

## AEGINA - FIRST AEGEAN 'STATE' OUTSIDE OF CRETE?\*

Social transformations in Crete during the developed early Bronze Age lead to the formation of palatial and urban centres from EM III-MM I (ca. 2100 B.C.) on and therewith of the first states to the west of the older state-organisations of Egypt and Nearer Asia<sup>1</sup>. In the Cyclades, after the turmoil which appears to have engulfed the Cyclades at the end of EC II, EC IIIB (contemporary with MM IA) saw the re-emergence and consolidation of Cycladic culture, especially in the foundations of more substantial settlements<sup>2</sup>. In the crucial period in question, the situation in the mainland of southern and central Greece was completely different from that in Crete and the Cyclades. After the collapse of the EH II culture<sup>3</sup> a period of 3 to 4 centuries (EH III-MH II) followed in which "life was little more than a struggle to survive and the pace of development extraordinary slow"<sup>4</sup>. There is no evidence for a developed social stratification, no trace of community-works on a larger scale, nor are there any signs of cult centres. According to Dickinson, "The general impression is of small communities, largely self-sufficient and independant of one another, ..., uninterested in imitating the products of their more advanced neighbours in the Aegean, if not unable to, and unwilling to cooperate"<sup>5</sup>. The picture has changed a little since 1977, when Dickinson wrote this, since imports and imitation of Minoan and Cycladic pottery have been found in MH I-II settlements in the Argolid, in Laconia and in Boeotia, a few Minoan stone vessels at Mycenae and Argos<sup>6</sup>. Thus there was some cooperation between MH I-II Greece and its neighbours in the Aegean. However, true prestige items pointing to the existence of an elite like swords and daggers with gold covered hilts or

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\* The idea for this paper originated during the summer university term of 1993 when I was lecturing on the origins of Mycenaean civilisation and realized the special role which the settlement of Kolonna on Aegina must have played in this process. In October of the same year, J.B. Rutter published his important article "Review of Aegean Prehistory II: The Prepalatial Bronze Age of the Southern and Central Greek Mainland", *AJA* 97 (1993), 745-797, where he has developed similar ideas about Kolonna on pp. 776-780.

1 Cf. P.M. WARREN, "Minoan Palaces", *Scientific American* 253 (1985), 94-103; J.F. CHERRY, "Politics and Palaces: Some Problems in Minoan State Formation", in C. RENFREW & J.F. CHERRY (eds.), *Peer Polity Interaction and Socio-Political Change* (1986), 19-45; for Knossos: J.A. MACGILLIVRAY, "The Early History of the Palace at Knossos (MM I-II)", in D. EVELY - H. HUGHES-BROCK - N. MOMIGLIANO (eds), *Knossos: A Labyrinth of History. Papers presented in honour of Sinclair Hood* (1994), 45-55; G. CADOGAN, "An Old Palace Period Knossos State", *ibid.*, 57-68; for Mallia: O. PELON, "Un dépôt de fondation au palais de Malia", *BCH* 110 (1986), 3-19.

2 Cf. R.L.N. BARBER, *The Cyclades in the Bronze Age* (1987), 28-30, 137-141.

3 On this cf. the recent comprehensive survey by J. FORSÉN, *The Twilights of the Early Helladics* (1992).

4 Cf. O.T.P.K. DICKINSON, *The Origins of Mycenaean Civilisation* (1977), 32-38, quotation from p. 38. cf. also G. NORDQUIST, *A Middle Helladic Village: Asine in the Argolid* (1987).

5 DICKINSON (*supra* n. 4), 38.

6 Cf. J.B. RUTTER & C.W. ZERNER, "Early Hellado-Minoan Contacts", in *Thalassocracy*, 75-83; R.E. JONES, *Greek & Cypriot Pottery: A Review of Scientific Studies* (1986), 420-424; H. GOLDMAN, *Excavations at Eutresis in Boeotia* (1931), 182-186 (Cycladic and Minoanising pottery from the first building level. For its MH II date cf. J. MARAN, *Pefkakia-Magula III: Die mittlere Bronzezeit* [1992], 308).

gold jewellery - in the production of which the Minoans had developed an extraordinary ability in the Old Palace period <sup>7</sup> - are missing among the imports and imitations in the MH I-II mainland.

