

CHAPTER 9

Excavations at *Iy'oythel*: A *Ts'elxwéyeqw* Pithouse Settlement in the Chilliwack River Valley

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Introduction and Background

This chapter presents the results of the first systematic archaeological excavation conducted in the Chilliwack Valley in 1999 by Stó:lō Nation in collaboration with Antiquus Archaeological Consultants Ltd. (Schaepe and Rousseau 1999). Investigations focused on a pithouse settlement at a place called *Iy'oythel* in the *Halq'eméylem* language, recorded as archaeological site Borden number DgRk-10, located in the lower part of the Chilliwack River Valley in southwestern British Columbia (Figures 1 and 2). This project provided baseline archaeological information on the local culture history and pre-contact indigenous occupation and use of the Chilliwack Valley. The site is situated in the homeland of the *Ts'elxwéyeqw* people (commonly pronounced 'Chilliwack' in English), sharing their name with the river and valley. The *Ts'elxwéyeqw* are a *Halq'eméylem*-speaking Coast Salish peoples and they are interconnected with sets of families constituting the Stó:lō (People of the River) of the lower Fraser River Watershed.

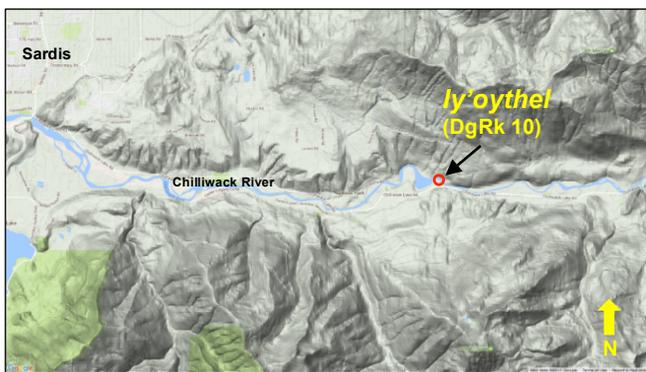


Figure 1. Location of *Iy'oythel* at Allison Pool on the lower Chilliwack River near Sardis, B.C. Google Maps image 2016.

The Chilliwack Watershed is a major part of the connective watersheds of the Coast Salish and Gulf of Georgia Regions, both geographically and culturally. The Chilliwack River Valley, is linked to several important waterways and watersheds that include the Harrison and

Sumas Rivers, and Hope and Lakahamen sloughs that connect to the Fraser River in the central Fraser Valley. For thousands of years, this transportation and communication network played a significant role in developing and maintaining pre-contact social, economic, and political relations among Stó:lō communities.

Prior to 1997 the pre-contact archaeological record in the Chilliwack watershed was virtually unknown. This site was recorded by Schaepe (1998) and recognized as the settlement of *Iy'oythel* (a.k.a. Allison Pool) in *Ts'elxwéyeqw* oral history. This project was carried out under the direction of the Stó:lō Nation, including the *Ts'elxwéyeqw* Tribe, with support from the Ministry of Forests, Chilliwack Forest District. We examined two large cultural depression features, recovered radiocarbon dates associated with their occupation and use, and from the sample of associated cultural materials, provided insight into past activities carried out at this settlement. This project set out to contributing baseline archaeological data supplementing existing ethnographic, historic, and oral historical accounts of *Ts'elxwéyeqw* tribal history.

Archaeological overviews presenting the archaeology and history of the Chilliwack River Watershed include Mohs (1991), Myles (1995), Millennia Research (1996, 1997) and Schaepe (1998). Prior to Schaepe's (1998) comprehensive archaeological inventory of the valley, only 13 archaeological sites had been recorded, most of which are located in the lower 10 kilometers of this 50 kilometer long valley. These were recorded mainly by ethnographer Wilson Duff (1949) and the National Museum of Canada in 1963 (Kidd 1969). In 1968, Knut Fladmark recorded a single site in the upper Chilliwack Valley at Chilliwack Lake. Schaepe's inventory study identified and documented additional archaeological sites, including pithouse villages, throughout the Chilliwack Valley from Chilliwack Lake to its junction with the Fraser Valley. The results of that study provided a basis for pursuing archaeological research aimed at more fully understanding *Ts'elxwéyeqw* culture history. Subsequent archaeological research has since focused on pithouses and settlement patterns within the Chilliwack

