floor (Fig. 2–3; Televantou 1990). The miniature frescoes from the west wall are almost all lost and the north wall frescoes are also very fragmented. On the extant fragments, the so-called ›Meeting on the hill‹ and a shipwreck scene can be recognised along with a depic-

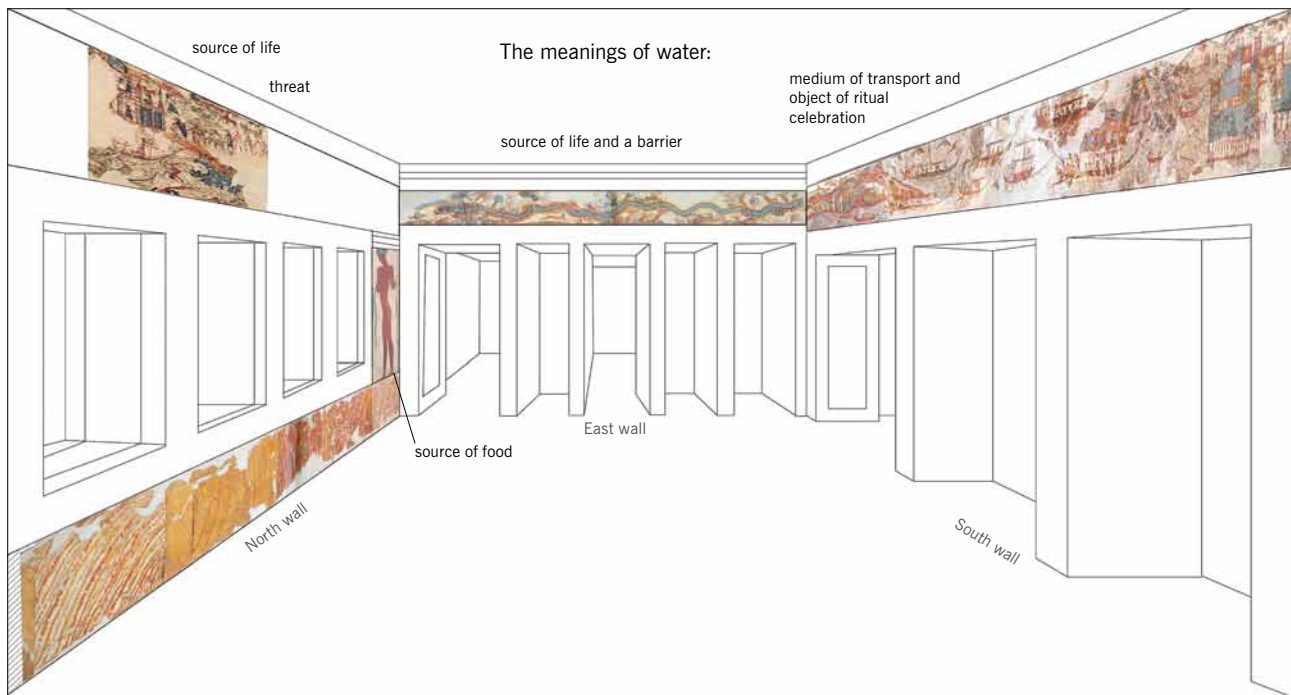


Fig. 3 Thera. West House. Perspective drawing of Room 5.

tion of women collecting water (Fig. 3–4). The east wall depicts flora and fauna in a river-like landscape (Fig. 3), while the south wall fresco depicts ships in a festive procession sailing between two settlements (Fig. 3; 5)⁵. Room 5 of the West House furthermore yielded two panels of paintings with ›fishermen‹ (Fig. 3), a small fresco decorated tripod altar, and a panel depicting a ›priestess‹ (Doumas 1992) which is in the doorway leading from Room 5 into Room 4. The adjoining Room 4 likewise yielded fresco paintings depicting *ikria* (ships' cabins) and flowerpots on the windowsills. The lower parts of the walls in both Rooms 4 and 5 were decorated with veined dadoes imitating stone orthostats.

Meaning of meanings

But what were the original meanings and intentions of these paintings? These are two of the questions that have been asked since they were discovered in the 1970s. It is not only their meaning to the house owner and its visitors that has been debated, but also the more fundamental expressions of social and communicative systems and messages⁶.

The frescoes seem to the present-day viewer to be an aesthetically thorough communicative message. The depiction of a joyful, possibly religious procession between two villages in the Ship Fresco depicts a cosmos: a defined space with a point of departure and an arrival, and through this, time has a beginning and an end.

The Ship Fresco – South wall, Room 5

The so-called Ship Fresco has, since the time of its discovery (S. Marinatos 1971; S. Marinatos 1972), been the object of many interpretations regarding the physical setting of the narrative⁷. This miniature frieze has been interpreted as depicting an Aegean epic tale like the *Odyssey* (Vance Watrous 2007) or a longer journey to Libya, Rhodes or Crete (Negbi 1994; Marketou 2009; Warren 1979).

The observations of L. Morgan are particularly interesting in this context. In 1978, she published a short interpretation of the West House miniature frescoes. She proposed that a short journey took place and that the Ship Fresco represented some kind of festival in connection with ›the Resumption of the Navigation Season‹ (Morgan Brown 1978, 629). A similar festival was proposed by A. Sakellariou (1980).

L. Morgan's arguments rested solely on the equipment of the ships and did not pinpoint a specific setting of the scenery. Our approach combines geological and archaeological research methods and, in this way, we bring a new aspect to the interpretation of the Ship Fresco.

On the basis of our analyses we have deduced that the festival took place between two specific harbours within the water-filled caldera of Santorini (Friedrich/Højen Sørensen 2010). Both sea water and fresh water play a very important role in the painting and the entire iconographic programme of the West House.

The Ship Fresco depicts several ships with oarsmen, steersmen, and passengers sailing from the ›Left Harbour‹, a

5 Cf. Friedrich/Højen Sørensen 2010 and Stras-ser 2010 for the most recent interpretations of the painting. Cf. also Negbi 1994; Doumas 1983; Doumas 1992.

