

## REVIEW ARTICLES

### Seals and Sealing Practices: The Ancient Near East and Bronze Age Aegean

JOHN G. YOUNGER

CORPUS DER MINOISCHEN UND MYKENISCHEN SIEGEL V, SUPPL. 1A: KLEINERE GRIECHISCHE SAMMLUNGEN (ÄGINA-KORINTH), edited by *Ingo Pini*. Pp. 487, numerous illustrations, figs. 5, map 1. Mann, Berlin 1992. DM 368. ISBN 3-7861-1676-8.

CORPUS DER MINOISCHEN UND MYKENISCHEN SIEGEL V, SUPPL. 1B: KLEINERE GRIECHISCHE SAMMLUNGEN (LAMIA-ZAKYNTHOS UND WEITERE LÄNDER DES OSTMITTELMEERRAUMS), edited by *Ingo Pini*. Pp. 538, numerous illustrations, figs. 9, color pls. 2, map 1. Mann, Berlin 1993. DM 384. ISBN 3-7861-1711-X.

ARCHIVES BEFORE WRITING. PROCEEDINGS OF THE INTERNATIONAL COLLOQUIUM, ORIOLO ROMANO, 23-25 OCTOBER 1991, edited by *Piera Ferioli, Enrica Fiandra, Gian Giacomo Fissore, and Marcella Frangipane*. Pp. 416, figs. 183, tables 13. Ministero per i Beni Culturali e Ambientali, Ufficio Centrale per i Beni Archivistici, Rome 1994. Lit 100,000. ISBN 88-86231-11-3.

Thirty-two years ago, the *Corpus der minoischen und mykenischen Siegel* (CMS) published its first volume. Under the leadership of Friedrich Matz (1958-1974) and Ingo Pini (1974-present) 19 more volumes have appeared, establishing a standard reference for thousands of sealstones, rings, and impressed clay objects. In addition, the *Corpus* has published four symposia on glyptic research in supplemental volumes, along with special studies. Aegean scholars should be aware that the CMS has a standard format for presenting seals. Each seal is published with its own CMS number, museum inventory, a concise description, including dimensions and bibliography, clear photographs of both itself and its plasticine impression, and a clean drawing of the motif. Each volume includes indices on provenience, shape, and motif, short prefaces discussing groups of seals and their findspots, profile drawings, and a map.

Since the beginning, the *Corpus* has set about improving its format. The first several volumes gave simpler information than the now standard set of dimensions, string-hole alignments (crucial for confirming whether a motif is typical or special), and occasional photographs of the reverse; now, volumes include comparanda for the motifs and, most recently, a few color photographs.

The CMS Institute in Marburg, Germany has been open and generous to scholars; it houses a complete glyptic library, casts of all the seals and sealings, and photographs and slides, which are available for publication, often at

no charge. The Institute has kept fairly to Matz's ambitious agenda (CMS Suppl. 0: xi-xii): CMS I (1964) National Museum in Athens; CMS VIII (1966) English collections; CMS VII (1967) British Museum; CMS II.1-4 (1969-1985) Herakleion Museum: sealstones and rings; CMS IV (1969) Herakleion Museum: Metaxas Collection; CMS II.5 (1970) Herakleion Museum: Phaistos sealings; CMS IX (1972) Bibliothèque Nationale, Cabinet des Médailles; CMS X (1972) Swiss collections; CMS XII (1972) New York Metropolitan Museum of Art; CMS XIII (1974) American collections; CMS V (in 2) (1975) small Greek collections; CMS I Suppl. (1982) National Museum in Athens (suppl.); CMS XI (1988) European collections (especially Berlin and Munich); and CMS V Suppl. 1A-1B (1992-1993) small Greek collections (suppl.).

