

Cartography in the Prehistoric Period in the Old World: Europe, the Middle East, and North Africa

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See the following web reference for complete text, images and footnotes :

http://www.press.uchicago.edu/books/HOC/HOC_V1/HOC_VOLUME1_chapter4.pdf

Chapter 4 excerpts edited by Marcus Bicknell, 30 December 2016, to show Smith's appreciation of Clarence Bicknell's classification techniques. She discusses the way in which rock engravings are interpreted by archaeologist and other researchers, and criticises (my bold blue below) their "unsystematic approach" such as ignoring the "contemporaneity, scale, or appropriate geometry". Her most telling indictment is "What fits is included; what does not fit is conveniently disregarded". She goes on to praise Bicknell's taxonomical and empirical approach (my bold brown below) in words which complement and strengthen the praise of Bicknell's techniques by Christopher Chippindale, the Bicknell specialist from Cambridge University.

... Taubner, admitting that he had been influenced by A. Ernst, declared that cup marks were topographical representations and that a double circle could represent isolated humps. He went onto describe the Bunsöh stone (Holstein) as a topographical representation of the local area, a suggestion that is not without its proponents even today. Taubner also introduced the idea that stone maps could represent not just the immediate vicinity but much larger regions. By matching the distribution of the cup-and-ring marks and divided circles on the side stone of a cist grave at Aspatria (Cumberland) with a map of Britain taken from a school atlas, he interpreted the pattern as a map of northern England and southern Scotland, complete with settlements such as Carlisle. **One of the fundamental weaknesses of such antiquarian interpretations is the unsystematic approach and lack of discussion of the whole archaeological context and other related points.**

The underlying assumption is that it is sufficient to look for a simple match between the pattern on the rocks and one in the landscape without questioning such matters as contemporaneity, scale, or appropriate geometry. What fits is included; what does not fit is conveniently disregarded, and the vital fact that prehistoric, like indigenous, maps could only have been constructed according to principles of topological geometry (not Euclidean) remains unappreciated.

A notable exception to such weaknesses was the work of a most remarkable Englishman, Clarence M. Bicknell. Bicknell, born at Herne in Kent and a clergyman in the East End of London before renouncing holy orders, moved to the Italian Riviera for health reasons. He spent his time there botanizing and sketching. Exploring the Maritime Alps inland from Bordighera, he came across the rock carvings below the peak of Mont Bego (in those days on the Italian side of the frontier) and eventually

devoted twelve summers from the end of the century to his death in 1918 to discovering, copying, and commenting on some fourteen thousand individual carved figures - seven thousand from Val Fontanalba and most of the rest from Val Meraviglie. **Bicknell's intellectual strength lay in his taxonomic approach**, and he classified all these figures into eight subject classes:

1. Horned figures
2. Ploughs
3. Weapons and instruments
4. Men
5. Huts and properties
6. Skins
7. Geometrical forms
8. Miscellaneous indeterminable forms.

It is the fifth group (huts and properties) that Bicknell referred to as maps or "topographical figures" in his writings. **His texts, published from 1897 onward, remain the standard works for the region.** There have been additional discoveries, bringing the total number of figures to an estimated one hundred thousand, and some alternative classifications, but **there has been nothing so far to match Bicknell's balanced and systematic studies**, nor has there been a definitive analysis of any one of the categories. Most ignored of all have been the so-called topographical figures (in Bicknell's group 5), which have been either misunderstood¹ or simply omitted from discussion in recent literature.

There is little excuse for bypassing Bicknell's remarkably homogeneous category "huts and properties" or "huts with enclosures". The key to his interpretation was simple empiricism. On his many journeys up and down the valleys to Mont Bego, he repeatedly observed the striking likeness of the carved combinations of solid

