Site Survey : Topographical Maps

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Selection of a site is extremely important today more than ever. With today's rising cost of labor and equipment one cannot afford to carry on a hit or miss expedition. Therefore a variety of techniques are used prior to excavation. These methods are employed to enable the expedition to have a higher rate of efficiency in locating a culturally valuable site. Several reasons may determine which particular site is chosen for excavation. One reason that must be considered is what type of archaeological expedition, salvage or regular, the site will be. In salvage archaeology a team is hired to excavate a particular site to identify whether it is of archaeological value. This type of archaeology is usually a rushed process because the team must complete its report before the site is destroyed for construction to commence. The site may not yield much valuable information but in salvage archaeology the whole process of locating a site is eliminated. This is not to say that when the team is hired, they won't examine the area as a survey archaeologist would in order to see if the area has any promise. Other reasons some sites are selected over others are stated in *Field Methods in Archaeology*. "In the past, sites were often chosen because they were easy to get to, because they dated from a period the excavator was
interested in, because the depth and richness of their deposits, and so forth."¹ But again this still doesn't designate any particular method to selecting a site which is archaeologically valuable. Therefore the focus of this paper is the selection of archaeological sites by examining topographical maps.

This paper does not imply that after a topographical map is referred to that there won't be other survey methods used before excavation. On the contrary. Many techniques such as visual surveying, electrical surveying, magnetic surveying, and resistivity surveying are used after a site is located. These methods, although not completely, insure that there is some subsurface material present. But these techniques are beyond the scope of this paper and will only be discussed in light of the study of topographic maps and their archaeological applications.

Before such areas are located and considered for their archaeological value, the criteria by which this paper considers the sites a "good risk" should be examined. There are three main categories by which each site is judged valuable. They are location, name of the area, and its elevation or exposure to the environment.

Location is an important category because when bands of people inhabit a certain area they don't just settle where

they please, they settle in an area with natural advantages. A logical place to settle would be near a stream, river, or lake. Water is invaluable in a pre-historic or historic society. Streams provide the inhabitants with fresh drinking water as well as a source of food. Fish will often be found in streams or rivers throughout America. Another reason why location is important pertains to the areas close proximity to throughways. Throughways provide easy access to an area and wide passage for moving large loads of materials that might be needed in their settlement. Another clue for the 20th century archaeologist to the whereabouts of a valuable site, would be old structures. These structures are usually old shacks but point to the possibility that people have inhabited this area. Roads, water, and structures all give clues as to where past cultures might have lived.

Another category by which a site may be considered valuable is the name of the area. Names for an area are often old. Usually the first inhabitants give a name to their own area and that name seems to stay in use. The people that named the area usually did so in light of their experiences in the area, their jobs, or a particular landmark. For example, let us consider the name Sewanaka. It's the name of an area in New York. After researching the derivative of sewan, we find that it means "unstrung shell beads used as money among the
Algonquian Indians of New England."^2 With this etymology, we may assume with little inaccuracy, that Indians of the Algonquian tribe once inhabited some area of Sewanaka. The importance of etymologies of area names also seems invaluable for locating archaeological sites of worth.

The last category by which a site may be considered valuable is it's vertical location or elevation. Elevation was important to the people who once lived in mountainous regions. Mountains have their advantages and disadvantages and it was up to the inhabitants of a mountainous region to take advantage of them. Mountains can provide excellent shelter from natural conditions. Mountains should also allow the sun to penetrate to the area because the well exposed areas are the most probable areas of pre-historic and historic habitation. Most persons would have settled on a plain behind some mountain and well exposed to the sun. So the elevation of the area also seems to be important criteria by which modern man will search for valuable sites.

One must take into consideration that these criteria are not always airtight and must be allowed some room to account for different methods of pre-historic or historic cultures. The regions are this paper will concentrate on are the Lexington and Glasgow, Virginia areas. Now let us take into

^2Webster's Dictionary.
consideration an actual area in Lexington that meets the criteria for a valuable archaeological site.

The first site which will be considered is the Limekiln Bridge area. (See corresponding map on page 6 entitled Lexington Quadrangle.) This area seems to have a high probability that past cultures have lived there. The categories that we discussed earlier shall serve as our guide to speculating on the archaeological value of Limekiln Bridge.

Location seems to play an important role in the value of this area. As the name Limekiln Bridge would suggest, there is a river along the southern border of the area. The Maury, well known in Lexington area, is the river that runs under Limekiln Bridge. I'm sure that the Maury proved to be a major reason for pre-historic or historic people to settle in Limekiln. After all, the Maury provides fresh clean drinking water as well as fresh water fish. This easy access to the Maury plus the inherent advantages of the river made Limekiln an appealing area to live. But the Maury isn't the only advantage Limekiln had to offer. Limekiln is surrounded by woods and green vegetation which implies that the area is somewhat valuable agriculturally. This was also an appealing attribute of the Limekiln area to pre-historic and historic inhabitants. On the south side of the Maury and Limekiln, there is a mountain or foothill. This elevation presents some
positive aspects to Limekiln. First and foremost, it gives the area protection from harsh weather. Another positive aspect that the mountain and river provide for Limekiln is the drainage. After winter is over and the ice starts to melt and flow down the mountain, the form of water, the Maury will catch most of the water and direct it downstream. This forms sort of a natural flood drain which protects the Limekiln area. This area also seems easily accessible by roads which in pre-historic or historic times were probably large paths. These paths were probably used for transportation of materials as well as travellers. Roads often indicate that somewhere not far from the side, will be encampments or villages. In addition to the throughways, the topography map shows some existing sheds and buildings. Since we can't see this area with the naked eye, we can't be sure that these structures or foundations are of archaeological value, but the map identifies that some structures are standing. These physical qualities of the limekiln site all point to pre-historic or historic inhabitants but let's look at the name Limekiln. Will the name Limekiln be able to enlighten us on some more valuable archaeological information?