The volumes that still await publication, however, are not trivial: the Giamalakis Collection in the Herakleion Museum (A. Xenaki-Sakellariou, *Les cachets minoens de la collection Giamalakis* [EtCret 10, Paris 1958]); the Ashmolean Museum (V.E.G. Kenna, *Cretan Seals*, Oxford 1960); and, most frustrating, the Cretan sealings. The sealings were once almost ready but new interest in what they sealed demanded reinspection, new photographs and drawings, and of course a new text. For a general guide to the Knossos sealings we still rely on M.A.V. Gill's "The Knossos Sealings: Provenance and Identification," *BSA* 60 (1965) 58-98.

These two new volumes, CMS V Suppl. 1A and B, present important new sealings. From an almost inaccessible cave on Mt. Zas in Naxos comes a small collection of jar sealings (B106-109; EH III), whose clay contains "cave material," implying these jars were sealed and unsealed on the spot. From the Kadmeion at Thebes comes the direct object sealing B354 (LH IIIB:2) whose imprint clearly reveals a leather document. And from Mikro Vouni in Samothrace come two sealings, two *noduli*, and two roundels (B320-328, probably contemporary with MM IB-II); on one of the roundels two different seal impressions (323 and 325) probably reflect a single bifacial cushion seal.

Most valuable is the publication of the sealings, *noduli*, and roundels from Khania (A127-183; LM IB and later contexts). In House I, room D, a brick "cupboard" contained a "temporary archive" of two *noduli*, a jar stopper, and a document sealing. The document was of leather, folded up into a long, narrow package, tied up with thread, sealed over the top with clay, and then impressed 12 times with 10 different seal faces (A128-137) possibly reflecting four parties: an overseer (132), the impressers of the left column, the impressers of the right column, and the two cult ring impressers at the bottom. From such informative photographs and drawings in the CMS we can move from a simple appreciation of the seals to a greater understanding of how they were used.

The Khania, Odos Katre archive consists of Linear A

tablets, roundels, sealings, and noduli, all perhaps belonging to a "final archive." The two seals used the most frequently were A158, a small seal with two antithetic sheep heads impressing inscribed roundels, and the cult ring A175 impressing only uninscribed noduli. The sheep-head seal has only one parallel: *CMS* I Suppl. 169c, an amethyst prism, whose other two faces also carry engraved motifs. If the sheep heads also appeared on a similar multifacial prism, we can recognize one of the other faces in the butterfly on seal impression 170—the seal was the right size and it also impressed roundels inscribed similarly to those impressed by A158. It therefore seems likely that different seal impressions do not necessarily reflect different seals; I will come back to this point later.

The *Corpus*'s most remarkable accomplishment is simply the existence of *CMS* V, whose original two volumes, published 21 years ago, brought to our attention seals and sealings in the Greek provincial museums, most of which came from excavated contexts. The two most recent volumes, V Suppl. 1A and B, bring us up to date and include seals from beyond the Aegean. Their introductions also contain important lists of seals from dated contexts; scholars will want to study these to gain insight into sealstone chronology.

Some of the seals in these two latest volumes are remarkable. A fragment of an EH II clay pithos-roller, B104, has turned up in the storerooms of the Nafplion Museum; originally it would have had a wooden core. Three metal rings, A100 from Manika in Euboea (EH IIB–IIIA context), and A45 and 46 from the Ayios Charalambos cave (MM II late to III early, in style) provide valuable evidence for the class's early history. The two seals, B247 from Armenoi (LM IIIA–B context) and B331 from Kato Zakro, are two of the earliest made with the horizontal bow-drill (MM IIB; cf. Suppl. 1B, pp. xxx, xxxii). The unprepossessing cushion of steatite, B346 from Ayios Stephanos, should be MM II–III (1B, pp. xxix, 335) and therefore the earliest Minoan seal exported to the Greek mainland. An apparent heirloom is A372 (cf. the MM III Knossos sealing HMs 131 in Gill [supra] Pe), but it was found in a LM IIIB larnax from Episkopi.