In this general picture of relative poverty and low living standard during the EH III - MH II periods, there is one remarkable exception: the settlement on the Kolonna hill on the island of Aegina in the centre of the Saronic gulf. Unfortunately, this important Bronze Age site had - until recently - a rather sad scientific fate. Discovered by V. Stais in 1894 below the level of the archaic temple of Apollo <sup>8</sup>, its investigation was the goal of excavations started by P. Wolters and G. Welter in 1924 and continued by Welter until 1941. Wolters published an informative preliminary report of the first year of excavation <sup>9</sup>. No more report of this kind was published on the following campaigns, however.

In 1966 H. Walter started new excavations in the Bronze Age levels of Kolonna, accompanied by a programme of study and publication of the finds of the old excavations. The evidence from both demonstrates the great importance of this site in the period in question, *i.e.* between EH III and the beginning of the Shaft Grave period in MH III.

Between 1972 and 1977, H. Walter and F. Felten have excavated and disentangled a series of the stages of the unique EH III-MH III defensive systems of their towns V-X <sup>10</sup>. The end of town III - the possibly fortified <sup>11</sup> EH II settlement with the 'Weisses Haus', a typical example of the 'Early Helladic II Corridor House' <sup>12</sup> - is not clear. The fact that in the following town IV the 'Weisses Haus' lay in ruins and a melting furnace was installed in it <sup>13</sup> suggests that town III had been destroyed violently <sup>14</sup>. In contrast to other settlements with EH II Corridor Houses - especially Lerna in the Argolid - there followed no period of recession at Kolonna. It is not possible to get a clear picture of the lay-out of town IV <sup>15</sup>, but the following town V was a planned settlement with the houses arranged in *insulae* and protected by a wall with rounded towers <sup>16</sup>. The lay-out of the settlement is comparable to that of about contemporary settlements in the northeastern Aegean, especially Thermi V on Lesbos <sup>17</sup>. Is it indicating east Aegean influence or even

7 Cf. O. PELON, "L'épée à l'acrobate et la chronologie maliote", *BCH* 106 (1982), 165-190; IDEM, "L'acrobate de Malia et l'art de l'époque protopalatiale en Crète", in *L'iconographie minoenne. Actes de la Table Ronde d'Athènes* (1983), *BCH* Suppl. XI (1985), 35-40; B. DETOURNAY, "Armes", in B. DETOURNAY - J.-C. POURSAT - F. VANDENABEELE, *Fouilles exécutées à Mallia, Le Quartier Mu II, ÉtCrét XXVI* (1980), 147-149; O. SARGNON, *Les bijoux préhelléniques* (1987), 76-80.

8 V. STAIS, "Προϊστορικοί Συνοικισμοί ἐν Ἀττικῇ καὶ Αἰγίνῃ", *AE* 1895, 235-253.

9 P. WOLTERS, "Forschungen auf Ägina", *AA* 1925, 1-12.

10 H. WALTER & F. FELTEN, *Alt-Ägina III, 1: Die vorgeschichtliche Stadt* (1981). On the chronology of the Kolonna 'towns' cf. MARAN (*supra* n. 6), 324-328.

11 Cf. WALTER & FELTEN (*supra* n. 10), 22.

12 Cf. D.J. PULLEN, "A 'House of Tiles' at Zygouries? The Function of Monumental Early Helladic Architecture", in R. HÄGG & D. KONSOLA (eds.), *Early Helladic Architecture and Urbanization, Proceedings of a Seminar Held at the Swedish Institute in Athens, June 8, 1985* (1986), 79-84; J.W. SHAW, "The Early Helladic II Corridor House: Development and Form", *AJA* 91 (1987), 59-79, on Kolonna: 65-69; IDEM, "The Early Helladic II Corridor House: Problems and Possibilities", in P. DARCQUE & R. TREUIL (ed.), *L'habitat égéen préhistorique, Actes de la Table Ronde ... de l'Ecole française d'Athènes, BCH-Suppl. XIX* (1990), 183-194.