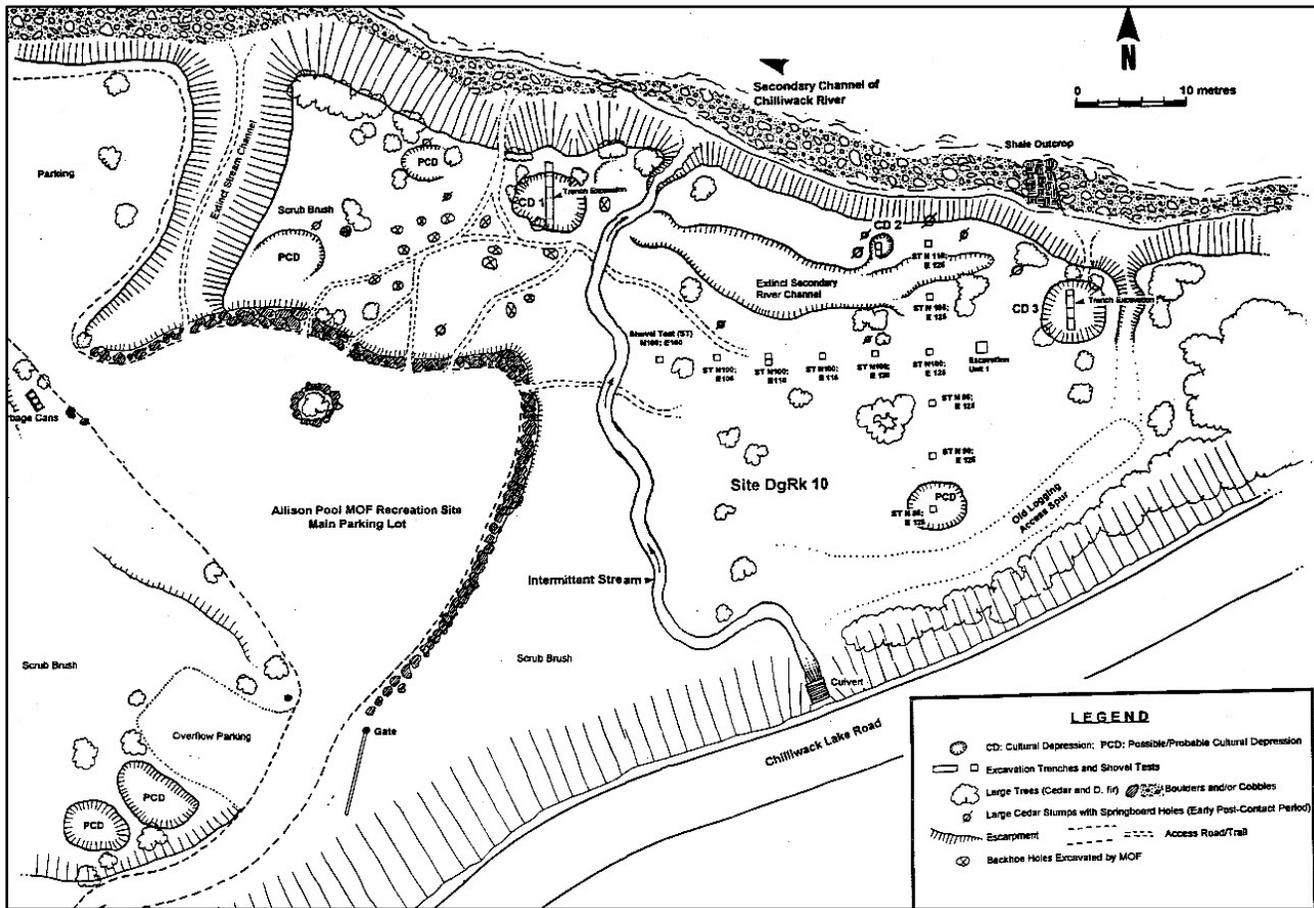


Figure 2. Map of *Iy'oythel* settlement at Allison Pool Recreation Site showing locations of cultural depressions and placement of excavation units (DgRk 10).