6 Cf. among others Doumas 1992; S. Marinatos 1971, S. Marinatos 1972, S. Marinatos 1974; N. Marinatos 1984; Paliou 2011.

7 Cf. Doumas 1992 for references.

sea-shore settlement, in an island-like area (S. Marinatos 1974), surrounded by two water courses (Doulas 1983; Warren 1979), to the ›Right Harbour‹ at the ›Arrival Town‹. Sea dolphins – Poseidon's animals – are jumping between the ships in the sea. The backgrounds of both harbours are hilly and the colours of the rocks resemble volcanic material.

The hills in the background of the ›Left Harbour‹ resemble the volcanic hilltops in the northern part of Thera. Also in the northern part of the island is a swarm of about 90 dykes that follow several directions. But in general they follow the NE-SW trending Columbo tectonic line, which is a zone of tectonic weakness. Here magma could rise, fill out the fissures, and form the dykes. These dykes are visible on the caldera wall at Mouzaki Bay and sometimes stand as vertical ›walls‹ (Friedrich/Højén Sørensen 2010, Fig. 13).

Given their shape, the slightly tilted wall-like structures on the house to the left in this fresco could be interpreted as volcanic dykes rather than as man-made ashlar cornerstones as proposed by C. Palyvou (2005a). The dykes on the fresco would then run parallel to the existing swarm of dykes, and the inhabitants could have incorporated them as walls in their houses. It is also possible that the red ground on the fresco in the island-like area could represent tuff or lava.

The semi-circular shape of the island-like area might thus fit an area on the caldera wall in the zone of the dyke swarm below Megalo Vouno in Mouzaki Bay.

The ›Right Harbour‹ is a harbour with two basins – a double harbour. This was first recognised by J. W. Shaw, who interpreted the harbour and town as Akrotiri (Shaw 1990; Doulas 2007). In the background of the ›Right Harbour‹ three hills are visible and could be those on the Akrotiri peninsula as seen from the caldera. Furthermore, a three-room house is painted on top of one of the hills and another hill-top has a notch with a structure resembling a house with a tree. To the extreme right a set of monumental facades can be seen.

During pumice mining in the 1870s, Gorceix and Mamet excavated a house with three rooms on the caldera wall at Balos in the southern part of Thera (Gorceix/Mamet 1870). However, the exact location of the site was forgotten over the years (Sperling 1973; Palyvou 2005) and has only recently been rediscovered on the caldera wall above the harbour of Balos (Friedrich/Højén Sørensen 2010, Fig. 2–4; 12).

From the excavation site one has a good overview of the double harbour at Balos. One harbour basin is still in use while the other has been filled with waste from pumice mining.

The red volcanic knoll at Balos furthermore indicates a relationship with the fresco and is a prominent landmark for navigation purposes.

Many features in the wall painting do resemble the area around Balos and we have therefore suggested that the ›Right Harbour‹ is a depiction of Balos double harbour (Friedrich/Højén Sørensen 2010).

Today there are no visible traces of Bronze Age buildings at Balos beach, but west of the harbour several caves of an uncertain age have been dug into the volcanic rock. In some places, in front of the caves, there is a beach-rock platform where the facades of the buildings in the fresco might have been situated.

Even though there are certain features in the fresco that could represent Akrotiri (such as the double harbour, the red volcano and the town), the painting has, in our opinion, more relations to Balos.

It might be difficult to comprehend that the Minoan Eruption of Santorini on the one hand caused enormous devastation on the island and its surroundings and even triggered global climate change but on the other hand, left the walls of the caldera, where the eruption took place, in such a condition that we still today – after 3600 years – can compare them with a fresco from the Akrotiri excavation and argue that the two harbours of the Ship Fresco were located within this place before the eruption. Furthermore, it is dif-



Fig. 4 Thera. West House, Room 5, north wall frescoes.



difficult to understand that the Santorini caldera could have existed before the eruption. Yet strong arguments for this can be based on the findings of stromatoliths that were ejected during the eruption (Eriksen et al. 1990) and geological observations (Druitt/Francaviglia 1990) showing pumice deposited on the inner side of the caldera wall. Furthermore, there are geological observations supporting both the location of the crater and the shape and condition of the caldera wall (Friedrich et al. 1988). The crater of the Minoan Eruption is in the northern part of the caldera between Thera and Therasia, where today we find the deepest place (ca. 400 m) of the caldera. This location is confirmed by several other geological observations. It is on this location where the pre-Kameni Island must have been situated. The places (Balos and Mousaki Bay) with which we compare the two harbours on the Ship Fresco are both on the caldera wall of Thera. Balos harbour is approximately 10 km away from the crater, and since the first eruption phase formed a vertical eruption column, it could hardly have had changed the caldera wall so far away. On the contrary, the fallout of this phase contributed to preserving the uppermost parts of the caldera wall, where we can in some places observe pumice in situ on the inner part of the caldera rim; for example on the caldera wall below the town of Fira (Druitt/Francaviglia 1990), Capa Athinios, Cape Plaka (Friedrich 2009) and Balos harbour, where, in 1870, French archaeologists found a three-room house under a pumice layer 22 m thick (see above) (Fouqué 1879). We have observed similar conditions at the place where two olive trees were found under a pumice layer about 40 m thick (Friedrich 2009). Moreover, there are several places on Thera and Therasia where mining of pumice between 1866 and 1980 uncovered the pre-Minoan surface of the landscape.

Changes in the caldera wall

What changes did the following phases of the Minoan Eruption cause to the caldera wall?

While the first eruption phase was not in contact with seawater, both the second phase (base surges) and the third phase (pyroclastic flows) were. Both phases were caused by the interaction of hot magma with seawater and its horizontal expansion to form a ring-shaped suspension of steam and pumice particles. The last phase (pyroclastic flows) contained 25 % dark material, which might indicate that it was in this phase that the pre-Kameni Island was destroyed. Both phases might have caused erosion on the caldera wall and removed all kinds of man-made installations. However, they could hardly have changed much of the caldera wall. We estimate, on the basis of the rounded blocks that origi-

nally were imbedded in the pumice layers but now lie on a small platform on the coast of Cape Plaka, that the following erosion could have removed 20–100 m of the caldera wall after the eruption. This general estimate is based on the location of settlements and trees from the Bronze Age on the caldera wall and observations of weathering of the different volcanic materials. At Balos and Mousaki Bay we find volcanic dykes which are more resistant to erosion than soft pumice and ash.

