Chapter 12

The Lithic Assemblages of Two Small Housepits: HP 90 and HP 104

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Introduction

The nature of small pithouses plays a critical role in the conceptualization of socioeconomic organization at Keatley Creek. It is not only important to document how small pithouses differed from large pithouses, but it is also necessary to determine how the socioeconomic organization of small pithouses varied among themselves. Two small housepits have thus far been excavated and analyzed (HP's 9 and 12—see Vol. II, Chap. 11; Vol. III, Chaps. 7 & 8), and display markedly different social and economic characteristics. Housepit 9 appears to have been the residence of a ritual or hunting specialist, with substantial high status connections, while HP 12 appears to have been home to much more common and poorer residents.

In order to extend the understanding of small housepit variability, several additional small housepits were sufficiently excavated to assess their socioeconomic characteristics: HP's 90 and 104. This chapter presents an analysis of the lithic industries for both housepits and compares them to the other small housepit assemblages at the site. While the HP 90 assemblage is roughly similar to the HP 12 assemblage in general composition and time (both are late Plateau occupations), the HP 104 assemblage is markedly different both in composition and in dating. Housepit 104 dates from the protohistoric period and the lithic assemblage is unique in terms of the activities represented, the tools present, point styles, and non-lithic associations. Because it was not contemporaneous with the main site occupation, HP 104 was not completely excavated.

Housepit 90, on the northwest periphery of the site core, was chosen for extensive excavation as an example of a smaller housepit because of its desirable qualities: it contained a single occupation with no cross-cutting building events and had easily identifiable floor deposits (Vol. II, Chap. 9). It was initially hoped that HP 90 was Kamloops Horizon (1,200–200 BP) in age, but it was subsequently discovered to date to the late Plateau Horizon (1,500–1,200 BP). A radiocarbon date obtained from a charred roof beam in contact with the living floor showed the house was used at approximately 1,410 ± 60 BP (Vol. I, Chap. 2). Although it is not contemporary with most of the other excavated housepit floors, it is still of interest in understanding household variation during the Plateau Horizon.

Analysis of the lithic assemblage from HP 90 followed the same methodology as that of the other housepits at the site, with the goal being to interpret spatial divisions within houses, socioeconomic differentiation, and other factors relevant to prehistoric occupations. The topics to be discussed in this analysis include: length of occupation; activity areas; domestic spaces; and socioeconomic standing. Evidence for the interpretations is derived from the lithic and spatial analysis, but other observations will be included whenever they are pertinent to the discussion.

HP 90

The Lithic Assemblage

All lithic materials recovered during excavation were cleaned and separated into debitage and modified artifacts. Debitage was further divided into four size classes; the percentage of each size class was then calculated for the roof and floor strata and then compared to the housepit as a whole (Fig. 1). The frequency of each size class throughout the house appears to be quite similar. A notable exception is the higher frequency of large flakes (8%) on the floor, compared to none on the roof. This is to be expected, however, as large flakes are most suitable for later use as tools and would not have been discarded. The majority of debitage from the entire housepit is found in the roof strata (54%), while the floor contained only 20%. This is most likely a product of re-roofing and cleaning, as floors were periodically cleaned and debris was probably thrown onto the roof during this process. Of the size categories, flakes between 1 and 2 cm in size dominate the assemblage (ca. 60–65%). This indicates intensive use of lithic materials with the final stages of lithic reduction occurring in houses. Debitage density and distribution will be examined further in the spatial analysis.

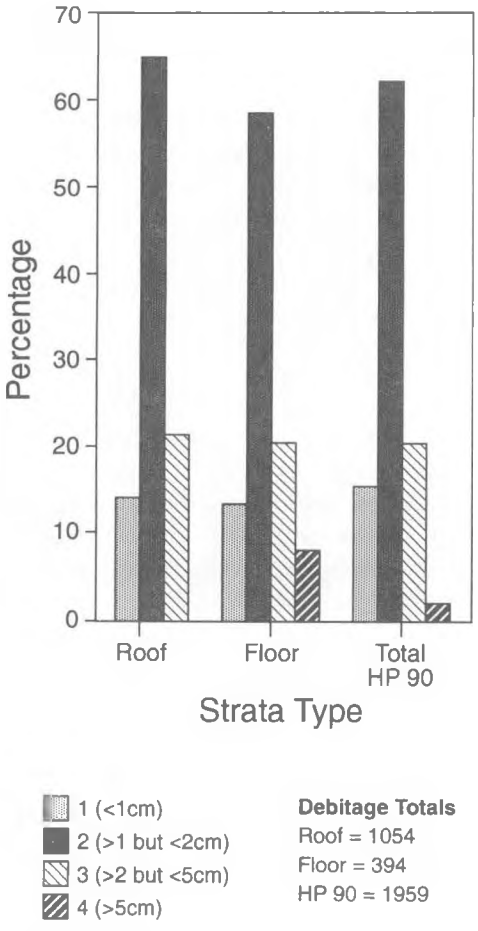

Figure 1. Percentages of debitage size categories in HP 90.

Modified artifacts were identified to type using the Keatley Creek Artifact Typology (Vol. III, Chap. 1). A total of 76 modified lithic artifacts were identified in the roof strata, while 45 came from the floor (Fig. 2). Some of the more common types included utilized flakes, expedient knives, bifaces, scrapers, and notches. The density and spatial distribution of these artifacts will be discussed below. Lithic raw materials utilized by the inhabitants of HP 90 were fairly limited, being dominated by trachydacite (77%), followed by jasper (15%), and a few other materials (8%).

