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EXPLORING STÓ:LŌ-COAST SALISH INTERACTION AND IDENTITY IN ANCIENT HOUSES AND SETTLEMENTS IN THE FRASER VALLEY, BRITISH COLUMBIA

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Social scientists recognize a complex and iterative relationship between the built environment and social identities. Here, we explore the extent to which household and settlement remains may be used as archaeological correlates of collective identities among the Stó:lō-Coast Salish peoples of the Fraser River Valley. Using data from six recently tested archaeological sites we begin with the household and explore expressions of identity at various social-spatial scales. The sites span the period from 4200 cal B.C. to the late A.D. 1800s and include settlements with semi-subterranean houses of different forms as well as aboveground plank houses. Across this timeframe we see both change and continuity in settlement location, layout, size, and house form. Our data suggest that although group identities have changed over the millennia, selected social units have persisted through many generations and can be linked to present-day identities of the Stó:lō-Coast Salish.

Los científicos sociales reconocen una compleja e iterativa relación entre el ambiente construido y las identidades sociales. Aquí, exploramos el alcance del uso de los restos de casa y de asentamientos como correlatos arqueológicos de identidades colectivas entre los Stó:lō-Coast Salish del valle del rio Fraser. Usando los datos de seis sitios arqueológicos recientemente examinados, empezamos con el asimiento de casa y exploramos las expresiones de identidad a varios niveles espaciales y sociales. Los sitios extienden desde el 4200 cal B.C. al 1800 A.D. aproximadamente, e incluyen asentamientos con casas semi-subterráneas de varias formas y casa con suelo de tablas elevadas. A lo largo de esta temporada, notamos cambio tanto como continuidad en la localización del asentamiento, trazado, tamaño, y forma de la casa. Nuestros datos sugieren que mientras que las identidades del grupo han cambiado a lo largo de los milenios, selectas unidades sociales han continuado a través de muchas generaciones y se pueden relacionar con identidades actuales de los Stó:lō-Coast Salish.

For more than a century North American anthropologists have attempted to use variation in material culture to define broader sociocultural groupings (e.g., Hill-Tout 1895; Jorgensen 1974, 1980; Kroeber 1939; Wissler 1914, 1917). Although the discipline has moved away from the essentialist assumptions associated with these early attempts at group identification, archaeologists continue to have a strong interest in the relationships between material culture and collective identities (e.g., Hall 2000; Jones 1997; Orser 2001; Shennan 1989). Many archaeologists now link the production of social identity with the production of material culture, especially within a "built" landscape (e.g., Marcus 2000; Preucel 2000). However, social identities are continuously negotiated and often vary across social settings. Thus, recognizing identities in the present where living actors can be observed and interviewed, let alone in the past where they cannot, is exceedingly

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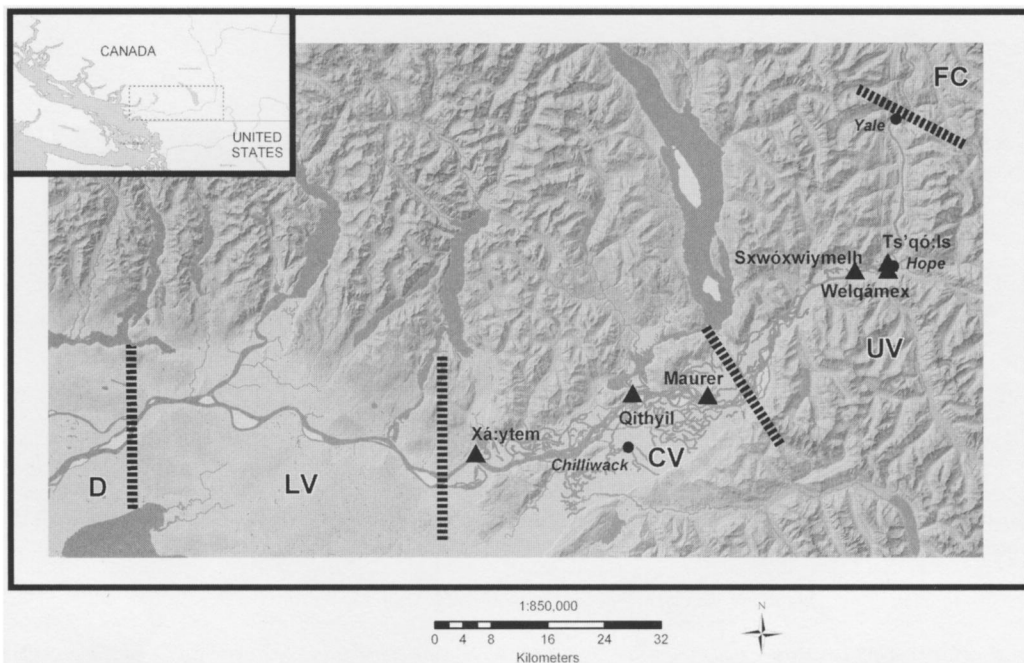
Figure 1. The Fraser Valley, showing location of sites and places mentioned in the text. We divide the region into five general areas based on topography: D = delta, LV = lower valley, CV = central valley, UV = upper valley, FC = Fraser Canyon.

difficult (e.g., Hall 2000; Jones 1997; Talalay 1997).

The Coast Salish of the central Northwest Coast exemplify the fluid nature of social identities and the difficulty of making one-to-one correspondences with material culture. Ethnographic sources from the 1800s onwards describe how Coast Salish peoples counted themselves as members of multiple social groups based on kinship, subsistence, gender, class, and ritual relations (Carlson 2003; Miller 1999; Suttles 1987a, 1987b, 1987c, 1990). Group relations were neither sharply bounded nor static in their arrangement in space and time (Miller and Boxberger 1994). Some expressions of group identity, such as those associated with familial lineages, had long-term consistency. Other identity expressions, such as those used in times of war, were more situational. In some cases physical proximity strongly influenced the degree of interaction among groups, but in other cases it did not. For example, although co-occupants of a house might be bound by consanguinal and affinal ties and consider themselves to be members of a closely knit house group, they might not consider their next-door neighbors to be part of the same social group—even though some might be close kin.

Despite these social complexities, several Northwest Coast archaeologists have optimistically suggested that material culture (e.g., basketry and stone sculpture) and features (e.g., earthen burial mounds) can be used as identity markers among the Coast Salish (Bernick 1998; Borden 1983; Carlson 1996; Croes 1989, 1997; Croes et al. 2005; McMillan 2003; Mitchell 1989, 1990; Thom 1995). These material remains have been the basis for archaeological claims of continuity and change in Coast Salish identity through time (Croes et al. 2005; Tveskov 2007).

In this paper we explore the extent to which the remains of houses and settlements[1] may be used as archaeological correlates of collective identities among the Coast Salish peoples of the Fraser River Valley (Figure 1). Today many Fraser Valley Coast Salish identify themselves as "Stó:lō" ("river" or "People of the River"). The Stó:lō are Halkomelem speakers of the Central Coast Salish and they take their name from the river that is central in their territory and integral to their identity. "Stó:lō," or the Fraser River, is one of western North America's largest rivers and is the most productive salmon river in the world (Northcote and Larkin 1989). For

millennia, the lower 200 km of the Fraser River and its many tributary watersheds have provided the Stó:lō and neighboring Halkomelem-speaking groups an abundance of terrestrial and aquatic resources (Lepofsky et al. 2005). The river was also a major transportation corridor that enabled and encouraged interactions among Halkomelem speakers throughout the region and beyond (Blake 2004; Schaepe 2009).

The longevity of Stó:lō collective identity is reflected in oral narratives that convey a sense of "deep time" and have remarkable intra-regional consistency (Boas 1894; Duff 1952; McHalsie et al. 2001). It is also evident in a landscape that bears evidence of both current and past land uses and social relations. Through oral traditions, some of which were recorded by anthropologists during the past century, the Stó:lō (people) speak of their age-old and unbroken occupation of the Stó:lo (river) in the Fraser Valley (e.g., Boas 1894). Archaeologically, this is evident in the association of modern-day Stó:lō settlements and cemeteries with ancient settlements and burial sites dating back several millennia (Lepofsky et al. 2000). These archaeological sites—as well as "transformation sites," features of the landscape formed through the process of "making the world right"—are imbued with meaning and serve as ever-present reminders of the links between present-day Stó:lō and the land, the river, and the past (McHalsie et al. 2001:6; Oliver 2007; Schaepe 2007).

Unlike previous studies that attempt to link Coast Salish identity with artifacts, our exploration of Stó:lō identity starts with the household and its archaeological correlate, the house. Houses simultaneously reflect and reproduce social, political, and ideological principles of their owners and occupants (Basso 1996; Blanton 1994; Bourdieu 1973; Deetz 1982; Lawrence and Low 1990; Rapoport 1969). In this paper we assume that houses and the settlements of which they are a part actively convey messages about the ordering of society. Such messages are conveyed to household and community members whose daily practices define and reinforce differences in social status and power. These messages also provide outsiders, including archaeologists, ideas about these internal sets of relations (Coupland 2006).

On the Northwest Coast, household studies have been a mainstay of research for decades—both because of the archaeological visibility of houses and the direct inferential leap that we can make about the households that lived in them. Households are recognized as a basic social and economic unit of many Northwest Coast peoples and thus constitute a basic and manageable unit of study. The remains of large aboveground plank houses that sheltered these social groups are visible in the ethnographic and archaeological records throughout most of the region (e.g., Ames et al. 1992; Ames et al. 1999; Archer 2001; Hill-Tout 1978; Lamb 1960; Lepofsky et al. 2000; Mackie and Williamson 2003; Marshall 2006; Sobel et al. 2006). Even more tantalizing for archaeologists, the ethnographic and historical records link a variety of plank house styles with specific cultural groups (Suttles 1990).

This study differs from previous household studies on the Northwest Coast in its focus on the aboveground plank house *and* on the much less-studied semi-subterranean house. Our research builds on the work of Marian Smith (1947), who over 60 years ago noted in *American Antiquity* the co-occurrence of these two house forms in the Fraser Valley (see also Barnett 1944). Smith's observations countered the then common notions that pithouses were used exclusively by the Interior Salish peoples of the Fraser-Columbian Plateau and that the Coast Salish only built aboveground plank houses.

Our study also departs from many household studies on the Northwest Coast in the scale of inquiry. While we start with the household as our basic unit of analysis, we examine expressions of group identity among households within and among local groups across the Fraser Valley region (Table 1). One of our goals is to understand how Stó:lō-Coast Salish social interaction and identities were negotiated and expressed through time and across space. Given the temporally and spatially fluid nature of Coast Salish identity, we argue that exploring identities at multiple scales of interaction is the most robust approach.

We approach the study of Stó:lō identity with household data from the Fraser Valley accumulated over the past 60 years of archaeological research. Although there are gaps in our current dataset, we suggest a framework for investigating past social group identity and for collecting and analyzing new data. This framework includes a consideration of variability in house form and settlement layout

Table 1. Inferential Links between the Built Environment and Social Groups.

Analytical Unit	Social Unit	Physical Attributes	Social Inferences
The House	Household	House construction/form	Expression of household identity
		House size	Household size
		Internal house features and artifacts	Household composition, daily activities, degree of sedentism
The Settlement	Local group	Number of houses	Local group size
		Relative size, form, and position of houses	Degree of cohesion, relative social positions
The Watershed	Multi-settlement group; "Tribe"	Location of settlements	Degree of interaction outside local groups
		Form and layout of houses and settlements in comparison to other watersheds	Expression of "tribal" identity
The Fraser Valley (multiple watersheds)	Multi-tribal group; "the Stó:lō"	Form and layout of houses and settlements in comparison to other regions	Interaction both within and outside the Fraser Valley; broader expressions of identity

across space and time. We present data from six sites located in the central and upper Fraser Valley that were excavated by one or more of the authors. Houses at these sites span a 6,000-year period from 4200 cal B.C. to the A.D. 1850s, after which time European colonization of the region accelerated dramatically (Figure 2).[2] Our data span the time range of all known houses in the Fraser Valley and represent one of the most complete chronologies of houses in the broader Pacific Northwest Coast region. We hypothesize that similarities and differences in certain attributes of houses and settlements signal important changes or continuities in social group identity.

Stó:lō Identities and Residential Architecture

Stó:lō and broader Coast Salish peoples formulate their identities within a range of social, economic, and ritual interactions (Bierwert 1986; Miller 1989; Miller 1999). Although many of these relationships are not spatially restricted, we focus here on those affiliations that (1) are linked to and expressed as physical elements of the built environment and (2) stem from relations between households (Table 1).