A recut cushion bead with faceted back, B429 from Tiryns, carries a woman before whom leaps a griffin; compare the "Grain Goddess" fresco from Mycenae, before whom leaps a lion (P. Rehak, *Aegaeum* 8 [1992] 39–62). A LM/LH II Almond-Eye lentoid B153 from Patras carries a controversial composition: a genius stands aligned with the vertical stringhole, but perpendicular to it, with the stringhole horizontal, lands an alighting bull-leaper; instead of a genius carrying a sacrificial victim, I see two scenes conjoined. The Phylaki tholos (LM IIIA–B or LM IIIA:2 context) contained few burials, at least one adult and a child, but a large collection of 16 seals that breaks down into matched sets through iconography, shape, and material; one pair consists of two unusual breccia rings, A197 and 198 (Dot-Eye Mumps, late in LM II).

We can track Minoans and Mycenaean in the outposts of their world by the seals they left behind. Mainland Popular Group seals (LH IIIA:2–B) have been found in Turkey, at Beşik Tepe (B474–477) and on the Kaş (Uluburun) wreck (B473). From Cyprus come three Aegean seals, B482, a member of Almond-Eyes (LM/LH II), the LM IIIA:1 Spectacle-Eyes 480, and a Mainland Popular lentoid 481. And from

farther afield come two lentoids, one of glass B471 from Tell Abu Hawam, Israel (cf. *CMS* XI, 4), and the other of agate, B472 from Tocra, Libya, a Dot-Eye lentoid (LM/LH II).

The supplemental volumes also present a challenging ethical issue posed by the inclusion of the Mitsotakis Collection (A206–344). Both the controversial manner by which the collection was formed and the fact that it contains pieces thought to be forgeries (p. xxi) lessen its archaeological value.

All things considered, the publication of the seals in all four volumes of *CMS* V represents an extraordinary achievement; seals are coveted artifacts, and obtaining the permission of the excavators to present them all together in *CMS* V has required tact and discretion. Tact and discretion, indeed, have been the hallmarks of the *Corpus*; and its demonstrated trustworthiness has been essential to its mission. It has not come, however, without some cost. The *Corpus* promotes a *laissez-faire* attitude that, on the one hand, has given scholars the complete freedom to develop their own approaches to Aegean glyptic, but, on the other, has not been totally successful in insuring consistency. Many Aegeanists seem unaware of the *CMS*, since they refer to seals not by *CMS* numbers but by drawings in other books, especially Evans, *Palace of Minos*; and when discussing seals few scholars use the precise terminology that has been adopted in the *CMS* volumes. The *Corpus* needs to promote more vigorously its standards, format, and clear and objective style of description. Matz long ago planned a final volume, *CMS* XIV: *Typologie*; perhaps now is the time for it.

*Archives before Writing*, the proceedings of the first conference of its kind, is essential reading. The papers, responses, and discussions integrate thematically, and they present a consensus; other symposia should take note. Although most of the papers and discussions concern sealing practices in the ancient Near East, I read everything from an Aegean perspective, and this I present here.

Sealing is a long-lived procedure. I. Vincentelli Liverani (pp. 363–74) reports on a "temporary" and a "discard archive" at Jebel Barkal in the Sudan dating to ca. 25 B.C.–A.D. 25; and D.M. Hallaq (pp. 377–94) reports on the historic use of sealings in caves in northern Libya, ca. 1200–1850 A.D.

How sealings functioned is basically simple. Tokens recorded deposits of a commodity into storerooms. Commodities were placed in containers sealed with clay and impressed with a seal. The storerooms had door-closing mechanisms that were also sealed with clay and impressed with a seal. Each time authorized persons entered the storeroom and withdrew a standardized amount of a commodity, they broke sealings, made their withdrawals, resealed containers and doors, and impressed these sealings with their authorizing seal. The sealings on the containers and doors constitute the "living archive"; the broken sealings from each storeroom are retained separately in "temporary archives" until they and other groups of broken sealings from other storerooms are brought together for the final audit at the end of an administrative cycle. The audit probably consisted of matching the seal impressions against known authorized seals and of counting the sealings from each type of container, letting them stand for the standardized quantities of the commodity, subtracting their number from the original amount represented by the tokens, and checking the result with the amount of com-

modity left. Unauthorized seals used to impress sealings would indicate illicit access to the stores and mismatches against the number of broken sealings and the amount of commodity left would indicate theft. Audited sealings were then carefully discarded so they could not be introduced back into the "temporary archive" by unscrupulous persons who wished to take more than they were allotted.

