

Petroglyphs Favor the Aikens and Witherspoon Theory of Numic Expansion in the Great Basin

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INTRODUCTION

This paper is the work of a retired scientist who for many years has thought that archaeology was one of the noble sciences. He has viewed those who have the degree of Ph.D. in archaeology with awe, feeling that they were working in a field where, to be complete, one had to know everything and be the ultimate scientist. He felt that archaeology was a pure science very similar to astronomy where the only goal of the practitioners was to improve mankind's knowledge of the world around him. He was discussing a book published by a couple of very well known archaeologists with archaeologist friends. He complained that the book contained a very unscientific approach to the subject of the book when one of his friends turned to him and said:

"What makes you think that Ph.D. archaeologists are scientists?"

I was speechless. Yes, I am the retired scientist. I had no reply. As soon as I could, I went to the reference books I had at hand and found the following definitions of archaeology:

archaeology The science which treats of antiquity. . . *Universal Dictionary of the English Language, Twentieth Century Edition. Volume 1. P.F. Collier & Sons. 1902.*

ARCHAEOLOGY is at the same time a science and an art. It is our should be a scientifically ordered branch of knowledge professed by men of truly scientific training . . . *The Encyclopaedia Britannica, Fourteenth Edition. Encyclopaedia Britannica Inc., 1937*

archaeology 1. The study of past human life and activities, as shown by the study of relics, monuments, etc., of ancient peoples. 2. The materials of this science; . . . *Webster's Collegiate Dictionary Fifth Edition. G. & C. Merriam Co. 1943*

archaeology the study of antiquity; particularly the scientific investigation, study, and classificatikon of the history, use, and meaning of prehistoric antiquities of every kind; . . . *Webster's New Twentieth Century Dictionary of the English Language, Unabridged. 1950.*

- archaeology** 1. The scientific study of the people, customs, and life of ancient times. *The World Book Dictionary Doubleday & Company, Inc. 1970*
- archaeology**, also spelled ARCHEOLOGY, the branch of learning concerned with study of the material remains of man's past. *The New Encyclopaedia Britannica, Encyclopaedia Britannica, Inc., Fifteenth Edition. 1988*
- archaeology** the study of prehistory and of ancient periods of history, based upon the examination of their physical remains. The body of knowledge obtained from this. *The New Lexicon Webster's Dictionary of the English Language, Lexicon Publications Inc., 1989.*

I noted that all definitions up to and including the year 1970 referred to archaeology as a science so my presumption that Ph.D. archaeologists were scientists wasn't too bad. However, neither of the post 1970 definitions mention science in connection with archaeology. Archaeologists have apparently become artists instead of scientists. Having been schooled in the scientific method and understanding that complete objectivity is the goal of every scientist I am beginning to realize why archaeologists, and particularly petroglyphologists, are no longer considered to be scientists. Objectivity is absent in many of the professional publications I have studied.

Because of my respect for the profession of archaeology and my fear of being considered an intrusive outsider, I have refrained from attempting to publish any of my findings until now. The careless science that I see in professional archaeological publications, however, gives me courage to proceed. Perhaps my naiveté concerning archaeology will not be quite so noticeable as I had feared. I have spent fifteen years intensively studying the petroglyphs of southwestern Idaho and less intensively studying the petroglyphs of Utah, Nevada and elsewhere. The paper I present here is a partial result of these studies and is in two parts. The first part has a solid scientific footing and I feel the conclusions reached in that part are absolutely sound. In the second part some subjectivity creeps in. I am not prepared to defend against all comers the complete boundary of the pre-migration Shoshoni homeland that I offer. I do, however, offer support for the boundary chosen in several different ways in compensation for that shortcoming. The conclusions I reach in this paper are at odds with some of the current archaeological doctrine. They are the result of a new approach to some of the problems in archaeology that have been debated for nearly forty years. They have been reached by me as a result of my scientific study of petroglyphs in Idaho and a less scientific study of petroglyphs in Nevada and have been reached without aid, advice, or consultation with others. They are my sincerely held beliefs.

CURRENT THEORIES

The various theories of the Numic expansion are probably well understood by most readers but let me briefly explain to those who may not know, a very short abstract of the pertinent Numic expansion theories. The theories have been formulated to explain how the Indians who lived in the Great Basin and neighboring areas at the time of first contact with white

men, got to be where they were and when they arrived there. Sidney Lamb (1958), a linguist, proposed a theory that attempted to answer those questions.

Sidney M. Lamb studied the prehistory of the Numic people in the Great Basin. Through the use of linguistic theory he determined to his satisfaction the approximate time when each of the Numic subgroups split from the others and became a separate language and hence a separate culture. He feels that the Numic people began to break up and spread into the Great Basin about one thousand years ago and that the northern and eastern parts of the Great Basin were not occupied by Numic people until about five hundred years ago. In a cautionary move, he states that "... lexicostatistic figures must be considered **very rough approximations**, subject to such **wide margins of error** that they can be used only with **very great caution**..." (emphasis mine). With this warning, and, using broad brush strokes, his theory states that three great groups of Indians in the Great Basin, the Paiute, Shoshoni, and Ute started about one thousand years ago, marching in three great, diverging columns from an area near Death Valley. They proceeded from that point, and in a very short time occupied northeastern California, southeastern Oregon, southern Idaho, all of Nevada, all of Utah, and nearly all of Colorado, Wyoming, and Montana, and part of southern Alberta, Canada. (See figure 1.) This is a feat that would have made Napoleon proud and is so stupendous as to cause a conservative person to wonder if it really happened as described by Lamb.

Most archaeologists seem to have reacted to the theory of Sidney Lamb much as the children of Hamelin did to the Pied Piper although a few dissenting voices have been heard. So, in addition to the theory of Lamb, I want to discuss the theory of Aikens and Witherspoon (1986), two of the dissenters. The two theories have points of agreement but on some points they have sharp differences. The principal difference between the theory of Aikens and Witherspoon and that of Lamb is that Aikens and Witherspoon propose a much larger original Numic homeland. They suggest that the Great Basin Numic homeland extended from about north-central Nevada southward into the Owens Valley region. They suggest that an expansion from that much larger area then occurred much as described by Lamb.

Theories are guesses made by someone who is attempting to explain existing evidence on a particular subject. If all the evidence is adequately explained by the theory, then confidence is developed in the theory and it is

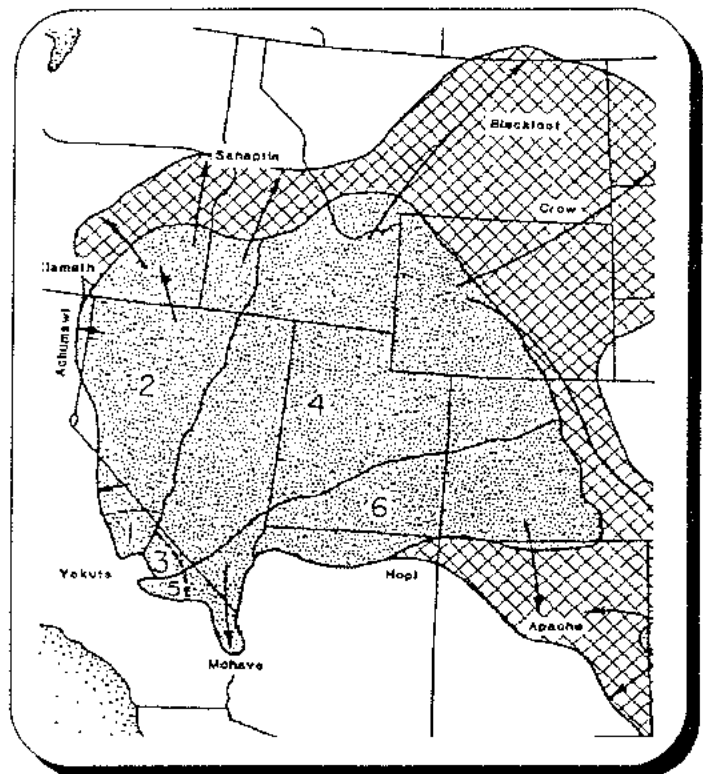


Figure 1. Location of various language groups in the late 1800's. 1. Monache; 2. Northern Paiute; 3. Panamint; 4. Northern Shoshone; 5. Kawiisu; 6. Ute-Chemehuevi. The shaded area represents the current distribution--the crosshatched area the maximum extension. After Sutton.

widely accepted. If all the evidence is not explained by the theory, which is the case here, then either the evidence must be discredited or the theory must be modified so that it agrees with the evidence. This process is the very heart of the scientific method.

When two theories differ to the extent that the theory of Lamb and the theory of Aikens and Witherspoon do, some test should be able to discriminate between the two. I propose that a study of petroglyphs is a key to differentiating between the two disparate theories or perhaps introducing a new one.