One of the most visible Stó:lō affiliations is what is popularly and somewhat problematically (Kennedy 1995) known as the river- or watershed-based "tribe." Approximately two-dozen Stó:lō "tribes" spoke dialects of common language and recognized descent from the same metaphysical ancestors (Carlson 2001a). Collectively, the tribes were linked through a shared sense of identity,

which is reflected in the observation of an elder who in the early 1900s characterized the Fraser River "Stó:lō" as the "river of rivers."[3] Placed in a cultural context, "Stó:lō" can also be regarded as meaning "tribe of tribes" (Carlson 2003:55).

Within the broad application of the term "Stó:lō," ethnographic sources (e.g., Duff 1952; Suttles 1990) suggest that most political relations took place at the local group level. Heads of households were responsible for managing resources and activities among members of households, and the heads of leading households were often considered the heads of local groups. As a forum for political activity, relations between households became the central arena for the definition of identity.

The structure of relationships between households appears to have developed into a form of nested hierarchy. At the time of first European contact in the late eighteenth and early nineteenth centuries, each "tribal" watershed was associated with at least one major town or potlatch center (Miller 1999). Relations centered on the Fraser River communications corridor and also included some tribal clusters that were anchored around towns located not in tributary watersheds but along major sloughs or stretches of the Fraser River itself. Because the Stó:lō treated these tribal clusters as social equivalents of those located within tributary watersheds, Carlson (2001a, 2003) has termed them "watershed equivalents."

Social cohesion within a town was sometimes manifested physically. Some of the larger towns, for instance, consisted of clusters of plank houses
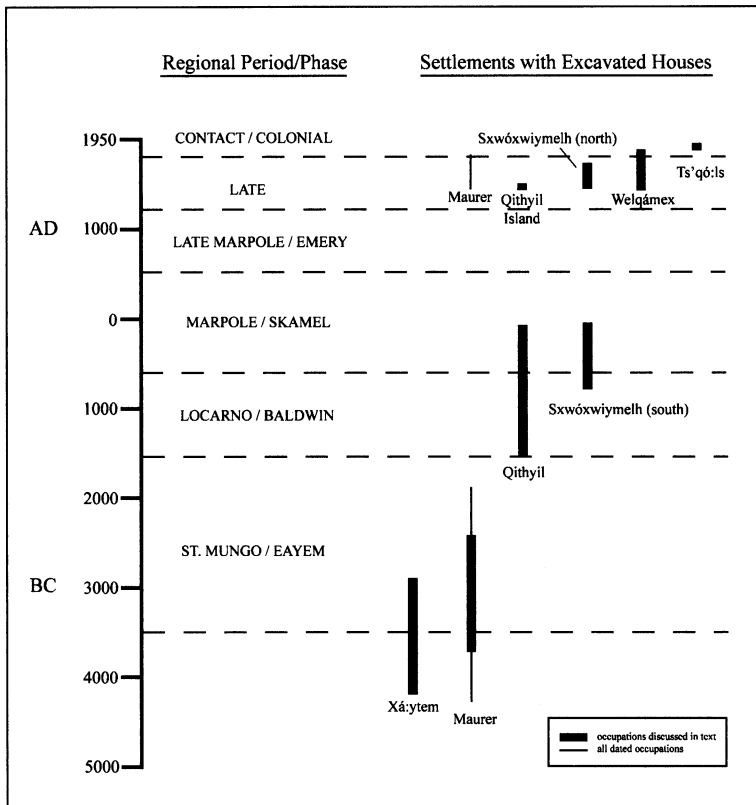
Figure 2. Archaeological chronology for the Fraser Valley and relative ages of sites discussed in the text. The solid line represents all dated occupations; the thicker portion of the line represents the occupations with houses discussed in the text.

protected behind a single giant palisade (Lamb 1960:106). The heads of high-status families, who hosted major community gatherings, lived in these largest settlements. Somewhat smaller and more numerous affiliated villages were found in secondary locations, more removed from significant fishing sites and places of political, economic, and spiritual power. Much smaller and more seasonal hamlets were scattered throughout the territory near resource-collecting locales. At the center of each watershed system were prominent households in the upper echelon of this nested hierarchy of relations. As centers of political, economic, social, and religious interactions, households within these strategically situated settlements factored prominently, by extension, in the process of identity production.

Stó:lō Houses and Settlements

Archaeological and ethnographic evidence describes two basic types of permanent houses in

Stó:lō settlements: the cedar plank house (*s'iltexwáwtxw*; Figure 3) and the semi-subterranean (or in-ground) pithouse (*sqémél*; Figure 4). The plank house, with some variation in size and form, was found throughout Stó:lō territory, whereas the pithouse appears to have been more common in the region east of the lower valley (see Figure 1; Schaepe et al. 2001). At the time of contact, both types of structures were occupied and maintained by a cohesive household group led by a ranking male and composed of kin, non-kin followers, and sometimes slaves. Within plank houses, social relationships were reflected in relative size, construction, and internal layout (Carlson 1997:89; Hill-Tout 1978; Suttles 1991). Published ethnographic and historical sources are more silent about the relationship of social and physical space within pithouses, although we expect patterns similar to those observed for aboveground plank houses.

The overriding importance of the Fraser River as a corridor of transportation and communication

Figure 3. Plank house structure described in the ethnographic and historical record, with *Halq'émeylem* structural terms added (adapted from Schaepe et al. [2001:40]; image courtesy of Jan Perrier).

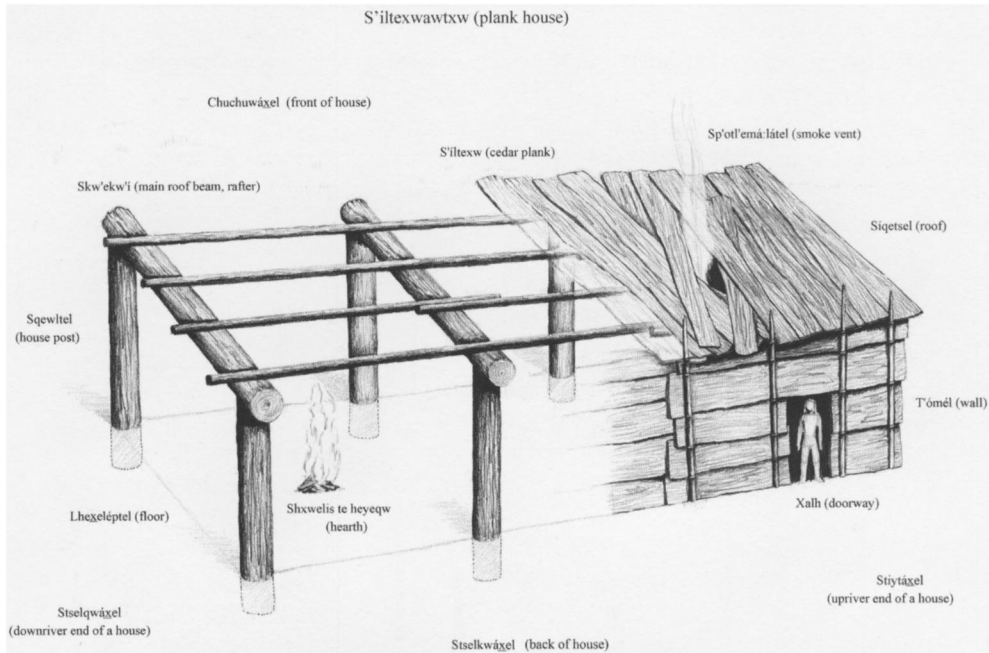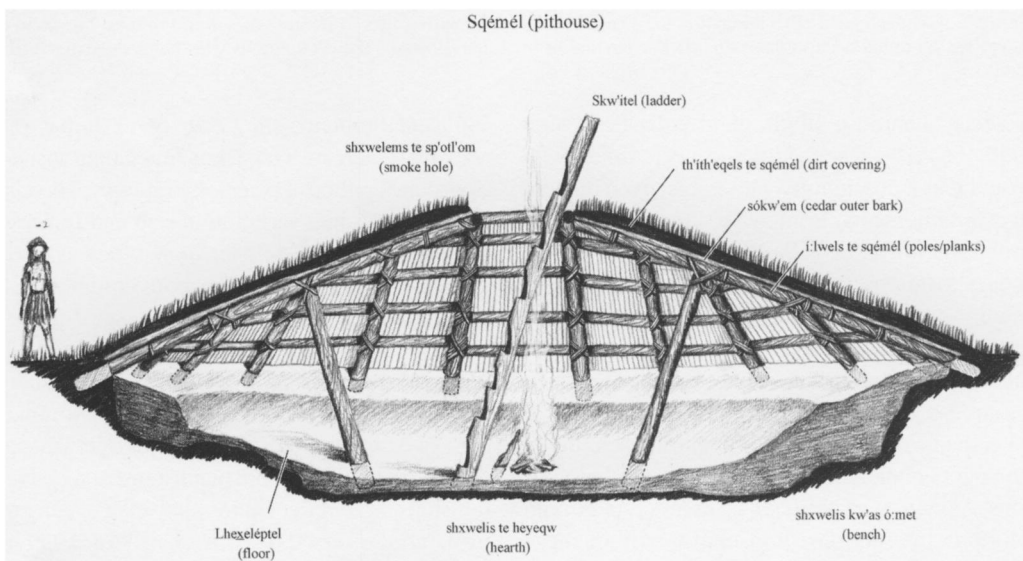**Figure 4. Pithouse structure described in the ethnographic and historical record, with *Halq'émeylem* structural terms added (adapted from Schaepe et al. [2001:46]; image courtesy of Jan Perrier).**

is reflected in the Stó:lō built environment. For example, the pithouse entrance ladder generally was oriented toward the river (Duff 1949:66), and plank houses were typically built in rows parallel to and facing the river (Bierwert 1986:212–213). Furthermore, terms in the Halq'eméylem dialect (the upriver dialect of Halkomelem) for plank house parts orient the house to the direction of river's flow (see Figure 3). Differences in the size and location of these houses commonly corresponded to differences in household status and wealth (Barnett 1955:19, 21). Similar descriptions account for long-standing social-spatial relationships expressed still today among people, households, and houses in Stó:lō gatherings and settlements (Bierwert 1986:223; 274–276).

Why Pithouses and Plank Houses?

Because most other Coast Salish groups historically lived in plank houses, anthropologists have offered a variety of functional and social explanations for the presence of pithouses in the Fraser Valley. These explanations include that pithouses were used (1) during the coldest months, (2) for defense, or (3) only by elite families (Barnett 1955; Duff 1952; Hill-Tout 1978; Smith 1947). Environmental explanations are supported by the concentration of pithouses in the central and upper Fraser Valley (Figure 1) where colder and drier winters prevail (Schaepe et al. 2001:47). Robert Joe, an oral historian among the Ts'elxweyeqw-Stó:lō people, noted that pithouses were rarely found in the lower Fraser Valley because the ground was generally too wet (Duff 1952:46). There is a general acceptance among archaeologists of the region that pithouses were occupied in the winter, despite the absence of seasonality data to independently evaluate this assumption. Data presented here suggest that, contrary to ethnographic sources, some pithouses were lived in year round (see Sxwóxwiymelh and Welqámex below).

Archaeological explanations for the co-occurrence of pithouses and plank houses have also relied on assumptions about the relationship between Salish house forms and identity. For many archaeologists, pithouses are equated with the Interior Plateau and plank houses with the Coast. Thus, the co-occurrence of both forms is seen as evidence of influence by both coastal and Interior Plateau cultures (Crowe-Swords 1974; Hanson 1973;

Mitchell 1963; von Krogh 1976). Our review, however, suggests that within the pithouse-plank house continuum, there is huge variation in structures that does not easily allow for a simple equation with Coast versus Plateau identities. Thus, while we recognize that climate and intercultural interaction likely simultaneously influenced architectural forms, we view architectural expression as influenced by political, economic, social, and religious functions and relations (Aldenderfer and Stanish 1993, Rapoport 1969).

Fraser Valley Houses: Archaeological Evidence

In the following summary, we provide details on the setting, age, size, construction, and position of residential architecture at six sites in the central and upper Fraser Valley (Tables 2 and 3, see Figures 1 and 2). Where possible, we use the Halq'eméylem place name as the site name. In the case of Sxwóxwiymelh (Katz) and Qithyil (Scowlitz), these names replace other, non-native names that have been previously published (e.g., Hanson 1973; Lepofsky et al. 2000). Our review starts with the oldest dated houses in the Fraser Valley (Xá:ytem and Maurer) and continues with two settlements dating to two to three millennia ago—one with both plank houses and pithouses and the other with only pithouses (Qithyil and Sxwóxwiymelh, respectively). We end our review with two settlements occupied by the Stó:lō in the Late and Contact/Colonial periods (Welqámex and Ts'qó:ls).

