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INTRA-SITE SAMPLING IN THE ARCHEOLOGICAL RECORD:
THE DISCOVERY PHASE AT CAMDEN

by

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INTRA-SITE SAMPLING IN THE ARCHEOLOGICAL RECORD:
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The historical development of the European settlement of North America from the time of the earliest permanent settlement at least through the end of the nineteenth century has been characterized by historians as a process of constant expansion into new lands (Bartlett 1974), lands either unoccupied or populated by groups possessing a lower level of sociocultural integration than that of the intrusive society. Apart from the effects of contact, this expansion required a temporary adaptation by the intrusive culture to the condition of remoteness it encountered on the frontier of settlement. The frontier is not seen here to represent a border, but rather a zone of transition in which a newly-occupied territory is incorporated into the social, economic, and political system of the complex society. It also constitutes the moving fringe of settlement where an attenuation of ties with the homeland requires a temporary breakdown of complex institutions which persists until the frontier becomes, in effect, an integral part of the parent state. Perhaps one of the best geographical areas in which to study North American frontier development is that region where English settlement first occurred, the Atlantic seaboard. In South Carolina, the frontier period encompassed the greater part of the eighteenth century and culminated with the transition of the former British colony into a segment of a newly-emerged nation-state situated in the New World. This paper will center upon the use of archeological methodology to investigate aspects of frontier change through an analysis of the material remains left behind by a portion of the intrusive British society which settled that area.

The similar nature of adaptive changes made by intrusive societies in frontier situations implies the operation of patterned regularities of behavior. Such patterns have been noted by scholars in many disciplines studying the phenomenon of pioneer colonization cross-culturally (Turner 1893, Dawson 1934, Leyburn 1935, Webb 1952, Hallowell 1957, Allen 1959, Mikesell 1968, Wyman and Kroeber 1957, Casagrande, Thompson, and Young 1964, Thompson 1970 and 1973, and Wells 1973). Their work has formed the basis for the definition of an evolutionary process of sociocultural change upon which it has been possible to construct a "frontier model" (Lewis 1973 and 1975). This model deals with the process in terms of a systemic framework applicable in a general sense to all settlement frontier situations. Given a knowledge of the systemic organization of the intrusive society prior to colonization, it permits the investigator to predict changes within it and to observe these changes in the archeological record or in any other form of data as long as he is aware of the transformations which relate these data to the past systemic context (see Schiffer 1975).

Five characteristics associated with the process of frontier change form the distinguishing traits of the frontier model. First, prolonged contact must be continually maintained between the colonists and their parent society. Second, as a result of its relative isolation and the attenuation of trade and communications linkages with the homeland the intrusive culture exhibits a sudden loss of complexity. Third, the settlement pattern in the area of colonization becomes more geographically dispersed than that of the homeland unless temporarily impeded by conditions. The fourth characteristic is that the dispersed settlement pattern within the area of colonization is focused around central settlements, called

"frontier towns". These serve as nuclei of social, political, economic, and religious activities within the colony and as the termini of the transportation network linking portions of the area of colonization to the homeland through an entrepot. Because it serves as the primary link to the national culture, the frontier town forms as the nexus of the communications network within the colony. Finally, as the colony changes through time it also varies through space so that the pattern of growth and change viewed temporally in a single community may also be seen spatially with those settlements closest to the moving frontier always representing the earliest developmental stages of the frontier process. As the colony expands with the influx of new settlers areas of earliest settlement experience marked changes in population density and achieve a more complex level of internal integration. In effect, the older colonial areas begin to replicate the national culture of the homeland. As the frontier expands settlements grow and take on new roles as they pass through a "colonization gradient" (Casagrande, et al. 1964: 311). With this change, the functions of the original frontier towns become decentralized and those which no longer occupy strategic positions in the trade and communications network decline or are completely abandoned.

Because colonization and the maintenance of frontier expansion presuppose that the intrusive society possess a complex level of sociocultural integration, it is likely that aspects of frontier change will be clearly revealed differentially throughout its systemic structure. The examination of subsystems allows the investigator to deal with the complexity of the intrusive system by permitting him to confine research to selected parts of it rather than the whole. This approach allows a more precise definition of research goals and the confinement of problems to a manageable size.

The frontier model is extremely useful for several reasons in the diachronic study of regions, such as the South Carolina backcountry, which passed through a period of colonization. First, the model is broad enough to incorporate all the parts of a frontier area yet narrow enough to deal with each in regard to its own role. In terms of archeological investigation, the components of a frontier may be visualized as sites, parts of sites, or groups of sites. Second, the frontier model does not confine research goals to the study of archeological patterning at a general or abstract theoretical level. Rather, it permits the consideration of a variety of questions simultaneously, making the model applicable to contract and salvage projects in which interpretive goals are sought in addition to questions of a broader nature.