Length of Occupation

It is possible, using evidence from the lithic analysis, to determine approximately how long HP 90 was occupied. Other indicators include nature and size of the structure; density of pits and postholes; and re-roofing episodes (Vol. I, Chap. 17). Housepit 90 has been characterized as a small housepit with a relatively long period of occupation and low lithic density (Vol. II, Chap. 14). A few possible postholes were identified in the floor strata and six pit features were excavated into it, none of which appear to have been used for major food storage.

It appears that between one and three re-roofing episodes occurred in HP 90, based on the two to three identifiable layers in the roof stratigraphy. Together with a low overall lithic density and assuming that roofs lasted between ten and twenty years (Vol. I, Chap. 17), this indicates a length of occupation on the order of 20 to 60 years. Evidence for this scenario can be found in the lithic assemblage as well. An almost identical suite of artifact types occurs in the roof strata as on the floor, with the exception of the more highly specialized artifacts (i.e., bifaces and groundstone objects; Fig. 2). The frequencies of these artifact types in the roof strata are very close to twice that in the floor deposits. When analyzed as percentages instead of frequencies (Fig. 3), the similarities between the assemblages are even more apparent. This would seem to indicate that HP 90 was re-roofed twice and that floor scrapings from this event were, indeed, placed onto the roof.

Activity Areas

In his analysis of the use of space in housepits, Spafford (1991) identified a number of criteria pertinent to the determination of activity areas. Some of these are: fire cracked rock density; debitage density; artifact

density; functional artifact distribution; and hearth and storage pit locations. Each criterion will now be discussed, along with distribution maps, as represented in HP 90. The criteria used to establish domestic areas are slightly different and will be dealt with next.

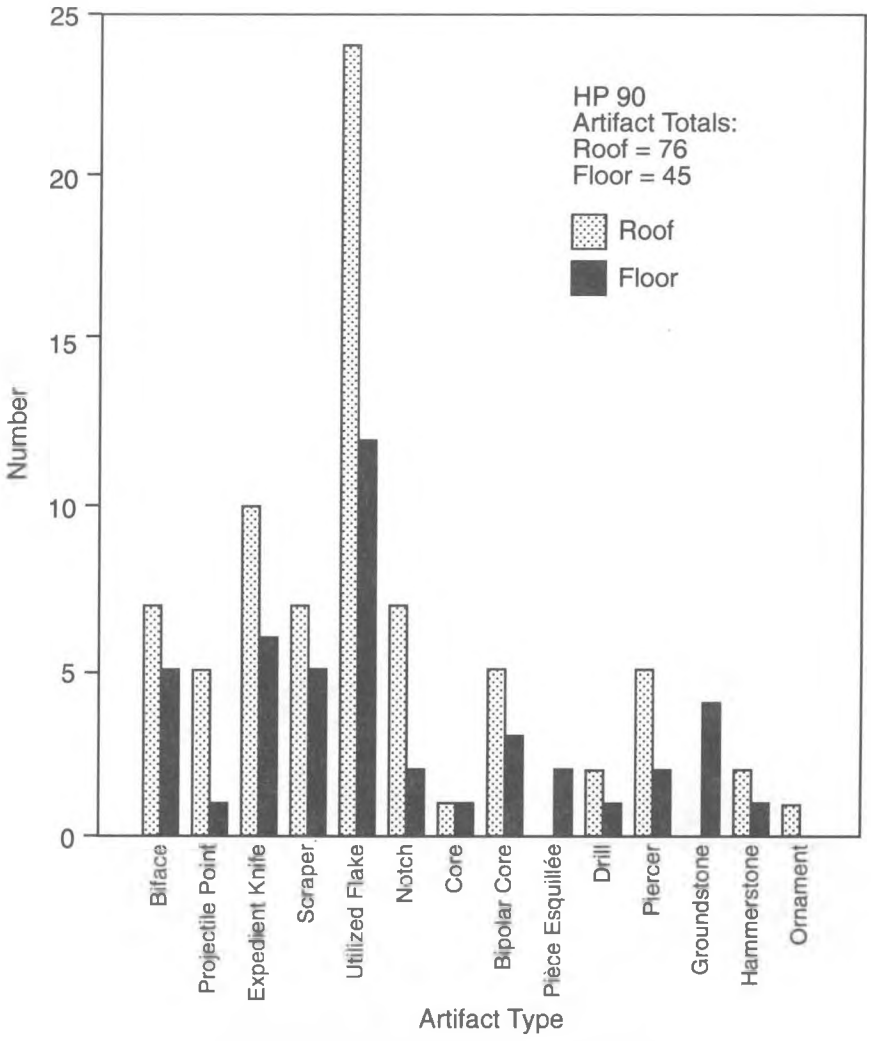

Figure 2. Artifact frequencies in HP 90.