G.G. Fissore (pp. 339–54) defines sealing as expressing "symbolically a collection of successive administrative operations (opening, movement of goods, closure, checks) which . . . must necessarily be repetitive and constant in method and quantity." D. Schmandt-Besserat (pp. 13–28) describes tokens of the eighth–fourth millennia as small clay objects: "cones, spheres, disks, and cylinders that stood for quantities of grain and livestock" in simple correspondence, e.g., 1 ovoid token = 1 jar oil. But in the mid-fourth millennium, as cities developed and states formed, "complex tokens" in new shapes stood for "finished products, such as bread," and for qualities like "the species, 'fat-tail sheep.'" J.C. Poursat (pp. 247–52) publishes evidence for a possible token system at Quartier Mu, Mallia: ivory, bone, and shell disks, pierced sherds, and about 200 miniature vases a centimeter tall. Surely these tokens, like the seals of the Mallia Workshop, refer to the potter's workshop located just beyond Quartier Mu.

Two excavators describe the objects sealed at sites dating to the late fifth–early fourth millennia. A. Alizadeh (pp. 35–54) reports on Tall-e Bakun, where both "living" and "temporary archives" contained impressed sealings affixed to containers (as stoppers in jars, on cords and knots around sacks, on cords around wicker baskets, and on wooden boxes), and to doors (conical lumps of clay with flat bases placed over cord wrapped around a stick "driven into the wall, next to the doorjamb"). U. Esin (pp. 59–82) describes two "temporary archives" at Değirmentepe where sealings were affixed to jars, and reed or wood containers, but apparently no doors. The "pots were usually covered with leather or, rarely, with cloth, and tied" with string near whose knot the clay was applied and stamped by a seal.

From the crucial period of the fourth millennium, the transition from Neolithic to the Bronze Age and the formation of early states, come two reports. P. Amiet (pp. 87–94) takes us through Susa II level by level to illustrate the emerging new order in private houses. M. Frangipane (pp. 125–36) describes two important sealing deposits at Arslantepe dating to the end of the fourth millennium. Storage area A340 contained about 220 sealings, some of which were found near pots, a "living archive," but most had been gathered into a "temporary archive . . . too great for it to be the result of one-day transactions." A wall had been hollowed out, space A206, to receive a large "discard archive" of some 1,800 sealings impressed by more than 100 seals, stratified in thin layers separated by decayed organic matter and earth. The upper layers contained many impressions of different seals on sealings of movable containers, mostly pots, but the middle and lower layers contained a low number of different seals, most repeatedly impressing many door sealings.

P. Ferioli and E. Fiandra (pp. 150–61) draw distinctions between sealing procedures before and after writing. Before writing, "one clay sealing bearing the impression of the object and of the seal was sufficient to identify a particular

operation." After the adoption of writing, the "clay sealings/labels placed on the tablet containers not only bear the seal but also written information on the quantity and the nature of the documents." Writing, it seems, adds only two pieces of information: the specific commodity instead of the generic container and the specific amount instead of the generic unit. This would imply that pre-writing administration must have relied on greater standardization.

M.S. Rothman (pp. 97–120) analyzes the administrative changes as states formed. In tribal societies, trusted members had unrestricted access to stores. In the early, chiefdom stage of state formation, "by restricting access to foodstuffs, an administrator could control the labor of . . . individuals who got rations." By restricting access to religious icons, administrators in Ur controlled religious ritual. I imagine the Pylos palace lending the gold cups listed in tablet Tn 316 for use in ceremonies at Pakijana, and supplying the men and women listed along with them to ensure their return.