River watershed that explored relations between Stó:lō peoples and settlements throughout the Fraser Valley and Gulf of Georgia Region (e.g., Lepofsky et al. 2009; Schaepe 2009; Schaepe et al. 2006).

Description of the Chilliwack River Valley and *Iy'oythel*

The lower Chilliwack River watershed (Figure 1) is located in the Skagit Range of the Northern Cascade Mountains which rise up from the Fraser Valley. It is the largest (1,230 km²) watershed in the North Cascades. The Chilliwack Valley extends from the foot of Chilliwack Lake to the junction with the Fraser Valley, and it is oriented generally east-west. The Chilliwack River is on average 30 to 50 m wide; narrowest at its headwaters and expanding into a braided system beyond its junction with the Fraser Valley. Prior to its diversion into the Vedder River Canal and Sumas River system in the 1890s, the Chilliwack River flowed across the Fraser Valley and emptied into the Fraser River by way of a meandering set of sloughs. Below Chilliwack Lake the river gradually drops 600 m in elevation. The valley supports an array of plant, animal and fish resources.

Iy'oythel is located in the lower section of the valley on a mid- to late-Holocene river terrace at the base of Mt. McGuire (Figures 1 and 2). At this point the river runs

through a short canyon consisting of bedrock outcrops on both riverbanks that form deep pools and eddies ideal for fishing salmon. This two-sided armoring along both river banks is the first of its kind lying about 25 km upriver of the confluence with the Fraser River. *Ts'elxwéyeqw* tribal historian Bob Joe called this place *Iy'oythel*, meaning 'the opposite side / both sides (of the rock wall)' (Wells 1987; McHalsie 2001). Thus this place name refers to the bedrock canyon associated with a productive fishing location along the Chilliwack River.

Ethnographic and Oral Historical Accounts of Pre-Contact Period *Ts'elxwéyeqw* House-Types and Settlement Patterns

Oral history provides many accounts of *Ts'elxwéyeqw* use of the valley. Documentation of *Ts'elxwéyeqw* history is derived mainly from oral history recorded by late 19th and mid-20th century ethnographers (Boas 1895; Duff 1952; Smith 1947; Wells 1987). Only recently have ethnohistorians (Carlson 2011) and archaeologists (Schaepe 1998; Schaepe and Rousseau 1999; Schaepe et al. 2006; Schaepe 2009) focused attention on this area. Smith's *Ethnography of the North Cascades* (1987) provides a thorough overview of *Ts'elxwéyeqw* ethnography. During an interview with

Wells (1987:160) the late *Ts'elxwéyeqw* elder Albert Louie explained the meaning of the word '*Ts'elxwéyeqw*':

“As far as you can go with a canoe... you can't go no further. *Ch'elaxw*, Indians called it. You come there, and you can't go any further, and you're right in *Ch'elaxw*, you see. It's what they call 'far as your canoe can go'... Then the white people have Chilliwack.”

As with all *Stó:lō-Coast Salish* people, *Ts'elxwéyeqw* social, political, economic and practices were severely impacted by small-pox epidemics and upheaval associated with the arrival of the Europeans (Carlson 1997). At the time of European contact in the early 19th century, the *Ts'elxwéyeqw* primarily occupied the lower portion of the Chilliwack Valley downriver from the junction of the Chilliwack and Fraser valleys where the Indian Act reserves are today. While the majority of settlements are clustered in the lower watershed, strong cultural ties an array of land and resource uses continue to connect the *Ts'elxwéyeqw* with the entire valley.

A substantial set of information on *Ts'elxwéyeqw* occupation and use of the valley, subsistence, settlement patterns and house types, comes from 19th and 20th century mapping of the valley by *Ts'elxwéyeqw-Stó:lō* individuals (Boxberger and Schaepe 2001; Schaepe 2001a) as well as information collected by a number of 19th century settler explorers and 20th century ethnographers (Boas 1894; Carlson 2003; Duff 1952; Harris 1994; Hill-Tout 1902; Lerman 1952; Smith 1950; Wells 1987; Wilson 1865). Smith (1950), Duff (1952) and Wells (1987), in particular, provide maps depicting village site locations and place names derived from *Ts'elxwéyeqw* oral history and other sources of information relevant to investigating settlement patterning, house types, travel routes and the overall occupation and use of the Chilliwack Valley.

