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Title

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Permalink

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Journal

Journal of California and Great Basin Anthropology, 13(2)

ISSN

0191-3557

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Publication Date

1991-07-01

Peer reviewed

The Packwood Lake Site: Lithic Technology and Site Function

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DIFFERENCES in site assemblages reflected by the stages and variety of lithic reduction that occurred on-site may be useful to differentiate site function. However, data alone (i.e., comparisons of specific debitage category frequencies) cannot be used to infer site function, but interpretations of these data which describe the entire range of reduction activities, reduction trajectories, resultant end products, and discarded artifacts may allow for inferences of some of the behavior, which in part resulted in the formation of the archaeological record.

When environmental factors, such as those characteristic of "open-air" sites (especially within upland forested areas), result in the destruction of perishable material remains (e.g., floral and faunal remains, bone artifacts, basketry, etc.), identification of prehistoric site function is often exclusively inferred by characteristics of the lithic assemblage. Logistical hunter-gatherer settlement and subsistence patterns have been modeled and described, for example, according to assemblage variability (or lack thereof) and whether artifact assemblages represent curated or expedient technologies (see Binford 1979, 1980; Bamforth 1986). These models suffer when arguments for site function (i.e., settlement and subsistence) rely upon inferences of tool use on the basis of artifact morphology and then are applied to describing the range of subsistence activities indicated by a lithic assemblage (see Binford 1979:271-272).

As observed by Mack (1989:54-55), site assemblages limited to lithic artifacts and sometimes described as "small" and "sparse" are frequently characterized or "written-off" by

many archaeologists as "indicative of lithic reduction and related hunting activities" (Mack 1989:54). Investigators may consider environmental and ecological contexts and provide additional inferences as to the extent and type of activities that may have occurred at a location on the landscape. Technological considerations of stone tool manufacture and how this behavior may relate to site function is conspicuously absent from the analyses of such sites. Sites characterized as "lithic scatters" frequently have been disregarded as sources of information regarding prehistoric lifeways because of the preconceived supposition that they contain insufficient information (Flenniken et al. 1989).

Recent investigations at prehistoric archaeological sites within the Cascade Range of the Pacific Northwest and subsequent lithic analyses (see Flenniken et al. 1989; Flenniken and Ozburn 1990; Flenniken et al. 1990; Flenniken et al. 1990a, 1990b; Ozburn et al. 1990) employed analytical techniques based upon replicative experimental data (see Flenniken 1981). The results of the technological analyses and the evaluation of on-site lithic reduction activities were then used for modeling site function.

In this study, lithic technological data and the resulting interpretations of site function from two sites within the Oregon Cascade Range, the Warehouse site, 35LA822 (Flenniken et al. 1989), and the Diamond Lil site, 35LA807 (Flenniken et al. 1990), are compared to the analytical results from the Packwood Lake site, 45LE285, an upland site located within the Washington Cascade Range. The Oregon sites have been depicted as exhibiting hunting or

hunting-related assemblages primarily on the basis of identified on-site lithic reduction activities. The specific functional characterization of the sites used for this comparison was necessary in an attempt to eliminate the potential for intersite redundancy of representative on-site lithic reduction activities; therefore, for purposes of this research, sites that represent relative functional extremes and manifest specific lithic reduction activities associated with those functions were expected to be the most effective for comparative purposes with the Packwood Lake site assemblage (see Binford 1979: 255).

The results of this research questions the classification of site function based merely upon gross attributes of lithic assemblages and offers an alternative explanation based on the identification of on-site stone tool manufacturing activities derived from a technological analysis of the lithic assemblage. As an example, within a lithic assemblage from an upland setting, the presence of one of the most basic components (e.g., projectile points) of an inferred hunting tool kit should not be used as an indicator for the identification of a hunting site lacking technological evidence to support this inference. Debitage indicative of hunting tool kit maintenance or refurbishment will be discussed below.

Analytical data base comparability between all three sites was an essential prerequisite for this research. The comparisons were feasible because the same analytical criteria (i.e., technological classification system and nomenclature) and methods were used for the analysis of each site assemblage. That is,debitage attributes were correlated with experimental flintknapping analogs in order to propose a reduction model for prehistoric flintknapping activities. Each formed artifact and piece ofdebitage was analyzed from a technological perspective and classified according to the reduction stage represented by the artifact. A com-

prehensive glossary of technological terms used in this study can be found in Flenniken et al. (1989:100-106) and Flenniken et al. (1990:241-247).