Camden, an eighteenth century political and economic center in the South Carolina backcountry, occupied a strategic position in the trade and communications network of the inland frontier of the colonial period. Documentary sources suggest that it fulfilled the role of a frontier town in relation to pioneer settlement over much of the northern portion of the present State of South Carolina (Schulz 1972 and Ernst and Merrins 1973). Certainly the investigation of the site of Camden would be useful in demonstrating the ability of archeological methodology to recognize aspects of frontier change in this settlement and in providing new information concerning the nature of this phenomenon in the Southeast.

In 1974 and 1975 archeological investigations were carried out at the site of the colonial settlement in conjunction with an interpretive study of the 1780 period town. Because documentary sources revealed little information concerning the size and extent of the settlement which could

be useful in interpretive exhibits or restorations, one task of the archeology was the discovery of structural remains as well as other patterns of past human activities. With this objective in mind it was possible to initiate excavations designed to examine the site in terms of the interpretive goals as well as that of eliciting aspects of the frontier model.

The immediate goals of the archeology included: 1) locating the Revolutionary War Period palisade which delineated the limits of the contiguous 1780 settlement; 2) identifying structures within the settlement; and 3) determining dates for the town as well as for structures and other cultural features within it. With regard to the frontier model, objectives of archeological research centered around the identification of those subsystemic phenomena associated with the frontier town.

In order to approach these questions and thereby begin to analyze this portion of the frontier (or for that matter any other past phenomena), one must first determine certain things about the nature of the data base with which he is to deal. This may be accomplished in "discovery phase" of archeological research which is intended to answer interpretive questions about the site as well. The discovery phase is designed to elicit information concerning the following: 1) the general condition of the archeological remains at the site; 2) the form and spatial extent of past human occupations there; 3) the ethnic or cultural affiliation of the settlement; 4) its beginning and termination dates; and 5) the nature of intra-site variability and behaviorally significant distributions of archeological materials.

The discovery phase of archeology at Camden has involved the use of a technique designed to gather a representative sample of the archeological

materials distributed over the entire site. The use of such a technique requires, of course, that the limits of the site be defined prior to the sampling. This was accomplished at Camden by determining the location of the 1780 palisade wall which surrounded the contiguous settlement. All non-contiguous structures were separately fortified.

Because statistical treatment of the archeological data is desirable, a technique for the random selection of sample units was chosen for this study. Random sampling offers the advantage of providing every unit defined within the sample area the same chance of being chosen (Dice 1952: 28) and eliminates the potential bias inherent in a sample based upon arbitrary measurements established by the investigator (Mueller 1974: 3). Redman and Watson (1970: 281-282) suggest that the stratified unaligned random sample provides the best method for examining artifact patterning because it prevents the clustering of sample units and assures that no areas are left unsampled. It accomplishes this by dividing the site into a series of large units based upon the coordinates of the site grid. Within each of these squares one unit of a smaller size is randomly chosen. The relative sizes of the units involved will determine the percentage of the site area sampled. Naturally, the greater the size of the sample the more reliable will be the results; however, the difficulty of enlarging the magnitude of such a sample increases with the size of the site. For this reason, it becomes necessary to decrease the size of the individual sample units in order to maintain the degree of their dispersal over the site. This permits a maximum area to be investigated with a minimum of area sampled (Redman 1973: 63). Because the total accessible area of the Camden site was quite large, totalling over 487,500 square feet, the discovery phase of excavations here utilized a

small sample comprising 1% of the entire area. The sampling was achieved by surveying the site in 50 x 50 foot squares and excavating one 5 x 5 foot unit randomly selected within each. In all, 85 sample squares were completed.

The excavations revealed that the entire site of Camden had been under cultivation, resulting in the vertical mixing of the historic component. It is assumed, however, that this has not greatly altered the horizontal distribution of the artifacts and the patterns of deposition should still be visible though discernible features may, in fact, be unrecognizable. The virtual absence of post-eighteenth century occupations suggests that the remains represent an uncontaminated occupation which would include the Revolutionary War Period settlement. The investigations revealed that the historic occupation covered most of the site with the greatest concentration occurring along a north-south strip running through its center. Post-eighteenth century destruction of the site appears to be confined to the construction of several public buildings in its northeast quadrant and a narrow strip removed during modern road construction.