Fire cracked rock (FCR) is produced in hearths or through use as boiling stones; in other housepits it is closely associated with fire reddened areas (Spafford 1991:53), so it is a reasonable assumption that FCR should concentrate around hearth areas. No definite hearth has been identified in HP 90 so FCR density offers the best line of evidence for the location of hearth features. Almost no FCR is present in the northern part of the floor, while diffuse amounts are present on most of the southern half (Fig. 4). Additionally, two notable concentrations occur, one in the center of the floor and another near the west wall near the side entrance. It seems that the central FCR concentration represents the main hearth area, while that near the side entrance represents a storage or provisional discard location. The uniform distribution of FCR across the southern half of the floor, and that near the entrance as well, would then have been derived from the central hearth. Other lines of evidence to be discussed below support this assessment.

Like FCR, the distribution of debitage across the floor of HP 90 also concentrates in the southern half of the floor (Fig. 5). Since debitage is produced and deposited during the manufacture and maintenance of stone tools, it will concentrate where these activities were undertaken most frequently. So it would seem that activities involving stone tools were more common in the southern half of the floor. Notable concentrations of debitage are present on the eastern side of the floor not far from the proposed hearth location and the southeast area as a whole, and also a small concentration in the southwest, and again near the side entrance. The concentration near the entrance is unusually large (62 flakes), again suggesting a storage area of items intended for discard. Stone tool manufacture and use certainly appears to have been much more common in the southern half, particularly the southeast corner of the floor. A glance at the total lithic distribution across the floor area reinforces this impression, with the only difference being a slight change in the lithic density (mainly modified artifacts) in the northern area. The central area of the housepit is relatively free of all lithic artifacts.

The lithic density dichotomy apparent in the debitage disappears, however, when one looks only at the artifact density (Fig. 6); the modified artifacts are nearly equally distributed between the northern (24) and southern (21) halves of the floor. The distribution becomes even more balanced if the tool concentration near the entrance is excluded (N=20 vs. S=21). It seems as though stone tool use (or possibly storage) was fairly even throughout the house, despite the majority of manufacturing and retouch occurring in the southern half. There is an additional pattern evident in the distribution of stone tools that is not as pronounced in the debitage: nearly twice as many artifacts are to be found in the east half of the floor (29) than in the west

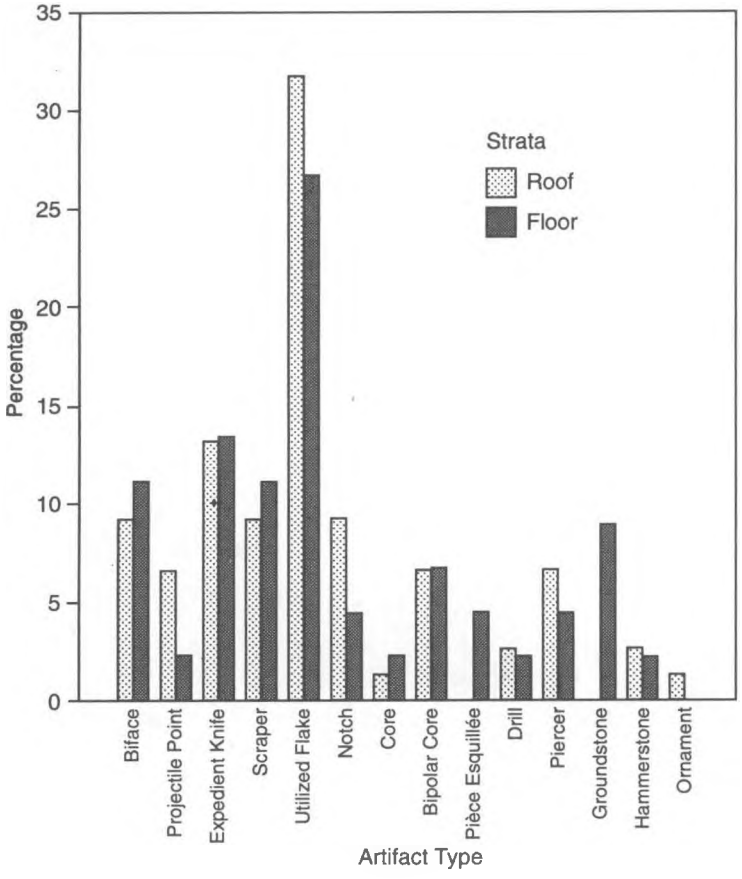

Figure 3. Artifact percentages in HP 90 calculated separately for roof and floor deposits.

half (16) despite the concentration near the western entrance. This indicates that the tools were more commonly used (or kept) on the eastern half of the floor, and especially in the northeast and southeast corners of the house. Since the most important household members generally sleep the farthest from household entrances, the concentration of tools in the northeast and southeast may reflect household head (adult) sleeping and adjacent activity areas. Again, the central area is almost devoid of artifactual material. Much more evidence can be derived from the tools than just density, however; their degree of modification and assumed functions can also offer critical insights to the use of space in HP 90.