In our opinion the ships in the Ship Fresco were sailing within the water-filled caldera of Santorini, which looked much as it does today, from a sea-shore village in the dyke swarm-zone at Mousaki Bay to the double harbour at Balos (Fig. 6).

This south wall frieze presents a picture of a joyful event and has water and its varying meanings as its most prominent elements. This also seems to be the case for the remaining fresco programme of the West House, as we will demonstrate in the following.

The meanings of water

The impact of the sea rather than the sea itself has been explored several times before⁸. For example, trade and its impact on the Mediterranean area has been subject of research for many years, whereas the impact and status of sea and fresh water in combination during the Bronze Age have been neglected so far.

The iconography of the West House makes this combination of studies in fresh and salt water possible, and the paintings address the various aspects of water. Both fresh and salt water can act as connections and barriers, as sources of life and of danger for people, animals, and plants⁹.

The Mediterranean Sea has on more than one level played a central and important role for the development of the Aegean Bronze Age civilizations.

Access to the Mediterranean should be seen in connection with the relationship between nature and people. Over the years – as a result of geography, geology, climate, migrations, disease, curiosity, fear and power – people have chosen their ways of dealing with the great sea.

Curiosity and openness lead to contacts with other people and cultures, and it has been proposed that first and foremost curiosity – and not necessarily common needs – has been the main factor of progression in human history (Diamond 1997). Likewise, curiosity and knowledge of the unknown have had been sources of internal power for centuries (Helms 1988).

However, other more tangible circumstances have played a very important part for the Bronze Age societies as well. In this context, geography seems to play an important role, particularly with regard to the coastline and access to the sea. In recent years this factor has been pointed out as crucial to

Fig. 5 (left page) Thera. West House, Room 5, South Wall Ship Fresco.

8 Of particular importance in connection to Santorini is Dumas 1990, 26–27 who accounts for the importance of the four elements on the island. He discusses the many roles of water in connection to some of the West House paintings and every day life on

the island. Stampolidis/Karageorghis 2003; Horden/Purcell 2000; Morris 2010. The Thera periodical ΑΛΣ (engl. sea and salt) is even named after the element (Dumas 2004).

9 In the Greek Orthodox Church water has a prominent status. An example of this is Jan-

uary 6th when the Theofania is celebrated. This day is also the day of the blessing of both sea and fresh water. The blessed water is used to sanctify for example private houses, gardens, and fields.

progress in many instances (Diamond 1997; Morris 2010; Dalgaard 2010). Thus, a combination of geography, climate and coastal access made the Aegean Bronze Age civilized societies possible. What was particularly helpful in terms of navigation, must have been the fact that it is possible to see many of the surrounding islands from Thera. In clear weather, 19 islands, including Crete, are visible from Mount Profitis Elias on Thera (Wilski 1899).

The relevance of the coastline and access to the sea has been underlined by the economist C. J. Dalgaard, who is able to show in his studies why countries with a long coastline and hardly any natural resources have been able to develop and maintain progress and prosperity (Dalgaard 2010).

This hypothesis might very well also apply to both Crete and Thera in the Bronze Age. The sea and access to the sea thus played an important role in the rise of Aegean Bronze Age societies.

The long coastline has throughout the ages enabled the populations of the islands to look across and beyond the sea.

Salt water

During the Bronze Age, the sea was at one and the same time a partner and an opponent to the islanders. From a

practical point of view, it naturally played a major role as a navigable ›highway‹, and as a source of food. It also may have played a religious role, for instance, in terms of the sky and the sea meeting in the horizon and the sea might thus have been thought to grant access to heaven (Helms 1988; Broodbank 1993).

We can observe the meaning of the sea as a source of food in the ›fishermen‹ frescoes (Fig. 3) from Room 5. They are holding two kinds of fish: Small tunnies (or mackerel) (Mylona 2000, 562) and common dolphinfish, which are caught in the period between August and September (Ekonomidis 2000, 559). The fish types are rather large and have their habitat in deep and open waters away from the coast (Mylona 2000, 564). Both fish types are uncommon in the fishbone repertoire and iconography of the Aegean and are probably special catches (Mylona 2000) that were not caught from the small boats sitting in the harbours on the Ship Fresco¹⁰.

Yet in addition to its role as supplier of food, the sea was certainly also a threat and demanded its sacrifices, as the many Mediterranean shipwrecks bear witness to¹¹. One such shipwreck scene is also depicted in the north wall painting of the West House (Fig. 3–4)¹². For a god-fearing and sea-faring people, it must have been of utmost importance to be on good terms with the sea god or goddess/-es and the sea was most probably included in the islanders' religion.