While the reduction of stone during the manufacture of tools is generally considered to be a continuum (see Muto 1971:109; Collins 1975; Flenniken 1984:192), stage analysis (see Gilreath 1983) has proven a useful tool for the study of prehistoric lithic assemblages (e.g., Stanfill 1976; Raymond 1986a, 1986b; Ozbun 1987; Flenniken and Ozbun 1988; Reid et al. 1989; Flenniken et al. 1990a, 1990b; Flenniken et al. 1990). Binford (1979:267-269) also suggested that staged artifact manufacture is an embedded aspect of hunter-gatherer organization as it relates to site function, immediate need, and anticipation for future tool requirements within other functional contexts at other locations.

PACKWOOD LAKE SITE: 45LE285

The Packwood Lake site (Fig. 1) is located in southwestern Washington (Fig. 2) approximately 32 km. southeast of Mount Rainier between the Cowlitz River valley, 9.6 km. to the west, and the crest of the Cascade Range, 13 km. to the east, at an elevation of 874 m. The site is adjacent to Lake Creek, a tributary of the Cowlitz River and the outlet of Packwood Lake, and is within the *Tsuga heterophylla* Vegetation Zone characteristic of the lower elevation, moist environs of the southwestern Washington Cascade Range.

The prehistoric lithic assemblage analyzed from the Packwood Lake site consists of over 4,000 artifacts including formed artifacts (n=72) anddebitage (n=4,170). The assemblage primarily represents cultural materials recovered (using 3 mm. mesh screen) below a primary air-fall deposit of Mount St. Helens Wn tephra which dates to 510 years ago (Yamaguchii 1983, 1985) and on top of debris from the Snyder Mountain landslide (see Harrison



Fig. 1. View facing north from the Goat Rock Wilderness area. Packwood Lake visible to the middle left and Mount Rainier in the background at right.

and Powell 1977) estimated to have been deposited 1,000 to 1,100 years ago and which resulted in the formation of the lake (Schuster 1990).

Prehistoric artifacts recovered at the Packwood Lake site from USDA Forest Service archaeological investigations in 1987 are limited to debitage and flaked stone tools, including projectile points (dart, arrow, and lanceolate; $n=6$), biface blanks and fragments ($n=9$), preforms and fragments ($n=7$), flake cores ($n=4$), and unifaces and fragments ($n=72$). Characteristics of the assemblage, as well as ethnographic information specific to utilization of Packwood Lake (see Jacobs 1934; McClure 1987; Marks 1990), suggested the site functioned not as a hunting camp, but rather as a site associated with the logistical procurement of seasonally available (i.e., spring and summer) resources, particularly a native trout species present within

the lake and huckleberries from the surrounding hillsides. Additional subalpine and alpine resources, as well as obsidian (see McClure 1989), are also available in the nearby Goat Rocks Wilderness area (see McClure 1987).

WAREHOUSE SITE: 35LA822

Test excavations by Flenniken et al. (1989) recovered (also using 3 mm. mesh screen) over 3,000 lithic artifacts (formed artifacts and debitage) at the Warehouse site which is located in the western Oregon Cascade Range (Fig. 2). While absolute chronological data (e.g., radiocarbon dates) pertaining to site occupation were not obtained, interpretations of obsidian hydration data indicated that the site represents a single component in which the archaeological assemblage was deposited. Obsidian source identification indicated a very homogeneous source-specific assemblage and was interpreted