Xá:ytem (DgRn-23)

Xá:ytem, formerly called the Hatzic Rock site, is located on the Fraser River on low terraces adjacent to the flood plain (Figure 1). Archaeological remains lie between the river and a large boulder that is a spiritual site recently named Xá:ytem ("suddenly transformed") to commemorate the story of its creation by Xexá:ls, the Transformers (Carlson et al. 1997:181). The earliest occupation at Xá:ytem dates to about 9,000 years ago (8980 ± 90 ^{14}C yr B.P., Beta 46707; Mason 1994; Ormerod 2002:69), but there is no evidence of residential structures until some 4,500 years later (Ormerod 2002). Excavations focused on two of these structures (Structures 1 and 2, Table 2). A third (Structure 3, Table 3) may be contemporaneous with

Table 2. Characteristics of Sites Discussed in Text.

Site	Setting	#	Characteristics of House		
			Form	Size Range	Arrangement
Xá:ytem (Hatzic Rock; DgRn-23)	Glacial terrace, 17 m above Fraser floodplain	1	Structure 1: Rectangular, semi-subterranean, vertical walls on at least two sides	3.5 x > 4.5 m	NA
		1	Structure 2: Rectangular, semi-subterranean, vertical walls, multiple hearths	11 x 10 m	NA
		1	Structure 3: not known	?	NA
Maurer (DhRk-8)	Glacial terrace, 10 m above Fraser floodplain	1	Rectangular, semi-subterranean, flat/horizontal floor, vertical walls, elongated hearth	7.5 x 5 m	NA
		1(?)	Flat/horizontal floor	Not known	NA
Qithyil (Scowlitz; DgRl-16)	Fluvial terrace, 2 m above Fraser	Min 6	Structure 3: Rectangular plank structure, with large posts and several hearths	17 x 11 m	Linear, 2+ rows
Qithyil Island (Dgrl-15)	Low-lying island	Min 4	Square and circular; semi subterranean	10 m across	Linear, 1 row
Sx̱wóx̱wiymelh (North and South) (Katz; DjRi-1)	Fluvial terrace, 5 m above Fraser	Min 37	Circular and sub-rectangular; semi-subterranean	8–12 m across	Linear, 3+ rows
Welqámex (DiRi-15)	Island, 5 m above Fraser River	7–8	Circular; semi-subterranean	6–14 m across	Curvilinear; two rows w/ outlier
		2	Rectangular; semi-subterranean	16 x 14 m; 13 x 12 m	
		1	Rectangular plank structure; no depression	unknown	
Ts'qó:ls (Hope; DiRi-1)	Fluvial terrace, 5 m above Fraser River	Min 3	Circular to sub rectangular; semi-subterranean	8–11 m across	Poss. 2 rows, linear

Table 3. Radiocarbon Dates of Sites Discussed in Text.

Site	House #	Lab #	Radiocarbon Age B.P.	Cal Age Range[a] or estimated age[b]
Xá:ytem	Structure 1	Beta 143727	5050±50	4229–3537 B.C.
	Structure 1	Beta 77758	4840±110	3936–3367 B.C.
	Structure 2	Beta 46708	4800±70	3706–3375 B.C.
	Structure 2	Nuta 1452	4420±180	3628–2588 B.C.
	Structure 2	SFU 888	4490±70	3366–2931 B.C.
	Structure 3	Beta 47260	4530±120	3623–2913 B.C.
Maurer	Structure 1	Gak 4919	4220±100	3089–2493 B.C.
		Gak 4922	4240±380	3767–1780 B.C.
	Structure 2	Gak 4927	4780±340	4329–2649 B.C.
Qithyil	Structure 4	WSU-5051	2940±180	1607–791 B.C.
	Structure 3	Beta 91911	2270±60	483–169 B.C.
		CAMS 61998	2250±70	479–95 B.C.
		WSU-4542	2460±90	789–400 B.C.
Qithyil Island		Beta 91910	2450±60	763–405 B.C.
	Housepit 4	Beta-217440	450±40	A.D. 1410–1480
Sxwóxwiymelh (South) (South)	Housepit 1	I-6191	2430±90	796–381 B.C.
	Housepit 6	Beta 208885	2380±40	741–386 B.C.
	Housepit 9	Beta 208882	2130±40	354–46 B.C.
	Housepit 10	Beta 208881	2300±40	412–205 B.C.
	Housepit 15	Beta 208879	2470±40	764–414 B.C.
Sxwóxwiymelh (North)	Housepit 21	Beta 208880	320±40	A.D. 1469–1648
Welqámex	Housepit 1	Beta 213529	320±40	A.D. 1460–1660
	Housepit 6	Beta 213531	140±40	A.D. 1660–1953
	Housepit 7	Beta 196134	220±60	A.D. 1520–1953; pre-1800s, based on artifacts
	Housepit 9	Beta 213533	70±40	A.D. 1680–1740, A.D. 1810–1930
Ts'qó:ls	Housepit 1	NA	NA	A.D. 1800s
	Housepit 2	NA	NA	A.D. 1800s

[a]All calibrated ages represented at 2 sigma; minimum and maximum date rages are provided. Calibrated using Calib 5.0.2.
[b]Estimates based on stratigraphic data and temporally sensitive recovered artifacts.

Structure 2, but it was not fully exposed and its architectural details were not recorded (Mason 1994; Ormerod 2002:69).

Less than half of Structure 1 was excavated (Figure 5), but details of its construction were clear owing to the absence of refurbishing. The structure was built over a capped earth oven on a leveled surface that was partially cut into the slope of the terrace. Based on the extent of the exposed floor deposit, 3.5 m is a good estimate of the east-west dimension of the structure, but 4.5 m is a minimum length for the north-south dimension. The patterning of post molds and stake molds on the floor of Structure 1 suggests it had vertical posts and walls on the north and east sides where the floor was below the ground surface. No hearth was recovered during excavation; it may lie to the south of the excavated part of the structure. Based on the exposed area, we surmise that Structure 1 housed a small family group.

Several kinds of tasks were conducted in association with Structure 1. Tasks performed inside the structure include tool manufacturing, the processing and/or consumption of berries, and the use of red ochre pigment. Most food processing and storage seem to have taken place outside the structure, as indicated by several earth ovens of different dimensions (Figure 5). The ovens contained remains of processed berries, birds, mammals, and fish. In addition, there were two forms of storage: pits and a storage box (Ormerod 2002).

Structure 2, located 20 m upslope of Structure 1, was first occupied approximately 500 years after the earliest age estimate for Structure 1. Radiocarbon dates from a hearth and a post mold (Table 3) indicate that, unlike Structure 1, which probably was occupied for only several years, Structure 2 was used for at least 400 years. Like Structure 1, the floor of Structure 2 was also partly excavated into the terrace slope to create a level surface (Mason
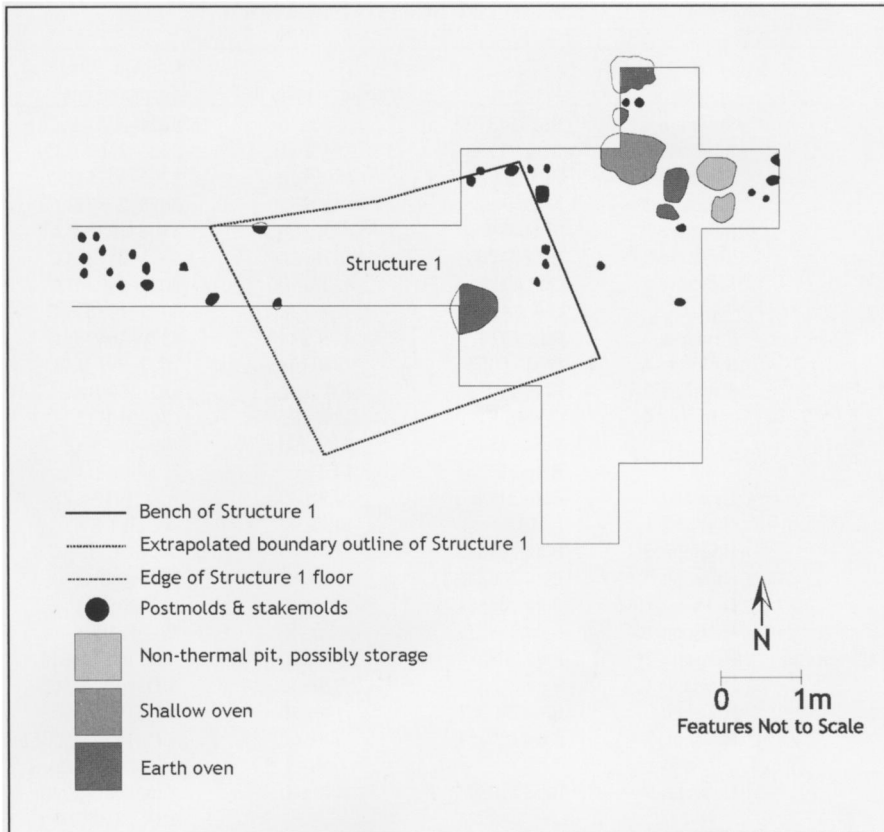
Figure 5. Structure 1 at X̱á:ytem (adapted from Ormerod 2002).

1994). It is roughly square and is larger than Structure 1 (11 x 10 m). This size suggests it could have housed approximately 35 people, or at least two extended families (cf. Hayden et al. 1996). The presence of multiple family groups is also suggested by several hearths located near the gravel bench at the edges of the floor (Figure 6), although hearth contemporaneity has not been demonstrated. Excavation also revealed a complex pattern of post molds, some exceeding 38 cm in diameter, which delineated the walls (Figure 6) and likely reflected over four centuries of house maintenance and refurbishing (Mason 1994).

Earth ovens continued to be constructed on the lowest terrace during the occupation of Structure 2. These ovens were larger than those associated with Structure 1. The largest (1.35 x 1.15 m and 68 cm deep) was used to process substantial quantities of plant and animal foods (Ormerod 2002), possibly to preserve them for later consumption or for immediate consumption by a large group. Other

earth ovens associated with Structure 2 contained foods items available only in distant coastal waters in the late winter and spring, including flatfish and shellfish. These data suggest that occupants of Structure 2 processed, stored, and consumed resources gathered at greater distances than those used by occupants of Structure 1.

Comparison of the sizes and forms of Structures 1 and 2 and associated features provides insights into household composition and activities at X̱á:ytem over a period of several hundred years. Both structures shared key design elements, including upright posts and stakes and rectangular footprints cut into the terrace slope. Continuity in these design features may reflect continuity in social groups and shared cultural norms. However, Structure 2 was considerably larger than Structure 1, perhaps indicating a shift from nuclear- to extended-family household organization over time. Concurrent with this shift was an elaboration of resource processing and storage, indicated by an
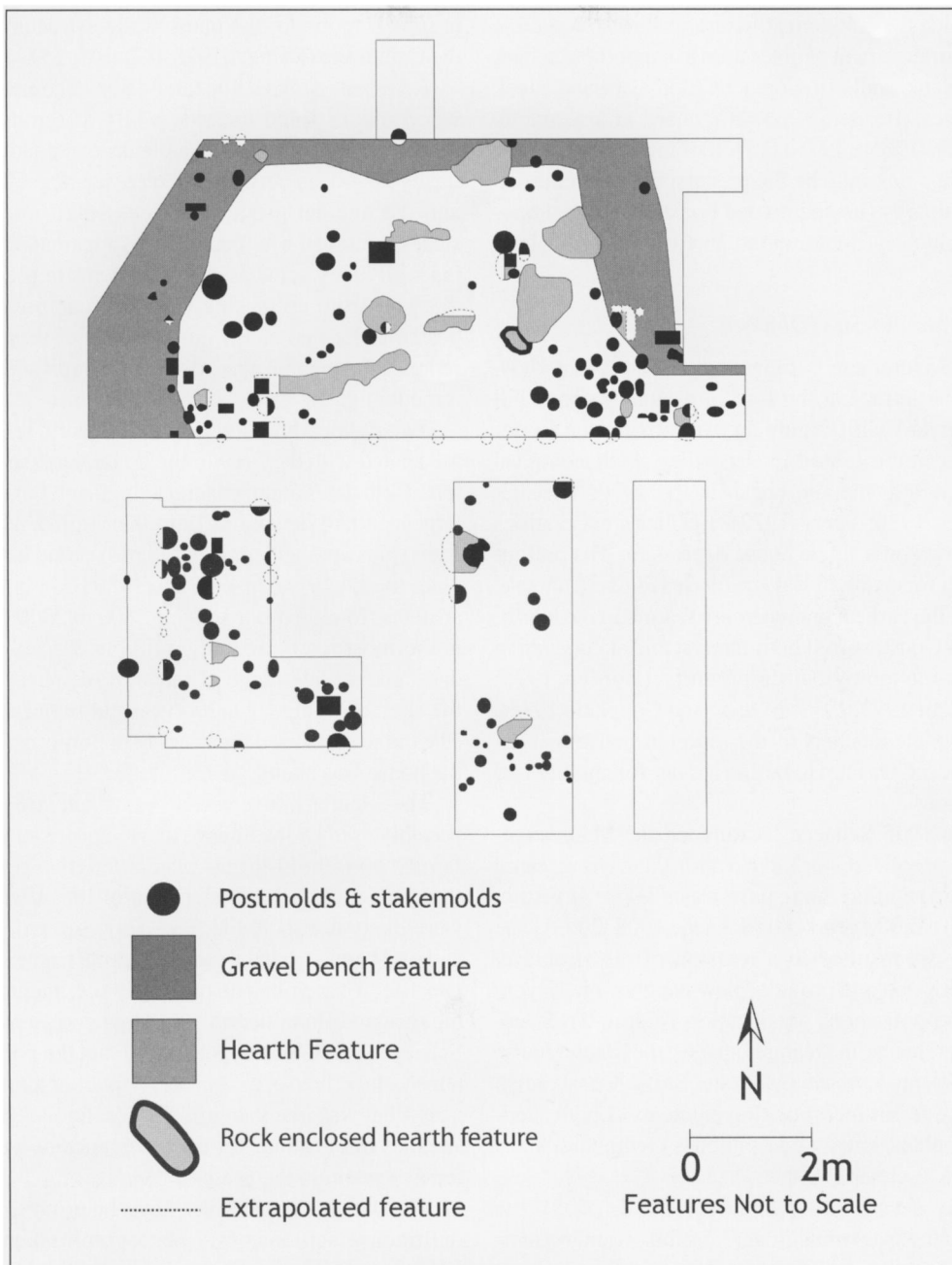
Figure 6. Structure 2 at X̱á:ytem (adapted from Mason 1994).

increase in the number and size of outdoor earth ovens and storage pits, as well as the expansion of diet to include nonlocal foods. Furthermore, the presence of food remains procured in winter months suggests that later residents of X̱á:ytem used the site year round.