Spafford (1991:39) separated artifacts at Keatley Creek into types that he thought would be useful to identify areas used for different activities. Those types found in HP 90 are summarized in Table 1. He cautions that the intent here is not to associate specific tasks to certain artifacts, but instead is to determine whether aggregations of artifacts represent different activity areas by using broad functional distinctions (Spafford 1991:40). This differentiation takes place at two levels:

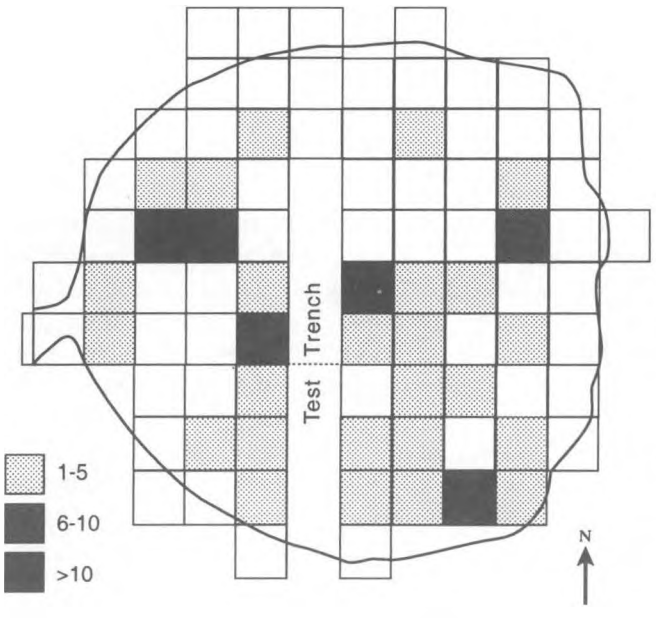

Figure 4. Fire-Cracked Rock density and distribution in HP 90.

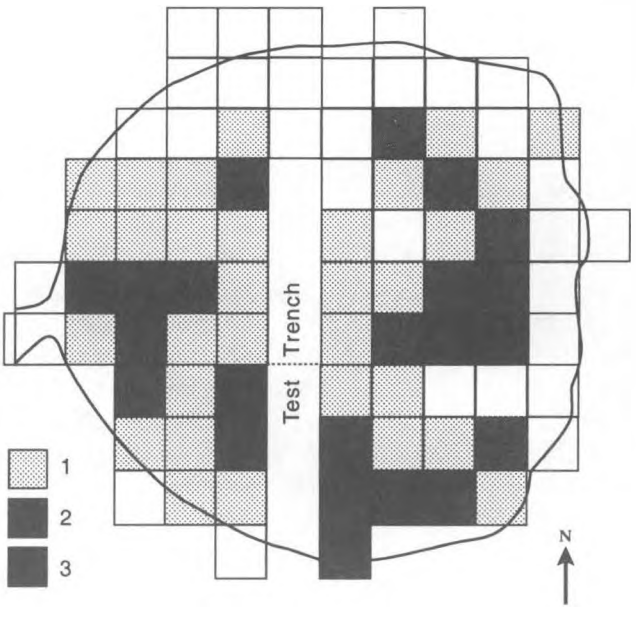

Figure 5. Debitage density and distribution in HP 90.

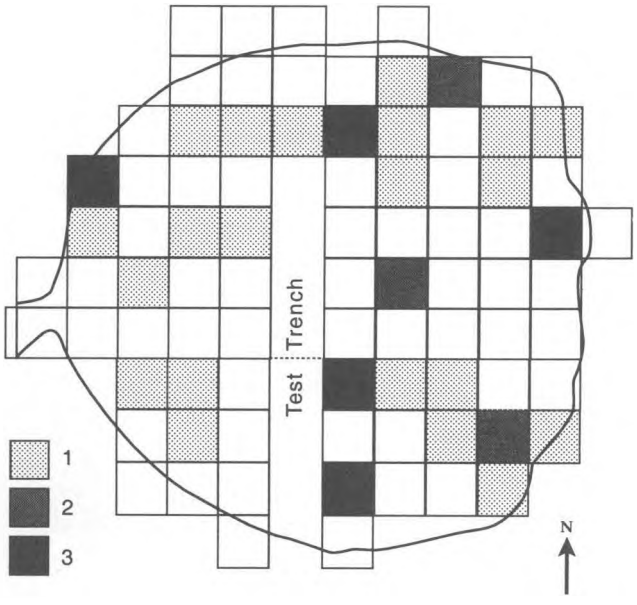

Figure 6. Modified artifact density and distribution in HP 90. Note that 3 artifacts were recovered from the south half of the test trench.

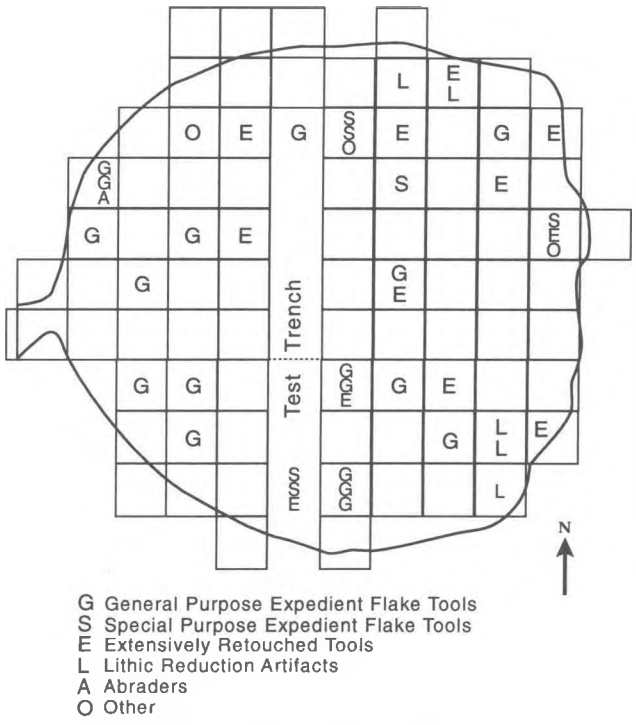

Figure 7. Distribution of functional artifact categories in HP 90.