A terrestrial, pedestrian mode of travel, transportation of goods, and inter group communication were common throughout the majority of the upper Chilliwack Valley. Trade relations with neighboring groups were maintained by a network of riverside and mountaintop trails (Myles 1995:66-71; Schaepe 1999, 2001b). Numerous trail systems provided access to the Nooksack and Skagit River valleys, to the south and east, and the Fraser River to the west. Mountain ridgetops were often preferred to the lowland routes, and were heavily traveled in part to reduce the risk of exposure to raids. Canoes were used as an efficient means of water travel and transportation of goods on lakes within this watershed, as were the lowland sloughs in the downriver area. These transportation and travel linkages enabled the foundation of trade between the *Ts'elxwéyeqw* and their interior and coastal neighbors.

While the *Ts'elxwéyeqw* occupied the lower Chilliwack River and Fraser Valley at the time of European contact, their oral history relates a westward shift of settlement from

the upper to lower portions of the valley. The late elder Bob Joe indicated that the earliest *Ts'elxwéyeqw* village was located at Chilliwack Lake about 30 km upstream from *Iy'oythel* (Wells 1987:53-55):

“The main headquarters of the Chilliwack Tribe was up at Chilliwack Lake, SxQchaqel. Well, as time went on, they kept a-moving down, that is the headquarters of these four [the brothers Wilileq, Th'elachiyatel, Yexweylem and Siyamches that governed the tribe of Indian down as far as the stone house, Laxewey.”

A more complete accounting of the *Ts'elxwéyeqw* history provided by Bob Joe is presented in Lerman (1950/51:268-269).

The *Ts'elxwéyeqw* maintain an oral history of settlement relating specifically to *Iy'oythel*. Three ethnographers mention a settlement located at this place (Duff 1952:36-38; Smith 1950:339-341; Wells 1987:82) and it is noted as being a good fishing site with deep fishing pools, within a narrow rocky channel situated below a flat- to gently-sloping terrace. Wells (1987:117) includes a photograph of Bob Joe standing on a bedrock outcrop at *Iy'oythel* just upstream of the pithouse settlement. Wells' (1987:82) interviewees maintained that housepits were associated with *Iy'oythel*.

In ethnographic accounts, some *Ts'elxwéyeqw sqémél* (pithouses) appear to have had some architectural features that were distinct from other *Stó:lō* and Interior Salish groups (Smith 1947:79). At 3 to 7 m above the floor, *Ts'elxwéyeqw* pithouse roof entrances and ceilings were higher than in other documented pithouse forms in the region. Some such dwellings also had a different architectural structure supporting the roof. Instead of support posts set vertically in the house floors as described for 'interior style' pithouses (Teit 1900:192-195), at least some *Ts'elxwéyeqw* dwellings appear to have used four posts set against the pit wall to support the ceiling rafters (Duff 1952:43, 46-47; Smith 1947:257, 264). Smith (1947:79) provides this description:

“Their [the support posts] tops, notched to receive the principal rafters, reached upward to just below ground level. The upper ends of these rafters were lashed to a square hatchway, one rafter secured to each corner. From supplementary posts other lesser rafters ran from the ground to the hatchway. The roof was pyramidal and only 4 to 4.5 feet above ground level. The centre entrance was reached from the floor by a notched pole ladder.”

Smith (1947:79) and Duff (1952:43, 46-47) note that each dwelling was a multi-family structure with only one cooking fire under the overhead entrance. These ethnographic descriptions of *Ts'elxwéyeqw* pithouses provide a comparative foundation for the interpretation of cultural depressions examined at *Iy'oythel*.

*Ts'elxwéyeq*w oral history clearly and directly establishes the long term occupation and use of the Chilliwack Valley and close connections to surrounding tribes including the Nooksack, Mathequi, and Semá:th (Boas 1895; Schaepe 2006). As Bob Joe stated, "We have lived here since time immemorial, thousands of years" (Wells 1987:15). The duration of the *Ts'elxwéyeq*w's westward, downriver movement from Chilliwack Lake has been a point of contention among anthropologists working in the region, although less so for the *Ts'elxwéyeq*w themselves. This question is relevant to our findings at *Iy'oythel*.