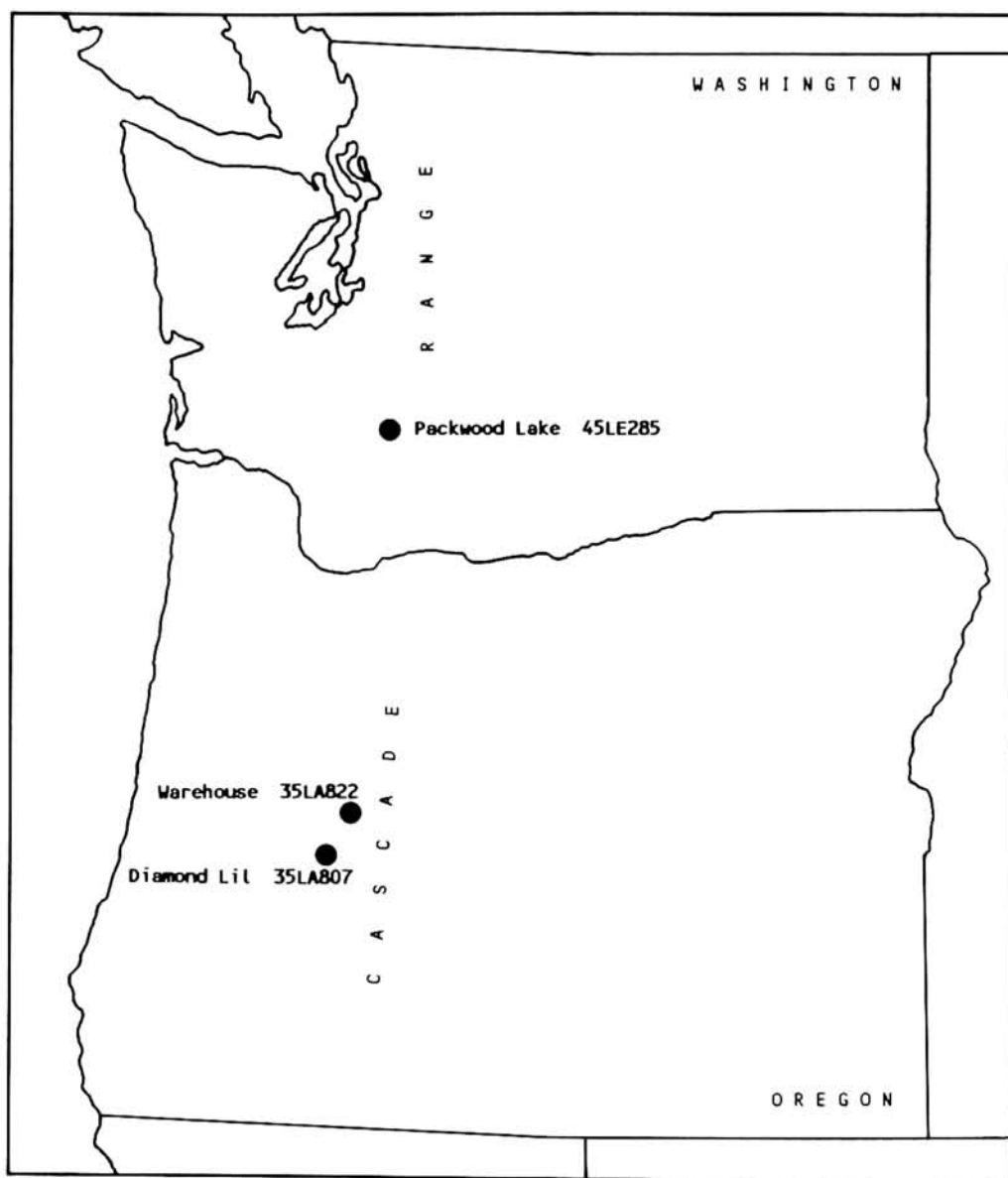


Fig. 2. Location of Packwood Lake, Warehouse, and Diamond Lil sites.

as supporting evidence for a single-component site (Flenniken et al. 1989:58-59).

Based upon the results of a technological analysis of the lithic artifacts (debitage and formed artifacts), lithic reduction activities represented the latest stages of projectile point manufacture, especially the rejuvenation of projectile points, which were associated with a

logistical hunting camp. A logistical hunting camp, or site, is defined as:

a site associated with the manufacture (secondary reduction subsystem) and rejuvenation (tertiary reduction subsystem) of projectile points, the evidence which was left as the permanent archaeological record at that location. These sites are situated at middle elevations nearer the home bases or somewhat more permanent residential

sites in the stream valleys. These locations are relatively close to permanent sites where large quantities of a meat resource may be procured at one time, processed, and easily transported back to the permanent home base. Logistical hunting site assemblages include lithic debitage associated with late secondary reduction, broken and/or exhausted projectile points, usually some evidence of animal processing tools, and in some instances, faunal remains. The major activities associated with a logistical hunting camp were, multiple kill episodes, initial butchery and processing, and refurbishment of hunting equipment. These activities may have occurred all at one location or in separate activity areas or separate sites [Flenniken et al. 1989:68-69].