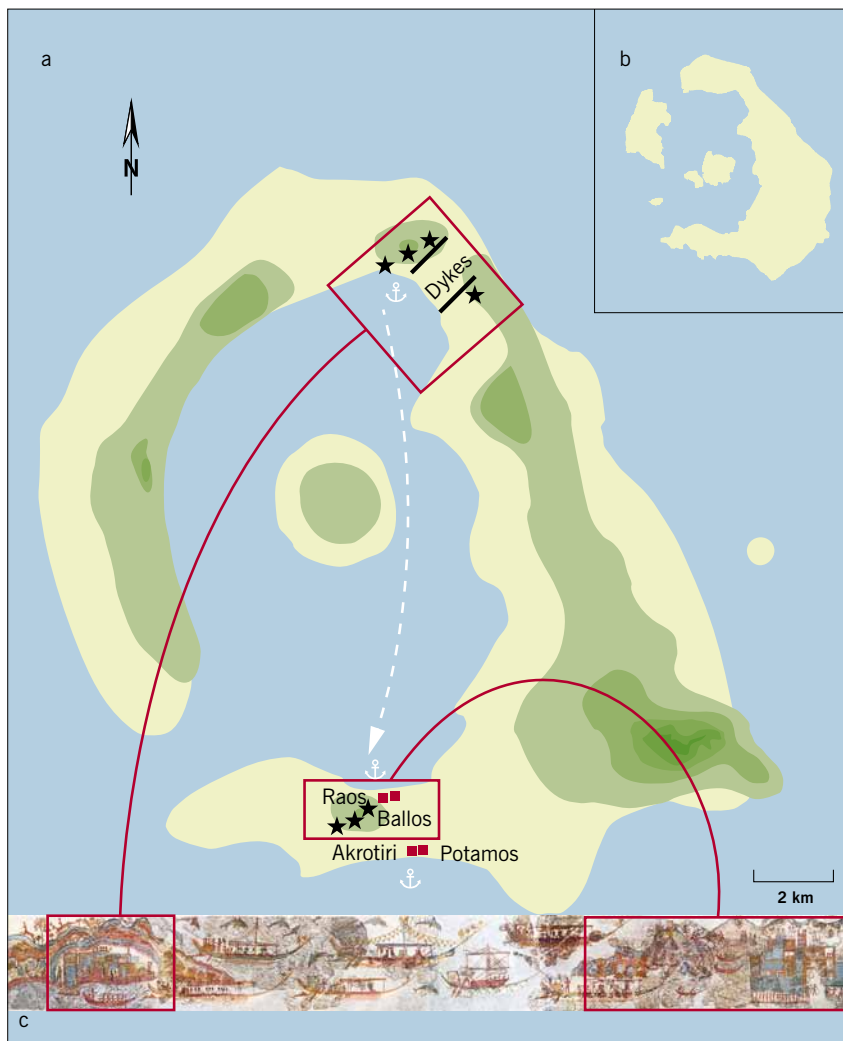


Fig. 6 Thera (b). Reconstructed route (a) on the Ship Fresco (c). Black stars mark hilltops and red rectangles the areas depicted on the fresco.



Fig. 7 Thera. Potamos Kamaras near Akrotiri created by torrents.

Fresh water

Streams and torrents

Apart from the sea water, fresh water was also an essential part of the islanders' life. The water encircling the 'Left Harbour' in the Ship Fresco might represent the seasonal flow of life-giving as precious rainwater is running down the caldera wall during and after the winter rain. Even today, rainwater running down the caldera wall is collected in cisterns at sea level in northern Thera as is the case at the church of Efta Pedes.

The seasonal rainwater – which falls from October to April – might, as noted above, be depicted in the South frieze but perhaps also in the river landscape shown on the East wall of Room 5 (Fig. 3). Here a stream of water is the source of life for the flora and fauna. As noted previously, during the rainy season rainwater runs down the caldera wall and gives life to for instance palm trees growing on the caldera wall. Rainwater also runs along seasonal water streams, like the Potamos valley of Kamaras, close to the Akrotiri excavation, where R. Zahn excavated in 1900 (Zahn 1904).

Although no rivers exist on Thera, torrents do during winter and early spring. A torrent has for instance destroyed parts of Akrotiri, and at Potamos Kamaras, a 'river bed' created by seasonal torrents is likewise visible (Fig. 7)¹³. Thus torrents might possibly be depicted in these frescoes. To our knowledge no Bronze Age cisterns have been located; however, at Ancient Thera on Mesa Vouno more than one cistern was built to collect and store water in the historical periods.

Wells and cisterns

Santorini has almost no natural subterranean fresh water resources. However, given the many filled swimming pools on Santorini today, this is not the impression one gets when visiting the island. At present the aquifers are heavily exploited, especially during the summer months, and at some places, salty water intrudes the aquifers (Romanos 2005, 46). A desalination facility is located at Oia which can provide fresh water for 50.000 people. Furthermore, the islanders collect rain water in cisterns from roofs and platforms, however, drinking water must also be brought to the island from other regions to fulfil the needs of the thousand people visit-

10 Mylona 2000, 564 suggests that men are fishing and carrying fishing nets on the south frieze.

11 E. g. Dokos, Pseira, Uluburun and Gelidonya.

12 Cf. Friedrich 2009 for an interpretation of the scene as a ship wrecked by a tsunami.

13 Cf. also Doumas 2007, 90 for the forces of rainwater and the precautions taken by the

ancient inhabitants of Akrotiri in this regard; one of us, Samson Katsipis, once experienced having his car washed away by one of these torrents at Emporion.