Although smaller in size, early structures at X̱á:ytem share many elements with nineteenth-century Coast Salish plank houses. In both cases, the effort required to prepare the X̱á:ytem house sites, erect substantial posts, and span them with timbers at least 4.5 m long, indicates a significant

investment of labor. Stake mold locations inside and outside the X̱á:ytem structure walls also resemble the arrangement of poles used to support cedar bark or plank walls in Contact/Colonial period plank houses (Barnett 1955; Bouchard and Kennedy 1975a, 1975b, 1976a, 1976b). Finally, the possible storage box may be the precursor of an important technology (i.e., bentwood boxes) that was ethnographically documented in Coast Salish plank houses.

The Maurer Site (DhRk-8)

The Maurer site is situated on a stable, late Pleistocene terrace at the foot of a large bedrock hill (Hopyard Hill; Figure 1) overlooking the Fraser River in the central Fraser Valley. Archaeological research at the site began in the 1970s (LeClair 1973, 1976; Percy 1972). LeClair's excavations focused on a single house depression. His preliminary report of an Eayem Phase (Figure 2) house, then the earliest known house feature in the Northwest Coast, stirred both interest and skepticism in the archaeological community (Borden 1975; LeClair 1973, 1976; Matson and Coupland 1995). Complete analysis of the reported house feature, however, was not to be carried out for another two decades.

In 1995 Schaepe reexamined the Maurer collection and LeClair's excavation data. His research confirmed that the feature was a house structure, almost 5,000 years old (Schaepe 1998, 2003). The analysis resulted in a revision of the structural description and provided new insights into Eayem Phase household organization (Figure 7). Structural remains and features suggest the Maurer house represents a prototype of later Stó:lō-Coast Salish house forms incorporating elements of both shed-roof plank houses and pithouses (compare Ames and Maschner 1999: 262).

As described by Schaepe (1998, 2003), the structure was rectangular (7.5 x 5.0 m) and was oriented north-south along its long axis. It had a level floor surface that, like *sqémél*, was shallowly dug into the ground (Figure 7). Accumulated floor debris was 10–15 cm thick, indicating intensive and possibly continuous occupation over an extended period. Large, vertical corner posts supported the roof while smaller posts or stakes along the perimeter between the corner posts served as a framework to which horizontally lain wall-planks

could have been lashed. This pattern of postholes is similar to that of the plank-walled structures at the Ozette site (Mauger 1978:142–143, 151–152).

Remnants of what appeared to be decomposed wood planks lined the side walls of the house depression at Maurer. These planks extended vertically 30–40 cm between the recessed house floor and the ancient ground surface. Small interior stakes abutting the remnants of this apparent retaining wall likely acted as reinforcements to prevent the wall from collapsing inward. Four possible postholes located on the northern half of the floor represent either internal dividers or episodes of remodeling.

Two radiocarbon samples from a hearth feature associated with the floor of the house date the feature. Both dates are in general agreement, but their large standard deviations limit their utility. These dates, plus another from a probable second house, place the site between 4329 and 1780 B.C., but the artifacts from the floor suggest 2800 to 2500 B.C. is the most likely age range (Table 3). Younger dates and a wide range of material remains from the site, including a ca. 300-year-old burial, indicate the site was used for a variety of purposes after the house was abandoned.

The Maurer house was a permanent structure possibly used by the lineage of a single, extended-family household group over a lengthy period (Schaepe 1998). Some elements of the structure were likely transportable (e.g., aboveground wall and roof planks), but the basic structural framework consisted of permanently set features, including the recessed floor, hearth, and large corner-posts. Schaepe (1998:166) hypothesized that the permanence of the house, as a property marker situated near what was likely an important salmon fishing site, has implications for the emergence of a land tenure system in the Fraser Valley.

The Maurer house may have been part of a multihouse settlement. A photograph taken by LeClair in 1973 of a road cut within 20 m of the excavated Maurer house shows a probable floor of a second structure. The floor was horizontal in cross-section, approximately 10 cm thick, and at least 3–4 m in length (Schaepe 1998:138). It was associated with at least one posthole that appeared to be about 25 cm wide and 25 cm deep, similar to the large postholes of the excavated house. A radiocarbon sample taken by LeClair (1973–1976 field
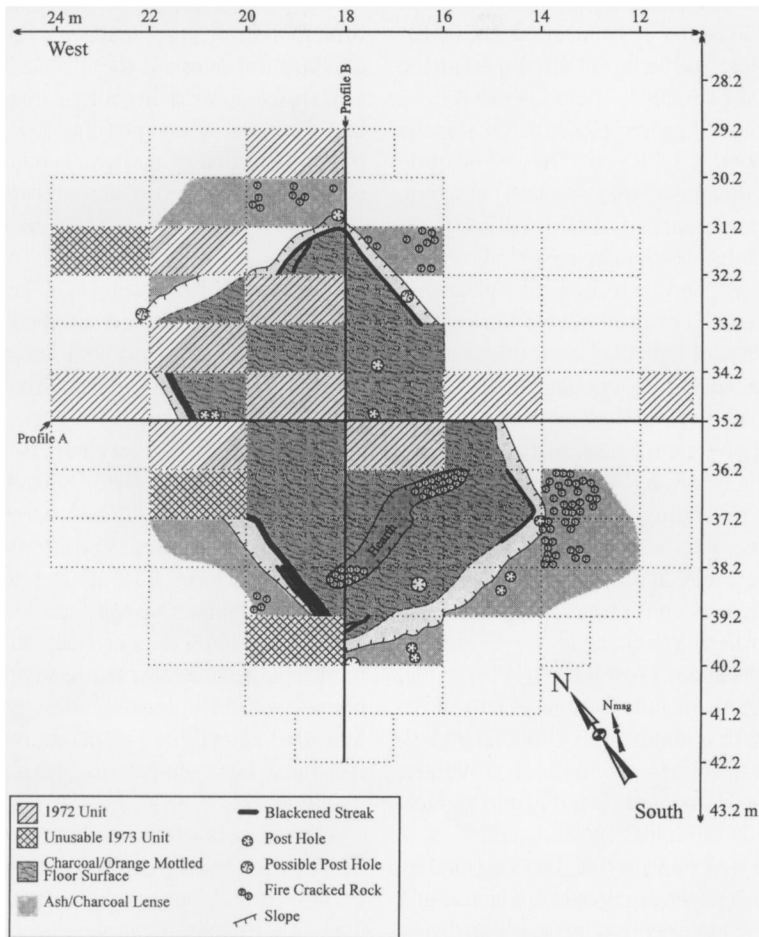
Figure 7. Maurer house floor and structural plan (Schaepe 1998).

notes) from the exposed floor layer yielded an age of 4329–2640 cal B.C. (Gak 4927). This age overlaps those of the excavated house. Unfortunately, the potential to carry out further investigations at this site has been lost due to erosion and recent development.

Qithyil (Scowlitz Site—DhRl-15 and DhRl-16)

Qithyil (the Scowlitz site) sits at the mouth of the Harrison River, one of the largest tributaries of the Fraser River (Figure 1). The Harrison River is one of the most water-accessible gateways to the interior of British Columbia, via Harrison Lake and the Lillooet River. Hundreds of archaeological features are located along the 17-km reach of Harrison River, from Qithyil at the south to the outlet of Har-

rison Lake on the north. The features include settlements, cemeteries, rock paintings, and spiritual locations, as well as fishing, hunting and plant harvesting areas.

Beginning in 1992 and continuing intermittently until 2005, many teams of archaeologists have mapped and excavated Qithyil (Lepofsky et al. 2000; Lyons 2000; Morrison 1997). Qithyil consists of two major sites. DhRl-16 is a large settlement and cemetery site on the river terraces and surrounding hillside, and is composed of the remains of shallow house depressions or terraces and many earthen and stone burial mounds and cairns (Lepofsky et al. 2000). DhRl-16 is the only example of excavated plank houses in the central Fraser Valley (Lepofsky et al. 2000). The other site,

Qithyil Island (DhRl-15), is a pithouse settlement located on a small island 700 m upstream of DhRl-16 (Figure 8). Here, we focus our discussion on the house remains at both DhRl-15 and DhRl-16.

Although not well preserved, Structure 4 is the oldest house floor at DhRl-16. The radiocarbon age on the structure has a large standard deviation, and its calibrated age range is 3,600 to 2,700 years ago (Table 3). Only a few square meters of its floor area were exposed, and there were few clear features, such as hearths or postholes. The floor did have small patches of light clay, the same material we found lining hearths in later deposits.

Structure 4 was disturbed and covered with construction fill when a new house, Structure 3, was built at the same location. Builders expanded the previous house by cutting into the natural terrace deposits upslope, excavating down to the hard-packed sterile gravels, and pushing a mix of this material and midden deposits down slope to create a more level surface. We estimate that the resulting structure was about 17 m long by 11 m wide, based on the alignment and positions of large postholes, floor patches, and hearths (Lepofsky et al. 2000). This estimate is provisional, however, because only the upslope side was dug into the sterile gravels and therefore easily delineated.

The upslope wall of Structure 3 was formed by a shallow bench-like cut. Just inside this bench, and parallel to it, were large depressions that were likely excavated for large posts to support rafter beams. The internal stratigraphy of these depressions suggests they were reused and possibly expanded during rebuilding episodes. Other smaller (30–50 cm diameter) postholes were probably used to support interior beams and walls. Multiple remnant hearths were present along the river edge of Structure 3. The hearths, combined with the large size of the structure, suggest that it housed a relatively large, multifamily group. Our analysis of botanical and faunal remains and lithic artifacts from Structure 3 indicates it was occupied year-round (Lepofsky and Lyons 2003) and used for a range of tasks (Morrison 1997).

Structure 3 was occupied for about 700 years (~700 B.C.–A.D. 1; Table 3), during which time it was refurbished many times. After its abandonment, subsequent structures were built at the same location. Test excavations (1 m x 1 m and 1 m x 2 m) along the length of the terrace revealed remnants of early house floors dating to the same age as Structure 3 and its successors (refer to Lepofsky et al. 2000 for dates). If these other houses had the same orientation as Structure 3, the settlement was laid out with one and possibly two rows of houses running parallel to the river—much as described centuries later in historic reports and ethnographic sources (e.g., Barnett 1955; Jenness 1955; Lamb 1960).

By 1,900 to 1,600 years ago, these large houses were no longer occupied and the site began to be used as both a cemetery and seasonal camp. The practice of mound and cairn building to mark graves ceased about 800 years ago (Lepofsky et al 2000; Thom 1995), but mortuary activities at the site continued until the mid to late 1800s. In fact, the land just upstream from DhRl-16 was set aside as an Indian Reserve because of its graves.

Qithyil Island (DhRl-15) is composed of four square or circular housepits arranged in a row. The site's strata and a radiocarbon date from a hearth in the southernmost structure suggest that the pithouses were occupied for a short period of time ca. 500 years ago (Table 3). This short occupation and the linear arrangement suggest a planned settlement.