1) road categories of manufacturing characteristics, and 2) a range of activities for which the tools are suitable.

The distribution of artifacts assigned to each category of manufacture in HP 90 is presented in Figure 7. It has already been noted that artifacts cluster in the northeast and southeast corners, while the central area is relatively clear, but looking at this map, a few additional observations can be made. The majority of tools on the western half of the floor are general purpose and expedient in nature, suggesting that activities here were mainly of the common variety and undertaken wherever space was available. The assemblages from the northern and southern halves of the floor are much more varied, particularly in the northern half (Fig. 8). Meshing well with the pattern identified in the debitage density and distribution in the housepit, the southern half of the floor has more abundant general purpose flake tools and lithic reduction artifacts, while the northern half of the floor contains more special purpose and extensively retouched tools, in addition to all of the groundstone artifacts, including a damaged nephrite adze, a maul fragment, and a sandstone abrader (all clearly in storage contexts—Vol. III, Chap. 9). Another factor which becomes apparent is that the suite of artifacts on the northern and southern halves of the floor are basically similar in the types of activities that they are suitable for, only the northern area has more extensively retouched tools and all of the groundstone artifacts. This distinction allows three observations which are important to the following discussion: 1) both halves of the house show evidence of a similar range of activities, suggesting the possibility of two independently functioning groups (Spafford 1991); 2) the northern area appears to have more desirable tools and artifacts, a possible indication of some sort of social or spatial distinction; and 3) items that one might expect to be stored are concentrated in the north.

Domestic Areas

Now that we have uncovered some indications that possibly two separate domestic units are represented in HP 90, it is important to pursue the issue. Domestic areas of a house should contain a number of common features: a hearth and FCR (possibly shared); a sleeping area; activity areas with similar proportions of tools; and a wide spectrum of tool types (Spafford 1991). We have already discussed the stone tools and, since it is most likely that only one main hearth was present in HP 90, it must be assumed that it was shared by all residents. Thus, two other criteria may offer a little more insight into this question: number of occupants and location of sleeping areas.

Spafford (1991) estimates that a large domestic unit would be composed of twelve people, while a small one

Table 1: Types of Modified Tools Present in HP 90 and Their Assumed Functions

Functional Categories and Artifact Types	Presumed Function	Materials Worked
General Purpose Expedient Flake Tools		
expedient knife	slicing and cutting	soft materials
utilized flake	slicing and cutting	soft materials
Special Purpose Expedient Flake Tools		
notch	working cylindrical objects	basketry elements, shafts
piercer	performating	birch bark, leather
pièce esquillée	splitting wedge	bone, wood
Extensively Retouched Tools		
scrapers	scraping hard materials	bone, wood, hides
borers/perforators	drilling hard materials	bone, wood
knife	slicing and cutting	soft materials
biface	no assigned function	
projectile point	hunting, arrow-making	
Abraders		
sandstone abrader	grinding	bone, stone, antler
Lithic Reduction Artifacts		
hammerstone	detaching flakes, pounding	stone
core	raw material	
bipolar core	raw material	

could contain as few as three or four. Based on his study of space requirements per inhabitant for the smaller houses (1.5 m^2/person), HP 90 (20 m^2) could house a maximum of 13 people, or two average sized domestic units. This seems to fit well with the discussion so far.

During the excavation of HP 90 a number of observations indicated that some kind of platform or bench extended around much of the perimeter of the floor. These observations included possible postholes near the walls; flat cobbles spaced a little over 1 m apart around much of the floor perimeter; floor deposits within 1m of the wall were thicker, softer, and darker compared to the lighter, compact, gravely central floor sediments; and evidence for storage areas and organic "dumps" in these peripheral areas, probably underneath a platform (Vol. III, Chap. 9). Of particular interest here is that the flat cobbles, which are possibly pole or log supports, occur mainly along the north and south walls.

Socioeconomic Status

Prestige items found on the northern half of the floor included a damaged nephrite adze, a broken ground-stone maul, and a broken palette with ochre staining. Observations during excavation, however, indicated that HP 90 presented a general picture of poverty. There were few lithic and faunal remains found relative to other housepits, and no salmon storage pits were identified. Additionally, in their ethnoarchaeological study, Hayden and Cannon (1982) observed that it was not uncommon to find broken or damaged prestige items in poor households. This could explain the occurrence of these items in HP 90, although it is suggestive that they only occur on one side of the house.

All evidence discussed so far is consistent with two very different notions: 1) two separate domestic units lived in HP 90 which differed in a few important ways: the residents of the northern half of the house may have had more access to better quality stone tools and prestige items (albeit damaged ones), while the residents of the southern half of the house may have done the majority of manufacturing and cooking, as evidenced by the debitage and FCR distributions; 2) alternatively, the artifact and FCR distributions may represent two very different uses of space, the northern half of the floor being a sleeping platform used by all residents and the southern half as a communal activity area. In this scenario, the extensively retouched tools and prestige items which are concentrated on the northern half of the floor were probably stored beneath a sleeping platform.