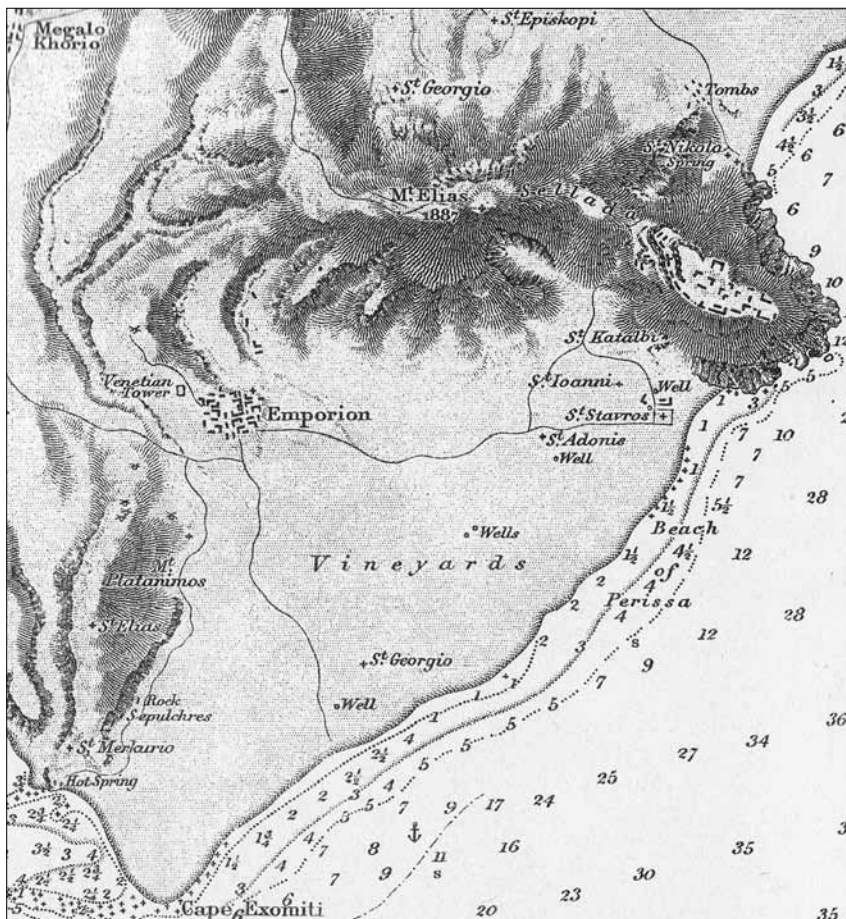


Fig. 8 Thera. 19th century nautical map showing wells around Profitis Elias.

ing and living on the island especially during the summer months. Present-day conditions can, however, not be applied to the Bronze Age societies on Thera.

Only the area around the old limestone mountain of Profitis Elias has sources of fresh water in caves, and, as can be observed on a nautical map from the 19th century (Fig. 8), many wells existed in the lowland this time¹⁴. The S. Nicolo spring on the map is most probably the spring we now know as Zoodochos Pigi (Philippon 1899).

The water resources must have been very precious in the Bronze Age and the seasonal rainwater represented life and prosperity to the society. This may be observed in the frescoes from the West House, as noted above, but also in many of the other paintings from Akrotiri: the reed fresco, the so-called 'Spring Fresco', the sea lilies, and also decorated pottery and other media.

Rainwater might have been collected in jars or cisterns, which we still need to find evidence of. However, it might also be that water in wells was sufficient in the Bronze Age. It has been proposed by C. Palyvou and C. G. Doumas that the construction of the house roofs and the use of water-spouts at Akrotiri made the collecting of water in cisterns improbable (Palyvou 2005, 39; Doumas 2007, 90).

Caves and springs

The so-called well (Doumas 1992) or spring (Doumas 2007, 91) on the north wall of Room 5 is located in a hilly landscape. Animals – presumably goats and sheep – are being led to and from the water source and women have collected water in jars. The reed or grass growing to the left of the jars also represents the existence of water in this environment¹⁵.

A well is, however, not natural in the mountains as it would be in the lowland (Fig. 8) and the fresco may therefore illustrate a cave or an entrance to a cave, with fig or carob trees in front. The two jars standing on a red square might thus represent the jugs used by the women to collect water from within the cave and not from a well or cistern.

The circular structure encircling the two trees might, as suggested by C. G. Doumas¹⁶, be some kind of pen for the animals, but as the structure is not closed it seems probable that it might resemble a natural feature – an entrance to a cave with two trees in front. One of the trees and parts of the circular shape in the painting are, however, heavily reconstructed.

In Crete, however, we have good evidence for the use of caves, especially for religious purposes¹⁷, and it does seem

¹⁴ Cf. Doumas 2007, 90 for the possible use of wells near the sea with salty or brackish water in the Bronze Age.

¹⁵ On the painting, above the reed, a red structure is visible. The structure differs from the

usual Thera depiction of mountains as there is no black contour.

¹⁶ Doumas 1992, 48; Doumas 2007, 91; Doumas 2006 describes the site of Ftellos where a cir-

cular pen was excavated in connection with a house.

¹⁷ E.g. Ida, Psychro, Eileithya, Kamares.

¹⁸ Zoodochos Pigi means 'lifegiving spring'.

plausible that the inhabitants of Thera would have used the caves they had for different purposes. Certainly, they would have used them to collect water, if possible, and would possibly have depicted this in the iconography of the West House.

Today one natural spring still is active on Thera and is located in a cave on the path leading from Kamari to Ancient Thera on Mesa Vouno. Today it is known as Zoodochos Pigi and its entrance is much like what we see in the painting. The cave is situated in the mountain and still attracts travelers (Fig. 9–10)¹⁸.

F.Frhr. Hiller von Gaertringen has described the water logistics of his excavations of Ancient Thera on Mesa Vouno (Hiller von Gaertringen 1899, 28; 188). During the summer months he sometimes excavated with more than 50 people and the cisterns ran dry. He had to assign two men to collect water from Zoodochos Pigi and this single spring provided enough water for washing, drinking and cooking for these more than 50 people every day. From this, we may deduce the importance of fresh water in the 19th century on Mesa Vouno. However, we do not know exactly how large the population was in the Bronze Age, but it seems likely that their water tanks and pithoi (if indeed they did collect water) would eventually have run dry during the long summer.

Springs would then have been essential to life on the island. Perhaps this is what the painter wanted to illustrate – water from a cave spring as an essential source of life.

Another small cave spring is located at the church of Panagia Katefiani on the south side of Mesa Vouno, but this spring has almost dried out. As at Zoodochos Pigi, a church is located by the cave, which indicates the importance of the water as a source of life in the physical as well as religious sense, at least in the Christian era.

This extant part of the north wall frieze, with 'the Meeting on the hill' and collection of water from a cave spring, resembles the areas around Profitis Elias and Mesa Vouno (from either the north or south side) and thus might show one of them.

Conclusions

According to N. Marinatos, the main theme of the north and south walls of Room 5 of the West House is aggression and a festival relating to aggression or military involvement and victory (N. Marinatos 1984, 56).

The conclusions of L. Morgan Brown, however, in 1977 and 1981, were that Rooms 4 and 5 of the West House had a

Fig. 9a–b Thera. Detail of north wall fresco and entrance to Zoodochos Pigi.





Fig. 10 Thera. View towards Zoodochos Pigi from east. The cave is situated on the southern slope of Profitis Elias facing Sellada.