Comparison with the Packwood Lake Site

As suggested by the occurrence of interior flakes with single-facet platforms (not attributed to early stages of biface reduction), cores requiring minimal platform preparation were reduced to provide flakes with effective cutting edges or, after minimal modification, for the production of other tools (e.g., flake tools, unifaces, etc.). At the Warehouse site, these flakes represent 1.3% (n=16) of the diagnostic debitage whereas they represent 10.3% (n=148) at the Packwood Lake site. This difference is attributed to the production of more flakes from unprepared cores (n=4) at the Packwood Lake site than at the Warehouse site (n=1). The relative low frequency (0.4%, n=16) of original detachment scars noted within the Packwood Lake debitage assemblage (n=4,170) suggests these flakes were not produced for use as flake blanks for the manufacture of bifacial tools.

An additional flake production method identified at the Packwood Lake site, a bipolar technique, is evidenced by the recovery of two exhausted bipolar cores (see Crabtree 1972: 16,19; Flenniken 1981). Replication and experimental use of hafted bipolar flakes, or micro-liths, has demonstrated the utility of this reduction technique for the production of a very efficient cutting instrument from the reduction of small pieces of lithic raw material (see

Flenniken 1981).

Early-stage biface thinning flakes at the Packwood Lake site account for 26.0% (n=373) of the diagnostic debitage and 15.1% (n=180) of the Warehouse site diagnostic assemblage. More initial percussion thinning occurred at the Packwood Lake site, especially when compared to late-stage thinning debitage (3.2%, n=46), suggesting that bifaces were being initially prepared, but final thinning by percussion did not occur to any significant extent at the site. Late-stage biface thinning flakes account for only 3.2% at the Packwood Lake site whereas the Warehouse site contains 9.2% (n=110) late-stage biface thinning debitage. Even though flake blanks, which tend to have an initial low length-to-thickness ratio, were being reduced at the Warehouse site, more final thinning by percussion was undertaken than at the Packwood Lake site.

The assemblage of biface thinning debitage at the Warehouse site is primarily associated with the reduction, or preparation, of flake blanks that were further reduced to manufacture projectile points (Flenniken et al. 1989:41-45). Biface percussion debitage at the Packwood Lake site represents early stages of biface reduction which, prior to final percussion thinning, were removed from the site. Without information pertaining to the entire range of reduction stages represented at each site, as illustrated in Figure 3, as well as the characterization of the reduction trajectories, it is unlikely such a differentiation would have been apparent.

Early-stage pressure flakes at the Warehouse site (18.8%, n=224) were attributed to the rejuvenation of lanceolate projectile points. Rejuvenation was also evidenced by alternate pressure flakes, a technique of alternate flaking used to repair squared or broken edges of points (see Towner and Warburton 1990:316-317). Late-stage pressure flakes (45.9%, n=547) are related to the restoration of the width-to-thickness ratio of lanceolate points necessary for