PETROGLYPH EVIDENCE

It should be recognized, when studying petroglyphs, that each culture has its own unique petroglyph style and that style is characteristic of the culture that made it and is just as distinctive as language or handwriting. To understand that there are a wide variety of styles, one has only to compare the Horseshoe Canyon style of pictographs, also called Barrier Canyon, (Figure 2) with the petroglyphs of the Shoshoni in southern Idaho (Figure 3). (The author follows the precedent of Mallory and Steward in calling all rock inscriptions petroglyphs unless specifically referring to a painted inscription which he then calls a pictograph.) While this is an

extreme example, discernible differences exist even between such closely related groups as Paiute and Shoshoni. Styles are identifiable and styles match cultures. It is assumed here that the boundaries of a petroglyph style are also cultural boundaries.

I have limited my objective study of petroglyphs to those which are in the southwestern corner of Idaho. My study area (See figure 4) covers that portion of southwestern Idaho west of Twin Falls and south of Weiser, an area of approximately 20,000 square miles. In this area I have located and recorded 85 petroglyph sites containing some 1200 panels. While I was working in the study area, I discovered some 40 additional sites that have not yet been recorded. The details of my recording methods are contained in another paper (Curtis 1994) and my analysis is similar to that which was done by Baxter and Pettigrew (1985).



Figure 2. Horseshoe Canyon (Barrier Canyon) pictographs located in Eastern Utah.



Figure 3. A typical pre-migration Shoshoni petroglyph in Southwestern Idaho. This site also contains cupules and corner worked ripples.

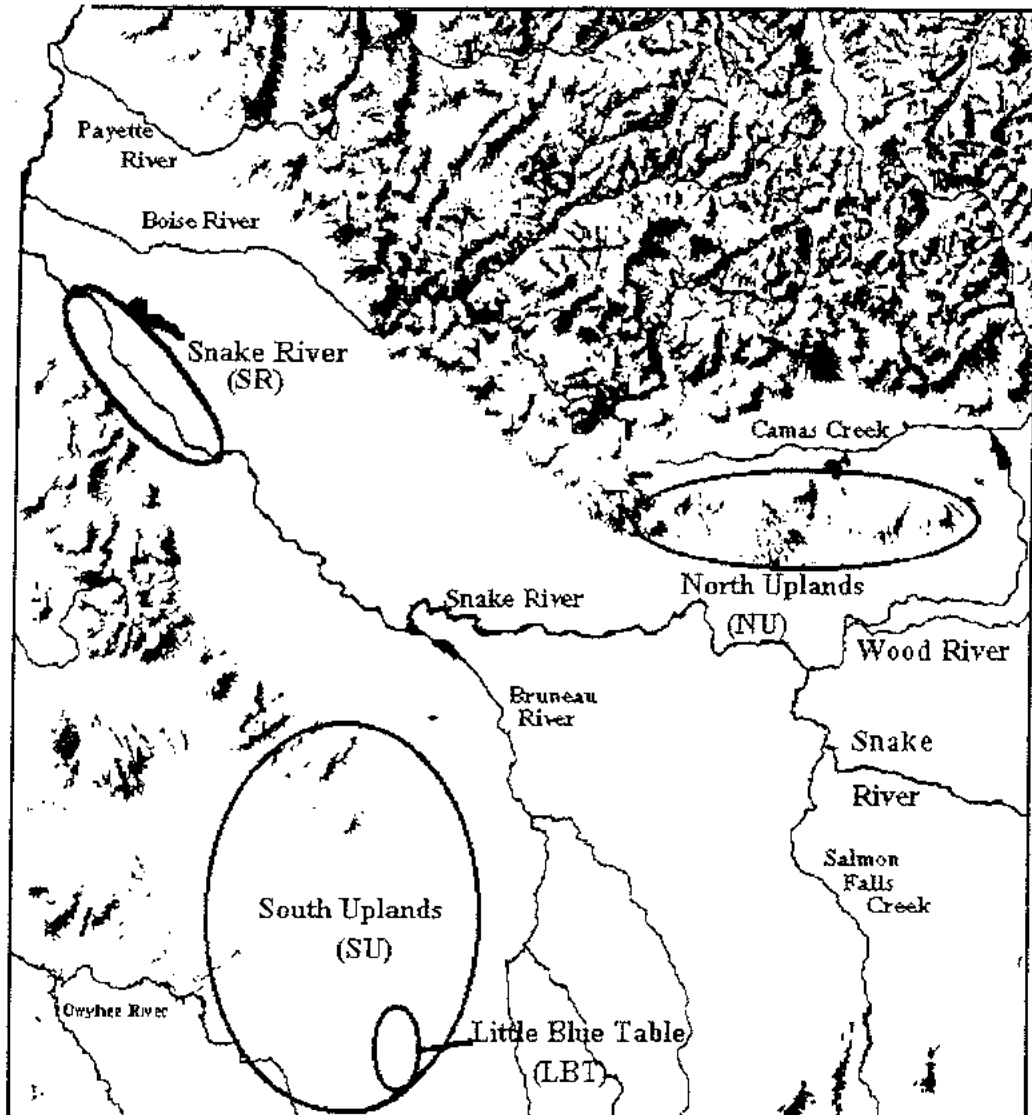


Figure 4. The study area, which is the southwestern corner of the State of Idaho, shows the regions in which most of the petroglyphs in southwestern Idaho are found. It is about fifty miles between each of the study areas except Little Blue Table which is a subdivision of the South Uplands study area.

All the data I have gathered has been placed into a computerized spreadsheet. The size of my data matrix of sites, elements, and other data is 150 columns by 1200 rows so it is impractical to present that material in this document. I can summarize my approach by saying that I have carefully defined all the elements that I have encountered and used in my analysis and illustrated most of them. Dots, circles and straight lines do not really require illustration. Careful definition is done to eliminate, or at least substantially reduce, subjectivity in the recording process. Recording petroglyphs is a lot like looking at clouds in the sky where some people see castles and elephants while others see sailing ships. It is my desire to make the definition of the elements sufficiently unambiguous so that any other petroglyphologist could go

to the sites I have recorded, record them using my list of elements, and get the same results that I have achieved. I think that I have accomplished that result.

ANALYZING PETROGLYPHS

I presented a paper (Curtis 1990) at the Great Basin Anthropological Conference of 1990 in which I attempted to demonstrate that the petroglyphs in the North Uplands region were different from those of the South Uplands and Snake River regions. I was confident that I had offered a satisfactory proof of my thesis, but my mentor, Dr. Thomas J. Green, then Idaho State Archaeologist, insisted that I had done it all wrong. He contended that the proper way to do it was to place all of my data in a computer and let the computer draw the cultural boundaries. One does not argue with one's mentor. This paper is a result of "doing it right."

My analysis here consists of comparing the content of petroglyph sites in southwestern Idaho and placing sites containing similar petroglyphs together in a group. By determining the physical location of the groups so located and considering ethnographic records for the locations thus determined, cultural boundaries may be located. A site is a definable location containing one or more petroglyph panels. Usually petroglyph panels cluster together and each cluster is considered to be a site if it can be defined in such a way as to separate it from other sites. In my analysis, I chose to consider only those sites that had 10 or more panels, feeling that a certain minimum amount of data was necessary to make a good comparison. In some cases, I combined nearby sites with less than 10 panels each to make a combined site having enough panels. My mentor had suggested that I should be a "splitter" instead of a "lumper" when it came to defining sites. When I had completed my selections and combinations, I had 31 sites to compare. When I record petroglyphs my recording unit is the panel. Panels usually define themselves being one face of a boulder or one section of a cliff where the line dividing panels is obvious. Usually a panel can be recorded in one photograph but occasionally much larger ones are found. In my spreadsheet, the data from one panel is recorded in one line of the spreadsheet. To obtain the data for the sites, I combined the data from the panels that together formed the sites. My comparisons here are based upon sites and not on panels. The largest site had 87 panels and the smallest has more than 10 panels. My data matrix for comparing sites is shown in Table 1.

The program I used to analyze this matrix was the cluster section in the statistical program *Systat* of Systat Inc. I entered my matrix of data into this program and gave the command to cluster. The result of the clustering is shown in Cluster 1 at the end of this paper. The sites are listed in a column on the left-hand side of the page. They are identified by a site number and a suffix that indicates the region in which they are located. They are rearranged by *Systat* and placed in an order such that the two sites adjacent to each other in the cluster diagram are more similar to each other than they are to other sites in the list. The degrees of their differences are indicated by the length of the horizontal line connecting them with other sites in the list. Similar sites are grouped together in clusters and, as with individual sites, the degree of difference between clusters is indicated by the length of the horizontal line connecting clusters. To locate significant clusters, the chart can be divided into two parts by a vertical line. If a vertical line is drawn through the single horizontal line at the right of the chart, the universe is divided into two groups: petroglyphs and everything else. If the line is moved to the left until it intersects two horizontal lines, it indicates that the world of petroglyphs is divided into two

intersects two horizontal lines, it indicates that the world of petroglyphs is divided into two clusters: the Little Blue Table cluster and all other petroglyphs. Moving the vertical line to the left until it intersects five horizontal lines provides a significant division of clusters.