»unifying maritime or aquatic theme« and that the sea was of crucial importance to the islanders of Thera (Morgan Brown 1978, 640–641; Morgan 1981). This hypothesis is in accordance with our analyses of the paintings and we have here tried to elaborate on the hypothesis by relating the scenes to the geological settings in Thera. Furthermore, fresh water was a life-giving and important force and is illustrated as part of the shifting seasons and the religious and everyday life on the island by the women with water jars and a possible cave spring.

The iconographic programme of the Rooms 4 and 5 illustrates that the focus of the painters of the West House was water in its various symbolic meanings: as a threat, as connection and/or barrier, as a prerequisite for life, and as a supplier of food.

Thus the ships in the Ship Fresco were in our opinion sailing within the water-filled caldera from the northern part of Thera in Mouzaki Bay to its southern part at Balos. They were taking part in a joyful event celebrating the sea with the sea god represented by dolphins, and fresh water, which might, in combination with the other paintings of the West House, be understood as part of a larger cultural narrative.

Acknowledgement

We would like to thank the organisers of the »1600« conference for the invitation to this very stimulating event in Halle and the opportunity to present and publish our results.

Bibliography

- Bietak 2000**
M. Bietak (ed.), Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. Proceedings of an International Symposium at Schloß Haindorf, 15th–16th of November 1996 and at the Austrian Academy, Vienna, 11th–12th of May 1998. Contributions Chronology Eastern Mediterranean 1 = Österr. Akad. Wiss. Denkschr. Gesamtkad. 19 (Wien 2000).
- Bietak 2003**
M. Bietak (ed.), Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. 2. Proceedings of the SCIEI 2000 – 2nd EuroConference. Haindorf, 2nd of May – 7th of May 2001. Contributions Chronology Eastern Mediterranean 4 = Österr. Akad. Wiss. Denkschr. Gesamtkad. 29 (Wien 2003).
- Bietak 2007**
M. Bietak, Bronze Age Paintings in the Levant: Chronological and Cultural Considerations. In: M. Bietak/E. Czerny (eds.), The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. 3. Proceedings of the SCIEI 2000 – 2nd EuroConference, Vienna, 28th of May – 1st of June 2003. Contributions Chronology Eastern Mediterranean 9 = Österr. Akad. Wiss. Denkschr. Gesamtkad. 37 (Wien 2007) 269–300.
- Bietak/Czerny 2007**
M. Bietak/E. Czerny (eds.), Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. 3. Proceedings of the SCIEI 2000 – 2nd EuroConference, Vienna, 28th of May – 1st of June 2003. Contributions Chronology Eastern Mediterranean 9 = Österr. Akad. Wiss. Denkschr. Gesamtkad. 37 (Wien 2007).
- Broodbank 1993**
C. Broodbank, Ulysses without sails: Trade, Distance, Knowledge and Power in the Early Cyclades. *World Arch.* 24, 3, 1993, 315–331.
- Cline/Yasur-Landau 2007**
E. H. Cline/A. Yasur-Landau, Poetry in Motion: Canaanite Rulership and Aegean Narrative at Kabri. In: S. P. Morris/R. Laffineur (eds.), EPOS. Reconsidering Greek Epic and Aegean Bronze Age Archaeology. Proceedings of the 11th International Aegean Conference. Los Angeles, 20–23 April 2006. Aegaeum 28 (Liège, Austin 2007) 157–165.
- Dalgaard 2010**
C. J. Dalgaard, Det danske vækstmirakel. *Nationaløkonomisk Tidsskr.* 148, 2010, 125–158.
- Diamond 1997**
J. Diamond, Guns, Germs and Steel. The Fates of Human Societies (London 1997).
- Doumas 1983**
C. G. Doumas, Thera, Pompeii of the Ancient Aegean (London 1983).
- Doumas 1990**
C. G. Doumas, »The Elements at Akrotiri«. In: D. A. Hardy/C. G. Doumas/J. A. Sakellarakis (eds.), Thera and the Aegean World 3. Proceedings of the Third International Congress. Santorini (Greece), 3–9 September 1989. Vol. 1: Archaeology (London 1990) 24–30.
- Doumas 1992**
C. G. Doumas, The Wall-Paintings of Thera (Athens 1992).
- Doumas 2004**
C. G. Doumas, Why ΑΛΣ? ΑΛΣ. *Period. Publ. Soc. Promotion Stud. Prehist. Thera* 2, 2004, 5.
- Doumas 2006**
C. G. Doumas, A lonely steading in Late Bronze Age Thera. ΑΛΣ. *Period. Publ. Soc. Promotion Stud. Prehist. Thera* 4, 2006, 82–91.
- Doumas 2007**
C. G. Doumas, Akrotiri, Thera: Some Additional Notes on its Plan and Architecture. In: P. P. Betancourt/M. C. Nelson/H. Williams (eds.), Krinoi kai Limenes. *Stud. Honor J. and M. Shaw. Prehist. Monogr.* 22 (Philadelphia 2007) 85–92.
- Druitt/Francaviglia 1990**
T. H. Druitt/V. Francaviglia, An ancient caldera cliff line at Phira, and its significance for the topography and geology of Pre-Minoan Santorini. In: D. A. Hardy/J. Keller/V. P. Galanopoulos/N. C. Flemming/T. H. Druitt (eds.), Thera and the Aegean World 3. Proceedings of the Third International Congress. Santorini (Greece), 3–9 September 1989. Vol. 2: Earth Sciences (London 1990) 362–369.
- Ekonomidis 2000**
P. S. Ekonomidis, The »Little Fisherman« and the Fish he holds. In: S. Sherratt (ed.), The Wall Paintings of Thera 2. Proceedings of the First International Symposium. Thera (Hellas), 30 August – 4 September 1997 (Athens 2000) 555–560.