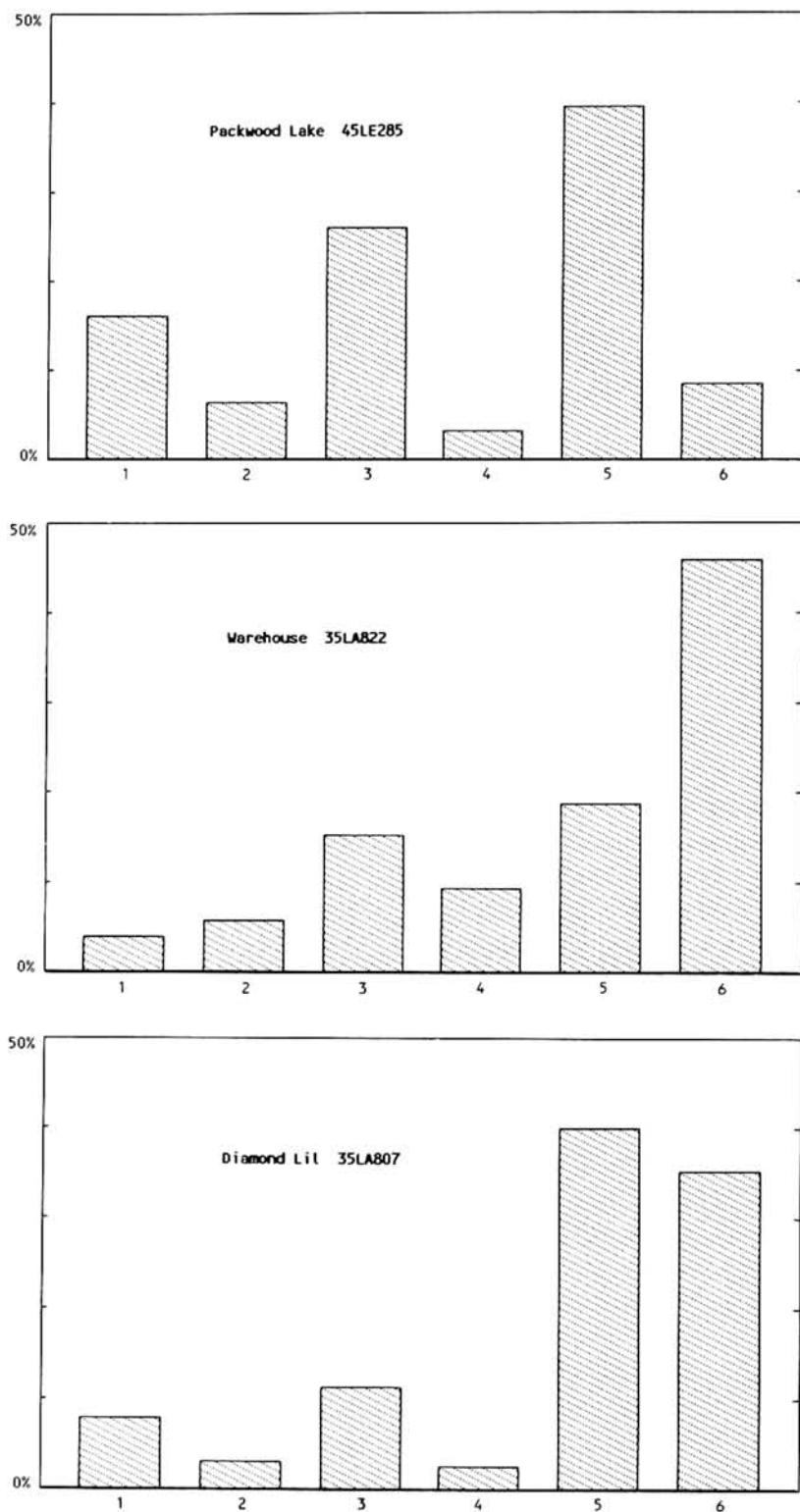


Fig. 3. Intersite comparison of diagnostic debitage reduction stage frequencies. Packwood Lake (top), Warehouse (middle), and Diamond Lil (bottom) sites. (1) Core reduction; (2) edge preparation; (3) early and (4) late percussion biface-thinning; (5) early and (6) late-stage pressure biface-thinning.

hafting and subsequent use (Flenniken et al. 1989:47; Flenniken and Wilke 1989). The frequencies of early- and late-stage pressure flakes vary considerably in comparison to those from the Packwood Lake site (Fig. 3); obvious rejuvenation pressure flakes were not observed (i.e., alternate pressure flakes) and early-stage pressure flakes (39.4%, n=565) were much more prevalent than late-stage pressure flakes (8.4%, n=120). The fundamental difference in the pressure flake assemblage of both sites reflects differences in the resultant end product. Pressure flaking at the Warehouse site was primarily associated with projectile point production and rejuvenation whereas initial manufacture was the principle activity at the Packwood Lake site.

Lithic reduction activities at the Warehouse site were more focused on maintenance aspects associated with hunting equipment than at the Packwood Lake site. Data that support this conclusion are debitage frequencies and their association with the rejuvenation and manufacture of lanceolate projectile points, and to a lesser extent, the attributes of exhausted and discarded points (Flenniken et al. 1989; see Daugherty et al. 1987a:92, 1987b:159). The most fundamental difference of the assemblages from the Warehouse and Packwood Lake sites is that the reduction trajectories employed at each site differ not only in the manufacturing goals, but especially in the behaviors associated with the ultimate use of the artifacts. That is, at the Warehouse site hunting equipment (e.g., projectile points) was repaired or replaced (immediate need), whereas at the Packwood Lake site manufacture was for future need (anticipated need; see Binford 1979).