It will be noted that four principal clusters are shown with one outlier, the Bruneau River site, (BRE-SU?). It is described by Erwin (1930) as follows:

Twelve miles from the town of Bruneau, on the west side of Bruneau River, near its junction with the Snake are two groups of petroglyphs on small boulders. They are in open country upon two knolls. The group to the East contains eighteen inscribed boulders, while three hundred yards due west, the second group contains fourteen. There is an absence of figures in the writing, except on three rocks, where human forms are found. The spoked wheel occurs once, dots within the circle several times, and dots are numerous, but the greater number of these marks are curvilinear.

This site is now under the waters of C. J. Strike reservoir and is unavailable for analysis. However, during the construction of C. J. Strike dam, Idaho Power Co. had 15 of the 32 boulders present removed and placed on display in a small park near the dam. No documentation of the site was done before the site was flooded and no records were kept. The selection of boulders does not appear to be representative of the site based upon the records of Erwin (1930). The clustering was done using data from the fifteen boulders or parts of boulders that were moved. The sample may not represent the site well so the result of the clustering must be used with caution. The result shows the Bruneau river site to be an outlier, which is not surprising.

The top cluster on the chart is the Little Blue Table cluster. Little Blue Table is a rather unusual name that may require some explanation. Blue Creek is a tributary of the Owyhee River. Little Blue Creek is a tributary of Blue Creek. The headwaters of Little Blue Creek are on a mesa. The Spanish influence of the Southwest did not quite reach Owyhee county so in this part of Idaho mesas are called tables, the English translation of mesa. So the mesa on which Little Blue Creek heads is called Little Blue Table. It is a classic mesa that divides the watersheds of the Snake, Bruneau, and Owyhee Rivers. It is surrounded by lava cliffs on which are inscribed most of the Little Blue Table petroglyphs. The Little Blue Table cluster also contains the Pole Creek site (PCE-SU) that is also in the South Uplands about 30 miles from Little Blue Table and at about the same elevation. Thus it is not unreasonable that it be clustered with the Little Blue Table sites.

One other South Uplands site clustered with the Snake River group and one was an outlier. These results agree nicely with statements made by Murphy and Murphy (1960 p. 321). *"One informant said that Silver City, Idaho, was within the limits of Paiute territory; according to other informants, the Bruneau River Valley was definitely within the Shoshone migratory range. It seems evident that southwest Idaho was not much used by either the Paiute or Shoshone, and, while both groups entered the area on occasion, boundaries could hardly have been narrowly defined."* The clustering chart gives no indication of two styles of petroglyphs on Little Blue Table.

The next cluster down on the chart is the one containing the recent North Uplands sites. The term "recent" is used here as opposed to "old" with the date of the dividing line between the two being unknown. We know that "recent" includes all panels containing horses or guns or elements associated with them, so the dividing line between recent and old North Upland clusters is probably that dividing the Numic from the pre-Numic elements. Everything appears to be in good order in this cluster except for the inclusion of site C35-EL. This site is located

about 30 miles from the boundary of the NU region in a northwesterly direction and across the Boise River from the NU region. It contained three shield figures which are one of the defining elements for the recent North Uplands cluster. The shield figures in C35-EL are clearly of a style that is different from those in the remainder of the North Uplands cluster, apparently older and more primitive. They were considered by me to be a predecessor of the shield figures in the more recent sites. They may have been enough different from the recent shield figures to have warranted definition as a different element but at the time they were recorded this seemed presumptuous. As an experiment, I deleted the three shield figures at site C35-EL from the master matrix and ran this matrix through the clustering program again. The result was that C35-EL was moved from the recent North Upland cluster down to the Snake River cluster just below. This seems to be a much more appropriate place for it.

Below the recent North Uplands cluster is a small cluster containing all the Snake River sites with one South Uplands site, (DCE_SU), included. The Snake River valley, elevation 2500 feet, is a somewhat inhospitable location in the summer being very hot and dry. It is understandable that residents there might seek comfort in a higher elevation site. The Dry Creek site (DCE-SU) is on a spring-fed stream at an elevation of 5000 feet and it is reasonable that residents should travel from one location to the other depending upon the season. The two locations are about 45 miles apart.

The bottom cluster is the old North Uplands cluster. It may not seem right that a site called the Little Horse site (LHE-NU) be included in an old cluster. It happens that all the sites in the North Uplands have been occupied for a long time and both old and recent petroglyphs appear at most, if not all, sites. An outstanding petroglyph showing a shield-bearing warrior astride a horse, with a total height of about three inches, is at this site, so it seemed quite appropriate to name the site the Little Horse site. Since it has been shown that this is an old site, the name does not seem quite so appropriate because the presence of horses was one of the criteria used to indicate a recent site.

In marked contrast to the Little Blue Table results, the North Upland sites form two separate and distinct groups. This was surprising to me since, when I was recording the sites in the North Uplands, I had concluded that this was one of the most homogeneous groups in the study area. I had recognized that there were old petroglyphs and recent petroglyphs but had assumed that the different styles were just evidence of metamorphosis of style as time passed. In addition, most of the sites seemed to have both old petroglyphs and recent petroglyphs indicating to me a long and sustained occupation. Since my recording of the North Uplands sites took place over a period of years, I did not notice that, although nearly all the sites were mixed sites, some were predominately old and some were predominately recent. After seeing the results of the first clustering, I prepared data for the list of sixteen sites that were actually in the North Uplands region and submitted them to the *Systat* program for clustering. The results are shown in Cluster 2 and the division of sites is identical to that obtained with the original larger clustering. To better understand the reason for the results obtained, I prepared the information shown in Table 2. Here I separated the North Uplands sites into two separate groups as indicated by the clustering charts and listed the various elements and their numbers and their sums in each group.

In examining the results of the summaries of element numbers in each group it is noted that 13 horses are listed in the new group (column 76) while only three horses were listed in the old group. Horses provide an excellent time marker for petroglyphs since they were introduced by the Spanish and did not arrive in Idaho until about 1700. Guns are another good time

marker. In columns 90 through 95, 16 weapons are listed in the new group including two guns. In the old group there are only two weapons and they are rocks. The two rocks were held by shield figures which are frequently associated with horses and guns and hence should be considered as recent elements. The two rocks should thus not be considered to be old elements. So we should properly consider that recent petroglyph panels contain 18 weapons while the old group of panels contain none. Since horses and guns are relatively recent arrivals in Idaho, sites on which horses and guns appear must be recent sites. The absence of weapons in the old sites may indicate the peaceful nature of the unknown inhabitants and indicate that the Shoshoni had an easy time occupying their territory.

Repatination of elements on the panels can also provide a clue as to the age of the panel. Dated panels have been found in the Mt. Bennett Hills area that are over 100 years old. No evidence of repatination is apparent on the glyphs of these panels. It stands to reason, therefore, that panels on which the glyphs show evidence of repatination must be in the order of 500 to 1000 years old. If significant repatination occurs they could be much older. Records were kept of the degree of repatination of elements on the panels. A scale from one to ten was adopted where one was barely detectable repatination and ten was repatination to a shiny blue-black color that was the maximum found in the area. Care was taken during recording to ensure that any coloration of the glyph was due to repatination and not because the glyph had not completely penetrated the preexisting patination. Thus the repatination was recorded only for glyphs that were inscribed in the rock deeply enough to penetrate completely through the existing patination. Repatination was not found on and not recorded for all panels. The new group contained 268 panels and the total of all the patination numbers recorded for that group was 138. The old group contained 180 panels and the total of all the patination numbers for that group was 250. Even without adjusting for the lesser number of panels, these numbers show that the old group was much more heavily repatinated, and hence older, than the new group.

Shield figures, P-shield figures, and sectioned circles are frequently associated with each other and it is felt that these three elements represent the same concept, namely that of a warrior. P-shield figures and sectioned circles seem to be abbreviated or unfinished shield figures. Shield figures in the new sites outnumber shield figures in the old sites by 132 to an adjusted 39 (column 58) so shield figures are an almost certain marker of a recent site. P-shield figures in the new sites outnumber those in the old sites by 120 to an adjusted 39 (column 60). Sectioned circles in the new sites outnumber those in the old sites by 77 to an adjusted 22 (column 23). All of these facts indicate that we do indeed have a group of predominately old sites and another group of predominately recent sites and that *Systat* has grouped them appropriately.

The circular-limb anthropomorphic figure (Figure 5) is the most numerous element in the North Uplands and is the dominant element in the old group. Similarly, the shield figure such as shown in Figure 6, is the second most numerous element in the North Uplands and is the dominant element in the new or recent group.