- Eriksen et al. 1990**
U. Eriksen/W. L. Friedrich/B. Buchardt/H. Tauber/M. S. Thomsen, The Stronghyle caldera: geological, palaeontological and stable isotope evidence from radiocarbon dated stromatolites from Santorini. In: D. A. Hardy/J. Keller/V. P. Galanopoulos/N. C. Flemming/T. H. Druitt (eds.), Thera and the Aegean World 3. Proceedings of the Third International Congress. Santorini (Greece), 3–9 September 1989. Vol. 2: Earth Sciences (London 1990) 139–150.
- Fouqué 1879**
F. A. Fouqué, Santorini and its Eruptions (Paris 1879). Translated and annotated by A. McBirney, 1998.
- Friedrich 2009**
W. L. Friedrich, Santorini Volcano, Natural History, Mythology (Aarhus 2009).
- Friedrich/Højen Sørensen 2010**
W. L. Friedrich/H. Højen Sørensen, New light on the Ship Fresco from Late Bronze Age Thera. *Prähist. Zeitschr.* 85, 2, 2010, 243–257.
- Friedrich et al. 1988**
W. L. Friedrich/U. Eriksen/H. Tauber/J. Heine-meier/N. Rud/M. S. Thomsen/B. Buchardt, Existence of a Water-filled Caldera prior to The Minoan eruption of Santorini, Greece. *Naturwiss.* 75, 1988, 567–569.
- Geertz 1973**
C. Geertz, The Interpretation of Cultures (New York 1973).
- Gorceix/Mamet 1870**
H. Gorceix/H. Mamet, Recherches et fouilles faites à Théra (Santorin) par MM. Mamet et Gorceix, membres de l'École française. *Bull. l'École Française Athenes* 9, 1870, 187–191.
- Helms 1988**
M. W. Helms, Ulysses' Sail: an Ethnographic Odyssey of Power, Knowledge, and Geographical Distance (Princeton 1988).
- Hiller von Gaertringen 1899**
F. Frhr. Hiller von Gaertringen, Thera: Untersuchungen, Vermessungen und Ausgrabungen in den Jahren 1895–1898 Vol. 1: Die Insel Thera in Altertum und Gegenwart: mit Ausschluss der Nekropolen (Berlin 1899).
- Højen Sørensen 2009**
A. Højen Sørensen, Approaching Levantine Shores: aspects of Cretan contacts with Western Asia during the MM-LMI periods. *Proc. Danish Inst. Athens* 6, 2009, 9–55.
- Højen Sørensen 2012**
A. Højen Sørensen, A toast to diplomacy! The act of diplomacy and trade in its wake; the case of Minoans in Cyprus and the Levant 2000–1500 BC. In: R. Laffineur/M.-L. Nosch (eds.), KOSMOS: Jewellery, Adornment and Textiles. Aegaeum 33, 2012, 705–722.
- Højen Sørensen/Friedrich 2009**
A. Højen Sørensen/W. L. Friedrich, Time Table. In: D. A. Warburton (ed.), Time's Up! Dating the Minoan Eruption of Santorini. Acts of the Minoan Eruption Chronology Workshop. Sandbjerg, November 2007. *Monogr. Danish Inst. Athens* 10 (Athens 2009) front endpaper.
- Horden/Purcell 2000**
P. Horden/N. Purcell, The Corrupting Sea: a Study of Mediterranean History (Oxford 2000).
- N. Marinatos 1984**
N. Marinatos, Art and Religion in Thera. Reconstructing of Bronze Age Society (Athens 1984).
- S. Marinatos 1971**
S. Marinatos, Excavations at Thera 4 (1970 season) (Athens 1971).
- S. Marinatos 1972**
S. Marinatos, Excavations at Thera 5 (1971 season) (Athens 1972).
- S. Marinatos 1974**
S. Marinatos, Excavations at Thera 6 (1972 season) (Athens 1974).
- Marketou 2009**
T. Marketou, Ialysos and its neighbouring areas in the MBA and LB I periods: a chance for peace. In: C. F. Macdonald/E. Hallager/W.-D. Niemeier (eds.), The Minoans in the Central, Eastern and Northern Aegean. New Evidence. Acts of a Minoan Seminar 22–23 January 2005 in collaboration with the Danish Institute at Athens and the German Archaeological Institute of Athens. *Monogr. Danish Inst. Athens* 8 (Athens 2009) 73–96.
- Morgan 1981**
L. Morgan, The West House Paintings, Thera. *Bull. Inst. Class. Stud.* 28, 1981, 166.
- Morgan Brown 1978**
L. Morgan Brown, The Ship Procession in the Miniature Fresco. In: C. Doumas (ed.), Thera and the Aegean World 1. Papers presented at the Second International Scientific Congress. Santorini (Greece), August 1978 (London 1978) 629–644.
- Morris 2010**
I. Morris, Why the West Rules – For Now: The Patterns of History and what they reveal about the Future (New York 2010).
- Myrona 2000**
D. Myrona, The »Fishermen« Frescoes in the Light of the Fish Bone Evidence. In: S. Sherratt (ed.), The Wall Paintings of Thera 2. Proceedings of the First International Symposium. Thera (Hellas), 30 August – 4 September 1997 (Athens 2000) 561–567.
- Negbi 1994**
O. Negbi, The »Libyan Landscape« from Thera: A review of Aegean enterprises overseas in the Late Minoan IA period. *Journal Mediterranean Arch.* 7, 1994, 73–112.

Niemeier/Niemeier 2000

B. Niemeier/W.-D. Niemeier, Aegean frescoes in Syria-Palestine: Alalakh and Tel Kabri. In: S. Sherratt (ed.), *The Wall Paintings of Thera 2. Proceedings of the First International Symposium. Thera (Hellas), 30 August – 4 September 1997 (Athens 2000)* 763–802.

Paliou 2011

E. Paliou, The Communicative Potential of Thera Murals in Late Bronze Age Akrotiri: Applying Viewshed Analysis in 3D Townscapes. *Oxford Journal Arch.* 30,3, 2011, 247–272.

Palyvou 2004

C. Palyvou, Peeping through the Keyhole of Time. *AAE. Period. Publ. Soc. Promotion Stud. Prehist. Thera 2*, 2004, 89–103.