DIAMOND LIL: 35LA807

The Diamond Lil site, 35LA807 (Fig. 2), is located on the west side of the Oregon Cascade Range in the Middle Fork of the Willamette River drainage. Data recovery excavations con-

ducted at the Diamond Lil site resulted in the recovery (using 3 mm. mesh screen) of over 20,000 lithic artifacts, which included both flaked and ground stone tools and a faunal assemblage consisting of nearly 800 bone fragments. Analyses included those of faunal remains, site structure, site context, obsidian x-ray fluorescence spectrometry, obsidian hydration, all of the formed artifacts (n=215), ground stone (n=9), and a 65% sample of the debitage (n=12,903). Interpretation of the site data as well as ethnographic and archaeological literature concerning multiple kill events, led to the conclusion that the Diamond Lil site operated as a kill, butchering, and meat processing locality (Flenniken et al. 1990). Site assemblages associated with intensive hunting may exhibit the following diagnostic, though not exhaustive, list of features:

- 1) impact fractured projectile points and fragments indicating the kill location;
- 2) artifacts diagnostic of weapons maintenance and rejuvenation such as pressure, alternate, edge preparation, and notching flakes;
- 3) tools and debitage evidencing manufacture and maintenance of butchering tools (i.e., flake core, bipolar, and/or microblade technologies);
- 4) ground stone or heavy industry tools and fire-cracked rock related to meat or bone processing. Traces of animal remains should also be present, although preservation of organic materials is dependent on micro-environmental conditions at the site and the age of the deposit [Flenniken et al. 1990: 143-144].

The frequent occurrence (n=95) of projectile points and point fragments that exhibited impact fractures suggested that hunting actually occurred on-site (i.e., a kill site; see Flenniken 1985; Flenniken and Raymond 1986; Titmus and Woods 1986). Flenniken et al. (1990) argued that the occurrence of projectile point fragments, especially nonbasal elements, in such frequency was not the exclusive result of being returned to the site within the meat, but rather the consequence of breakage on-site during use, specifically during the actual kill of game at the

Diamond Lil site locale (Flenniken et al. 1990:156; Flenniken, this volume).

Comparison to the Packwood Lake Site

At the Diamond Lil site, microblades and bipolar flakes were interpreted as the cutting tools used during the processing of carcasses following the kill event. Other cutting implements were not identified in the assemblage. Even microscopic inspection of lanceolate-shaped projectile point margins failed to reveal evidence of use as cutting tools (Flenniken et al. 1990:159; see Keeley 1980). The inference that flakes also were being produced for use as unmodified and expedient cutting edges is suggested by the recovery of 11 flake cores from the site (Flenniken et al. 1990:65-68).

The use of a microblade technology at the Diamond Lil site was probably an important means for the production of straight cutting edges for use in processing meat. Complete microblades and fragments ($n=184$) and microblade cores ($n=4$) recovered from the site suggest a technique often employed to utilize small pieces of high quality tool stone fully (Daugherty et al. 1987a, 1987b:109; Flenniken et al. 1990:186-187).

Although a microblade technology was in evidence as early as 7,000 B.P. within the upper Cowlitz River drainage at sites such as Layser Cave, 45LE223 (Daugherty et al. 1987a), and continued until as recently as 200 B.P. at Judd Peak, 45LE222 (Daugherty et al. 1987b:226), microblades were not used at the Packwood Lake site. Their utilization at Layser Cave and Judd Peak may be related to the intensity of meat-processing activities that occurred at these sites. Inferred activities at the Diamond Lil site are comparable to those at both Layser Cave (Daugherty et al. 1987a) and Judd Peak (Daugherty et al. 1987b); these sites were associated with processing large quantities of game. Judd Peak also contained a significant quantity of salmonid bones, though it should be noted that

the use of the microblade technology at Judd Peak was not limited to distinct levels associated with these remains (Daugherty et al. 1987b:102). Apparently, the lithic assemblage at Packwood Lake does not reflect the processing *en masse* of large quantities of meat resources such as that obtained from multiple kill events.

Principal lithic reduction activities at the Diamond Lil site indicate the manufacture and especially the rejuvenation of bifacial tools (Flenniken et al. 1990). Early-stage biface thinning flakes (11.3%, $n=558$) and late-stage biface thinning flakes (2.6%, $n=130$) are represented in the Diamond Lil site lithic assemblage (Flenniken et al. 1990:82). These data are similar to the percentages of biface thinning flakes from the diagnostic debitage of early-stage biface thinning (26.0%) and late-stage biface thinning debitage (3.2%) at the Packwood Lake site, although once again, the emphasis is on the earliest stage of biface thinning at the Packwood Lake site.