An even better way to illustrate the differences between the two groups is, for each element, to subtract the number of elements in the new group from the number of elements in the old group and then display the results in descending order as has been done in Table 3. The important numbers are at the top and bottom of this list and all elements whose difference has an absolute value less than five have been deleted. These omitted cases are the ones where the numbers of elements were approximately the same in each group and hence were not important in distinguishing between groups. The elements at the top of the list are those which

in distinguishing between groups. The elements at the top of the list are those which predominate in the old sites whereas the elements at the bottom of the list are those which predominate at the new sites. It is interesting to note that most of the elements at the top of the list are rectilinear elements while most of those at the bottom of the list are curvilinear. This is consistent with the fact that, of the panels with abstract elements in the new sites, 130 contained rectilinear elements while 143 contained curvilinear elements. In the old group, of the panels with abstract elements, 99 contained rectilinear elements while 79 contained curvilinear elements. The numbers in the preceding sentence are actual numbers and are not adjusted. The important fact is that in the sites labeled "old", rectilinear elements outnumber curvilinear elements. In the sites labeled "new" curvilinear elements outnumber rectilinear elements.

A complicating factor is present in the analysis just done. The boundary line between the

Paiute territory and the Shoshone territory is a north-south line that divides Owyhee county into two approximately equal parts.

Petroglyphs made by the two groups are discernibly different. So to do the tests that I have just done, one must stay either in the Shoshoni territory or the Paiute territory. Finding two cultures at the border of the Shoshoni and Paiute regions would cause confusion and negate the validity of the test. Consequently, I have chosen to stay strictly in the Shoshoni region for which I have much better data.

It is inevitable that questions will arise as to the accuracy of this method of comparing petroglyph sites. As an indication of the accuracy, it should be noted that every Little Blue Table site appears in a single cluster. Every

Snake River site appears in a single and separate cluster and that every North Uplands site appears in one of two clusters. No indication of the location of a site or of its age appears in the data given to the computer. Everything given the computer is included in the matrix shown in



Figure 5. Typical Circular Limb anthropomorphic figures from the North Uplands.



Figure 6.. A typical North Uplands shield figure (right) and a P-Shield figure (left).

Table 1. It seems remarkable that, given this data, the computer could divide the sites into clusters that so accurately group them according to their physical locations.

The results obtained by clustering agree with and support the conclusions I reached in the paper I presented at the Twenty-second Great Basin Anthropological Conference in 1990. (Curtis 1990)

NUMIC EXPANSION

The theory of Aikens and Witherspoon (1986) suggests that the Numic people had a homeland that occupied a strip of land extending from the vicinity of Owens Valley up to north-central Nevada for many thousand years. A style of petroglyph exists near the Owens Valley that is similar to that which is found at Fallon, Nevada and in southern Idaho just west of the Bruneau River. While the presence of a single petroglyph style throughout this region may not constitute convincing proof of the accuracy of the theory of Aikens and Witherspoon, it does no damage to their theory. If a different petroglyph style were found in this region it would be convincing proof that their theory was wrong but such is not the case. Although I have not done a completely objective study of the Nevada petroglyphs yet, in fifteen years of a rather intensive study of petroglyphs I have gained a modicum of expertise in the comparison of petroglyph styles. I have attended many "show and tell" sessions on Nevada petroglyphs and have studied the literature including Heizer and Baumhoff's (1984) book with the unfortunate title *Prehistoric Rock Art of Nevada and Eastern California* that apparently introduced the lamentable term "Rock Art" to the lexicon of American anthropologists and archaeologists. (No true scientist should use the term "Rock Art" because petroglyphs were not considered to be art by their makers nor are they considered to be art by most present day Indians. Early investigators such as Mallory (1888) and Steward (1926) and Erwin (1930) did not use this misguided term and we should follow their precedent. Failure to do so is discourteous to Mallory, Steward and Erwin. It also is insulting to the present day Indians by belittling their ancestor's writings by calling them art. In addition any scientist starting a study of petroglyphs by calling them "Rock Art" has already decided what they are and has destroyed any credibility he or she might otherwise have had. The term is useful, however, in distinguishing between the work of a true scientist and that of a journalist, pseudo scientist, or dilettante.)

Based upon my experience and what I have seen, it appears that there is a continuous band containing a single petroglyph style that extends from the Snake River in southern Idaho south through Owyhee County west of the Bruneau river, down through west-central Nevada to the vicinity of Owens Valley and from there over into the Nevada Test Site. This region is illustrated in Fig. 7. It was delineated by taking a map of Nevada, including southern Idaho and placing on that map a dot at the location of every site that appeared to be Shoshoni and a cross at the location of sites which appeared to be not Shoshoni. A smooth line was then drawn which included all the dots and excluded all the crosses. East of this region there is clearly a different petroglyph style. The region thus located includes much of pre-migration Shoshoni homeland. Paiutes are Numic but are not included in this region. The pre-migration Paiute homeland is west of the Shoshoni homeland and could be much larger.

Let me detail a few of the reasons I call this region pre-migration and why I call it the area Aikens and Witherspoon propose as the Numic homeland. I call the region the Shoshoni and why I think it is approximately correct as drawn. That part of the region in question that is located in Idaho, was occupied by Shoshone Indians at the time of first contact with white men.

located in Idaho, was occupied by Shoshone Indians at the time of first contact with white men. (Murphy and Murphy 1960 p.321). They mention repeatedly the Bruneau River Shoshone. The

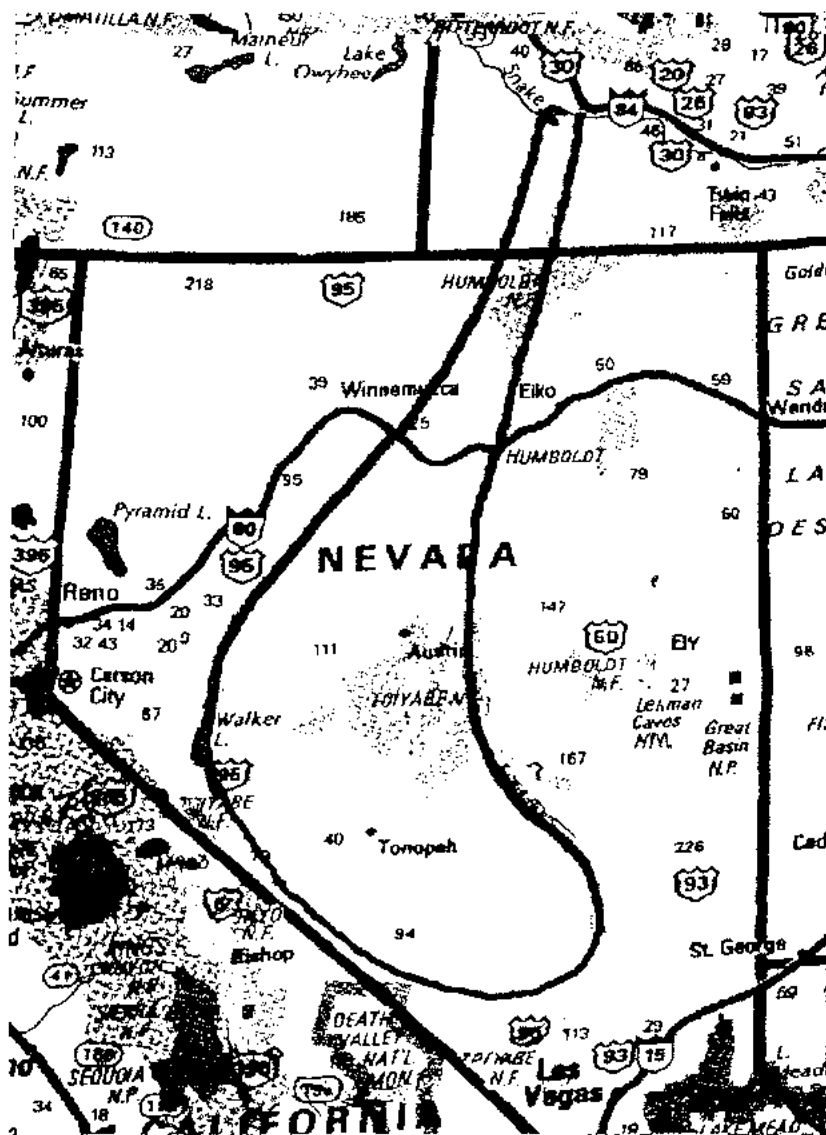


Figure 7. The pre-migration Shoshoni homreland as determined by petroglyph style.

computer analysis I have done indicates that this region has been occupied by just a single culture. The implication is that the Shoshoni have occupied the Bruneau River corridor for many years.