13 WALTER & FELTEN (*supra* n. 10), 23-28.

14 WALTER & FELTEN (*supra* n. 10), 22; H. WALTER, *Die Leute im alten Ägina* (1983), 58.

15 WALTER & FELTEN (*supra* n. 10), 28.

16 WALTER & FELTEN (*supra* n. 10), 28-41. 28, Fig. 22; WALTER (*supra* n. 14), 66-67, Fig. 42 (clay model).

17 W. LAMB, *Excavations at Thermi in Lesbos* (1936), Plan 6.

the immigration of population groups from the eastern Aegean, for which there appears to be some further evidence in the Cyclades and the eastern Greek mainland <sup>18</sup>?

Town V was destroyed by fire. In the following town VI, still to be dated to EH III, the fortification wall of town V was reconstructed as outer wall, the main wall with two gates flanked by rectangular towers was erected above the ruins of the first row of houses <sup>19</sup>. In the following MH I town VII, this fortification system was further developed with hidden walks and dog-leg gateways <sup>20</sup>. In the MH I-II town VIII, it became even stronger and more sophisticated <sup>21</sup>. In the MH II town IX the space for settlement had become too small, and a fortified suburb was laid out to the east <sup>22</sup>. The fortification wall which had been strengthened again and again from town VI on - in town VIII it had reached a thickness of 8 m - was not needed any more as inner wall. Thus a narrower new wall was erected above the former outer wall, the former main wall was used to construct houses on it <sup>23</sup>. After the suburb had been attacked and destroyed at the end of town IX, the inner wall and the wall of the suburb were strengthened in the MH III town X <sup>24</sup>.

There are only two fortified Middle Bronze Age towns at all in the Aegean comparable to Kolonna VI-X, Ayia Irini IV-V on Keos and Troy VI. However, Ayia Irini IV represents a re-settlement of the site after a long hiatus. It is to be dated contemporary with Kolonna town IX, *i.e.* with MH II <sup>25</sup>. Moreover, the fortifications of Ayia Irini IV and V do not reach the monumentality and sophistication of the defensive works of Kolonna <sup>26</sup>. Troy VI possibly started only around 1700 B.C. after a hiatus <sup>27</sup>, *i.e.* not earlier than Kolonna MH III town X <sup>28</sup>. Moreover, the towers were added only in a later phase of Troy VI <sup>29</sup>. Thus the impressive and more and more sophisticated fortifications of Kolonna towns VI to IX are at their time hitherto unique in the Aegean.

The special position of Kolonna is also clear from the numerous Cycladic and Minoan pottery imports found during the old excavations. The imports of Cycladic pottery started in EH III-MH I <sup>30</sup>, those of Minoan pottery roughly contemporary in MM IA and were