Qithyil is important for our understanding of Stó:lō community organization and identity because it provides an example of the long-term use of a key fishing/hunting/collecting location and a transportation node. Archaeological data indicate that activities and interaction patterns at the settlement were not static and that the functions of particular geographic locations changed over time. Yet despite the changes there was long-term continuity in people's connection to the locale, including direct occupation and use by the living, the graves of ancestors, and an enduring spiritual importance of the site. Sites such as Qithyil are part of a network of interconnected places on the river and landscape that, considered together, provide a strong indication of Stó:lō identity and interaction.

Sxwóxwiymelh (Katz Site, DiRj-1)

Sxwóxwiymelh (the Katz site) is located on a large, late Pleistocene terrace adjacent to a slough that, prior to development of the modern highway, was a highly productive salmon fishing location. The site is composed of three occupations: a pre-pithouse campsite and two pithouse occupations.
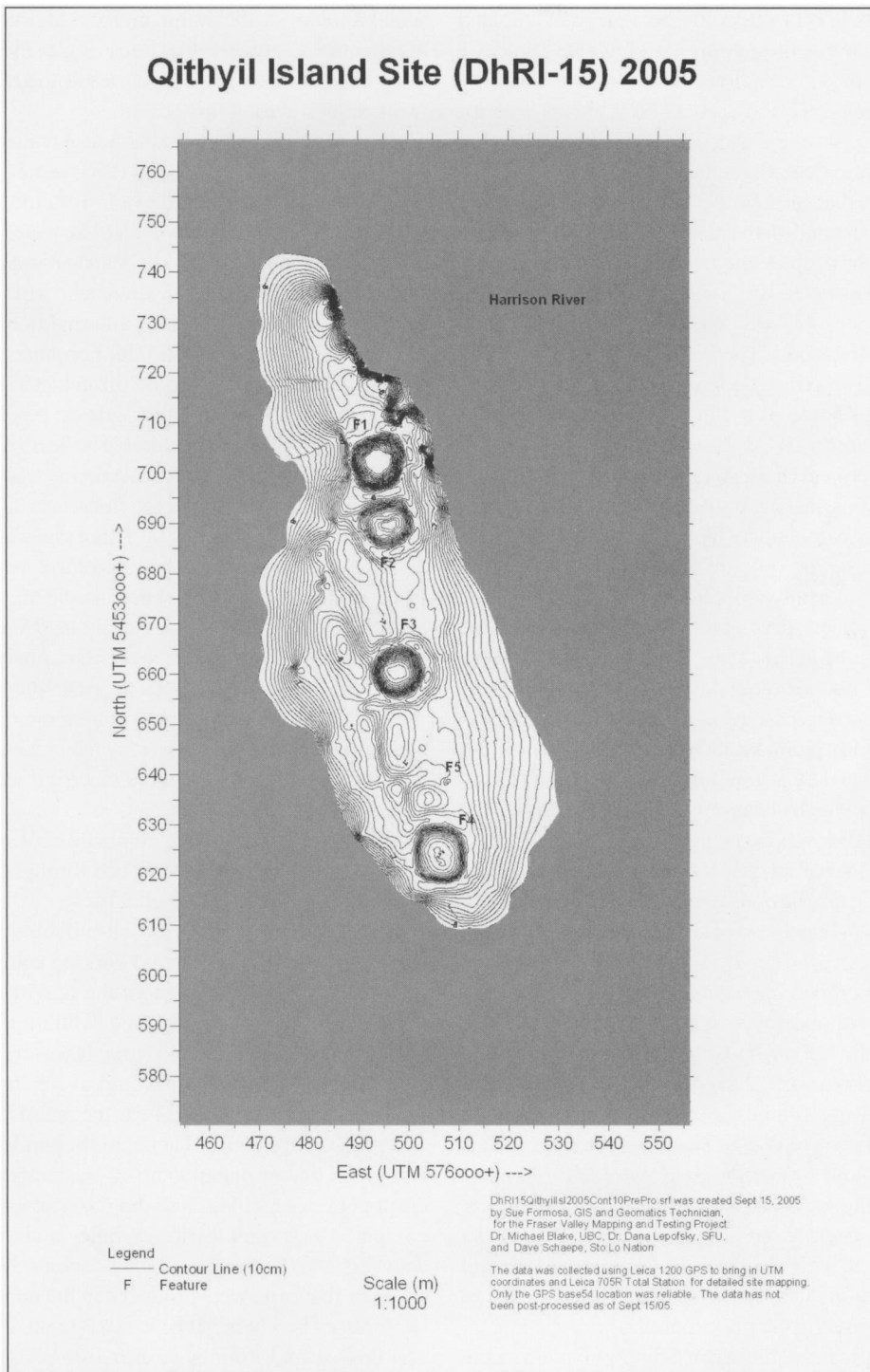
Figure 8. Surface features and topography at Qithyil Island.

The pithouse occupations are of particular interest in the context of our study because, as Coupland (1996) noted, they combine elements typically thought of as coastal (i.e., rows of houses) with those thought to be associated with the Interior Plateau (pithouses). According to Chawathil elder Evangaline Pete, the name Sxwóxwiymelh ("lots of people died all at once"; Duff 1952:33; McHalsie 2001:150) refers to the many deaths associated with the smallpox epidemic in the eighteenth century.

Prior to the 1970s, Sxwóxwiymelh consisted of a minimum of 37 pithouse depressions arranged in three or four rows. The best known of these are 23 previously reported depressions situated in two parallel rows adjacent to the Fraser River (Coupland 1996; Hanson 1973; Schaepe 2001). Highway and railway projects have since destroyed eight of these depressions, leaving only the western portion of the rows relatively intact (Figure 9). In addition to the 23 depressions, our investigations in 2005 and scrutiny of Hanson's (1973) and Duff's (1949) notes revealed a row of nine structures north of the highway and at least five houses along what is now the road and railroad. Although prior maps illustrate these depressions as round or oblong (Coupland 1996; Hanson 1973; Schaepe 2001), the majority of depressions are subrectangular. Housepit sizes range from approximately 19 to 86 m^2; the largest, HP 1, was excavated by Hanson (1973). We do not have sufficiently large samples of excavated material from the houses to determine if or how differences in house size or shape reflect social meaning.

Radiocarbon dates and settlement layout indicate the pithouses were constructed in two discrete phases. Based on house alignment, similarity of size, floor refurbishing, and radiocarbon dates (Table 3), most of the houses were occupied for several years between 2,400 to 2,000 years ago. Much later, around 300 years ago (Table 3, HP 21), a few smaller houses were added to the northernmost row, but slightly out of alignment with the earlier structures. This decrease in number and size of houses indicates a considerably smaller social grouping in the later occupation.

Significantly, the main Sxwóxwiymelh occupation is approximately contemporaneous with occupation of many of the plank houses of Qithyil. The two sites are just 42 km apart. The presence of two large, contemporary communities along the Fraser River—one with plank houses and the other with pithouses as the dominant form of household architecture—suggests that house styles may have been used to distinguish identities at the regional level, at least during this period.

Our information on internal house features and content comes from Hanson's (1973) excavation of HP 1 and our testing and excavation of nine houses (Lenert 2007). Hanson (1973) also excavated a considerable amount of HP 2, but despite his assertion otherwise, we do not think he reached the floors associated with this structure. Internal house features include benches along the perimeter of the floor and a single hearth just off center (Hanson misidentified the one in HP 1 as a cache pit), but there are few other floor features. The hearth uncovered during the 2005 field season was associated with a possible heat-deflector stone near the central ladder (see Duff 1949). This stone, and the absence of any saddles in the rims of the structures that might suggest the presence of side entrances, indicate that the houses were accessed by way of a central ladder through the roof. Our analysis of plant remains and stone tools suggests the houses were likely occupied at least from summer to the end of winter and were used for the same sets of activities, including tool manufacturing and fish and hide processing.

Ground stone tools of nephrite and related dense, hard stones were produced throughout the occupation of Sxwóxwiymelh. These raw materials were highly valued by Coastal and Interior peoples for manufacturing woodworking adzes and were widely traded throughout the region (Blake 2004; Carlson 1994; Hayden and Schulting 1997). Nephrite and other suitable stone types are available as boulders and cobbles in gravel bars along the Fraser River, including near the site (Darwent 1996; McGinity 2007). The relative abundance of celt (adze blade) manufacturing waste at sites in the upper Fraser Valley, including Sxwóxwiymelh, compared to sites in the lower valley and on Vancouver Island (Brown et al. 2008; Mackie 1995:49), suggests that celts were produced in the upper valley for use elsewhere. At Sxwóxwiymelh, detritus and broken and unfinished celt forms are fairly common in the housepits, indicating that most if not all households had access to these valued raw materials and the rights to manufacture celts from them.
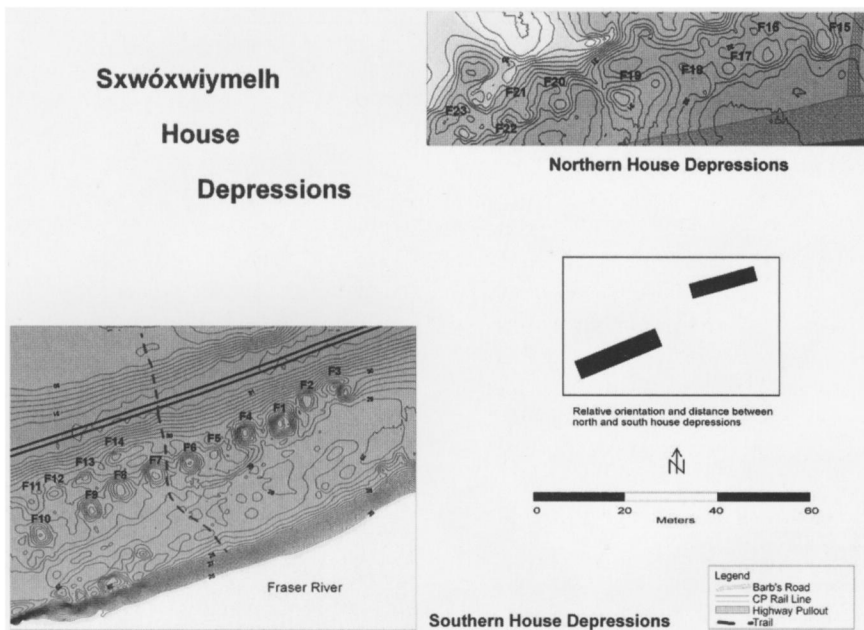
Figure 9. Surface features and topography at Sxwóxwiymelh. At least one additional row of houses was located between the north and south rows of houses, under what is now highway. Inset shows relative position and orientation of northern and southern portions of the settlement.

Between 2,400 and 2,000 years ago Sxwóxwiymelh was a relatively large settlement, which may have had social and economic parallels with the towns of the Contact/Colonial period. Its location near a productive fishery suggests community-scale tenure of a local fishing station (Lenert 2007). When Sxwóxwiymelh was reoccupied about 300 years ago, site size and community organization may have been more consistent with ethnographically and historically documented small settlements.

Welqámex (DiRi-15)

Welqámex is a well-preserved, large settlement located on Greenwood Island, approximately 200 m west of the former Hudson's Bay Company (HBC) Fort Hope (A.D. 1848). Greenwood Island is a small (4 ha), densely forested island located in an elbow of the Fraser River (Figure 1). The island is currently uninhabited First Nations' land (IR3), and Welqámex is situated at its southern margin where the elevation is highest.

Welqámex was one of two island communities located near the present-day town of Hope that were documented by explorer Simon Fraser during his 1808 expedition down the Fraser River (Lamb 1960). Fraser's journal suggests that as many as 125 people resided at this settlement, some of whom were slaves (Duff 1952; Lamb 1960). Stó:lō elder Robert Joe recalled that the population of slaves at Welqámex increased over time, necessitating the construction of separate slave houses.

Expanding on early reconnaissance work by Borden and Baldwin (1956), Graesch (2006, 2007) documented a settlement containing several interconnected semi-subterranean dwellings and an aboveground cedar plank house. Clustered near the shoreline are 10 large cultural depressions that differ in shape, size, and depth, suggesting considerable differences in pithouse design and construction (Figure 10; see Table 2). Several of the depressions located nearest the pre-1894 island shoreline (Houses 3, 4, 5, 6) seemingly constitute a front row of houses, and others (Houses 1, 2, 8, 9, and 10) may form a back row. House 1 is the largest housepit recorded in the Fraser Valley (Schaepe 2009).