One of the elements found in the sites of the Bruneau River corridor is the cupule. The cupule is called by Heizer and Baumhoff (1984 p. 208-209) the pit part of the pit and groove style. They credit Baumhoff, Heizer, and Elsasser (1958) with naming the style but there they say that the style was named after inspection of a single site. This style clearly seems to be misnamed by them since, in most instances, there is not a groove associated with cupules where they occur. In addition, cupule seems to be a more descriptive name for the style than pit. The cupule is not exclusively Shoshoni but it is very rare in Idaho outside the Shoshoni area. In fact I have never seen it in southwestern Idaho other than in the Shoshoni area. Cupule boulders are found at the junction of the Bruneau and Snake rivers, at Little Blue Table in southern Owyhee county, at a site on Boulder Creek in Elko county just south of the Idaho border, and at the Grimes Point site near Fallon, Nevada, all of which lie in the region identified. Most of the cupules are old. The patination on most is as dark as on the surrounding boulder but recent unpatinated ones are found at Little Blue Table sites. Heizer and Baumhoff (1984 p.234) indicate that some may be as much as 5000 years old. In our modern vernacular a cupule boulder would be called a church. It is a sacred place where people congregate to make offerings to the spirits and to pray.

A comparison has been made between the Paiute sites of western Idaho along the Snake River and the Shoshoni sites on Little Blue Table. The comparison was done by subtracting the elements in the Paiute sites from the elements in the Shoshoni sites element by element. The results of this operation are shown in Table 4. All differences having an absolute value of less than 5 have been omitted to save space. The elements that characterize Paiute sites when compared with Shoshoni sites are at the top of the page while those that characterize Shoshoni sites when compared with Paiute sites are at the bottom of the page.

In addition, the ratio of panels containing rectilinear elements to those containing curvilinear elements and the ratio of panels containing abstract elements to those containing representational elements have been computed for each region. It can be seen that large differences exist between the two groups based on these ratios. Elements found at sites within the Shoshoni region, which tend to differentiate them from Paiute sites, are the straight line, dots in lines, curved lines, meanders, serpentine, etc. Again, these elements are not exclusively Shoshoni but are found more frequently at Shoshoni sites than at Paiute sites.

In addition to the evidence used to draw the boundary of the Shoshoni homeland, nine bits of mostly anecdotal evidence were discovered after the boundary was drawn. None of these bits of evidence are convincing proof of the accuracy of the boundary but when we find nine items, every one of which fits the boundary perfectly, they begin to weigh down on the side of

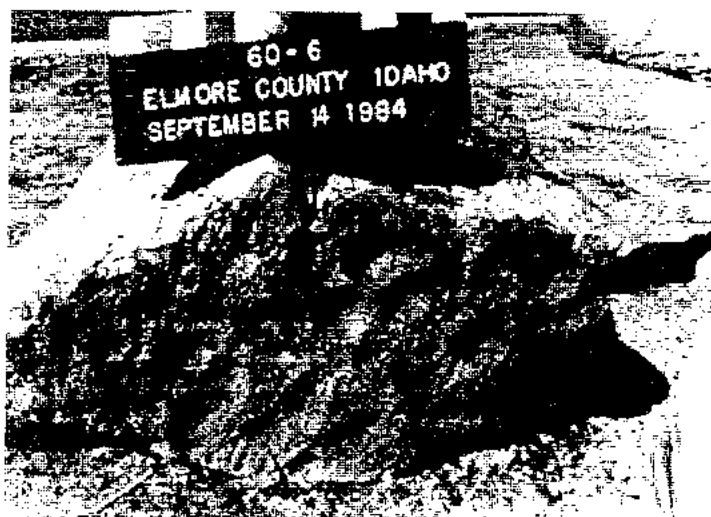


Figure 8. Cupule boulder from the junction of the Bruneau River and the Snake River.

truth. If we put aside the theory of Lamb, no other evidence conflicts with the regions I have drawn. It is likely that nothing short of doing the kind of research in Nevada that I have done in Idaho will quiet the disbelievers. But father time is weighing heavily on my shoulders and it is unlikely that I will do that work.

ANECDOTAL EVIDENCE

Sutton (1990) has collected legends and tales from various Great Basin peoples. In the Shoshoni tales, every place mentioned (Lida, Beowawee, and Owyhee, all in Nevada) except Saline Valley, California, are in the region designated herein as being Shoshoni. Saline Valley is near Death Valley and just outside the Shoshoni area. It is near the Coso style petroglyph area and may contain similar petroglyphs. The Coso petroglyphs are definitely not Shoshoni.

Bettenger and Baumhoff (1982) in a criticism of Goss state: *"What he does not explain in particular is why the same Shoshoni language spoken at Tonopah, Nevada was also spoken on the Snake River, Idaho, while it differed substantially from the Mono Lake Paiute language only a few miles west of Tonopah."* Perhaps if Goss, Bettenger, and Baumhoff were to examine the area I have identified as Shoshoni and accept it, their problem would be solved. Both Tonopah and part of the Snake River lie in the Shoshone territory I have identified and no obstacle prevented the Nevada Shoshoni from moving to the Snake River. The boundary of the Shoshoni territory lies between Tonopah and Mono Lake and a different group of Indians (probably Northern Paiute) occupied the Mono Lake region so it is reasonable that they should speak a different language.

In their extensive discussion of southern Idaho Indians, Murphy and Murphy (1960 p.321) state: *"The Shoshone of the middle Snake River resemble the Nevada Shoshone in social, political, and economic characteristics more than does any other part of the Idaho population, and Steward lists them with the Western Shoshone for this reason. They had few horses and took no part in the buffalo hunting activities of their neighbors of the Fort Hall plains, and warfare was virtually nonexistent."* The middle Snake River according to Murphy & Murphy extends from the mouth of the Bruneau River east to American Falls. This observation is quite well explained by looking at Figure 7 showing the pre-migration Shoshoni homeland. As the pluvial period in central Nevada ended and their territory was desiccated, the Shoshoni apparently migrated northward, passed through the Owyhee County funnel and emerged at the Snake River from which point they expanded to fill most of the Snake River basin.

Trimble (1989 p. 80) presented a map showing the floristic regions in the Great Basin that is shown in Figure 8 in part. When the pre-migration Shoshoni area is superimposed

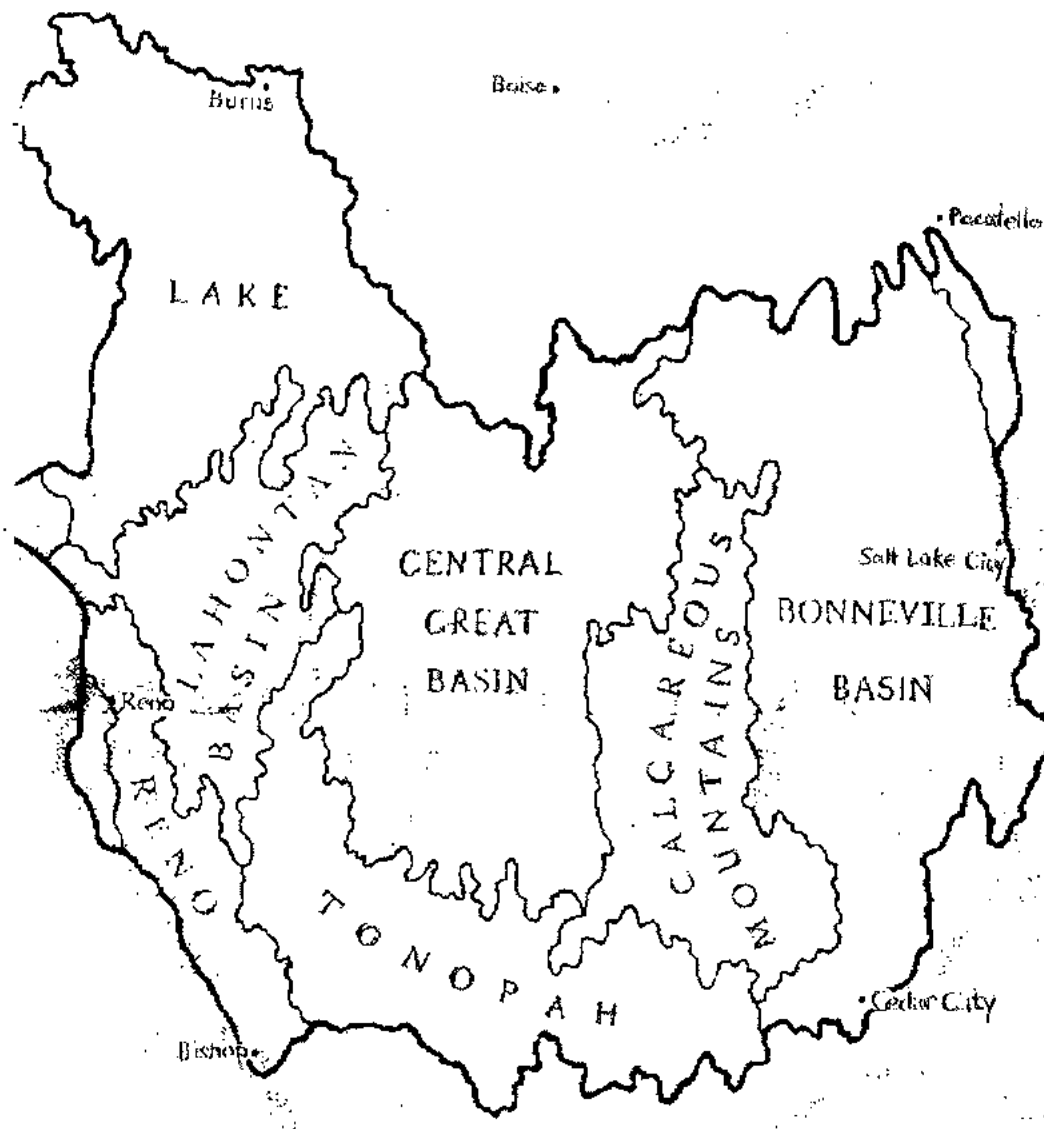


Figure 6. Floristic regions in the Great Basin. After Trimble.

upon this map (see Figure 9) an interesting coincidence is noticed. The south and west boundaries of the pre-migration Shoshoni area and the south and west boundaries of the Tonopah floristic section nearly coincide. It seems reasonable that a floristic boundary and a cultural boundary should coincide.