In her analysis of HP 9, a similarly sized housepit occupied during the Kamloops Horizon, Alexander (Vol. III, Chap. 7) interpreted activity areas in the same way as scenario two, with a northern sleeping platform and southern work area. Floral analyses of HP 90 sediments hint that this may also have been the case here; plant remains associated with sleeping areas (i.e., conifer needles) concentrate around the northern perimeter of the floor (Vol. II, Chap. 4).

Summary

HP 90 was occupied for approximately 40 years during the late Plateau Horizon, during which time it underwent two re-roofing events, as indicated by artifact frequency and debitage size category similarities between the roof and floor strata. Fire cracked rock distribution

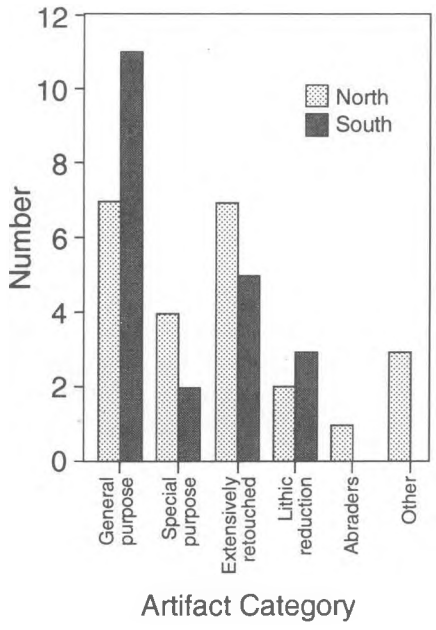

Figure 8. Artifact categories represented on the north and south halves of HP 90 floor.

suggests that one intermittently used hearth was present in the central area of the floor and that cooking activities were more common on the southern portion of the floor. The manufacturing and maintenance of stone tools was also more frequent on the southern side of the floor as shown by the significant difference in debitage densities. There appears to have been a storage area near the side entrance where FCR and debitage were stored for eventual discard or reuse. Two distinct areas are represented in HP 90, which housed approximately thirteen people; these areas exhibit similarly functioning sets of stone tools but the tools found on the southern portion of the floor were more expedient in nature.

Although there is a possibility that two separate domestic units inhabited HP 90, evidence is not sufficient to prove that they were socioeconomically differentiated or even that they lived in separate areas of the house; instead it seems more reasonable that all residents shared communal activity and sleeping areas. The socioeconomic differences so clearly evident in large houses during Kamloops Horizon times, do not appear to have been as clearly manifested in smaller houses during the preceding late Plateau Horizon.

HP 104

Housepit 104 is located about 200 m away from the site core on the north side of Keatley Creek. Initially, it was believed that HP 104 could either be a peripheral dwelling or a special purpose structure. Excavations were undertaken to determine the function of this relatively isolated cultural depression. Approximately 25% of the total area of HP 104 was excavated. Results of the excavation showed that HP 104 had a low lithic density in comparison to most housepits at Keatley Creek, but sandstone artifacts and debitage and burned animal bone were unusually abundant (Vol. III, Chap. 12.13). The occupation appeared to have been short and the presence of Kamloops style projectile points in the floor and roof sediments suggested that it was occupied during the Kamloops Horizon (1,200–200 BP); radiocarbon dating confirmed this, as floor sediments were subsequently dated to 250 BP (Vol. I, Chap. 2). This analysis explores HP 104's function based on lithic and spatial analysis of the recovered artifacts. After a description of the analytical methods employed in this study, the information obtained from that analysis will be applied to the question of HP 104's function by exploring issues such as length of occupation, and internal spatial divisions.

The Lithic Assemblage

Analysis of the lithic assemblage from HP 104 followed the same methodology as that of the other housepits at the site: lithic artifacts were divided into debitage and modified artifacts. Debitage was further separated into four size categories. Most debitage found in HP 104 was between 1 and 2 cm in size and no flake was larger than 5 cm, indicating that only the final stages of lithic reduction occurred here. Relatively few flakes were recovered: 37 flakes were excavated from floor sediments while 24 came from the roof. The distribution of flake sizes was similar in both the roof and the floor (Fig. 9) which could suggest that lithic

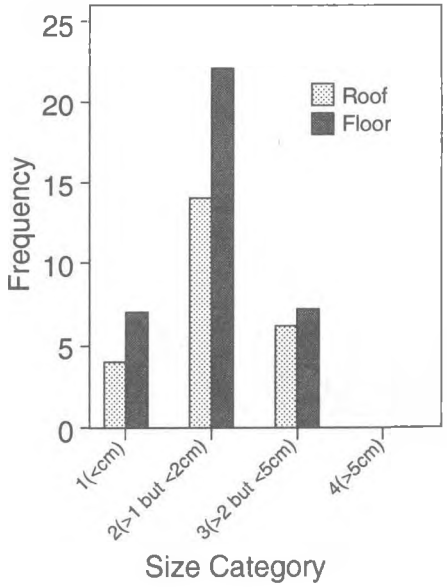

Figure 9. Debitage size frequencies in HP 104.

reduction activities were of a similar nature in both locations but slightly more intensive on the floor where the larger number of flakes were found. Another possibility is that the flakes recovered from the roof deposits originated as floor sweepings, probably a common occurrence at Keatley Creek (Vol. I Chap. 14).

A total of 18 modified artifacts were recovered from floor sediments and 17 came from the roof. Artifact frequencies (Fig. 10) were very similar but two slight differences were notable. Scrapers were present on the floor and absent on the roof while the opposite was the case with notches. Perhaps this is indicative of a difference between indoor and outdoor activities, but the small sample size and similarity of the other artifact frequencies tended to argue against that idea.