Wilson Duff (1952) postulates that *Ts'elxwéyeq*w emergence onto the Fraser River Valley occurred around the time of contact with Europeans and the establishment of Hudson's Bay Company's Fort Langley trading post in 1827. Marion Smith (1950) provides some evidence that supports this theory, indicating that the *Ts'elxwéyeq*w may have displaced Nooksack-speaking people from this locality. Alternately, based on archaeological evidence from the Central Fraser Valley, Mohs (1990:15) argues that the Chilliwack River plain between Vedder Crossing and the Fraser River was occupied by the *Ts'elxwéyeq*w for a long period prior to European contact. Bob Joe's oral history supports this position as examined in Carlson's (2011) detailed history of *Ts'elxwéyeq*w movements within the valley. Our archaeological research, presented below, at *Iy'oythel* contributes to this debate and sheds light on pre-contact settlement patterns in the Chilliwack Valley. Our study also specifically provides new information about the Middle Period occupation of the Chilliwack River Valley between 2000 and 4800 years ago.



Figure 3. A general view of the site during excavations, looking westward toward CD 1 in the background. Note small ephemeral stream (center) passing through the site.

Excavations at *Iy'oythel*

The primary objectives of our 1999 study at *Iy'oythel* were to examine the integrity and content of two housepit depression features recorded at DgRk 10, and establish the archaeological foundations of a culture historical framework for the Chilliwack Valley. Excavations of the two pithouse

features at *Iy'oythel* yielded information that contributes significantly to the pre-contact period history of settlement in the Chilliwack River Valley. Excavations involved two research objectives and strategies, one focusing on investigating dwelling-size cultural depressions (CDs), and the other addressed areas on the river terrace adjacent to the depressions (Figures 2 and 3). Our CD excavation strategy employed exploratory trenching of each of the three identified CDs using eleven 0.5 m x 1 m excavation units (Figures 4 to 8). The trenches served the purpose of cross-sectioning each of the three CDs. Assessment of the landform surrounding the CDs employed a combination of 12 shovel tests (50 cm x 50 cm) and one standard excavation unit (1m²) laid out in two intersecting linear transects bisecting the river terrace between CDs 1 and 3 (Figure 2). Our transect excavations provided exposures that revealed the horizontal and vertical extent of subsurface deposits across the terrace between CDs 1 and 3. The single 1m² excavation unit was expanded from a shovel test to explore a subsurface feature encountered at the east end of the terrace near CD3. This unit contained deep cultural deposits.

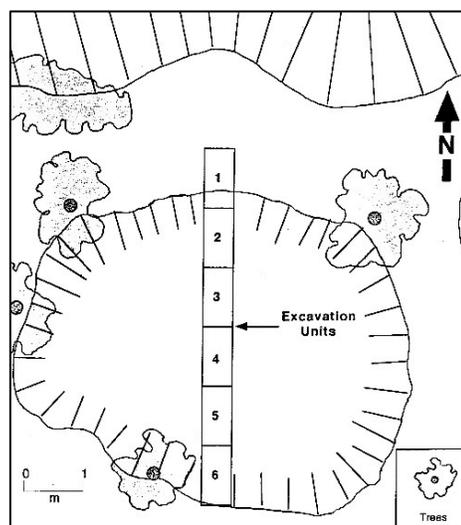


Figure 4. Plan view of CD 1 showing excavation unit placement.

All units were excavated stratigraphically, with thicker strata being separated into arbitrary 5 cm levels. Emphasis was placed on establishing *in situ*, three dimensional provenience for all cultural materials associated with occupation zones (e.g., CD 3) or strata that appeared to be living surfaces, floor deposits or features as encountered in CD 2. All excavated matrix was screened using 3 mm (1/8") mesh. A total of 6 m³ were excavated during our project; four cubic meters were excavated from trenches in CDs 1 to 3, and two from smaller units excavated in a linear arrangement across the site area. Soil and radiocarbon samples for future analysis were collected from floor deposits, occupation layers, and hearth features. Three radiocarbon samples were processed by Beta Analytic in Florida (Table 1).



Figure 5. View of CD 1 showing completed excavation trench, looking north.