Other interesting observations can be made when the pre-migration Shoshoni area is superimposed upon a map showing the pluvial lakes in Nevada. (See Figure 10) As Nevada desiccated the Shoshoni were held in the driest area of Nevada.

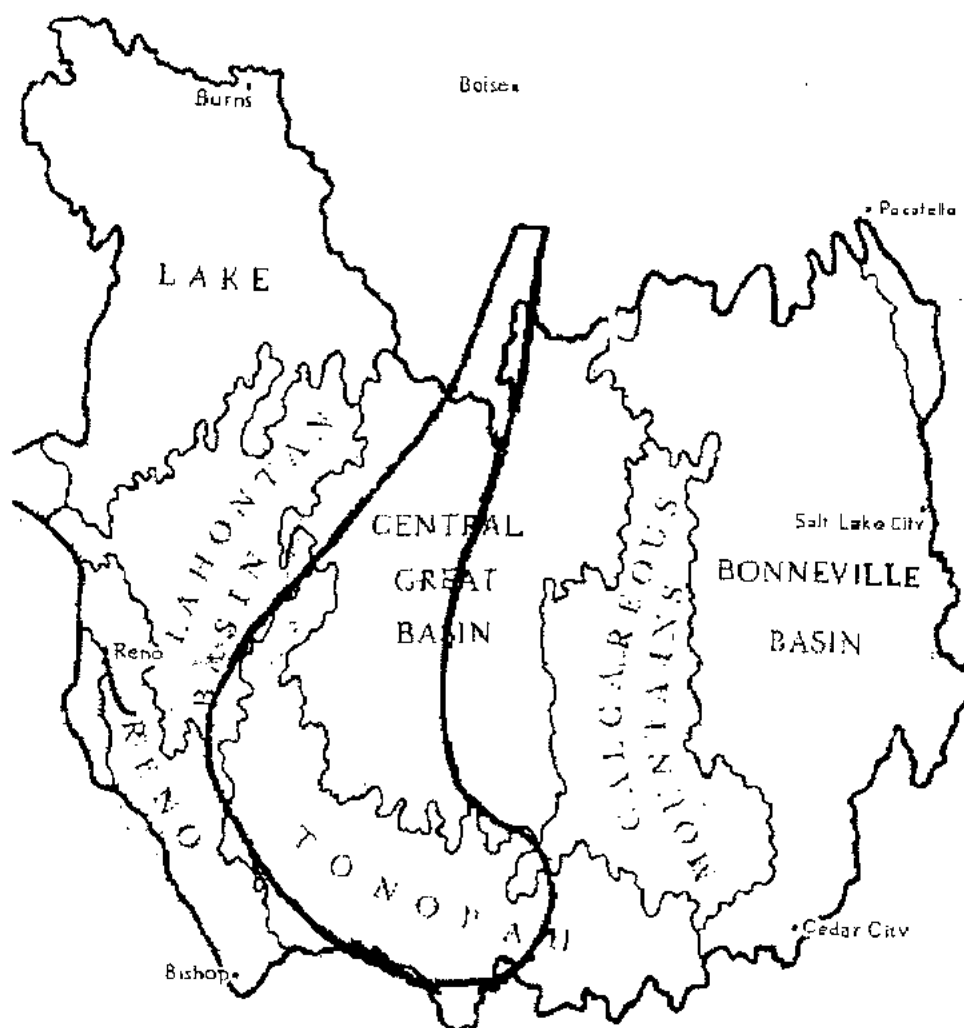
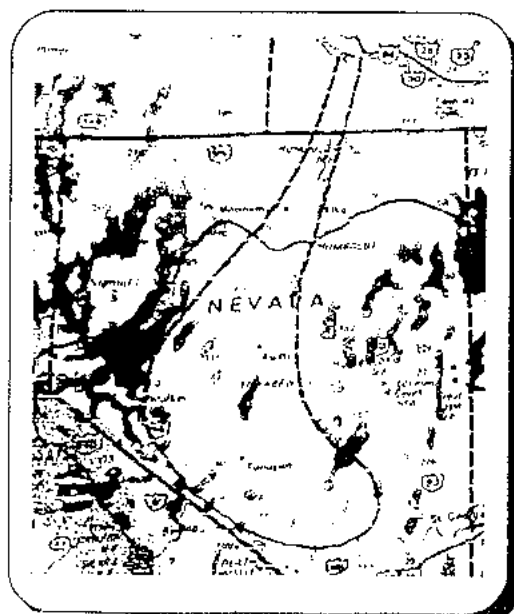


Figure 9. Floristic regions in the Great Basin with the Shoshoni homeland superimposed.

Figure 11 shows that part of the Great Basin in Nevada which is above five thousand feet. The high ground is shown in white, the lower elevations in black. Figure 12 shows the pre-migration Shoshoni homeland superimposed upon the previous map. It is clear that the Shoshoni occupied most of the high ground in western Nevada. One can look at Figure 11 and almost see the outline of the pre-migration Shoshoni homeland.

Figure 10. (Right) Map showing the pluvial lakes in Nevada with the Shoshoni homeland superimposed.



If one is willing to speculate a bit, a plausible answer can be given to another puzzling question. The Bannock of eastern Idaho, who speak a language indistinguishable from that spoken by the Oregon Paiute (Murphy and Murphy 1960 p. 315), are isolated in a sea of Shoshoni-speaking Indians. They were at least 200 miles from the nearest group who spoke their language. The question is, "How did they become isolated?"

We know that the Paiute have occupied the well-watered lacustrine environment of western Nevada, Northeastern California, and southeastern Oregon. We know that the Paiute moved to occupy southwestern Idaho. If we can now speculate that the Paiute movement into

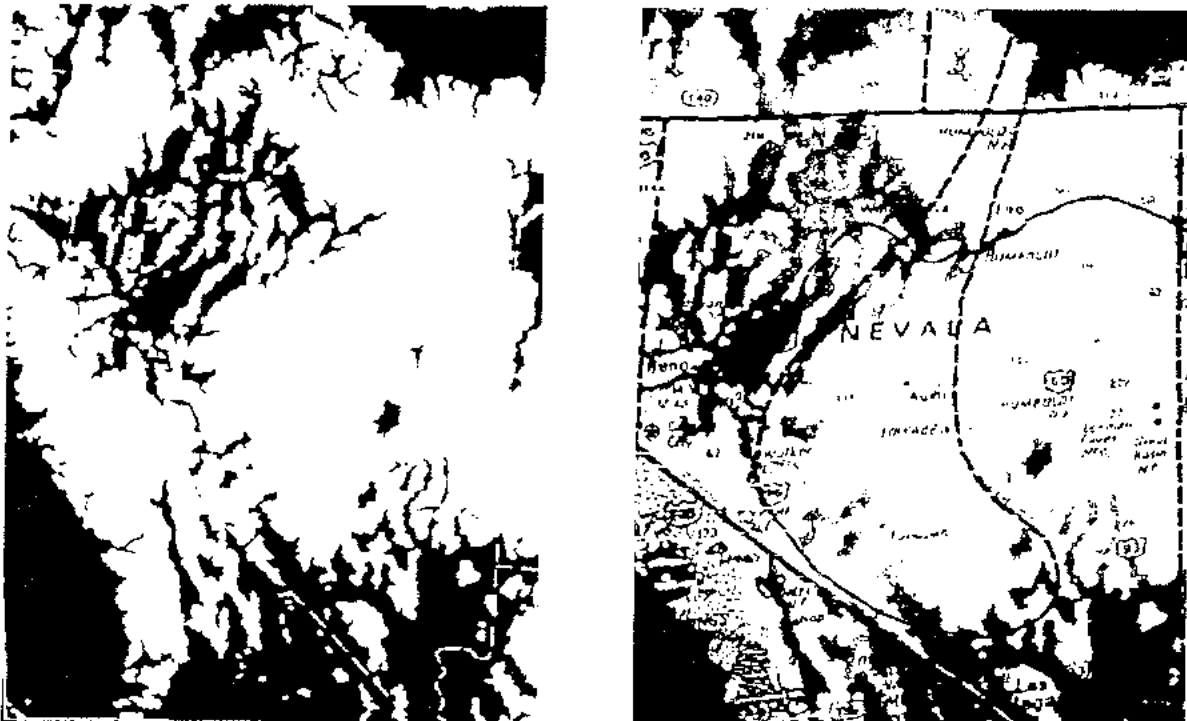


Figure 11 (left) shows a map of the western Great Basin where the land which is higher than 5000 feet is shown in white. Figure 12 (right) shows the same map with the Shoshoni homeland superimposed on it.

southwestern Idaho preceded the Shoshoni movement into south-central Idaho it is possible that the Paiute movement extended up the Snake River valley to eastern Idaho where the Bannocks are now found. Let us now suppose that further desiccation of Nevada or other factors drove large numbers of Shoshoni from their central Nevada homeland up through the Owyhee county funnel and onto the middle Snake River. They arrived in such numbers that they cut off the eastern Idaho Paiute from the western Idaho Paiute. The eastern Idaho Paiute, now Bannock, would be isolated and the present situation would obtain.