One of the major themes at the conference concerned the meaning of a seal's motif. Rothman uses a variation of reader-response theory ("an ethnography of communication") and concentrates on the seal's iconography. H. Pittman in her response adds seal shape. I would go further: seals begin declaring their messages immediately by where they are worn; more messages are conveyed through shape, color, motif, style, and stringhole orientation. Aegean seal-owners usually wore their seals on bracelets at the left wrist (gold rings included). Most motifs are read upright on lentoids with the stringhole vertical, horizontal on amygdaloids. Deviation from these generalities mark an Aegean seal and its messages as special. The seal that impressed the Khania Master Impression (*CMS V Suppl. 1A, 142*) conveyed its specialness first by the vertical orientation of its elliptical shape, and subsequently by the iconography, a unique juxtaposition of two standard images, a powerful figure in "Commanding Gesture" atop a cityscape.

This particular iconographic juxtaposition illustrates Rothman's two levels of meaning: on the personal level, seal images "contained a complex image language, which served to inform each potential audience about the seal bearer's social identity and status," while at the institutional level "designs should theoretically show what institution officials represented." Such images would need careful planning: "control over [seal] design would be managed by controlling the seal maker." If so, then seals should reflect the political agendas of successive administrations; thus monsters at Kato Zakro mark a distinctive iconographic boundary in LM I separating East Crete from the rest of the island, and the development from Almond-Eye to Spectacle-Eye animals should reflect the transition from Minoan to Mycenaean control at Knossos.

Pittman, in her response, challenges a completely political interpretation: "Were there not more important pieces of information that the people inside the system needed to know" than just "the identity of the seal bearer?" Seals can refer to their own authority: some inscribed Near Eastern cylinders carry their owner's name, and the Vapheio lentoid *CMS I, 223* self-consciously depicts a robed administrator wearing a seal (P. Rehak, *Kadmos* 33 [1994] 76–84).

Pittman (pp. 177–204) sorts the glyptic iconographic

repertory into themes (n. 27). She interprets H. Frankfort's "action scenes" as socioeconomic occasions when "goods were redistributed" (see *Aegaeum* 12 [1995] *passim*); and she sees iconographic differences between sites as reflecting their political relationship. The glyptic at Uruk includes military/political events and rituals (so at Knossos, we have stone rhyta that depict archers and men at peak sanctuaries). But the glyptic at the "colony" site of Susa concentrates on the manufacturing of goods, the birthing of young animals, and threshing (cf. the Harvester Vase from Ayia Triada, the depopulated Peak Sanctuary Rhyton from Kato Zakro, and the unique seal impression of a milking scene from Khania, *CMS V Suppl.* 1A, 137). Pittman reminds us that figural motifs on seals and writing are both semiotic and their simultaneous appearance with state formation (in the Aegean, as well) cannot be coincidental. "Both writing and visual narration . . . were the externalization and the concretization of information and both were tools of social control."

J. Aruz (pp. 211–36) documents the rich evidence for administration on the Greek mainland in EH II, contrasted with the dearth of contemporary evidence in Crete. She presents much of the glyptic material in detail, the seals and sealings, impressed hearths, and pots. Roller-impressed banded pithoi have also been found at many sites, and almost all of these carry their own unique design, perhaps another reflection of administration. Most of the sealings at Lerna were excavated from room XI in the House of the Tiles. According to Fiandra in her response, in this "temporary archive," 70 different seals had impressed 142 sealings affixed to five classes of objects: lidded pithoi, door pommels or box pegs (the most common), other types of jars and jar stoppers, and reed mats (covers to pots? baskets?). Aruz employs the conventional analyses to identify an intensively used seal and seven pairs of seals that co-stamped sealings. Because of similarities to Minoan bifacial dentine stamp cylinders, I think three of those pairs possibly represent the two ends of three stamp cylinders. She also organizes the iconography into "thematic families" that should indicate office or rank, not individuals or kinship.