- 18 cf. BARBER (*supra* n. 2), 28-29, 137-139; C.G. DOUMAS, "EBA in the Cyclades: Continuity or Discontinuity", in *Problems*, 21-29. *Contra*: J.L. DAVIS, "Review of Aegean Prehistory I: The Islands of the Aegean", *AJA* 96 (1992), 754.
- 19 WALTER & FELTEN (*supra* n. 10), 43-50, 43, Figs 34-35; WALTER (*supra* n. 14), 86-87, Fig. 60 (clay model).
- 20 WALTER & FELTEN (*supra* n. 10), 50-55, 51, Figs. 40-41; WALTER (*supra* n. 14), 96-97, Fig. 69 (clay model).
- 21 WALTER & FELTEN (*supra* n. 10), 58-70, 59, Fig. 46-47; WALTER (*supra* n. 14), 102-103, Fig. 74 (clay model).
- 22 WALTER (*supra* n. 14), 124; H. WALTER - H.-J. WEISSHAAR, "Alt-Ägina: Die prähistorische Innenstadt westlich des Apollotempels", *AA* 1993, 293-297.
- 23 WALTER & FELTEN (*supra* n. 10), 72-92, 73, Fig. 56-57; WALTER (*supra* n. 14), 120-121, Fig. 89 (clay model).
- 24 WALTER & FELTEN (*supra* n. 10), 83-85; W. WOHLMAYR, "Ägina Kolonna - Die schachtgräberzeitliche Siedlung", in R. LAFFINEUR (ed.), *Transition. Le monde égéen du Bronze moyen au Bronze récent. Actes de la deuxième Rencontre égéenne internationale de l'Université de Liège (18-20 avril 1988)*, *Aegaeum* 3 (1989), 151-153.
- 25 Cf. MARAN (*supra* n. 6), 360-361.
- 26 J.L. DAVIS, *Keos V. Ayia Irini: Period V* (1986), 104-105, Pl. 3. For the fortification of Ayia Irini IV cf. J.C. OVERBECK, *Keos VII. Ayia Irini Period IV*, Part 1 (1989), 119-121, Pl. 3.
- 27 Cf. M. KORFMANN & B. KROMER, "Demircihüyük, Besik-Tepe, Troia - Eine Zwischenbilanz zur Chronologie dreier Orte in Westanatolien", *StTroica* 3 (1993), 160-162, 168-169, Fig. 23.
- 28 For the absolute date of MH III cf. S. DIETZ, *The Argolid at the Transition to the Mycenaean Age* (1991), 316-321, 321, Fig. 93.
- 29 W. DÖRPFELD, *Troja und Ilion* (1902), 133-134, 139-151.
- 30 R. WÜNSCHE, *Studien zur äginetischen Keramik der frühen und mittleren Bronzezeit* (1977), 51-59.



increasing in MH II <sup>31</sup>. Beside actual imports there are also imitations of Kamares pottery in shape and/or paint <sup>32</sup>. On the other hand, Kolonna was an important pottery production centre exporting different classes of its "Gold Mica Fabric" from MH I on <sup>33</sup> to different areas of Greece, especially to the Argolid and Attica. At Middle Helladic Asine, Aeginetan Gold mica fabrics make up nearly one fourth of the sherd material <sup>34</sup>.

Further evidence for the special position of Kolonna in the MH period is given by the representative decoration of a group of pithoi found during Welter's excavation and in their recent final publication stylistically ascribed to town IX. A reconstructed pithos shows a frieze of manned ships <sup>35</sup>. The same topic appears on a fragment with stylistically more developed painting <sup>36</sup>. Here the men of the crew are characterized as warriors by their spears. Other fragments possibly show mythological representations: a human figure standing on a dolphin and a serpent-like spinous sea-animal <sup>37</sup>. The ship representations most probably had at least in part a function as symbols of status <sup>38</sup>.

Let us summarize the evidence gathered up to now. The impressive fortification works of towns VI-X reflect community works of large scale requiring a high level of planning and organisation. The distribution of high quantities of Aeginetan pottery, among them big pithoi difficult to transport presupposes a well organised trade net with agents outside the island. This high level of organisation points to the existence of social stratification in the MH settlements of Kolonna. The elite of town IX has expressed its status in the ship and warrior representations of the discussed matt-painted vessels.

Unfortunately, our informations about the structure of the settlement of Kolonna are much poorer than those about the fortifications. As is clear from a map recently published by Walter <sup>39</sup>, only a small part of the settlement has been excavated. Thus it is impossible to get an idea about the social structure from the architectural evidence.

However, there is burial evidence. The rich 'shaft grave' - which I would prefer to describe with S. Hiller <sup>40</sup> as a "remarkable example of a stone built tomb" - found in an unusual position at the foot of the suburb-fortification of town IX has here been already

31 Cf. RUTTER & ZERNER (*supra* n. 6), 81-82; S. HILLER, "Minoan and Minoanizing Pottery on Aegina", in C.W. ZERNER & P. ZERNER eds., *Wace and Blegen: Pottery as Evidence for Trade in the Aegean Bronze Age, 1939-1989* (1993), 197-199.