Sandstone abraders, presumed to have been used for grinding bone, stone, or antler, were relatively abundant in HP 104 on both the floor and the roof, indicating that some specialized activity was undertaken there. A large, concave sandstone abrader, abrader fragments, and a sandstone saw, in addition to relatively large amounts of sandstone debitage (N=12), were found only in HP 104 at Keatley Creek, while the sandstone saw may be a rare if not unique find in the Interior (Vol. II, Chap. 13). Although no nephrite was recovered from the housepit, it was certainly present at the site and specialized manufacturing of nephrite artifacts may have taken place in HP 104 using sandstone saws and abraders. As mentioned, however, bone was also plentiful in the housepit and some abraders may well have been employed in the fashioning of bone implements. A very unique small leaf-shaped point was also found in HP 104 (see Vol. I, Chap. 3) which may be the result of protohistorical contacts or other processes.

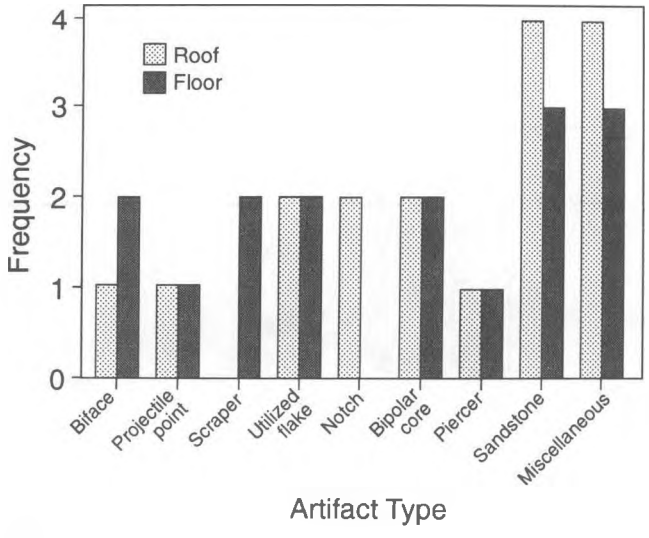

Figure 10. Frequencies of artifact types in HP 104.

Length of Occupation

It was possible, using evidence from the lithic analysis, to determine approximately how long HP 104 was occupied. Other indicators include the nature and size of the structure; density of pits and postholes; and re-roofing episodes. At 8 m in diameter, HP 104 was classified as a small housepit. Only single event postholes occurred in the floor. Lithic density was quite low and artifact frequencies and debitage counts in the roof did not attest to any re-roofing episodes unless the lithics in the roof were from the removal of a previous floor during re-roofing. Most of these indicators pointed towards a short occupation of HP 104, perhaps as short as 1 to 5 years or as long as a generation (20 years).

Activity Areas

The application of Spafford's (1991) criteria for identifying activity areas was problematical in the case of HP 104 due to the limited excavation area and small sample numbers, but was not without merit. Each criterion will now be discussed, along with distribution maps, as it was manifested in HP 104.

Again, it was a reasonable assumption that FCR should concentrate around hearth areas. Excavations in HP 104 did not reveal a definite hearth so FCR was a good means of locating areas where a hearth may have existed. A notable concentration of FCR was located in the east-central area of the floor (Fig. 11) and it is likely that a hearth would have been located near this area.

Debitage in HP 104 was more evenly dispersed than FCR. There did seem to be a slight concentration in the southeast corner of the housepit (Fig. 12) but given that this was also where the majority of the excavation was focused, the suggestion that most lithic reduction activities occurred there must be a tentative one.

Modified artifacts (Fig. 13) were also fairly evenly distributed in the excavated floor area. Most artifacts were recovered from the southeast corner but no significant concentrations occurred and it would be difficult to locate activity areas based on artifact density alone. Spafford (1991:39) separated artifacts at Keatley Creek into types that he thought would be useful for the identification of areas used for different activities. Those types are summarized in Table 1. The distribution of artifacts assigned to these categories in HP 104 is shown in Figure 14. Again, it was difficult to discern one particular location as being distinct from the others, except for the location of most of the abraders in the extreme southeast corner of the floor. All functional artifact categories except "Special Purpose Expedient Flake Tools" were present in HP 104 suggesting a rather broad range of activities were undertaken in addition to the specialized manufacturing of, and use of, sandstone.

Domestic Areas

The identification of domestic areas within a housepit was logically the next step after the examination for potential activity areas. Given that no specific activity areas were located and that there was no firm evidence to suggest that HP 104 was a dwelling, the identification of domestic areas was extremely problematical. Estimation of the approximate population of the housepit if used as a dwelling (or the maximum capacity if used as a special purpose structure) can be done using the formula developed by Spafford (1991): if each occupant required 1.5 m^2 of space then HP 104 with a floor area of 38 m^2 could hold a maximum of 25 people. If used as a multipurpose structure, the occupancy of HP 104 might have been even be more.

