

*Civilization*, (Göteborg 1977); R. Treuil, P. Darque *et al.* eds., *Les civilisations égéennes* (Paris 1989); D. Hardy *et al.* eds., *Thera and the Aegean World III* (London 1990); R. Laffineur ed., *Transition (Aegaeum 3: Liège 1989)*; and so on. These would have benefitted philologically oriented readers in particular. As it now stands, there is only one new reference here, and that is to Ruipérez-Melena, *Los Griegos Micénicos* (Madrid 1990) which is mainly textual and philological. Thus the introductory readers, for whom this primer is mainly intended, are deprived at the outset of the fuller references necessary to acquaint them with current thinking about Minoan and Mycenaean civilization. This is an especially serious shortcoming because, without a fuller archaeological context, Linear B studies run the risk of being reduced to an imaginative parlor game. I can also imagine any one of a number of eminent prehistoric field archaeologists referring to this edition to see what Linear B tablets have to say about a given topic. He or she might be dismayed by the paucity of updated archaeological references.

Likewise the updating of the bibliography on Aegean scripts only ventures very selectively beyond 1982, omitting, for example, references to the more recent studies of Duhoux and Olivier on Linear A and Cretan hieroglyphic. Yet the translator's notes contain references to the two major publications which contain their work: Y. Duhoux *et al.*, *Problems in Decipherment* (Louvain 1989) and T.G. Palaima ed., *Aegean Seals, Sealings and Administration (Aegaeum 5: Liège 1990)*. Examples could be multiplied in other sections of the edition, including the discussion of texts and series of texts in part II, where, for example, the updating on the key text Tn 316 omits the article by E.L. Bennett, Jr., «PU-RO, vacant (PY Tn 316.7-10, v. 13-16)» *CM*, pp. 221-234. This article would serve as a self-sufficient introduction to the complexities of Mycenaean pinacology and would show how details of the physical texts must be kept in mind when proposing interpretations. That J.T. Hooker was aware of this principle is clear from his own analysis of the structure of Linear A texts.

In sum, one should think of the bibliography of this edition as randomly, rather than systematically, updated. Yet even a minor gain here is a gain, and all involved are to be praised for the overall quality of the edition: translation, text format, introductions, illustrations, and additional notes. We hope this book finds its way into many hands, young and old, in Greece and in other countries.

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BERIT WELLS ed., *Agriculture in Ancient Greece* (Proceedings of the Seventh International Symposium at the Swedish Institute at Athens), Stockholm, Acta Instituti Atheniensis Regni Sueciae, Series in 4°, XLII, 1992, pp. 178.

Scholars of the Aegean Bronze Age have awaited keenly each new volume in the series of publications of Swedish Institute Symposia. These have provided definitive international attacks on critical problems: the design, organization, use, and history of the Minoan palaces; the nature of the power and influence of Minoan culture; the many aspects of cult practice; and the transitions from Bronze Age to Dark Age to

Archaic Aegean culture. This volume will take its proper place among the rest, although it addresses a central topic of importance to the whole of Aegean prehistory and history and most of its papers deal with evidence from historical periods.

Of the fourteen papers, those which will most directly interest the readers of *Minos* are: J.E. Skydsgaard, «Agriculture in Ancient Greece. On the Nature of the Sources and Problems of Their Interpretation»; Eberhard Zangger, «Prehistoric and Historic Soils in Greece: Assessing the Natural Resources for Agriculture»; Anaya Sarpaki, «The Palaeoethnobotanical Approach. The Mediterranean Triad or Is It a Quartet?»; Paul Halstead, «Agriculture in the Bronze Age. Towards a Model of Palatial Economy». The others will be useful for analogical purposes, e. g., Michael Jameson on the historical evidence for agricultural labor and Signe Isager on the sacred and profane ownership of land.

The interpretation of the Mycenaean texts even on agriculturally related topics, e.g., C.W. Shelmerdine, *The Perfume Industry of Mycenaean Pylos* (SIMA Pocket-Book 34, Göteborg 1985) and R. Palmer, *Wine in the Mycenaean Palace Economy* (*Aegaeum* 10: Liège 1994), makes extensive use of later sources and reasoning by analogy. Skydsgaard's general discussion of problems in using Hesiod, Xenophon and Theophrastus is therefore of value. He emphasizes problems of the perspective of the ancient sources, their selectivity –often arbitrary or at least non-representative– and their chronological specificity. Farming for Hesiod was laborious and barely rewarding. For Xenophon, the gentleman-farmer, it was amusing and an interesting exercise in devising and implementing management strategies. Their outlooks are largely determined by social position, period, locale. How much each factor was involved is the puzzle we must solve in using these respective works as sources. S. also discusses particular problems concerning the average acreage cultivated as one unit, the practices used in farming through time, fertility within particular regions, and the financial rewards from farming. In each case, S. sounds warnings against drawing conclusions from either literary or archaeological –including iconographical– evidence. The effect on interpreters of Linear B texts should be sobering.