J. Weingarten (pp. 261–96) analyzes sealing deposits at both Karahöyük and Phaistos with a view to establishing an estimate of the number of bureaucrats involved, their status, and their movements. This desire to "people the landscape" as Weingarten terms it, is laudable, but by equating different seal impressions with different "seal-users," she employs an imprecise terminology that leads to the troubling conclusion that too many people had access to the storerooms. Multifacial Aegean seals could offer two or more faces for impressing sealings and roundels (cf. Knossos Wc 41, E. Hallager, *BSA* 82 [1987] 64, fig. 2 Rh, Ri; and Samothrace Wc 2, *CMS V Suppl.* 1B, 323, 325); and individuals could have more than one seal, as abundant burial evidence makes clear (cf. *CMS V Suppl.* 1A, p. xviii; Rehak and Younger, *AJA* 99 [1995] 342). It may be better, therefore, to conceive of the seal impression as the act of an "administrative persona," several of which could belong to the same person. Palaima, in the discussion after his paper, notes that "an individual can be qa-si-re-u (basileus) and e-qe-ta (follower) simultaneously," and in such capacities an individual might have used different seals.

Weingarten's paper begins with Middle Bronze Age Karahöyük. Arranging the deposits in chronological order, "discard archives," then "temporary archives," and finally "living archives," she notes that nine seals impressed only sealings in the early "discard archive" but eight seals impressed sealings in all three deposits. She then concludes a "rapid staff turn-over" from the last administrative cycle to the present. Weingarten then similarly analyzes the stratified "discard archive" at Arslantepe A206, where she finds that from one cycle to the next, some seals continue to be used for stamping, while the number of those that do not continue is compensated by the introduction of new seals. She reconstructs there a core set of administrators and another "staff turn-over." I find her interpretation compelling, but I would word the conclusion differently: administrative cycles may involve the same number of administrative personae, including a consistent set, but from one cycle to the next there is a notable shift in administrative focus.

In the second half of her paper, Weingarten turns to the MM II sealings from Phaistos. There are three deposits, in rooms 25, 11, and LI–LV. Since the deposits contained few, if any, seal impressions in common she concludes they must be separated in time, rather than having different administrative foci. Assuming a more or less linear development of motifs, she notes their changing percentages and arranges the deposits in a corresponding chronological order. She concludes that "the sealings in Room 25 may easily have spanned 15 years . . . some 45 administrative cycles." In his response, Poursat comments on "des arguments certes ingénieux, mais fragiles." That is true, but nonetheless I feel Weingarten has discerned, at least at Karahöyük and Arslantepe, an important new aspect of administrative procedure.

T.G. Palaima (pp. 307–30) offers many observations on the Linear A inscriptions from Ayia Triada, including their layout, contexts for certain signs, and range of scribal concerns, all of which support the notion that the script is not impervious to reason (also see R. Palmer, *Aegaeum* 12 [1995] 133–56). He begins by differentiating the Mycenaean administration from the Minoan because of its reliance on written documentation over sphragistic authorization; this has been observed before, but Palaima locates the difference at Knossos where the Mycenaeans had "every reason to be more careful, almost obsessive, about transactional information involving previously non-Mycenaean land, goods, materials and persons." But surely the Mycenaeans learned sealing procedures and auditing techniques from the Minoans. The differences appear to me to be organizational: the Minoans recorded the mixed contents of magazines together, using different administrative personae (seals) and specialized ideograms on the Linear A tablets to differentiate them; the Mycenaean system used specialized magazines and recorded their contents on separate Linear B tablets, in effect creating files independent of their administrators.

In his analysis of the Linear A administration at Ayia Triada Palaima reminds us that, although the findspots of the tablets and sealings are not securely known (see Palaima's ns. 22 and 26), it is apparent that there is some topographical separation between the two classes of documents. It is apparent that Palaima infers a separate ad-

ministrative focus as well. Palaeography suggests, somewhat implausibly he admits, that the sealing inscribers and the tablet scribes were different people. But it is clear from the handwriting that one scribe could counterinscribe sealings impressed by different seals, and from this Palaima concludes that "the seal-users cannot have been the same as the writers of the counter-inscriptions." If, however, we again think of these seal impressions only as administrative personae, not individuals, then it is possible to imagine that some scribes could have been assigned to individuals as they performed different administrative duties using different seals.