Figure 6. View of north-central aspect of CD 1 showing east wall profile. Note the dark floor deposits.

Excavations focused on CDs 1 and 3 (Figures 2 and 4 to 8). The CDs remaining at Iy'oythel may be only a portion of what was once originally there with some having been lost to riverbank erosion over time, with significant loss of the river terrace edge being witnessed within the last 50 years. What remains is the southern portion of a once larger

settlement. Full descriptions of the excavation findings are presented in Schaepe and Rousseau (1999).

Interpretation of CD 1

The Cultural stratigraphy and associated lithic waste, tools and a hearth feature encountered in CD 1 indicates it is the remains of a pithouse. Multiple strata representing successive occupations are present in CD 1 (Figure 6). Excavations revealed well-preserved floor deposits containing lithic debris and artifacts (Table 2), and a hearth feature. The most common lithic materials associated with CD 1 are basalt coarse and fine-grained, shale, a local red chert, and andesite. Metasediments, slate, green chert, chalcedony, and black glassy obsidian are represented in lower frequencies.

Table 1. Radiocarbon assay results on charcoal from Iy'oythel

Field Sample Ref. no.	Beta Lab Ref. no.	Recovery Context	¹⁴ C Age in yrs BP	CAL BP (2σ) Calendric Calibration Age(s)
CD1-1	Beta-128241 (conven.)	Hearth feature and occupation zone (Strata IX/X)	2620 ± 60	2835-2715, 2565-2540
CD-1-2	Beta-128242 (conven.)	Floor deposit (Stratum IX)	2190 ± 110	2365-1905
CD-3-1	Beta-128607 (AMS)	Feature (hearth charcoal) from occupation zone (Stratum V)	4110 ± 40	4825-4525

The bowl-shaped hearth was about 50 cm in diameter by 10 cm thick and contained a charcoal rich matrix with fire-altered rocks. It was located in the north-central aspect of CD 1 at the juncture of Units 2 and 3, and extending below the floor horizon. A linear set of pebbles and cobbles defined the southern rim of the hearth. Charcoal samples recovered from this hearth indicate that CD 1 was occupied repeatedly between 2800 and 2000 years ago (Table 1).

Interpretation of CD 3

CD 3 represents the remains of an early pithouse with a single occupation layer dating to the Middle Pre-Contact Period between 4800 and 4500 years ago. It was difficult to identify a distinct occupation layer or floor zone in CD 3. It appears that Stratum V deposits, overlying non-cultural strata, represent the occupation layer. The overlying strata appear to be the result of post-occupation infilling from aggradation and ongoing use of the site through time. A small hearth was located in the northeast portion of the floor deposits that extended the full length of the excavated trench. Charcoal from this hearth provided a date of 4110+/-

40 BP, which is one of the earliest pithouse dates in the Lower Fraser River region.

A concentration of lithic waste was associated with this occupation zone included 89 pieces (30%) of the total 294 recovered from CD 3. The two most common lithic materials associated with CD 3, including the occupation zone, are a local red chert and various metasediments. Lesser quantities of green chert, Hozomeen chert, andesite, basalt, chalcedony, and low frequencies of slate, shale, gneiss, and quartzite were also recovered. The age of CD 3 is based on the date derived from a charcoal sample collected from this hearth (Table 1).

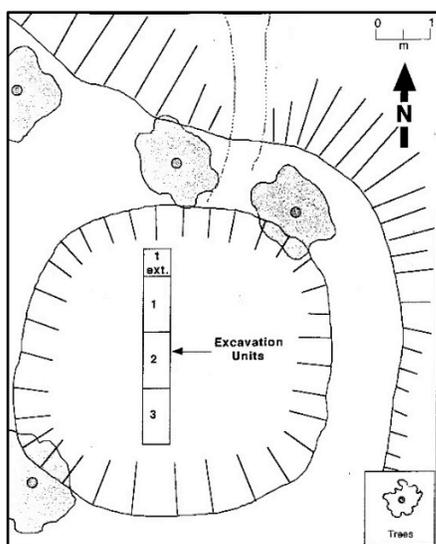


Figure 7. Plan view of CD 3 showing excavation unit placement.



Figure 8. Post-excavation view of CD 3 showing the west wall stratigraphic profile.