The main points of interest of Zangger's article for this sample of one Mycenaeanist are as follows. By Mycenaean times the range of vegetation in Greece was similar to the present range. Some dense forests remained for hunters (boar, lion) documented in fresco and in the tablets (*ku-na-ke-ta-i*). Soil erosion was a local problem in the late Mycenaean palatial period, as clearly attested around Tiryns in the Argolid.

Sarpaki's meticulous and thorough paper is very much «worth beans». In it she surveys exhaustively the Neolithic and Bronze Age archaeological evidence for the use of beans as food alongside the standard triad of olive, wine and cereals. She provides a working example of Skydsgaard's cautionary theory: beans are almost archaeologically invisible, since the implements used in their harvesting and processing as food (querns, mortars, sickles, ovens) can and have been associated exclusively with the harvesting, grinding and baking of cereals. Of course, beans are so far unidentified in the Linear B texts, which leads Sarpaki to express the hope that they may be found in Linear A, based on an inadvisable reference to Faure's identification of legume terminology in the Linear A tablets (p. 72 n. 43). Most compelling is the evidence of seeds from the West House at Akrotiri which indicates that legumes were as essential a part of the diet of a wealthy urban population as was barley. Wheat is a distant third.

In the discussion of the paper, Harriet Blitzer points out that this ranking corresponds to modern ethnographical evidence for Crete in the premechanized era, where legumes were a crop of the wealthy and were very much integrated into the agricultural system for their nutritional and market value and also for their role in soil enrichment. According to Sarpaki (p. 74), the caloric yield of pulses is just slightly lower than barley, wheat is a poor third. In terms of protein, pulses yield more than double the nutritional value of barley and almost triple that of wheat. Much of this information is relevant secondarily to the debate, recently raised by Ruth Palmer (*Mykenaiika*, pp. 475-497), about the identification of the Linear B signs traditionally identified as wheat and barley. It makes the case for a reversal of values seem even stronger. The question remains: where are the beans?

Paul Halstead leaves nearly no bean uncounted and no assumption unquestioned in considering exactly how agricultural production was integrated into Mycenaean palatial economies. He critiques how specialization and intensification have been used as explanations for the large quantities of agricultural products recorded as subjects of palatial interest in the Linear B economic records. He favors *extensification*, the use of work animals on a large scale by a small labor force, as the main means of increasing production of the three principal palatial agricultural products: 'wheat', wool and olive oil. This is a view with which I am very much in sympathy, since it would provide an explanation of the peculiar records of bovids and *go-u-ko-ro* in the Linear B tablets from Pylos and Knossos (see T.G. Palaima in *Studia Mycenaea* 1988, Skopje 1989, pp. 85-124).

Halstead's discussion of the Linear B evidence assumes that ideogram \*120 covers both emmer and bread wheat, while ideogram \*121 refers to barley, citing among other reasons the resemblance of forms of \*121 to the «nodding ear characteristics of most barleys» (p. 113 and n. 107). Halstead believes then that tablets of the Linear B E- series reflect the specialized and intensive use of palatially controlled lands for wheat production, while non-palatial lands produced barley and pulses (p. 113). He is able to point to a wide range of cereals attested in the archaeological seed records. In no case, however, does he resort to the kinds of nutritional and caloric arguments used by Sarpaki and Palmer, nor does he use the relative quantities of seeds from individual contexts as does Sarpaki. I still wonder whether this interpretation can hold up as a valid way of explaining all the land of the Pylos E- series. Then, too, one still has to reckon with the allotments of barley to the gods and wheat to the dependent work force that the standard identifications yield. Halstead's paper then introduces us to new perspectives on a current particular Mycenological problem while it provides us with a well-conceived model for the role of the 'agricultural sector' within the overall Mycenaean palatial economic system.

Berit Wells chose her participants wisely and they have not disappointed her or us. May the tradition of Swedish Institute symposia flourish under her new direction.

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