32 *Ibid.*, pl. 22a.c-f.

33 Cf. C.W. ZERNER, *The Beginning of the Middle Helladic Period at Lerna* (Diss. University of Cincinnati 1978), 156-158. 189-190; EAD., "Middle Helladic and Late Helladic I Pottery from Lerna", *Hydra* 2 (1986), 64-66; EAD., "Middle Helladic and Late Helladic I Pottery from Lerna: Part II, Shapes", *Hydra* 4 (1988), 1-5; NORDQUIST (*supra* n. 4), 49; J. MARAN, *Kiapha Thiti, Ergebnisse der Ausgrabungen II.2.: 2. Jt. v. Chr.: Keramik und Kleinfunde = Marburger Winckelmann-Programm 1990* (1992), 179-199; J.B. RUTTER, "Review of Aegean Prehistory II: The Prepalatial Bronze Age of the Southern and Central Greek Mainland", *AJA* 97 (1993), 775-776. 777, Fig. 12 (distribution map).

34 NORDQUIST (*supra* n. 4), 49.

35 H. SIEDENTOPF, *Alt-Ägina IV.2: Mattbemalte Keramik der Mittleren Bronzezeit* (1991), 24-25, Fig. 4. 62 no. 158. Frontispice and Pls. 35-37.

36 *Ibid.*, 25. 62 n. 162. Pl. 38.

37 *Ibid.*, 18-19. 55, nos. 75 & 79, Pl. 14. For an interpretation of the fish-rider as Bronze Age representation of Apollo Delphinios cf. S. HILLER, "Fisch oder Schiff: Zu einem bemalten mittelbronzezeitlichen Gefäßfragment aus Ägina", *Pantheon* 30 (1972), 439-446.

38 Cf. RUTTER (*supra* n. 33), 778-780.

39 H. WALTER, *Ägina: Die archäologische Geschichte einer griechischen Insel* (1993), 12-13, Fig. 5.

40 S. HILLER, "On the Origins of the Shaft Graves", in LAFFINEUR (ed.), *Transition. Le monde égéen du Bronze moyen au Bronze récent. Actes de la deuxième Rencontre égéenne internationale de l'Université de Liège (18-20 avril 1988)*, *Aegaeum* 3 (1989), 139.

discussed by I. Kilian<sup>41</sup>. With its rich grave goods - a gold diadem, bronze weapons (among them a rapier) and fine decorated pottery of both Minoan and Cycladic manufacture - it is undoubtedly an elite burial, possibly that of a chief, prince or king.

Evidence for the existence of more of such rich elite tombs at Kolonna is provided by the Aegina Treasure in the British Museum. In 1979, R. Higgins has abandoned his theory - often followed still today - according to which the Aegina treasure has been robbed in modern times from the Chrysolakkos burial complex at Mallia in Crete<sup>42</sup>. As it now appears, the Aegina Treasure was found on the Windmill Hill east of Kolonna in a Mycenaean chamber tomb and is an ancient tomb robber's cache from the looting of one or several rich tombs in the area of Kolonna. The similarity between the golden diadem of the Aegina Treasure and that from the 'shaft grave' at Kolonna confirms this reconstruction of the find circumstances of the Aegina Treasure<sup>43</sup>. According to the thorough investigations of the Aegina Treasure by Higgins<sup>44</sup> and Ch. Gates<sup>45</sup>, the objects of the Aegina Treasure are to be dated between ca. 1700 and 1500 B.C. - according to the new high chronology which I am following between the 19th and 17th century B.C. -, and show influences from Minoan Crete, the Levant and Egypt, just like the rich grave goods from Grave Circles B and A at Mycenae<sup>46</sup> which started later<sup>47</sup>.

Thus Aegina probably played an important role in acting as a mediator of goods and ideas - Minoan, Cycladic and Aeginetan - for the mainlanders at the dawn of Mycenaean civilisation<sup>48</sup>. We would like to know more about the social organisation about the settlement of Kolonna which apparently played such an important role in the transition from Middle to Late Bronze Age and are therefore looking forward to the continuation of the excavations at Kolonna.