The eastern boundary of the Shoshoni region was determined mostly by sites that were specifically not Shoshoni. One of these is the Hickison Summit site east of Austin on highway

50. This site is discussed at some length by Heizer and Baumhoff. (1975 pp. 38-40). The site is characterized by the fact that almost the only representational figures at the site are depictions of female genitalia. (Heizer and Baumhoff call them deer tracks. p.386) These elements are illustrated in Figures 13, 14, and 15. Zancanella and Amme (1988) report on a similar site farther east of this site at the north end of the White River drainage. In their words: "*The most common element by far, however, is the recurrent representation of anthropomorphic stick figures. In fact, they compose 99% of all representational forms, and approximately 70% of the total number of elements. One of the unique features of these stick figures is that almost all appear to be possessed of male or female genitalia, with the latter represented most often. Some of the figures incorporate natural holes or vugs to represent this particular part of the anatomy.*" Illustrations from their paper are shown in Figure 16.

There are two sites on the middle White River drainage north of Hiko that contain elements similar to those found at Honeymoon Hill. Female genitalia are not dominant at these sites as they are at the sites farther north. They have a strong resemblance to those sites farther south such as the Valle of Fire. However, there are numerous outstanding figures of female genitalia at these sites such as the one illustrated in Figure 17. These sites, while they

cannot be considered the same as those further north, probably constitute border sites, being influenced by those both north and south.

At the 24th Great Basin Anthropological Conference Ms. Alanah Woody (1994) presented a paper entitled *Five Rock Art Sites in Elko County*. These sites were mostly in eastern Elko County and two of them featured elements



Figure 13. Hickison summit panel showing elements representing female genitalia.

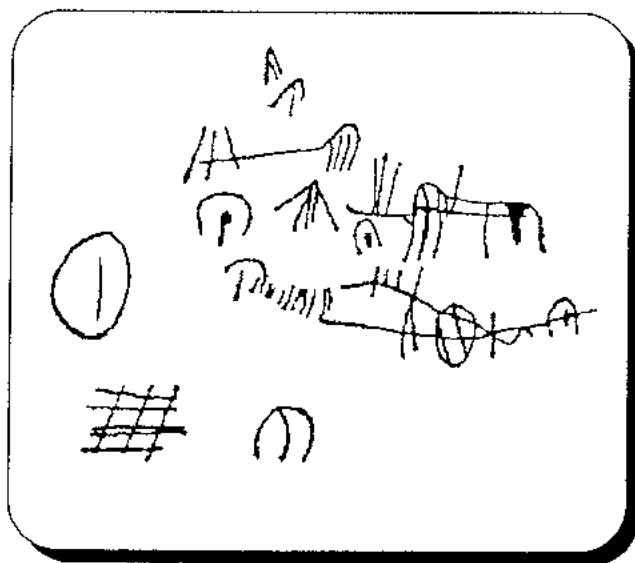


Figure 14. Another Hickison Summit panel showing elements representing female genitalia. After Heizer and Baumhoff.



Figure 15. Old woman picking up pine cones at Hickison Summit site.

If the theory of Lamb is correct what might we expect to find in the petroglyphic record in southern Idaho? Since southern Idaho is a considerable distance from the Numic homeland proposed by Lamb, it might be expected that the original residents of southern Idaho and the Numic people in the putative Lamb Numic homeland would have a different, and probably distinctive, petroglyph style. Thus, when the Indians of southern Idaho were overrun by the expanding Numic people, it would be expected that two different petroglyph styles would be found on nearly all rocks containing petroglyphs in southwestern Idaho. If Lamb were correct, we would find in the two cultural regions in central and northeast Nevada, evidence of a dual occupancy in each of

representing female genitalia almost to the exclusion of all other representational elements. The information from these two sites permits the drawing of borders of another cultural region. Again, this was done by enclosing similar sites and excluding those which were not similar. fourteen sites are found within this boundary. This region is shown in Figure 18. It is the one in the northeast corner of Nevada. Following the lead of Zancanella and Amme (1988), I call this region the Honeymooners region. In this region, no sites have been seen which resemble the Shoshoni sites in any respect. All the sites except those on the middle White River are similar and have but a single theme. They clearly belong to a single culture.

WHICH THEORY?

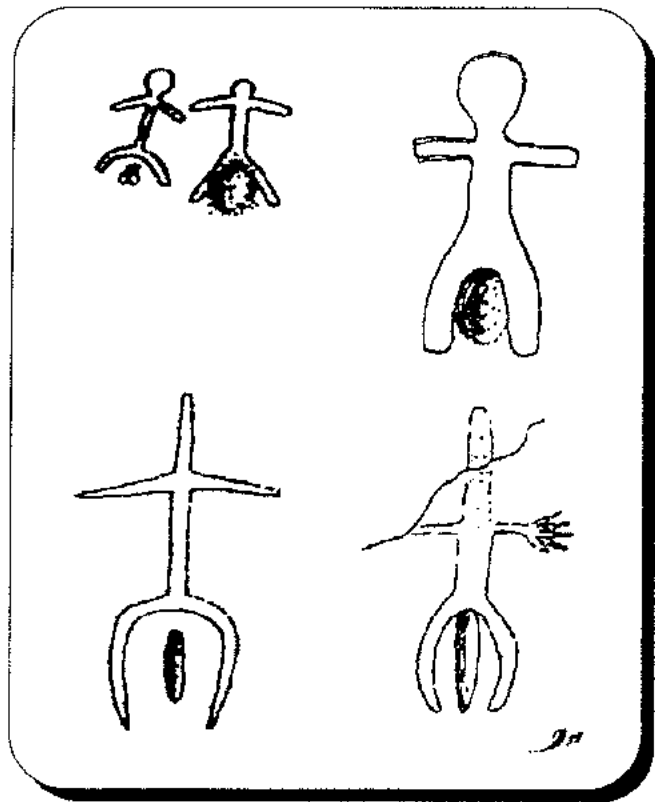


Figure 16. Typical figures from the Honeymoon Hill site. After Zancanella and Amme.



Figure 17. A petroglyph from the middle White River site.

the original inhabitants had been displaced by the expanding Numic people. In Nevada, the story is a bit confused. Aikens and Witherspoon did not precisely define the location of their proposed Numic homeland so the result of their being correct cannot be stated with precision. Regardless, their Numic homeland in Nevada and southern Idaho would have a single style of petroglyph if they were correct and Idaho north of the Snake River would have two styles.

them. Any grand migration from the Death Valley region that covered all of Nevada and southern Idaho would surely leave evidence of the former occupants in addition to that of the occupying Numics. Heizer and Baumhoff, who have blindly adopted Lamb's theory, placed themselves in an almost untenable position by noting that in a given area there was but a single style of petroglyph. How can there be a single petroglyph style when, according to Lamb's theory, it is clear that the Numics overran the prehistoric occupants of Nevada? They solved their dilemma by assuming that the prehistoric inhabitants of Nevada quit making petroglyphs around A.D. 1500 and that the occupying Numic people did not make petroglyphs at all! How did they know where the Idaho and Oregon borders were so they could resume making petroglyphs as soon as they crossed them?