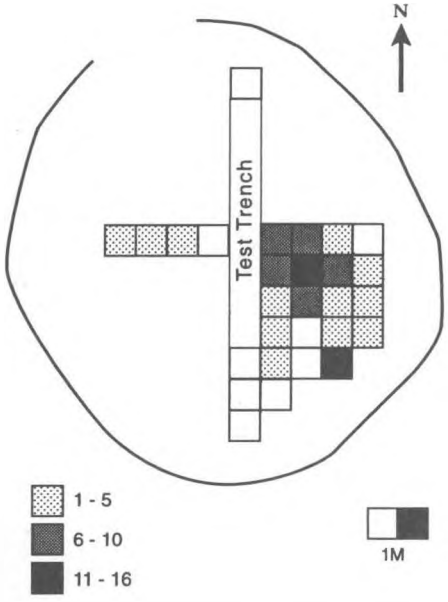

Figure 11. Density and distribution of FCR on HP 104 floor.

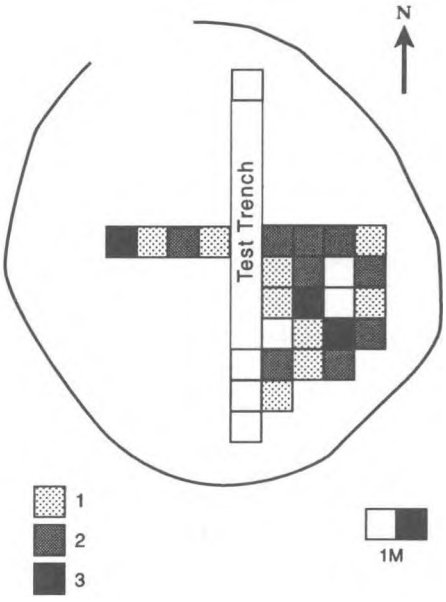

Figure 12. Density and distribution of debitage on HP 104 floor.

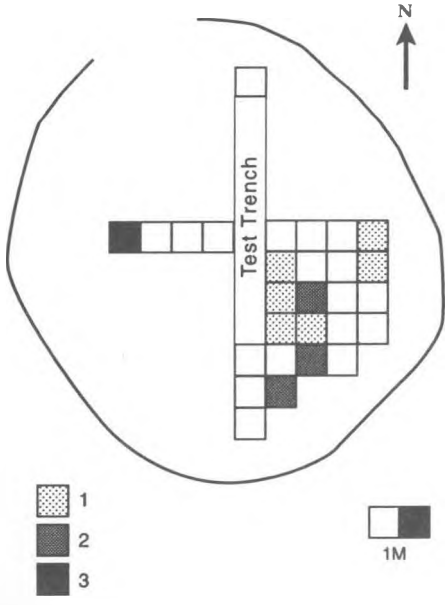

Figure 13. Modified artifact density and distribution on HP 104 floor.

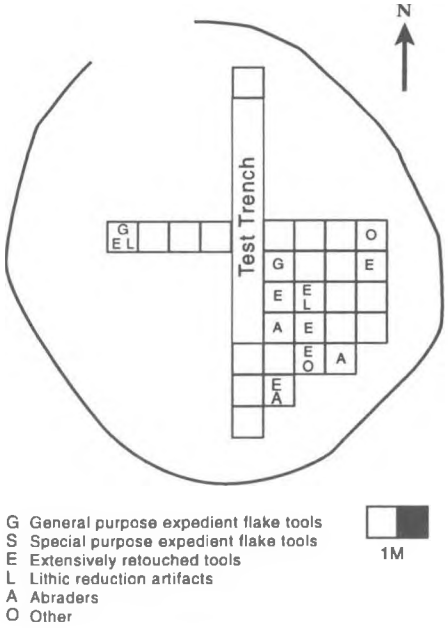

Figure 14. Distribution of functional artifact classes on HP 104 floor.

Summary

Housepit 104 appears to have been used for only a few years during the late Kamloops Horizon at around 250 BP. Lithic density was quite low and the characteristics of the lithic assemblage suggested that flake tools were used and maintained but not manufactured in the housepit. Specialized manufacturing, probably of nephrite, but possibly also of bone and antler, seemed to have been a common activity in HP 104 as indicated by the large quantity of sandstone artifacts and fragments. It appeared that a hearth was located in the center of the housepit and that these activities were undertaken around the perimeter. There were no firm indications that HP 104 was used as a dwelling. Instead, it seemed to have functioned as a special purpose structure for activities involving bone reduction and specialized groundstone tool manufacturing.

Conclusion

The analysis of the lithic assemblages from HP's 90 and 104 seems to confirm earlier interpretations of variability among small housepits at Keatley Creek. At least two, and probably three major types of housepits can be distinguished at this point in research at the site. First, there were small housepits that were residences of relatively poor families. Both HP's 90 and 12 seem to represent this type and are similar in many respects including overall lithic and faunal assemblage characteristics, division of space, infrequent use of hearths, and the paucity of features or postholes. Second, there are small housepits that seem to have been the residences of more affluent specialists such as hunters, ritualists, or perhaps craftspeople. Both HP's 9 and 104 may represent this type of small housepit, although other interpretations are possible in the case of the protohistoric HP 104 structure. This may have been the residence of a nephrite specialist or it may have been a specialized ritual lodge and meeting place for men. It seems unlikely that the high concentrations of abrading and sawing sandstone items in this structure would be the result of any general change over time during the Kamloops horizon and no such suggestions have been made by others. Whether HP 104 represents a ritual lodge or the residence of specialists may have to be resolved through the continued excavation of other small housepits.

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