There are some hints, what kind of evidence we can anticipate. Recently, C. Reinholdt has published a Minoan stone hammer found during Welter's excavations at Kolonna<sup>49</sup>. Reinholdt stresses the sacral function of the Minoan stone hammers found in MM III-LM I cult deposits in Minoan palaces and villas<sup>50</sup>. According to him, the stone hammer from Kolonna belonged to a cult deposit of Minoan type and points to the existence of a Minoan colony on the island. This must not necessarily be the case, however. The representation of a seal from Mallia shows a priest bearing a stone hammer as *insignium*<sup>51</sup>. Thus the stone hammers were also status symbols. The specimen from Aegina belongs to a group of Minoan items found in Crete only in special locations (the palaces and villas) to which only certain persons would have access, like in the Grave Circles B and A a faience cup from Grave Gamma as well as bull's head rhyton and

41 I. KILIAN, this volume.

42 R.A. HIGGINS, "The Aegina Treasure Reconsidered", *BSA* 52 (1957), 42-57; revision: IDEM, *The Aegina Treasure: An Archaeological Mystery* (1979), 45-54.

43 R.A. HIGGINS, "A Gold Diadem from Aegina", *JHS* 107 (1987), 182.

44 HIGGINS (*supra* n. 42, 1957), 44-54; IDEM (*supra* n. 42, 1979), 22-42, 55-61.

45 C. GATES, "Iconography at the Crossroads: The Aegina Treasure", in LAFFINEUR (ed.), *Transition. Le monde égéen du Bronze moyen au Bronze récent. Actes de la deuxième Rencontre égéenne internationale de l'Université de Liège (18-20 avril 1988)*, *Aegaeum* 3 (1989), 215-224.

46 Cf. E.T. VERMEULE, *The Art of the Shaft Graves at Mycenae* (1976).

47 G. GRAZIDIO, "The Process of Social Stratification at Mycenae in the Shaft Grave Period: A Comparative Examination of the Evidence", *AJA* 95 (1991), 403-440; DIETZ (*supra* n. 28), 261-264.

48 As similarly argued by RUTTER (*supra* n. 33), 777-778.

49 C. REINHOLDT, "Ein minoischer Steinhammer in Ägina", *AKorrBl* 22 (1992), 57-62.

50 Cf. also N. MARINATOS, *Minoan Sacrificial Ritual: Cult Practice and Symbolism* (1986), 22, who thinks that the stone hammers were used to stun bulls before sacrificing them.

51 *CMS* II.3, no. 147.

marble vessels from Graves IV and V <sup>52</sup>. Most probably, the owner of the stone hammer from Kolonna used it for expressing his high status.

In the Late Roman north-wall of Kolonna, the Acropolis of ancient Aegina, there is a re-used limestone block that is very interesting in our context (Pl. XIV-XV) <sup>53</sup>. It is a typical Minoan type ashlar block, smoothed and provided with straight angles only on the front side and with a rough, wedge-shaped back side <sup>54</sup>. On the front side it bears a mason's mark of Minoan type, a double axe <sup>55</sup>. Best comparable are the double axe mason's marks on the West Bastion of the North Entrance Passage, to be dated to the MM III/LM IA transition <sup>56</sup>. The Minoan ashlar block with double axe mason's mark points to the existence of a probably monumental building with Minoan influences in the later Middle Helladic at Kolonna. Was it the Middle Bronze Age megastructure of which a very small part has been uncovered at the south side of the excavated area of the inner town? According to Weißhaar it has a foundation of big stone-blocks unusual before the Mycenaean period <sup>57</sup>. An answer to this question and more information about this apparently important building will be found by our Austrian colleagues during the future excavations which will hopefully also reveal further evidence for a reconstruction of the social organisation of this important and unique settlement and help answer the question, whether there existed on Middle Helladic Aegina the first Aegean 'state' outside of Crete.