Palaima's section on the agricultural productivity of Ayia Triada persuasively counters the notion that the site was second-order, concerned only with local "estate management." The HT tablets record a vast amount of grain (4,148 units or 398,208 l), which could have been grown on 829 ha (8.29 km<sup>2</sup>) of land (at 480 l/ha) to support 20,740 women workers for a month (at 2 T-fractions/month). Similar analyses of the total amounts of other commodities give similarly large figures; certainly Ayia Triada was more important than just a villa for Phaistos.

In one of the closing statements to the conference, D. Tamblé (pp. 407–12) sees administration as the record-

ing of power: when "ruling classes realize they may govern and dominate by means of documents and their filing," we have history. His conclusion is striking: "What about archives after writing?" We now have "new clay seals made of silicon circuits, and microchip tokens already give guarantee, evidence and memory." I immediately think of my automatic teller card to withdraw money, and of my university identification card to withdraw books from the library.

This conference has changed my perceptions, and I now approach the *CMS* with new questions: What social, political, and economic messages did Aegean seals convey? What do the various deposits of sealings tell us of Minoan and Mycenaean administration? And most important, who owned seals, who used them, and how? Future volumes of the *CMS* will provide more information for elucidating these questions.

DEPARTMENT OF CLASSICAL STUDIES  
P.O. BOX 90103  
DUKE UNIVERSITY  
DURHAM, NORTH CAROLINA 27708-0103  
JYOUNGER@ACPub.DUKE.EDU

## Survey and Greek Society

ROBIN OSBORNE

A GREEK COUNTRYSIDE: THE SOUTHERN ARGOLID FROM PREHISTORY TO THE PRESENT DAY, by Michael H. Jameson, Curtis N. Runnels, and Tjeerd H. van Andel with a register of sites by Curtis N. Runnels and Mark H. Munn. Pp. xviii + 654, figs. 224, tables 36, 8 back-pocket maps. Stanford University Press, Stanford 1994. \$125. ISBN 0-8047-1608-0.

In the year that the Minnesota Messenia Expedition published its findings,<sup>1</sup> two teams of archaeologists under the direction of Jameson, Jacobsen, and Dengate carried out the first intensive systematic regional survey to be undertaken in Greece. In six weeks of fieldwalking, some 20 km<sup>2</sup> were covered and 134 sites located (cf. the 311 sites in 3,800 km<sup>2</sup> of the Messenia survey). A new archaeological world was opened up, a world dominated by the countryside and a world in which the interpretation of small scatters of pottery and lithics was the central issue. Further seasons of survey and study in the Argolid followed in 1979 and following years and eventually 44 km<sup>2</sup> were surveyed (20%

of the southern Argolid) and 328 sites located. By the time the project completed its fieldwork in 1982, its example had been an important factor in making intensive survey a standard part of Greek archaeology. The publication of the southern Argolid survey has been long awaited. This volume is only the first of three projected volumes, and is fundamentally concerned not with the presentation of the archaeological data, but with interpretation. Unfortunately, the opportunity that belatedness offers for looking back, and forward, at the problems and possibilities of interpreting survey data is not here taken up, largely because, as stated in the preface, "Our text is substantially that submitted at the end of 1987" (p. vi). This means that little account is taken of the publication of later projects, most notably of the Kea survey.<sup>2</sup> This review aims to highlight some of the issues of interpretation raised by the data that this publication now makes available and by the organization of the book.

Excavation sites are normally selected with considerable prior knowledge of the nature of the site to be excavated and the periods during which the site was used; extensive survey, too, frequently concentrates on looking for and reporting only sites of a particular period or periods. Those

<sup>1</sup> W.A. McDonald and G.R. Rapp, Jr., eds., *The Minnesota Messenia Expedition: Reconstructing a Bronze Age Regional Environment* (Minneapolis 1972).

<sup>2</sup> J.F. Cherry, J.L. Davis, and E. Mantzourani, *Landscape*

*Archaeology as Long-Term History: Northern Keos in the Cycladic Islands from Earliest Settlement until Modern Times* (*Monumenta Archaeologica* 16, Los Angeles 1991).