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RESEARCH CENTER FOR
ANATOLIAN CIVILIZATIONS

Assessment of Thesis
Submitted to the Institute for Classical Archaeology,
Faculty of Arts, Charles University in Prague

Thesis author: Kristina Doležalová
Thesis title: The tale of volcanic rocks. Assessing the grinding stones and their *chaîne opératoire* in 2nd Millennium BC Western Anatolia
Review author: Prof. Dr. Christopher H. Roosevelt

Thesis content: 2 title pages, 8 pages of frontmatter, 134 pages of text (including many figures, graphs, and tables), and 116 pages of catalogue, including brief explanatory sections, tabular catalogues, and illustrative plates.

The aims and outcomes of the thesis
The author's primary aims included collecting, describing, and classifying all examples of grinding stones from the second-millennium BCE site of Kaymakçı, conducting limited use-wear analysis to explore the potential of the method for this assemblage, and comparing Kaymakçı's assemblage to other published assemblages from well-known and contemporary western Anatolian sites (Aphrodisias and Troy). Building upon her prior bachelor's thesis on similar materials from the Aegean, she conducted an extremely thorough study, working closely with the materials at Kaymakçı, and as thoroughly as the publications allow for comparative assemblages, producing a thesis of top-notch quality with significant value to ongoing research on macrolithic assemblages in Bronze Age Anatolia (and further afield) and to research at Kaymakçı, in particular.

The structure of the thesis and methods chosen
The thesis is very well structured, with only a few calls for comment here. The introduction to the "Bronze Age Sites" that form the core of the analysis, for instance, appears as section 3.3 within a chapter titled "Chaine opératoire". This should be moved to another (earlier?) chapter or made its own short chapter. Additionally, the sections of Ch. 4 on geology and provenance might be developed well enough to serve as standalone chapters, though this is not a requirement by any means.

The methods applied to the study are fully discussed, well chosen, and thoroughly applied, leading to robust and statistically supported conclusions. Although I am neither a geologist nor an expert in lithic (or macrolithic) analyses, I have dabbled in such subjects in previous publications and find the work presented here to be commendable and basically already of publishable quality.

Literature review and references
The literature review and references cited throughout the study are fully professional in both quantity and quality. Topics including grinding tools, in general, their history of research, problems in terminology, ethnographic work, provenance studies, and use-wear analysis are all excellently, even if briefly, covered. Very good, too, are the brief examinations of previous

studies of grinding tools in the Bronze Age Aegean and Anatolia, and the review of the development of grinding tools from Neolithic through Iron Age times. Similarly, the author's presentation of the history of *chaine opératoire* approaches—theoretical, technical, and social—is very good, as is the coverage of regional geology (even if such geological details may not be of primary interest to some readers). In short, the work is very well referenced, and the full and critical exploration of previous literature allows the author to justify her choices in terminological usage, analytical approaches, and interpretation.

General comments on content versus form

The content of the text, figures, charts, and tables are all very high quality, and the catalogue is commendable for its clarity and superb illustrations. The form of the same is generally high-quality, even if there are some problems with the English and in-text figures. With respect to the English, problems typical to non-native English speakers are common (e.g., omission or over usage of the definite article "the"); these are minor details in light of the whole, which is very clearly written. With respect to the in-text figures, the text in many is almost illegible and so the resolution should be increased. This may be a factor of downsampling to reduce the size of the defense copy, however. Finally, before the final version is submitted, a thorough check should confirm that all figure captions are kept on the same page as the figures to which they belong.

Short comments and questions

Comments

The study produced many interesting conclusions that are worthy of further exploration, if not only comment deriving from their general interest. For me, these include at least the following: ergonomic adjustments that suggest most people using GSs at Kaymakçı were right handed, yet at least some were left handed; the use of GSs not just for seeds and plant matter, but also for other materials (ceramic, if not also pigment); re-use for other purposes (socket stones, stones with hollows, torus stones, etc.); no evidence of grinding benches; discard patterns that demonstrate how useless pieces were thrown in corridors and courtyards (if not reused in walls), while better preserved pieces were found in building interiors (especially Building 227 of EA 109.523).

Questions

With respect to the arguments of Searcy (2011) concerning the economic value of grinding stones (and acknowledging the bias you mention in that particular study), do you think the frequencies of grinding stones at sites like Kaymakçı, Troy, and Aphrodisias could be used as proxies for relative prosperity within and between settlements? Why or why not?

Your conclusions suggest that the felsic rocks (rhyolites and dacites) of Yunt Dağ (some 50 km away) are the most likely source for the most common raw material used in GSs at Kaymakçı (and that the more mafic andesites at Kaymakçı may come from there if not from the source in Demirci). Are these same sources utilized for the GSs of other sites? If so, or if not—and taking into consideration the results of your CV and CCV calculations—what might this suggest about the organization of production and transport processes and who controlled them?

You note the lack of roughouts, preforms, or production debris at Kaymakçı itself, noting that it was primarily a node of consumption (pp. 92, 142). Is this remarkable, or does it align with evidence from other BA settlement sites? That is, is such evidence available from any other BA settlement site?

What can you conclude from the suggestion (p. 144) that "Mostly local and regional raw materials were used for the production of GSs at Aphrodisias and Troy", whereas Kaymakçı may have imported finished products from as far away as 50 km?

Overall summary

The thesis pulls together a very large amount of data from personal inspection, synthesizes it appropriately, and draws interesting, and previously unpublished conclusions. Its results will be of use not only in general analyses of grinding tools and other macrolithic studies in western Anatolia and the Aegean, but also to the specific excavations concerned, especially Kaymakçı. The original results are already of publishable quality, and with minor revisions, reorganization, and/or slight modifications, I look forward to seeing those next steps come to fruition!

The submitted thesis ***sufficiently fulfills the requirements of an MA thesis*** and warrants a thesis defense. I classify it as ***excellent***, with the final grade to be determined following the defense. My comments in this review are meant only to improve the final submission and provide guidance for future research and publication.

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