Wolf-Dietrich NIEMEIER

52 Cf. M.K. DABNEY & J.C. WRIGHT, "Mortuary Customs, Palatial Society and State Formation in the Aegean Area: A Comparative Study", in *Celebrations*, 49 with n. 40.

53 It was identified by my wife Barbara during a visit to Aegina in 1991.

54 Cf. J.W. SHAW, *Minoan Architecture: Materials and Techniques*, *ASAtene* 49 (1971/1973), 92.

55 Cf. S. HOOD, "Mason's Marks in the Palaces", in *Function Palaces*, 205-210.

56 *Ibid.*, 205; W.-D. NIEMEIER, "Knossos in the New Palace Period (MM III-LM IB)", in D. EVELY - H. HUGHES-BROCK - N. MOMIGLIANO (eds), *Knossos: A Labyrinth of History. Papers presented in honour of Sinclair Hood* (1994), 80-81.

57 WALTER & WEISSHAAR (*supra* n. 22), 297. Fig. 1.

## LIST OF ILLUSTRATIONS

- Pl. XIV Sketch-plan of Aegina Kolonna, eastern part, after *Aegaeum* 3 (1989), Pl. XXXI (position of reused Minoan ashlar block in Late Roman North Wall marked by arrow).
- Pl. XVa Aegina Kolonna, Late Roman North Wall from East (position of reused Minoan ashlar block marked by arrow).
- Pl. XVb Aegina Kolonna, reused Minoan ashlar block in Late Roman North Wall.
- Pl. XVc Aegina Kolonna, double axe mason mark on reused Minoan ashlar block in Late Roman North Wall.

## DISCUSSION

**M. Wedde:** This is just a footnote to the ships on the pithos from Kolonna. They are, as far I can see, of a Minoan type, MM I/II, which is otherwise only known from Minoan seals.