A small sample of temporally diagnostic modified lithic artifacts from CDs 1 and 3 (Figures 9 to 12; Table 2) are supported by the radiocarbon age determinations. A ground slate knife fragment (Art# DgRk-10:2) from CD 1 is typical of those found in other sites of this period (2800 to 2000 years ago). The well-made, leaf-shaped, red chert biface

(Art# DgRk10:10) recovered from CD 3 is consistent with bifaces common in regional assemblages dating between 5500 and 3500 years ago.

Table 2. Provenience and Description of Modified Lithic Artifacts from CDs 1 and 3 at *Iy'oythel*

Artifact #	CD	Unit	Level	Description
DgRk 10:1	1	1	5	A medium-sized, rectangular, thin, green shale utilized flake; cutting tool/knife.
DgRk 10:2	1	3A	13	A large, thin, ground slate knife; cutting tool.
DgRk 10:3	1	4	2	A medium-sized, irregular-shaped, grey, semi-translucent chalcedony utilized flake; scraping tool.
DgRk 10:4	3	1	12	A large, tabular shaped, red metamorphosed chert utilized core fragment; chopping, shaving tool.
DgRk 10:5	3	2	12	A medium-sized, irregular-shaped, grey mudstone utilized flake; shaving/cutting tool.
DgRk 10:6	3	3	2	A medium-sized, leaf shaped, red chert formed biface; knife.
DgRk 10:7	3	3	5	A small, irregular-shaped, red chert utilized flake; scraping/shaving tool.
DgRk 10:8	3	3	9	A medium-sized, irregular-shaped, red metamorphosed chert utilized flake.
DgRk 10:9	3	3	10	Medium-size stemmed lanceolate biface, black chert, possibly Hozomeen.
DgRk 10:10	3	3	11	Large, lanceolate, leaf-shaped biface, red chert.
DgRk 10:11	3	4	1	Pebble hammerstone, granodiorite.

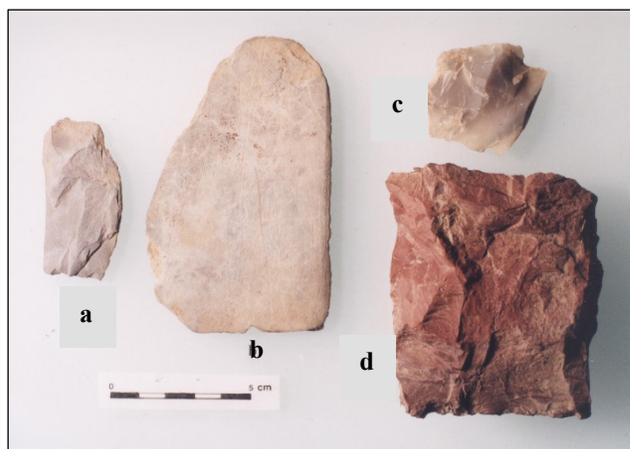


Figure 9. Modified lithic artifacts from CD 1: (a): DgRk 10:1; (b): DgRk 10:2; (c): DgRk 10:3; and (d): DgRk 10:4.