The significant difference in the debitage sub-assemblages between the two sites is not in the actual frequencies of those categories. Rather it is the dissimilarity in the associated end products resulting from the reduction trajectories and in the intersite association of one stage to another within the reduction stage continuum (Fig. 3). At the Diamond Lil site, biface thinning debitage is primarily associated with the reduction of flake blanks and their subsequent reduction for use in the production of projectile points, whereas the Packwood Lake site biface reduction predominately indicates the production of biface blanks and preforms.

Debitage characteristic of reduction by pressure at the Diamond Lil site is represented by early- (40.0%, $n=1,973$) and late-stage pressure flakes (35.1%, $n=1731$), including notching flakes ($n=15$). Replication experiments were conducted for the obsidian assemblage of the Diamond Lil site, and the analytical results were used to identify the specific on-site reduction

stages represented by the debitage assemblage. Results of these experiments demonstrated that the Diamond Lil site assemblage exhibited characteristics of "preform-to-finished point, point-through-rejuvenation" reduction stages (Flenniken et al. 1990:83-96).

The Packwood Lake site assemblage of pressure flakes is represented by both early-stage (39.4%) and late-stage pressure flakes (8.4%). Pressure flaking debitage likely reflects initial manufacture rather than rejuvenation of artifacts, such as projectile points. The pressure flakes in the debitage assemblage differ from those of the Diamond Lil site, that is, rejuvenation pressure flakes were not observed among the pressure flake subassemblage from the Packwood Lake site.

One of the most immediately apparent distinctions between the two assemblages is the frequency and characteristics of the projectile point assemblage from each site. A total of 95 projectile points and fragments were recovered from Diamond Lil compared to only 6 at the Packwood Lake site. The numerical disparity is not nearly as meaningful as the comparison of the frequency and type of projectile point damage between the two sites. The Diamond Lil site projectile point assemblage exhibited numerous examples of impact damage and impact fractures. All of the projectile points from the Packwood Lake site are representative of exhausted and discarded projectile points, none of which exhibited characteristics of impact damage.

CONCLUSIONS

The Packwood Lake site prehistoric lithic assemblage primarily represents utilization of the lakeshore area between 510 and 1,100 years ago. Interpretations of the technological analysis determined flintknapping activities were concentrated on the production of bifacial blanks, preforms, and, to a lesser extent, expedient flake tools. These data do not suggest

a site associated with hunting, but in conjunction with the ethnographic record for the site vicinity and the absence of a hunting site assemblage, suggest that other resource procurement activities occurred at the site. This may have included, but was not limited to, fishing and the gathering of huckleberries as suggested by ethnographic and ethnohistoric information; therefore, the Packwood Lake site lithic assemblage may be characteristic of a base camp or multi-resource acquisition site within higher elevation areas of the Cascade Range away from major river or stream valleys.

The comparison of the Warehouse site lithic assemblage, which represented a hunting camp, and the Packwood Lake site lithic assemblage indicated differences in reduction activities. At the Warehouse site, flintknapping activities were focused on maintenance aspects of the hunting tool kit. This was evidenced by the occurrence of rejuvenation debitage and the manufacture of projectile points as well as the attributes of the exhausted and discarded projectile points (see Daugherty et al. 1987a:92, 1987b:159).

The Packwood Lake site reduction data indicate activities other than refurbishment or maintenance of the hunting tool kit. Instead, flintknapping activities at the Packwood Lake site are a continuation of the reduction continuum of the entire tool kit. That is, some artifact classes, such as bifacial blanks and preforms, were manufactured at the site with the intent that they be further modified or reduced elsewhere on the landscape when replacement tools were required (e.g., Raymond 1990). Other lithic materials, or flake cores were reduced at the site to provide expedient flake tools. This clearly can be considered staged manufacture (e.g., Binford 1979:268) from the perspective that the reduction continuum of an artifact may be interrupted through time and, as a result, separated by space. That is, lithic raw materials procured at one location pass through several manufacturing stages, use and rejuvena-

tion episodes, and lateral cycling (Schiffer 1972) of the artifacts at different locations on the landscape before being deposited into the archaeological record as an exhausted artifact.