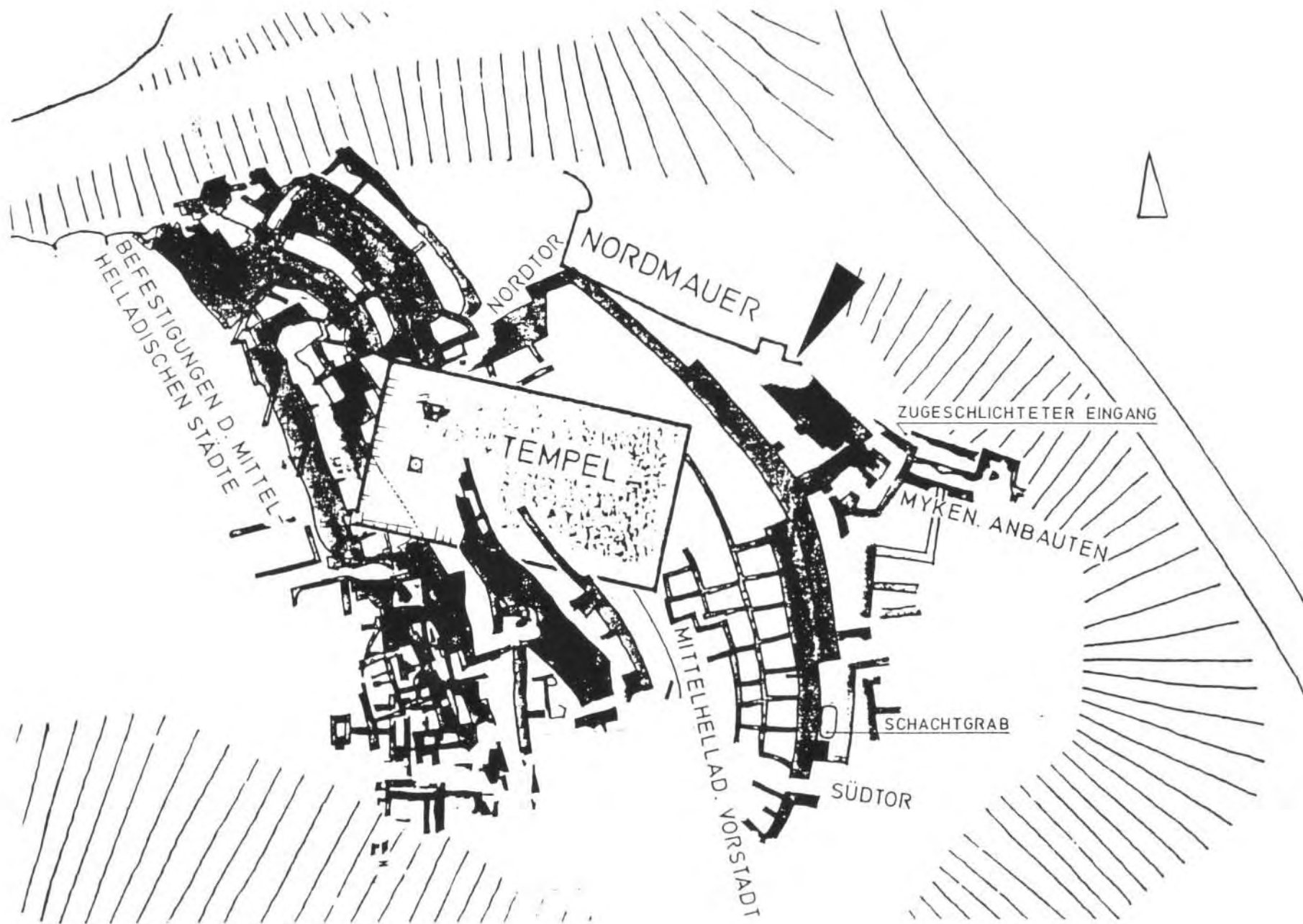
**S. Hiller:** I have to congratulate W.-D. Niemeier on his finding of this most interesting block with a Minoan sign on it. I am sure that I often saw this block without realizing that it was Minoan while I was looking for evidence of Minoans on Aegina. I think that one of the main problems concerning state formation is the relationship between the Minoans and the indigenous Helladic people. Having studied the Minoan imported pottery I feel sure that there was a Minoan workshop on Aegina, as many of my colleagues believe. But when I tried to figure out how many vessels were produced here I had problems to come to one Minoan vase per year for the period in which I thought that this workshop should have existed. So in my opinion the Minoan pottery is only a very small percentage of the whole pottery produced there. On the whole there is no doubt that Aegina was a Helladic town. We have some problems, I think, in discussing the formation of states with respect to the relations of Minoan and Helladic peoples. What did the Minoans contribute to the formation of a state on Aegina?

**W.-D. Niemeier:** I do not have yet the answer; first you must excavate more of the settlement till we know more. The Minoan block was not identified by me, but by my wife Barbara.

**L.V. Watrous:** I have a question since we are talking about state formation in the Aegean. We have had the good talk by S. Voutsaki, who talked about state formation on the mainland. As you know, archaeologists all over the world have been working on the subject of state formation — a lot of them in the New World — and they have come up with a minimum list of seven basic elements of state formation. I wondered whether I could get you to comment on this. The first is that a state center will have a ceremonial center; the second is that there will be some sort of domestic, monumental architecture; literacy; a complex administrative system; some sort of storage and redistribution system; specialised craftsmen; and finally some evidence of social hierarchy. What kind of evidence do we have for that in Aegina?

**W.-D. Niemeier:** I think we have evidence for social hierarchy: the so-called shaft grave as well as the Aegina treasure as argued in my paper. I think we have also specialised craftsmen; at least we have the Minoan potter. We also have monumental, communal architecture, we have the fortifications, which are, I think, unique at this time. The other criteria I cannot answer at the moment; we need to excavate more of the settlement. But there seems to be some evidence — the Minoan type ashlar block with the mason's mark and the foundation of this huge building — that we may have some kind of palace in the settlement. We do not know yet. As to literacy we do hitherto only have the potters' marks which, of course are no real literacy. But who knows? Perhaps there will be found Linear tablets within the settlement of Aegina. We do not know enough yet. Therefore I have put a question-mark at the end of my title







a



b



c