¹ Recent objections have been on the grounds that they are unlikely to have been topographical figures because there are not, nor can there ever have been, cultivation and permanent settlement at these altitudes (2,000-2,750 m above sea level): see Andre Blain and Yves Paquier, "Les gravures rupestres de la Vallee des Merveilles," *Bollettino del Centro Camuno di Studi Preistorici* 13-14 (1976): 109-19, and Bernardini, *Alpi*, 171 (note 65), who talks similarly in terms of the "vocazione pastorale" of the land. Such objections are irrelevant; drawings are not necessarily made with the subject in sight, nor did Bicknell suggest that there ever had been cultivation at these altitudes. On the contrary, he stressed that "it was not among the wilderness of glaciated rocks or boulders at an elevation of 2,100 m and more that they ploughed. There the land has never been cultivated.... But years ago, Val Casterino and the lower parts of the Miniera valley may well have been tilled as they are now, and terraces long since abandoned are still to be discerned far up the steep mountain sides. Here ... people who stood on the terraces might have looked down at the ploughing in the flat land of the valley, or on other terraces beneath them, and seen the operation from above as it seems to be depicted on the rocks of the higher regions": Bicknell, *Prehistoric Rock Engravings*, 38-39 (note 67). Blain and Paquier seem confused (p. 109) over the distinction between rural settlement types (isolated steading, hamlet, village, etc.) and the social and economic structure or organization associated with each type. A topographical map by definition depicts only the former, the formal aspects of the landscape. Recent mining, as well as grazing, has been responsible for much deforestation. Though there are still some larches in Val Fontanalba, in the seventeenth century Pietro Gioffredo reported thick larch forests: *Corografia delle Alpi Marittime*, 2 books (1824); republished with his *Storia delle Alpi Marittime in Monumenta historia patriae*, vol. 3, *Scriptorium I* (Genoa: Augustae Taurinorum, 1840), 47. A. Issel, "Le rupi scolpite nelle alte valli delle Alpi Marittime," *Bollettino di Paletnologia Italiana* 17 (1901): 217-59, simply disagrees with Bicknell's interpretation, holding instead that the so-called topographical figures are not plans but "conventional signs of individuals or tribes."

rectangles, sub-circular forms, pecked surfaces, and irregularly interconnecting lines to features in the landscape when these are viewed from above—seen in plan, that is, from a vantage point high up the mountain-side. Thus he interpreted the "rectangular figure with semicircle or other sort of closed line joining it" as "signifying huts or sheds with a piece of ground enclosed by a wall, and the interconnecting lines as paths. He also suggested that the variety of enclosures containing stippling, made by hammering with a single blow or repeatedly, arranged with obvious regularity or randomly or left blank, could imply different categories of land use.

He concluded, cautiously, that about 194 of the groups of rock-carved figures in the Fontanalba valley and another 15 in Val Meraviglie might be representations of either a hut with a path or huts with enclosed plots.

Not all modern archaeologists are willing to accept Bicknell's interpretation of the "topographical figures." A common objection is that many of these appear to have been "distorted" to fit the outlines of the rocks they were carved on and thus could not be "accurate" representations of some real layout. But this is to ignore the key property of topology, which is the preservation of contiguity but not shape, and to assess the prehistoric figures according to the then unformulated principles of Euclidean geometry (which stress the properties of distance, direction, and angle that preserve shape and underlie the modern concept of scale). Many of Bicknell's suggested topographical figures do in fact satisfy the cartographic criteria presented here for ichnographic or plan maps, and for this reason (and in the total absence of realistic alternative interpretations) these have been included in the list in appendix 4.1.

The notion that the prehistoric rock artists may have been making graphic representations of parts of the earth's surface is not the only cartographic suggestion to have been made in the nineteenth century and preserved in the antiquarian literature. The apparently randomly distributed cup marks on natural surfaces or on prehistoric monoliths were seen by some observers as representations of the major constellations, while others raised issues of cosmological import. These views are discussed in the sections dealing with celestial and cosmological maps later in this chapter. It must be stressed, however, that of all the theories from the early literature put forward to explain the purpose or original meaning of the rock art figures and motifs, those relating to maps represent but a tiny proportion. Out of no fewer than the 104 such explanations recently amassed by Ronald Morris for the British Isles, all of which "have been put forward in all seriousness from time to time by archaeologists and others," only seven concern maps or plans in any way. Moreover, most of these relate to cup-and-ring markings, probably the most ambiguous of all rock art motifs.

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