Housepit rim deposits at Welqámex are exceptionally well-defined and have abundant fire-altered
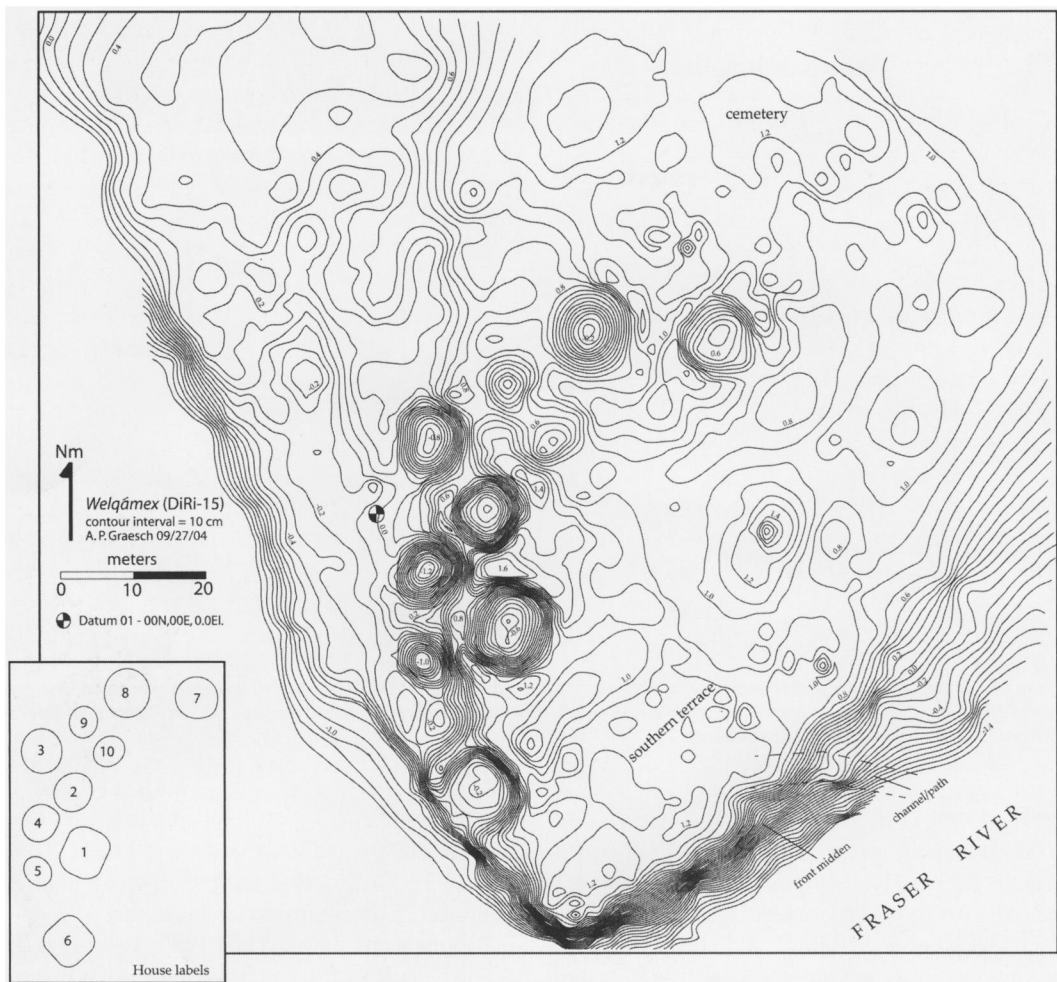
Figure 10. Surface features and topography at Welqámex (Graesch 2006).

rock, charcoal, and lithic debitage on their surfaces. Portions of some rim deposits are shared by contiguous structures, and in some instances these shared rims exhibit distinct saddles (e.g., between Houses 1 and 4 and 5; Figure 10). These saddles may be the result of roof collapse into subsurface tunnels connecting two or more structures occupied by people who self-identified with the same household group. Alternatively, the saddles may have been differentially compacted by foot traffic on over-roof trails connecting pithouse roof entrances. Tunnels have been documented in Stó:lō oral narratives (Schaepe et al. 2001), but have yet to be evaluated with archaeological data.

Excavations in Houses 1, 2, 5, 6, 7, and 9 revealed

moderately consolidated roof deposits that contain high densities of household refuse (e.g., fire-altered rock, charcoal, tool-making byproducts) as well as compact floors, centrally located hearths, storage pits, postmolds, and compact bench areas (Graesch 2006). Artifact assemblages recovered from lower roof and upper floor deposits in Houses 1, 2, 6, and 9 contain a mix of traditional Stó:lō material culture and objects obtained from HBC outposts, including glass beads, cut iron nails, and ceramic vessels. Combined with radiometric dates obtained from charcoal recovered in hearths (Table 3), these data indicate that at least five of the 10 pithouses at Welqámex were occupied in the Contact/Colonial period. A radiometric age obtained from hearths in

House 7 and the lower of two floors in House 1 indicate that at least two pithouses were built and occupied in the Late period.

Retention and laboratory sorting of all screen residue generated during field investigations have resulted in high-resolution datasets that reflect daily practices and labor organization of households at Welqámex (Graesch 2007). Several thousand fragments of slate debitage and tool-making byproducts indicate that occupants of all houses were engaged in the production of ground slate knives during the Late and Contact/Colonial periods. Given that slate knives and other fishing-related equipment had to be manufactured prior to the onset of the intensive summer salmon runs, Welqámex houses were likely loci of tool-making activities during winter months when cold temperatures, rain, and snow favored the most intensive use of pithouses. Subsistence data, including the remains of seasonally available food items such as sturgeon, deer, elk, waterfowl, and elderberries, suggest year-round occupation of the site.

Analysis of stratigraphic data from House 1 and House 6 indicate that neither of these rectilinear structures featured roofs characteristic of circular pithouses. Compact floor deposits were found directly below ephemeral rim slump and noncultural alluvial loams that capped the interiors of both depressions. A carbonized cedar plank was recovered from House 1, and both houses contained notably higher densities of Contact/Colonial period trade goods compared to their smaller, circular counterparts at Welqámex. These data suggest that rectilinear pithouses were built differently than circular structures and were associated with large households that maintained privileged access to regional trade networks. Graesch (2006) argues that rectilinear pithouses at Welqámex reflect a unique set of hybrid pithouse-plank house design elements, including the use of cedar planks for walls and/or roofs, which may have been applied to the construction of semi-subterranean houses used by wealthy households. This use of architecture to signal differences in social standing, political influence, and household prosperity is consistent with ethnographically and historically documented Coast Salish communities in the lower Fraser Valley and on the coast (Barnett 1955; Jenness 1955; Miller 1997).

Population estimates for the Contact/Colonial period settlement at Welqámex range from 168 to 278 people based on calculated interior living spaces of pithouses (Graesch 2006:69–73). However, since historical maps and subsurface investigations on the south terrace confirmed the presence of House 11, which is a Contact/Colonial period aboveground cedar-plank longhouse, the post-1800s settlement population may have been still larger. By comparison with other population estimates for upper Fraser Valley and lower Fraser Canyon settlements (Carlson 2001b), these figures are reasonable estimates of community size at Welqámex.

Ts'qó:ls (Hope Site; DiRi-1)

The settlement of Ts'qó:ls (DiRi-1) was first recorded by Charles Borden in 1956, when he noted nine housepit features on the east bank of the Fraser near the Coquihalla River. Although considerable destruction has occurred across precontact parts of the site, substantial Contact/Colonial period deposits closer to HBC Fort Hope remain in good condition. Three housepit features are still visible on the surface (Figure 11), and there are two buried house floors between Houses 1 and 2, thus forming a row over 100 m long. The visible houses are roughly square in plan view and differ in size (Table 2).

Oral narratives provide details about the history and layout of Ts'qó:ls. According to Chawathil First Nation Elder Bill Pat Charlie, the pithouses were part of a large Contact/Colonial period settlement. Photos and narratives describe three plank longhouses located at the south end of the community. Local lore suggests that when Hudson's Bay Company Fort Hope was established near Ts'qó:ls in 1846, occupants shifted residences and activities toward the fort to maximize access to activities there. Stó:lō oral history connects Ts'qó:ls with the movement of people from Welqámex and more distant settlements in the Fraser Canyon and Chilliwack in the central Fraser Valley (Figure 1). Contact/Colonial period housepits provide a link between the built Stó:lō environment and elements of Stó:lō identity documented in oral history, ethnography, ethnohistory, and archaeology.

In 2003 and 2005 we conducted small-scale excavations at Houses 1 and 2 (Arnold 2006; Arnold and Schaepe 2004). Súx'yel, otherwise known as Captain Charlie, occupied House 1 with
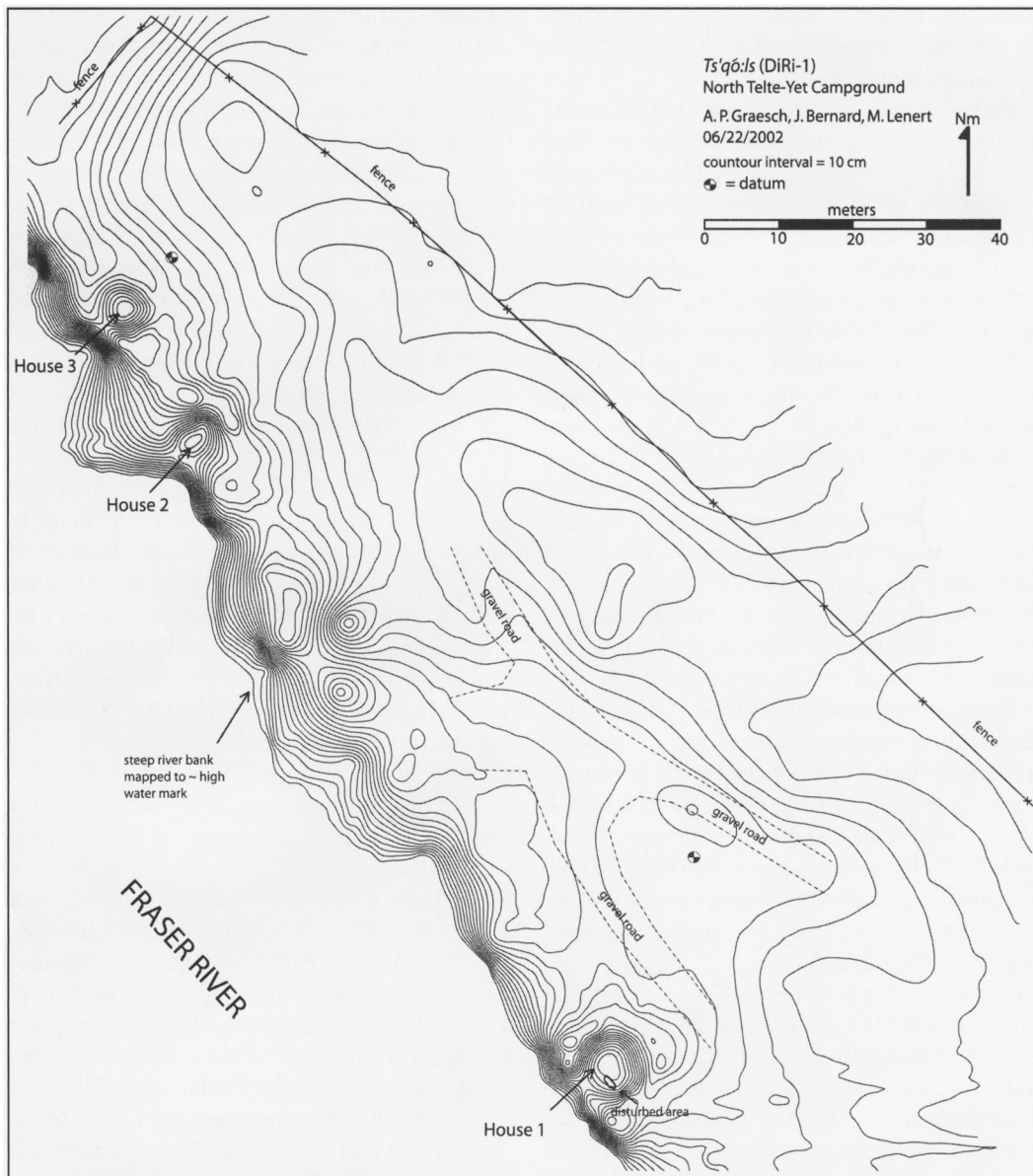
Figure 11. Surface features and topography at Ts'qó:ls.

his wife and at least one child sometime between A.D. 1860 and 1880, based on diagnostic artifacts and family history (Sonny McHalsie, personal communication 2004; Carlson and McHalsie 1998). Bill Pat Charlie, Súx̱'yel's great grandson, remembers playing in this housepit as a child. He also recalled being told by Charlie Joe that House 2 was the home of Patrick Joe, Charlie Joe's father (Sonny McHalsie and David Schaepe, personal communication 1999; Arnold and Schaepe 2004). We know

little about the Joe family and their social roles in the settlement, but artifacts recovered from Patrick Joe's residence indicate a somewhat greater span of occupation, possibly extending from the 1850s into the 1880s or 1890s. Traditional tool types and a range of European-made items are associated with both structures.