Palyvou 2005

C. Palyvou, Akrotiri Thera: An Architecture of Affluence 3,500 Years Old. *Prehist. Monogr.* 15 (Philadelphia 2005).

Palyvou 2005a

C. Palyvou, Architecture in Aegean Bronze Age Art: Façades with no Interiors. In: L. Morgan (ed.), *Aegean Wall Paintings. A Tribute to Mark Cameron* British School Athens Stud. 13 (Athens 2005) 185–197.

Philippson 1899

A. Philippson, Die Inselgruppe Thera (Santorin). Geologisch-geographische Skizze. In: F. Frhr. Hiller von Gaertingen (Hrsg.), *Thera: Untersuchungen, Vermessungen und Ausgrabungen in den Jahren 1895–1898. Vol. 1: Die Insel Thera in Altertum und Gegenwart mit Ausschluss der Nekropolen* (Berlin 1899) 36–82.

Romanos 2005

M. Romanos, Plan for the Future of Santorini. University of Cincinnati, Sustainable Development Group (Cincinnati 2005) 46–48.

Sakellariou 1980

A. Sakellariou, The West House Miniature Frescoes. In: C. G. Doumas (ed.), *Thera and the Aegean World 2. Papers and Proceedings of the Second International Scientific Congress. Santorini (Greece), August 1978 (London 1980)* 147–153.

Shaw 1990

J. W. Shaw, Bronze Age Aegean Harboursides. In: D. A. Hardy/C. G. Doumas/J. A. Sakellarakis/P. M. Warren (eds.), *Thera and the Aegean World 3. Proceedings of the Third International Congress. Santorini (Greece), 3–9 September 1989. Vol. 1: Archaeology (London 1990)* 420–436.

Sperling 1973

J. W. Sperling, Thera and Therasia. *Ancient Greek Cities* 22 (Athens 1973).

Stampolidis/Karageorghis 2003

N. C. Stampolidis/V. Karageorghis (eds.), *ΠΛΟΕΣ. Sea Routes...: interconnections in the Mediterranean 16th–6th Century BC. Proceedings of the International Symposium held at Rethymnon, Crete, September 29th–October 2nd 2002 (Athens 2003)*.

Strasser 2010

T. Strasser, Location and Perspective in the Thera Flotilla Fresco. *Journal Mediterranean Arch.* 23,1, 2010, 3–26.

Televantou 1990

C. Televantou, New light on the West House paintings. In: D. A. Hardy/C. G. Doumas/J. A. Sakellarakis/P. M. Warren (eds.), *Thera and the Aegean World 3. Proceedings of the Third International Congress. Santorini (Greece), 3–9 September 1989. Vol. 1: Archaeology (London 1990)* 309–326.

Vance Watrous 2007

L. Vance Watrous, The Fleet Fresco, the Odyssey and Greek Epic Narrative. In: S. P. Morris/

R. Laffineur (eds.), *EPOS. Reconsidering Greek Epic and Aegean Bronze Age Archaeology. Proceedings of the 11th International Aegean Conference. Los Angeles, 20–23 April 2006. Aegaeum 28 (Liège, Austin 2007)* 97–106.

Warburton 2009

D. A. Warburton (ed.), *Time's Up! Dating the Minoan Eruption of Santorini. Acts of the Minoan Eruption Chronology Workshop. Sandbjerg, November 2007. Monogr. Danish Inst. Athens 10 (Athens 2009)*.

Warren 1979

P. M. Warren, The Miniature Fresco from the West House at Akrotiri, Thera, and its Aegean Setting. *Journal Hellenic Stud.* 99, 1979, 115–129.

Wilski 1899

P. Wilski, Topographische Aufnahme auf Thera, Sommer 1896. In: F. Frhr. Hiller von Gaertingen (Hrsg.), *Thera: Untersuchungen, Vermessungen und Ausgrabungen in den Jahren 1895–1898. Vol. 1: Die Insel Thera in Altertum und Gegenwart: mit Ausschluss der Nekropolen* (Berlin 1899) 309–350.

Yasur-Landau/Cline 2009

A. Yasur-Landau/E. Cline, Preliminary report on the results of the 2009 excavation season at Tel Kabri. <<http://digkabri.files.wordpress.com/2008/10/preliminary-report-on-the-results-of-the-2009-excavation-season-at-tel-kabri4.pdf>> (21.03.2012).

Zahn 1904

R. Zahn, Die Anfänge bis zur grossen Bims-sanderuption. In: F. Frhr. Hiller von Gaertingen (Hrsg.), *Thera: Untersuchungen, Vermessungen und Ausgrabungen in den Jahren 1895–1902. Vol. 3: Stadtgeschichte von Thera* (Berlin 1904) 35–47.

Source of figures

- | | | | | | |
|---|--|---|---|----|-------------------------------------|
| 1 | based on a map from European Space Agency (ESA); modified by A. Højen Sørensen | 4 | Courtesy of the Akrotiri Excavation | 8 | Hiller von Gaertingen 1899, Blatt 2 |
| 2 | modified by W. L. Friedrich. Courtesy of the Akrotiri Excavation | 5 | Courtesy of the Akrotiri Excavation | 9a | Courtesy of the Akrotiri Excavation |
| 3 | modified by W. L. Friedrich after Palyvou 2005 | 6 | Friedrich/Højen Sørensen 2010, 244 Fig. 1,a–b | 9b | W. L. Friedrich |
| | | 7 | A. Højen Sørensen | 10 | S. Katsipis |

Addresses

Dr. Annette Højen Sørensen
Aarhus University
Faculty of Arts
Department of Culture and Society
Section of Classical Studies
DK-8000 Aarhus C
klaahn@hum.au.dk

Prof. Dr. Walter L. Friedrich
Aarhus University
Faculty of Science and Technology
Institute of Geoscience
DK-8000 Aarhus C
walter@geo.au.dk

Samson Katsipis
Principle Gymnasium of Emporio
School Director
Natural science teacher
Thera
samkatsipis@gmail.com

Prof. Dr. Kirsten Molly Søholm
Aarhus University
Faculty of Arts
Department of Aesthetics and Communication
Section of German
DK-8000 Aarhus C
gerks@hum.au.dk