A comparison of the Diamond Lil site lithic assemblage, which is characterized as representative of a deer kill/butchery site, and the Packwood Lake site also emphasizes the differences between task-specific hunting and non-hunting site assemblages. The Diamond Lil site contained abundant evidence for on-site use of projectile points as evidenced by numerous impact-fractured points and point fragments. The Packwood Lake site did not contain such evidence. The Diamond Lil site reduction activities were primarily associated with the rejuvenation of projectile points as well as the manufacture of replacements. Indications of this activity were virtually absent from the Packwood Lake site. Finally, the Diamond Lil site contained evidence for the use of a microblade and bipolar technology to produce artifacts for processing meat obtained from on-site multiple deer kills. There is no indication from the analysis of the Packwood Lake site lithic assemblage that the site represents intensive hunting or processing activities.

The Packwood Lake site appears to represent a multi-resource acquisition site. It is likely that seasonal use of the lake area began with the onset of trout spawning sometime during late spring to early summer (Packwood Community Study Proceedings 1954; McClure 1987; Lucas 1989:166). Inhabitants of villages within the upper Cowlitz River valley presumably traveled to Packwood Lake to initiate procurement and processing of fish at this time. As the season progressed, additional resources such as huckleberries ripened in the surrounding hillsides. These were probably gathered and returned to the site for processing. When access to the higher elevations (1,800 to 2,500 m.) of the nearby Goat Rocks area was possible following summer snow melt, additional journeys were

made to hunt mountain goats as well as other game. Meat processing probably occurred at or near kill sites within the Goat Rocks Wilderness (see Jacobs 1934) at which time tool kit maintenance likely occurred. Obsidian was obtained while in the Goat Rocks Wilderness area and its acquisition probably represents an embedded strategy (Binford 1979). The end of procurement of resources in the vicinity of Packwood Lake likely coincided with the onset of fall fish runs in the upper Cowlitz River, at which time prehistoric groups returned to the villages within the Cowlitz River valley.

Other conclusions that can be elicited from results of the analysis of the Packwood Lake site and subsequent comparison to lithic assemblages of functionally dissimilar sites have implications for the interpretations of site function utilizing a technologically oriented approach. A prerequisite for this approach has been the comparison of lithic assemblages from sites whose functions have been inferred from the same or similar analytical criteria and methodological approach derived from interpretations of experimental data.

Subsistence activities, especially those that are primarily concentrated or focused on the procurement or processing of faunal resources at a specific site, are especially apt to be reflected by the distinctive nature of the lithic assemblage such as those from the Warehouse and Diamond Lil sites. Hunting site assemblages are represented by well-defined lithic reduction strategies principally involving late stages of tool manufacture, and particularly rejuvenation of tools damaged either during the most recent hunting episodes, or during an interlude in preparation for those to follow.

Sites such as the Packwood Lake site that exhibit lithic artifact assemblages more generic in character do not reflect the manufacture, use, or repair of distinctive stone tool categories for effective completion of various tasks; that is, interpretation of the available data does not

portray an emphasis on a well-delineated set of activities (cf. Binford 1978:482-483). Therefore, sites should not be ascribed a specific function without consideration of all plausible aspects of human behavior likely to have led to the nature of the archaeological record. This should also include an assessment of natural processes that may have affected the character of these remains.

The research presented above demonstrates the utility of an approach that uses data, and interpretations thereof, to describe technological aspects of logistical resource-procurement organization (see Binford 1980). While a presumption is not made that all subsistence activities can be identified using this approach, it nevertheless establishes a framework within which the researcher must work toward an examination of all aspects of the site and its context in order to contemplate a more likely hypothesis regarding site function.

Single assemblage attributes, such as technologically diagnostic lithic artifacts, are not indicative of the limits of site activities, or range of diversity therein, for interpretations of potential activities that occurred prehistorically at a site. The whole of the assemblage—and not just its constituent parts—represents a portion of a behavioral system that enables the elucidation of a more accurate definition of site function.

ACKNOWLEDGMENTS

Rick McClure and Janet Liddle of the Gifford Pinchot National Forest were instrumental in the completion of the Packwood Lake site project. Jeff Flenniken and Terry Ozbun contributed to the technological research as well as editing early drafts of the manuscript.

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