Súx̱'yel's house is the largest preserved housepit (11.0 to 11.5 m from rim crest to rim crest), possibly signaling his well-documented prominence in

the community. Oral narratives make it clear that Súx'yel was a respected hunter, doctor/curer, and "Captain," a designation that means he was either a riverboat worker or a Catholic watchman recruited by missionaries to monitor First Nations people adopting the new faith. Artifact tallies indicate that he had regular access to circulating Euro-Canadian goods of some value.

We identified several well-defined features in Súx'yel's house that reveal activity areas. Overlapping basins of heat-altered soils extend across the center of the floor, which may indicate the sustained use of a wood-burning stove. The feature resembles shallow basins of red soils beneath iron stoves in contemporary Stó:lō longhouses. Alternatively, it may comprise several overlapping open hearths. Along the margin of the fire feature are seven sharpened stake molds. Stó:lō co-worker Riley Lewis suggests that their position is evocative of the contemporary practice of positioning small salmon-grilling stakes next to an open fire (see also Haeberlin and Gunther 1930:23).

Remnants of a compacted, 2–6 cm thick, sandy silt stratum across the center of House 1 indicate an occupational floor hardened by foot traffic. Penetrating the floor are two post molds, 20 cm in diameter, positioned 2 m apart. The posts may have supported the roof, although they are smaller than roof supports found elsewhere in the region. Several post molds 7 cm in diameter may represent space dividers or gear storage supports inside the house. Parts of the pithouse structure itself appear to have been made or repaired with iron nails.

The shallow cultural deposits, oral history, and the documentary data suggest a short occupation by Súx'yel and members of his household—not more than 20 years. Traditional technology continued to be used, including slate knives, mauls, and flaked tools. Family members regularly consumed fish from the Fraser River and the meat of large mammals. Valued trade commodities such as glass beads, shell buttons, metal objects, and glass vessels containing prized oils and beverages were acquired by this household either from nearby Fort Hope or from other Stó:lō trading with Euro-Canadians. Captain Charlie may have had unusual access to such valued goods, given his important social position.

Testing at the slightly smaller house of Patrick Joe (roughly 10.5 m from rim crest to rim crest)

yielded remains of a collapsed roof and multiple Contact/Colonial period floors, but we did not find hearths, posts, or stake molds in the small area excavated. The strata dating to the later nineteenth century, contemporaneous with Súx'yel's occupation, contained traditional lithic technologies as well as many Euro-Canadian objects, suggesting a household of moderate to high social standing. The latter items include glass beads and a pendant, glass and metal buttons, brass items, glass tumblers, and ceramic serving wares.

In comparison to Patrick Joe's house, Súx'yel's house yielded fewer European-made objects. A likely explanation for this difference is varying intensity and duration of occupation of the two structures rather than a marked difference in wealth or social standing. The deeper and more charcoal-filled accumulations of roof and floor deposits at House 2 point not only to more refuse from a greater number of occupants, but also to a probable longer duration of residence. On the other hand, Súx'yel's house may have had an iron wood-burning stove and a nailed roof, whereas Patrick Joe's house apparently had neither of those features.

Discussion

Our review of six settlements demonstrates that there was a wide range of house and settlement forms through time in the central and upper Fraser Valley. Collectively, the data indicate not only changes in the built environment, but also continuous threads that link structures and settlements through time and space. This discussion brings together several types of information. We begin with a brief discussion of the significance of the appearance of substantial houses in the Fraser Valley. We then turn to a summary of the specifics of house form and settlement arrangements as they relate to social inferences about households, local groups, watershed-based tribes, and the Fraser Valley Stó:lō (see Table 1). Finally, we explore the implications of these data for understanding Stó:lō expressions of identity and interaction more broadly.

The Appearance of Substantial Houses

In the Fraser Valley, and indeed in the Northwest Coast region more broadly, substantial structures first appeared about 5,500 years ago at the sites of

Xá:ytem and Maurer. Their appearance is the result of a shift from forms of housing with gracile architectural elements to those with robust architectural features and more evident and persistent anthropogenic footprints. A variety of environmental and social reasons have been suggested to explain the appearance of such substantial structures on the Northwest Coast (Hebda and Mathewes 1984; Matson and Coupland 1995). We briefly explore these with specific reference to the Fraser Valley data.

Environmental reasons focus on shifts in climate and the availability of redcedar for construction (Hebda and Mathewes 1984). In the Fraser Valley specifically, there appears to be a connection between mid-Holocene cooling and the appearance of the presumably well-insulated in-ground structures of Xá:ytem and Maurer (e.g., Schaepe et al. 2001:47). Scrutiny of the paleoenvironmental data, however, shows that the two events may have not coincided. Rather, cooling began in this region around 7,000 years ago, approximately two millennia before the earliest house at Xá:ytem, and continued through the mid-Holocene (Rosenberg et al. 2004; Walker and Pellatt 2003).

The precise time of arrival of redcedar in the Fraser Valley is unknown, but the species was well established in the region by 6,600 years ago (Wainman and Mathewes 1987), about 1,000 years before the earliest house at Xá:ytem. As such, there are no compelling data to suggest that the establishment of western redcedar coincided with the emergence of large plank houses in the Fraser Valley. Similarly, the availability of redcedar alone does not appear to have stimulated the emergence of semi-subterranean houses.

Although we do not rule out the association of houses and environmental change, we suggest the need to examine non-environmental reasons for the shift to more permanent dwellings and semi-sedentism. A detailed discussion of the reasons for this shift is beyond the scope of this paper, but houses at Xá:ytem and Maurer would have linked social groups to particular places and productive resource locales and may be associated with the emergence of the land tenure system documented among the Stó:lō (Schaepe 1998:166). Regardless of the ultimate drivers, living in such permanent homes undoubtedly reflected and structured the form of these ancient communities.

House Construction and Form

The houses in our sample constitute three categories. The first includes the houses at Maurer and Xá:ytem. Despite the fact that these are the oldest houses in our sample, we have a more complete view of their construction than later houses. Early houses in the Fraser Valley share many characteristics, including partial excavation into the ground to create a level surface, post-and-stake construction (presumably to hold planks), and a rectangular shape.

Later houses comprise two broad types: semi-subterranean and aboveground plank structures. These forms are similar to the ethnographically and historically documented *sqémél* (semi-subterranean pithouses) and *s'iltexwáwtxw* (plank houses), but there is considerable variation within these categories. Two of the semi-subterranean houses at Welqámex appear to have incorporated design elements common to above-ground plank structures, suggesting some degree of architectural hybridization in the Contact/Colonial period (Graesch 2006). The shapes of the semi-subterranean houses range from circular to rectilinear and square. Differences in shape are evident in the oldest pithouse communities in our study (Sxwóxwiymelh), as well as in the youngest (Ts'qó:ls), although temporal patterning remains unclear. More detailed excavations will determine more specifically the relationship between the surficial expression of house shapes and actual house form, and the degree to which taphonomic factors influence the shapes we observe on the surface.

Our knowledge of the form of ancient plank houses primarily comes from Structure 3 at Qithyil. Based on excavations of this structure, we know that substantial houses were constructed with planks and internal posts, similar to plank houses documented in the nineteenth century. Importantly, Structure 3 and other houses at Qithyil also share structural elements with earlier houses at Xá:ytem and Maurer—cut and fill, plank and post construction—that are 3,000 years older.

House Size

In general, house size increases from the earliest structures to the later forms, reflecting an increase in the size of the co-resident groups. The earliest houses were homes to either nuclear families (Structure 1, Xá:ytem) or relatively small extended-

family groups (e.g., Maurer). Beginning at least by 2,400 years ago at Qithyil and Sxwóxwiymelh, the size of co-resident groups increased dramatically. For example, Structure 3 at Qithyil was perhaps as much as four times the size of the house at Maurer and was about the same size as interconnected houses described by Simon Fraser in the central and lower Fraser Valley (Lamb 1960).[3] We suggest that these larger houses mark a shift to larger households comprising multiple nuclear families and potentially non-kin followers.

Our sample includes semi-subterranean structures as small as 6 m to as large as 16 m across (at Welqámex). These pithouses were probably the homes of nuclear and extended families. At the Contact/Colonial period site of Ts'qó:ls, at least one of the pithouses (11 m across) was the home of a very small nuclear family. Most structures within our sample are within the 5- to 9-m range documented from the ethnographic sources (Duff 1952:47). In general, the size of co-resident groups is smaller in pithouses than in aboveground plank structures. However, the possible tunnels connecting pithouses at Welqámex also suggest some pithouses were designed to accommodate both a certain degree of family autonomy and connections to the larger household group (Schaepe et al. 2001). No such tunnels were recorded at Sxwóxwiymelh or Qithyil, but in the latter case recent ground disturbance may have destroyed such features.

Internal House Features and Artifacts

We use internal house features and artifacts to provide insights into the composition and daily lives of the household group. Not surprisingly, our sample suggests that a broad range of activities was conducted by household groups, including processing and consumption at all sites and the production of goods that may have been used in trade and exchange at later settlements (e.g., ground stone adzes at Sxwóxwiymelh). Our data on seasonality are limited, but where we have appropriate data (Xá:ytem, Qithyil, Sxwóxwiymelh, Welqámex), houses were lived in year-round by at least some members of the household group. Multiple refurbishings of the houses at Xá:ytem, Maurer, Qithyil, and Sxwóxwiymelh reflect the longevity of some household groupings over several generations. Similar longevity of households has been demonstrated

elsewhere on the Coast (Ames et al. 1992; Ames et al. 1999). The enduring connection of households to a single house, during a year, and across the years, is a physical manifestation of the intergenerational continuity of household identities.

The distribution of features and artifacts within houses also speaks to social roles within household groups. The single hearth at Maurer and in the earliest house at Xá:ytem are consistent with the houses being occupied by single families who worked together. At Maurer, discrete activity areas provide insights into how these tasks were partitioned spatially and socially within the family. Multiple hearths in the later house at Xá:ytem (Structure 2) suggest the organization of internal living space into family-specific quarters and may indicate a relatively greater degree of internal socioeconomic complexity. By contrast, several millennia later, households in pithouses at Sxwóxwiymelh, Welqámex, and Ts'qó:ls, whether comprising single or multiple families, appear to have maintained and used one centrally located and communal hearth per house. Benches exposed in pithouses at Sxwóxwiymelh and Welqámex suggest that occupants slept at the periphery of each structure, although it is unclear whether individual families or members of families maintained personal sleeping space. In the much larger plank house at Qithyil, multiple hearths indicate spatial separation of food preparation and probably consumption. At the same time, however, the shared use of features such as the bench along only one side of the structure may have served to reinforce the collective identity of the household as a whole.

Settlement Size

As elsewhere on the Coast (Ames and Maschner 1999; Archer 2001; Matson and Coupland 1995), our sample of Fraser Valley sites suggests settlement size and therefore the size of the local group increased dramatically over time. At both Maurer and during the occupation of Structure 2 at Xá:ytem, the settlements appear to be composed of two relatively small houses, each of which could have held one or two extended families. This size contrasts sharply with settlement sizes 3,000 years later and extending into the Contact/Colonial period when multiple households lived together in a single settlement. For instance, from about 2,400 to 2,200 years ago, Sxwóxwiymelh may have con-

sisted of 33 pithouses and the settlement at Qithyil had a minimum of four substantial plank houses, each housing multiple families. Large, substantial settlements with multiple households continue into the Contact/Colonial period, as exemplified by Welqámex and of course the many examples of towns documented in the ethnohistoric record. Smaller multi-house settlements in later prehistory, such as the Late period occupation at Sxwóxwiymelh, are reminiscent of the considerably smaller villages documented historically.

Settlement Layout

While our data do not allow us to discuss relative social position of households within local groups, we do have insights into the degree to which local groups formed a social unit. Based on the proximity of the potentially contemporaneous houses at Xá:ytem and Maurer, we suggest that the households at these settlements formed a social grouping. The external processing and storage features at Xá:ytem further suggest that extended families in separate houses sometimes functioned as a collective economic unit. This behavior contrasts with our understanding of plank house organization in the Contact/Colonial period, where some processing activities and most storage facilities were located inside the structures and were the property of a single collective household unit (Suttles 1991). Unfortunately, the samples of houses from Xá:ytem and Maurer are too small to determine whether local-group collective identities were expressed in similarities of house form during this period.

All of the later, multi-house settlements in our review have the hallmark of coastal settlements: the houses were generally arranged in one or more rows. This arrangement is found at the pithouse settlements of Sxwóxwiymelh, Ts'qó:ls, Qithyil Island, and a significant portion of Welqámex. The main settlement at Qithyil, our only example of a settlement with multiple plank houses, was also arranged in distinct rows. The obvious linear patterning of contemporary houses suggests community-level planning and the deliberate accommodation of multiple households into a single settlement. These arrangements may signal collectivity at the level of the local group. The apparent community-wide production of celts at Sxwóxwiymelh provides an example of socioeconomic cohesion at the level of the settlement.