In general, stratigraphy on the site consists of three layers: a grey loam lying at the surface, a pale brown sand, and sterile red sandy clay. The historic component is confined to the grey loam except in those places where the pale brown sand is exposed at the surface. In effect, the entire historic component utilized in the comparative analysis was recovered from a single zone throughout the site.

At present, the results of the sampling phase are far from complete but useful information is already emerging from the analysis of the ceramic artifacts. Ceramics are significant in that they are capable

of providing clues to the cultural affiliation of the site, the dates of its occupation, and, to some extent, its form and size. The Camden ceramic collection yielded specimens representative of an eighteenth century British site, a great quantity of English wares together with smaller amounts of foreign products exported to its colonies through Britain's vast mercantile system. A mean ceramic date of 1789 was derived for the site as a whole utilizing South's (1972) formula. It differs from the median historic date (1788) by one year. Documents indicate a temporal span from 1758 to 1819. Mean ceramic dates calculated for individual sample squares range from 1764 to 1819, closely approximating the historic dates. A frequency distribution of these dates forms a unimodal curve with a mode of 1791, suggesting that the greatest area was occupied at this time. General terminus post quem and terminus ante quem dates for the site as a unit have also been estimated utilizing the temporal use spans of the ceramic type represented. These are respectively 1775 and 1813 and fall within the historic range.

At this time it is possible, however, to make a few inferences concerning the form and spatial extent of the site based on the portion of the data now available. Utilizing the ceramic sample from Camden, an attempt has been made to compare relative frequencies of sherd counts and weights per excavated unit in order to ascertain the patterned distribution of these artifacts on the site. The results of this comparison have been portrayed graphically utilizing a SYMAP (Synagraphic Computer Mapping) program. The maps illustrating the distribution of the ceramics by weight indicates a great deal of variability in their distribution.

In the western half of the site five areas of high concentration occur as well as two minor concentrations. Three small areas of concentration also appear in that portion of the remaining half of the site which was explored. Several general characteristics are visible in the patterning. First, the highest concentrations are surrounded by concentric zones of progressively decreasing density, suggesting a thinning out of materials derived from a central location. Second, the concentrations appear to lie closest to the major road bisecting the settlement, a thoroughfare which also served as a "main street" in the eighteenth century. Third, the locations of the main concentrations are found within the boundaries of property known to have contained commercial structures. They also correspond to the general pattern formed by structures shown on a Revolutionary War Period sketch map. Unfortunately documentation is very scanty for eighteenth century Camden (McCormick 1975) and no structure locations are known precisely. Because only one structure foundation was found during the excavations it is uncertain at this time if the concentrations represent structural ruins or the disposal areas associated with them (c.f. South n.d.: 69-99). It will be necessary to complete the analysis of other classes of artifacts more closely associated with building construction to clarify the relationship between the ceramic patterning and the distribution of structures as well as other activities.

The patterns of ceramic occurrence must not be taken alone to represent the settlement pattern or the distribution of activities on the site although they may reflect both. To approach these phenomena it becomes necessary to study those classes of artifacts which are functionally related to the activities considered. This may also

involve the separation of certain classes, such as ceramics, into smaller categories possessing special temporal and/or functional significance. For example, the distinction of heavyware versus teaware discussed by Ferguson (1975: 49) in relation to status differentiation associated with the occurrence of the tea ceremony (Roth 1961) may be useful here in defining structure use and function. This distinction assumes temporal relevance when asked with regard to the functional relationship of creamware to porcelain and early pearlware, all of which occur together at Camden. A preliminary glance at the patterning displayed by these three types suggests that pearlware and porcelain, which both tend here to be associated with teaware but have separate though overlapping temporal ranges, exhibit separate concentrations apart from the creamware, perhaps indicating differential use and disposal of these ceramics.

In the search for patterning artifacts may also be grouped by classes representing components of various subsystems suspected to have existed at Camden as the result of the settlement's status as a frontier town. The subsystems might involve trade and communications, certainly the paramount binding element on the frontier, subsistence, social organization, or any other segment of the frontier system in which Camden participated and within which it played a crucial role. Activities identified by artifact configurations may be arranged and associated chronologically through the use of datable items (e.g. ceramics) in order to demonstrate stability or change in functional patterns through time. In this manner it will be possible to view early Camden as a cultural entity both in a synchronic as well as a diachronic sense.

In summary, the recent archeological investigations at Camden have yielded data which are intended to form the base upon which to launch a long-term program of interpretation at the site as well as to provide preliminary information designed to explore larger questions about Camden's role on the Carolina frontier. It is hoped that this work will emphasize not only the advantages gained through the use of a discovery sampling phase of archeological research, but also the compatibility of theoretical and interpretive goals in historical archeology.

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