

Comments on Daffara et al. “Technological analysis of lithic assemblages from surface collections. First evidence of a Palaeolithic frequentation of the Po plain in Piedmont: the case of Trino (north-western Italy)”

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The paper presents a body of well-researched data on an important series of stone tool assemblages and while the specific methods, results, and conclusions are all meticulously documented, the broader, more general importance of this work can also be seen in terms of its focus on scale (intra-site to regional) and on the incorporation of a diverse set of archaeological collections. The study presents solid primary data that is exceptionally well integrated with comparable analyses from near-by sites with better excavated contexts. Using the controlled excavation datasets as the basis for the surface assemblage interpretations is a method in need of more general archaeological application. The paper not only provides descriptive data, but also develops a series of data-based regional research questions to increase the effectiveness of future research. Using reduction sequence analysis and raw material source investigation provides a solid, replicable set of comparative methods.

One of the more significant aspects of a research project is that the team actively incorporates diverse collections and data sets to develop the most complete regional record possible. Although the work is geographically and chronologically focused, the integrative approach is of general archaeological relevance. It's all too common for research to dismiss older, less well documented collections. While recognizing difficulties in working with the Trino collections, the effort expended to glean as much information as possible from the un-controlled surface collections is laudable. The alternative – to ignore the surface record because it's difficult to interpret unambiguously – is essentially just an excuse for not tackling tough problems of working with a potential major archaeological information source. The authors of this paper do an exceptional job of bringing appropriate technologically-based analysis to the problem. They recognize that there is uncertainty to the results, and present their observations as the basis for proposing hypotheses about Paleolithic settlement dynamics.

On my first reading of the manuscript, I saw it as a well-reason, well documented piece of research about a geographic I that I knew nothing about. It fell into my 'good work, but of limited interest' categorization. But as I've had time to think about the project, it has shifted into my “this has much wider implications” mental pidgin-hole. I've been a strong advocate for incorporating analysis of surface materials into regional studies since first read Foley's *Off-site Archaeology* paper decades ago, (1981), and I've tried to implement artifact-based rather than site-based thinking into my view of regional archaeological studies. While Foley's approach calls for much more controlled surface collections than available to Daffara et al. from Trino, when viewed from the regional perspective these surface collections can definitely be seen as appropriate additions to the very few data points provided by well-excavated, stratified sites. It certainly doesn't seem appropriate to limit our examination of the full complexity of the archaeological record to only those few high-integrity/high resolution preserved components of the full record. Kudos to Daffara et al. for taking on the regional record in its full, and often messy complexity.

The second issue that's been making me think about this paper than I originally thought likely, is the explicit attempt to incorporate as many older, previously collected materials into the study as possible. While the results of recent excavations at Ciota Ciara cave seem very information rich, the active incorporation of older collections into the ongoing study is something that needs to much more commonly practiced. Too older collections are often dismissed because of less than contemporary standards of documentation. But just as a solid research project involves a *literature review* section of background information and thought, it's encouraging to see the *collections review* approach taken here. We probably should all have a balance of data-collection activities, from both new sources (e.g., excavations, surface inventory, or experimental work) and collections revisits activities as part of every research project we're engaged in. This paper is a great example of the methods and benefits of the broader use of older, existing collections to help inform contemporary investigations.

In sum, this paper uses solid methods, takes into account the basic data problems, and generates thought-provoking results. Most of the suggestions I have are small-scale issues to perhaps improve the information content of the Figures and Tables and have no comments on the body of the text.

Suggestions:

**Abstract:** Perhaps note that methods used are comparable with analysis of excavated sites in the region (e.g., Ciota Ciara cave and Castelletto Ticino) and are fundamental in being able to link the older Trino surface collections to the more recent, controlled datasets. The systematic, inclusive approach to regional analysis is a message that should be applied to many other geographic areas and time periods and noting it in the abstract might broaden the readership.

**Figure 1:** Assume that the color difference differentiates the alpine/sub-alpine zones, but this should be made specific in the legend. Also, what are the differences between the localities marked with stars versus circles and in the size of the circles – describe either in caption or legend.

**Figure 2:** Do the numbers of the localities in “c” refer to the RIT numbers used in the text and tables? If so, specify in the caption. If not, it would make a more useful Figure if renumber to correspond to the RIT #s. Also, when stating that “white dot = collection area of the bifacial tool recently found” if this is the artifact illustrated in Figure 3, it would be helpful to note the illustration in this caption and the location in Figure 3.

**Figure 3.** Add reference to the biface’s location in Figure 2.

**Figure 4.** Would be helpful if the locations of each RIT location were linked to the terraces shown here. Think this would best be accomplished by adding another column to Table 1 (see comments below) with the terrace were each collection was found indicated.

**Figure 5.** Although it’s obvious, for consistency add the MP and UP codes after the Middle and Upper Palaeolithic descriptors in the caption.

**Figures 9e, 14e, and 19e.** Length misspelled on x-axis label.

**Figure 17e.** Neither axis is labeled.

**Table 1.** This table is an exact duplicate of Table 7 previously published in *Daffara, S., Berruti, G.L.F., Caracausi, S., Garcia-Rojas, M., Arzarello, M., 2023. Techno-economy of lithic raw materials in Piedmont (north-western Italy). A First lifelike scenario. Journal of lithic studies 10, 41 p. doi: <https://doi.org/10.2218/jls.7322>*. While it is clear that these data are needed in the this paper as well, as suggested in comments on Figure 4, perhaps the table could be modified/updated a bit to include some new information, specifically the terrace location (when known) for each RIT collection, and perhaps also the older TR designations previously used for some of these (as discussed in lines 140-156 of the current document).

References:

Foley, R.A.

1981 Off-Site Archaeology: An Alternative for the Short-Sited. In *Patterns of the Past: Essays in Honour of David L. Clarke*, edited by I. Hodder, G. Isaac, and N. Hammond, pp. 157-183. Cambridge University Press, Cambridge.