Settlement Location

There is a clear difference in settlement location between our two early sites and the four later ones. In particular, Xá:ytem and Maurer are both located on raised late-glacial landforms at the margin of the Fraser River floodplain, similar to other mid-Holocene settlements in the region (Lepofsky and Lenert 2005; Schaepe et al. 1999). The occupants of these early settlements seem to have placed a high premium on well-drained locales with good visibility, particularly at the junction of ecozones, for example, the floodplain-foothill transition.

By contrast, all later sites are located adjacent to and oriented toward the Fraser River or, in the case of Qithyil, toward the Harrison River. We noted above that many towns were placed to maximize access to the Fraser River following European arrival, and it appears that this positioning was also the case in the more ancient past, at least after 2,400 years ago. Access to the Fraser meant that people could easily travel to other communities with whom they were interacting for rituals, exchange, and other purposes.

Although the earlier sites were set back from, and above, the Fraser River, these peoples, without doubt, used the river as their means of access to larger regional social networks, both upstream and down. The occupants of Structure 2 at Xá:ytem, for example, ate marine resources that they either obtained themselves or by trading with peoples living on the Fraser delta. Ames and Maschner (1999:157) suggest that people in early settlements such as Xá:ytem and Maurer protected against potential resource failures by creating and maintaining long-distance social ties. Such region-wide social relations among the Coast Salish were also a critical part of resource buffering in the Contact/Colonial period (Carlson 2003; Miller 1989; Suttles 1987a, 1987b, 1987c) and possibly at other times as well (Lepofsky et al. 2005).

In the Contact/Colonial period, most large settlements in the Fraser River system were associated with places of easy access to tributary watersheds or "watershed equivalents" (Carlson 2001a). In our archaeological sample, Sxwóxwiymelh is not located within a tributary watershed, but rather at a once-highly productive fishing location on an extensive, stable landform at the margin of the main Fraser River channel. Encompassing a range of terrestrial and aquatic

ecosystems, the site featured abundant resources and supported a large population. Ts'qó:ls, which formed in part around the Hudson Bay Company outpost Fort Hope, represents a more recent expression of this long-standing strategy. It may be that, in the past, communities formed around many kinds of circumscribed and productive environments in the same way as they did around tributary watersheds and that these landforms were equally important in identity formation.

Comparisons to Other Regions

Broadening our gaze beyond the Fraser Valley, we see elements of the built environment that are both similar to and distinct from the neighboring Interior Plateau to the east and outer coast to the west. The absence of comparably detailed mapping and excavation data from nearby regions precludes rigorous comparison. However, where the data do exist, comparisons reveal tantalizing similarities and differences in house forms that may reflect group identity and interaction.

Fraser Valley pithouses are both similar and different from Interior pithouses along the Fraser River. Perimeter benches are common to both regions, although they appear to be rare on the Plateau or different in form from those at Sxwóxwiymelh and Welqámex (Anna Prentiss, personal communication, 2007). Central hearths and central roof entrances have been reported on the Plateau (Hayden 1997; Teit 1900), but a much larger sample of excavated pithouses is needed before we can determine if any of these differences reflect regional-level distinctions and had social meaning to their occupants.

Based on available data, house shape and settlement layout differed between the Fraser Valley and the Interior Plateau. Although not all housepits in our sample are rectilinear, many are, including examples at Welqámex, Sxwóxwiymelh, and Ts'qó:ls. In contrast, in the Plateau, rectilinear houses are rare and may only be special function structures (Morin 2006; Morin et al. 2008). In terms of settlement layout, the later settlements in our sample also differ from Interior Plateau settlements in the distinctly linear arrangements of the former. On the Plateau, large pithouse settlements may have internal patterning (Prentiss et al. 2008), but distinct rows are rare or non-existent (Prentiss et al. 2005; Wilson and Carlson 1980).

Conversely, houses and settlements in the Fraser Valley share many elements with those on the coast. In particular, there are the similarities in plank houses in both regions, which, we argue, begins with proto-forms at Xá:ytem and Maurer. Ames and Maschner (1999:156, 262) suggest that these early dwellings share enough structural elements with contemporaneous houses in the southern Plateau to be part of a broad interregional pattern of residential architecture. We note, however, that these 5,000-year-old structures share elements not only with archaeologically documented plank houses of the Northwest Coast (e.g., Ozette; the Paul Mason site), but also with ethnographically and historically documented Coast Salish plank houses, which have cut-and-fill construction, planked walls, rectangular shape, and post-and-pole wall structures. The distribution of traded artifacts in the Middle Holocene also indicates interactions among the people of the Fraser Valley with those of the southern Plateau and the coast, but there is currently no evidence of links to the Interior Plateau to the east (Carlson 1994). We thus suggest that the form of these early Fraser Valley houses reflects a coastal and perhaps southerly orientation of these peoples.

Later houses and settlements in the Fraser Valley are more clearly similar to coastal dwellings. Based on limited information in our region and elsewhere along the coast, the form of the plank house at Qithyil is most similar to the "shed-roof house" used by Wakashan and Coast Salish speakers (Suttles 1990, 1991), with its multiple hearths, unexcavated floors, and use of plank construction. These house forms are distinctly different from the aboveground houses used among other coastal groups (Suttles 1990). Finally, as previously noted by Coupland (1996) and Schaepe (2001), the linear arrangement of houses in the Fraser Valley is characteristic of settlements throughout the Coast. We suggest that the combination of plank houses, square houses, and rows of houses are tangible manifestations of the social links between the people of the Fraser Valley and the larger Northwest Coast region, reflecting elements of a coastal identity shared by people living along the Fraser River.

Houses and Settlements, Identities and Interactions

The ethnographic literature documents a complex

picture of Stó:lō identities that is both situational and has endured over the millennia. Thus, it is no surprise that ancient houses and settlements in the Fraser Valley, as expressions of group identities, also reflect both continuity and change over time. Here we summarize our understanding of how group identities, at various scales, may be expressed in the built environment and in relationship to the landscape. Our review reveals that some aspects of house form and settlement layout most clearly reflect Coast Salish-Stó:lō identity, owing to their specific persistence and uniqueness. Others, however, are more general attributes that can be seen as part of larger region-wide trends in social developments that are reflected in house and settlement forms. This summary outlines the gaps in data and potential areas of future exploration linking the built environment with identities.

There is strong continuity between the ancient houses and settlements of the Fraser Valley and the more recent, Contact/Colonial period pithouse and plank house settlements used by the Stó:lō. This continuity can be traced from the houses at Maurer and Xá:ytem, which exhibited elements of both house forms (i.e., planking, rectilinear shape, in-ground construction) to the later forms of above-ground plank houses and pithouses. Continuity in house elements is also evident in the hybridized structures of Welqámex. At the level of the settlement, the row arrangement of houses in all late pre-contact and early Contact/Colonial period settlements also signifies continuity in socially accepted ways to form the built environment. We suggest that this clear relationship between house form and settlement layout signifies links among households through the millennia and across the Fraser Valley.

These threads of continuity do not, however, indicate stasis in household social organization. Our data indicate increasing household size and complexity over the past 6,000 years. This trend mirrors that observed elsewhere on the coast (Acheson 1995; Archer 2001) and the Interior Plateau to the east (Lenert 2001), and signifies the connection of the people of the Fraser Valley to larger regional social networks.

Furthermore, the continuity we see is neither simple nor linear. At the level of individual houses, our data suggest that many households were connected to specific houses, and thus specific locations on the landscape, for multiple generations. However, at none of our sites can we demonstrate through house data a connection to the landscape that endured for millennia. Rather, at several sites (Maurer, Qithyil, Sxwóxwiymelh), site use shifted dramatically over time and appears to have been sporadic. Such shifts indicate the formation and reconfiguring of local groups and intergroup relations as social, political, and economic contexts changed. We note, however, that it may be problematic to use archaeological ways of measuring continuity as the sole measure of long-term and enduring connections to the landscape. In our experience, the connection to "place" among First Nations is seldom easily equated with the boundaries of an archaeological site.

Within the overall pattern of continuity, there is also significant variability in group affiliation. At the level of the settlement, the proximity of early houses and the planned row arrangements in later houses, indicate social cohesion among local groups. Within local groups, however, variation across houses suggests that different social groupings were emphasized. At Sxwóxwiymelh, for instance, the absence of physical connections between extended family pithouses, combined with the redundancy of tasks conducted at houses, suggest that extended family households were the basic social unit. In comparison, at the roughly contemporaneous plank house settlement of Qithyil, multiple nuclear or extended families may have lived together in a single house and presumably formed a much larger, more internally complex household unit. At the much later settlement of Welqámex, side entrances connecting pithouses suggest affiliation with larger social groupings, perhaps more similar in size to those at Qithyil. An important, unresolved question is why some communities, or portions of communities, chose to live in these very different houses, each with their unique sets of embedded social meaning.

At a general level, Fraser Valley settlements are a unique combination of plank house and pithouse elements that, we suggest, signify the unique identity of the People of the River. However, the combination of settlement and house styles—rectilinear houses, plank houses, and rows of houses—represent identities that are, like the flow of the Fraser River itself, strongly coastal in orientation. At the level of the household, we see identities that

are both long-lived and shift through time. Collectively, the longevity and distinctiveness of house types and traits in the Fraser Valley suggest the unique character, central place, and long-term importance of the Stó:lō amid both Northwest Coast and Interior spheres of regional interaction and identity formation.

The data compiled here provide a step toward understanding the ways in which social identities stemming from relations within and between households may be represented in the built environment. In the case of the Fraser Valley, our investigation of Stó:lō houses and settlements and how they nest within the larger social and geographic landscape is a significant beginning toward understanding these complex social relations between regions.

Future archaeological investigations will need to address important gaps in the data before we can have more confidence in our interpretations of continuity and change in Stó:lō identity as reflected in households and settlements. Specifically, we need more systematic settlement surveys with testing and dating of as many sites as possible. Without these data, it will not be possible to determine how many settlements existed in each period and how similar or different they were in terms of size, layout, and house type. We need to excavate more house structures from selected settlements to expand our knowledge of house characteristics. In particular, we need to sample more aboveground plank houses dating to the past three millennia. These structures are notoriously difficult to excavate, but examples from neighboring regions, such as those in northern Oregon (Ames 2006; Sobel 2006), provide some inspiration for new methods of excavation and techniques of analysis. Finally, we also note that it will be necessary to expand our analyses to other categories of material culture, including a variety of classes of artifacts, in order to test some of the patterns of Coast Salish identities that we have noted in this study.

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Notes

1. We have deliberately used the somewhat vague term "settlement" throughout this paper to refer to sites with houses. Typically, archaeologists who have worked on the Northwest Coast refer to many such sites as "villages" (but see Ames and Maschner 1999:266). However, because this term evokes an image of a small-scale, simple settlement, possibly without political authority, it may not be appropriate. Ames and Maschner (1999:266) suggest the term "town" may be more appropriate for Contact/Colonial period multi-house settlements because of the implied political structure. However, this term is problematic in an archaeological context where we can not reconstruct political structure. Carlson's (2001a) typology for Contact/Colonial period Stó:lō settlements is based on relative size and differences in socio-economy.

2. When phase names differ, we present the names for both the Fraser Delta (listed first) and the Fraser Canyon (listed second). Many names have been applied to the past ~1000 years of prehistory of the region (Mitchell 1990:346). We use the generic label "Late period" in place of more specific labels (e.g., "Developed Coast Salish") used by others. The culture historical sequence for the Fraser Delta has been revisited relatively recently (Matson and Coupland 1995), but the later chronology for the Canyon has not been reevaluated since it was proposed over 30 years ago (Borden 1975). Matson and Coupland (1995:117) found a general correspondence of artifact types and frequencies between St. Mungo-aged sites in the Fraser Delta and central Fraser Valley. No analysis of how well sites from later phases fit into the already established sequences has been completed. Finally, we use the terms "Contact" and "Colonial" to refer to the period of time following European arrival in southwestern British Columbia. Used alone, each term can convey dichotomous ideas about the nature of European-Stó:lō power relations. Whereas historical and ethnographic evidence suggests that these relations were more than mere instances of "contact" mediated by economic transactions, it is clear that European colonial agendas alone did not predict the outcomes of inter-cultural interactions, as may be implied by "colonial". Thus, both terms are used to encapsulate a dynamic period of cultural entanglement characterized by regionally and temporally unique processes of cultural change (Graesch 2008; Schaepe 2009).

3. Charles Hill-Tout explained during a phone conversation with Miss Annis of the Carnegie Library in Vancouver that his informants defined the term Stó:lō as "River of Rivers." Miss Annis conveyed this information to Denys Nelson, who in turn had the information corroborated by Jason Allard, the son of a Coast Salish woman and an HBC trader at Fort Langley (Nelson 1925).

4. It should be noted, however, that our excavations did not reveal any internal divisions in this free-standing structure.