If the theory of Aikens and Witherspoon were correct and if my modification of the size of the Numic homeland proposed by them is correct, one would find a single style of petroglyph in Idaho south of the Snake River because the Numic people had lived there for a long time. Evidence of a dual occupancy north of the Snake River would be found where

CONCLUSIONS

No evidence has been found to indicate that, in the eastern part of the South Uplands in Idaho, one culture has replaced another. Insufficient data has been gathered in the remainder of the South Uplands on which to base any conclusions regarding the replacement of one culture by

another, but nothing has been seen there which would indicate that such a replacement has

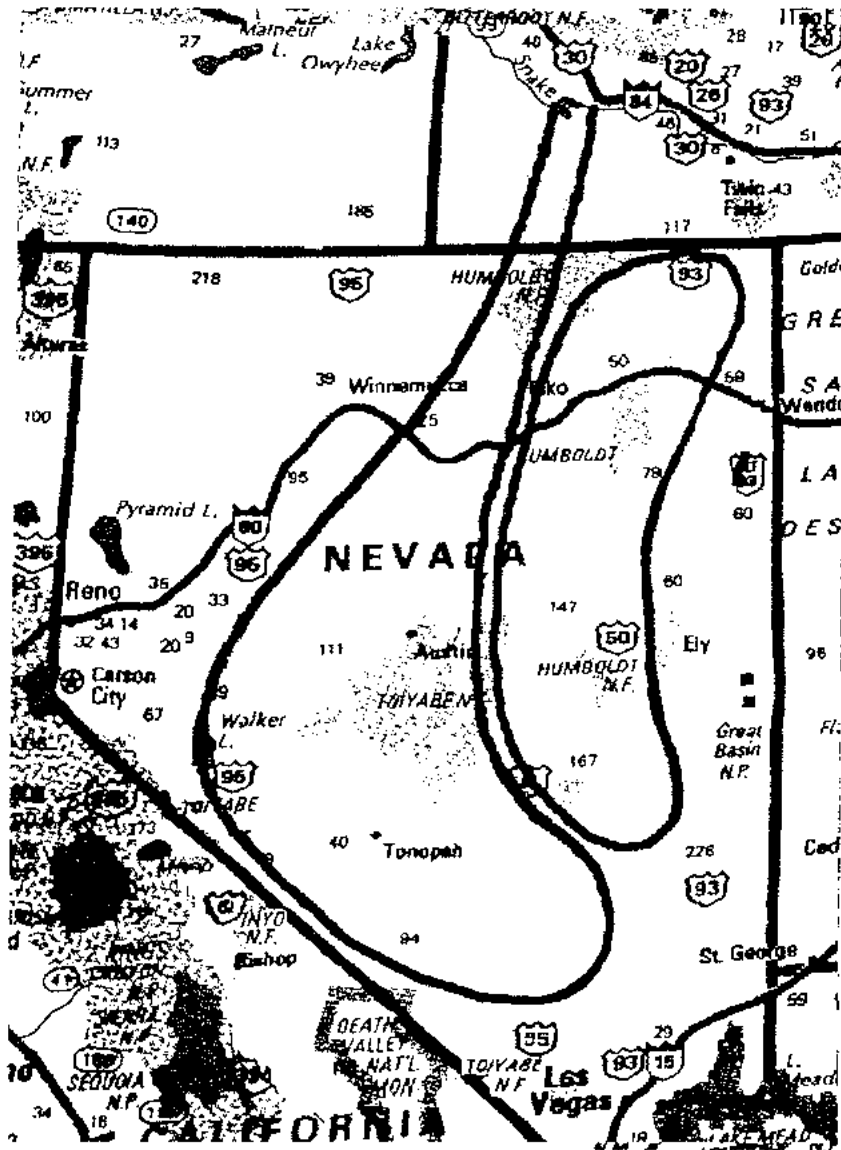


Figure 18. Nevada, showing the Shoshoni homeland on the left and the Honeymooners homeland on the right.

occurred. It is highly unlikely that the Numic people could occupy the South Uplands, replacing an original tenant, without leaving evidence in the Little Blue Table area. The rugged Owyhee river canyon protects the western South Uplands from invasion from the South and West. This canyon is not impassable but it certainly is a formidable obstacle to anyone trying to cross it. A corridor having a width of perhaps 30 miles exists between the Owyhee river canyon and the even more rugged Bruneau river canyon. Little Blue Table is a prominent feature within this corridor. The Little Blue Table data indicates that a tight group of homogeneous sites exists

there. On the other hand, North of the Snake River in the North Uplands, there is strong evidence of a dual occupation. Thus, if we can postulate that the Numic homeland extended slightly farther north than that proposed by Aikens and Witherspoon, the theory of Aikens and Witherspoon fits the data very well.

In Nevada we have two large areas, the Shoshoni and the Honeymooners, where only a single style of petroglyph is found. If we can dispense with the curious logic of Heizer and Baumhoff and agree that the Numic people did make petroglyphs in Idaho, Oregon, and Nevada, there is but one conclusion. The theories of Lamb and those who follow him are wrong. It appears that there may have been a Numic expansion but it took place from a vastly larger homeland than that envisioned by Lamb. Although the description of the Numic homeland by Aikens and Witherspoon was rather tentative, I conclude that the expansion took place from a vastly larger homeland than even they envisioned. However, if it is necessary to choose between the theory of Sidney Lamb and that of Aikens and Witherspoon based upon the petroglyphic evidence in southern Idaho and northeastern Nevada, Aikens and Witherspoon win hands down.

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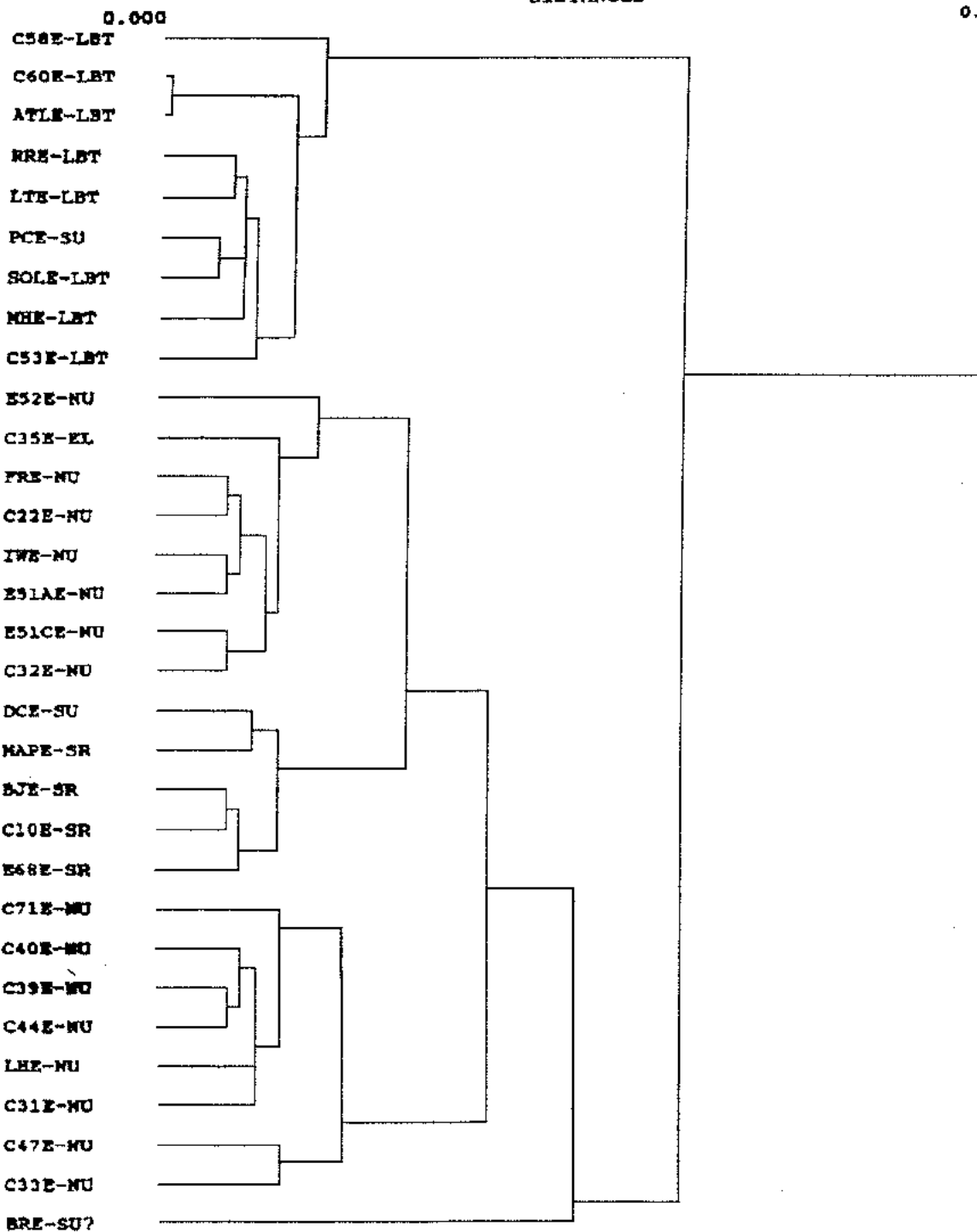
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City, Utah.

Cluster 1

DISTANCE METRIC IS EUCLIDEAN DISTANCE
WARD MINIMUM VARIANCE METHOD
TREE DIAGRAM

DISTANCES

0.2



Cluster 2

DISTANCE METRIC IS EUCLIDEAN DISTANCE
WARD MINIMUM VARIANCE METHOD

TREE DIAGRAM