Limekiln as defined by Webster's Dictionary states, "A kiln or furnace in which limestone or shells are burned and reduced to lime." This etymology implies that the town got

3 Webster's Dictionary.
its name from a process in which the pre-historic or historic culture took part. This influence should be taken with some reservation because we don't know what generation or particular culture actually took part in Limekilning until the site is excavated. But we do know that around the Lexington area, there are large formations of limestone and it's probable that a pre-historic or historic people took part in the process of burning limestone and reducing it to lime. The word bridge also tells the surveyor that there used to be some sort of old bridge in the area, maybe sort of a landmark.

The arguments preceding this have attempted to locate a site that has archaeological value. All the information was taken from a topographical map and therefore the surveyor does not enjoy the advantage of viewing the actual site. But topographical maps can lead us to sites like Limekiln where we may then examine more carefully the area and decide upon its archaeological value. This is an important process that precedes most excavations and site surveys. Another example of site surveying could possibly expand on the ideas brought forth through the Limekiln site and clarify the process of topographical map reading and its relationship to archaeology.

The next site which will be surveyed by use of environmental data from a topographical map is Buffalo Bend. (See corresponding topographical map, Glasgow Quadrangle.) Buffalo Bend is about three miles south of Lexington. The topographical
map used for this site survey exercise is exactly the same as the Limekiln Bridge site in scale, contour, interval, and direction. Buffalo Bend is a probable archaeological site for many reasons. The various data supporting Buffalo Bend's archaeological value will be presented in a similar fashion to that of Limekiln Bridge.

The location of Buffalo Bend is important because of its close proximity to features that would indicate habitation of historic or pre-historic people. Buffalo Creek runs about 1/8 of a mile southeast of Buffalo Bend. Although this body of water is designated as a creek it moves as wide as the Maury River in many places. The creek is in a bow at its nearest point to Buffalo Bend. Buffalo Creek, because it's so close to Buffalo Bend, was probably useful to the people once living there. They wouldn't have far to walk for fresh water and edible fish. Buffalo Creek is particularly interesting in this area because of its ox-bow shape. On the southeast bank of this bowed river stones, sand, and other possibly valuable objects are deposited. While on the north-west side of the bow, the bank is being cut away. This transportation of deposits to the area as well as away from the area is very interesting. This may account for a mixture of artifacts that wouldn't seem to be in the same area. And this is one aspect in which the surveyor must be cautious in examining his artifacts. An archaeologist would be committing
an injustice to the area's history if he were to jump to seemingly obvious conclusions without considering the possibility that these artifacts were deposited here from a different area.

Another feature that is of utmost importance while surveying by map is the natural topography around Buffalo Bend. The map indicates slight foothills to the north and south of Buffalo Bend. The hills tend to shelter the area from extreme weather conditions such as high winds. The surrounding area also has a lot of greenery. A major reason why the area is so green is that it has good exposure to the sun which indicates that this area might have been a good agricultural center for earlier inhabitants. And because the hills are to the north and south of Buffalo Bend, the area is exposed to the sun moving east to west almost all day long. These are the types of features that a pre-historic or historic culture would want to have. So it's quite possible that people would have lived here. But, there are other aspects of Buffalo Bend that would lead the survey archaeologist to believe that past cultures have lived here.

Through the middle of Buffalo Bend runs a road which is familiar to the Lexington area, route eleven. Today it's a heavily used interstate road and heads north and south. In historic and possibly pre-historic time, route 11 was probably a large path or passage in which animals as well
as people travelled. The point is obvious that where people and large numbers of animals travelled, there will also be places that the travellers stayed. In this case, Buffalo Bend stands in the middle of this path and seems to indicate that people did settle in the area. Besides the road dissecting Buffalo Bend, the map also indicates structures standing in the area. By looking at a topographical map we can see structures but we can't be sure whether they are new buildings or maybe old shacks but it does indicate that someone has built there. To be sure, the surveyor would visit Buffalo Bend and walk through the area to see whether there is some evidence of historic structures. But, by first studying topographic maps, the surveyor is at an advantage because he knows beforehand that there will be buildings or shacks in the area.

The last category which needs to be investigated is the name of the site we're interested in. The name of an area will often supply some information about what people were doing when they inhabited the area. Another possible reason for the area's name would be some specific natural feature. But the area at hand is Buffalo Bend. I believe that there are a pair of reasons behind the name of this area. First, the obvious name Buffalo probably tells us that buffalo at one time either grazed there or used it as a path. And second, the word Bend is also fairly obvious in that Buffalo Bend is
located on a curve. The meanings behind the name Buffalo Bend aren't in the least profound, but when those people who inhabited the area and named it, they did so for familiar reasons. Buffalo were probably there and the bend existed. Its simplistic but practical.

The two exercises, Limekiln Bridge and Buffalo Bend, just completed are similar to what a survey archaeologist would do prior to visual and instrumental survey. But even before this analysis of topography takes place, information about the site should be gathered. As you can see this exercise of studying the topography as well as other features is only a small step in the process of an expedition. One would also have to realize that a site will be examined with different methods depending on whether it is to be a salvage archaeological site or a complete, excavated archaeological site. Hand in hand with this idea is the time allotment for the project. Obviously the more time allocated to the project will result in increasing the precision of the project. That is to say, more time may be spent mapping, cataloging artifacts, etc. In any case, the use of topographical maps in archaeology, prior to excavation, has saved time as well as funds for all those involved.

I pledge, on my honor, that I have neither received nor given aid on this paper.

[Signature]
Field Methods In Archaeology, Text for Anthronology 231.

Webster Dictionary.