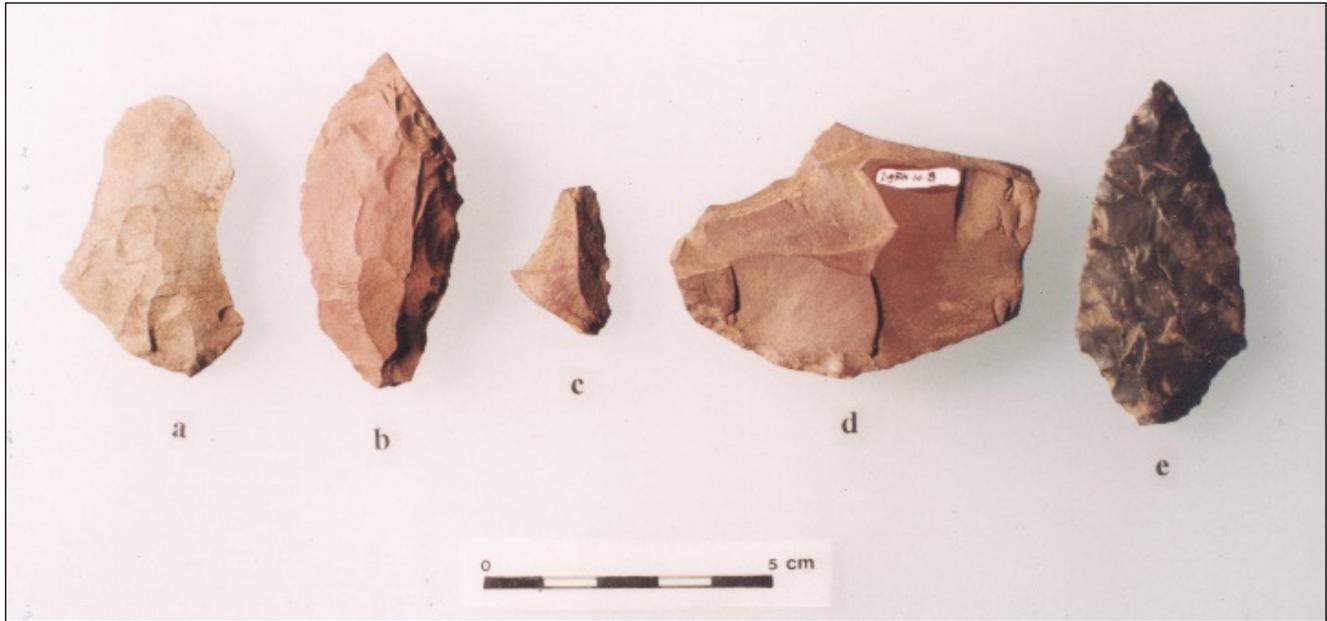


Figure 10. Modified lithic artifacts from CD 3: Item (a): DgRk 10:5; (b): DgRk 10:6; (c): DgRk 10:7; (d): DgRk 10:8; and (e): DgRk 10:9.



Figure 11. A modified elongate cobble artifact (DgRk 10:14) from 10-15 cm BS in Shovel Test N100 E130.



Figure 12. Lithic artifacts: (a): DgRk 10:10 from Level 11 of Unit 3 in CD 3; (b): DgRk 10:12 from Shovel Test N100-S110 (35-40 cm BS); and (c): DgRk 10:11 from Level 4 of Unit 1 in CD 3.

Summary

The results of our exploratory investigations at *Iy'oythel* indicate occupation and use of the site during to the Middle Pre-Contact Period. The two excavated dwellings were built and inhabited during two separate occupation episodes; about 4800 to 4500 years ago in CD 3 and 2800 to 2000 years ago in CD 1. CD 1 was occupied multiple times over the course of hundreds of years as indicated by floor remodelling, thick floor deposits, and intensive re-use of the hearth. CD 1 is larger than CD 3. They also differ in the nature and intensity of use as indicated by the substance of their respective occupation zones, floor deposits, and features. The accumulation of floor deposits and features in CD 1 is far greater than that in CD 3. These differences indicate that pithouse size and occupation at this settlement expands between 4800 and 2000 BP.

Differences in lithic materials and tool types between house assemblages also indicate changes and shifts through time. The presence of ground slate fish knife fragments in CD 1 signifies a change in salmon processing technology after 3000 BP. Evidence for ground slate use at *Iy'oythel* is consistent with slate technology identified at other investigated sites throughout the Fraser Valley. Our finding of glassy obsidian in the younger deposits in CD 1 indicates the acquisition and occasional use of a lithic material originating from sources beyond the region.

Our findings of semi-subterranean pit house features and the use of ground slate fish knives supports *Ts'elxwéyeq̓w* oral history about *Iy'oythel* being used as a settlement and important fishing site. Inter-regional comparisons of material culture (e.g., housepit forms, lithic materials and tool types) provide insights into cultural connections, social

and economic interactions, and sharing of cultural and technological traits between inhabitants of the Chilliwack Valley and the adjoining Fraser Valley sub-region over a many millennia. This archaeological investigation of *Iy'oythel* establishes base-line information which informs inter- and intra-regional comparisons and aids in understand the occupational history and use of the Chilliwack Valley. The result of this archaeological work in the Chilliwack Valley expands our understanding of the pre-contact period history of the greater Lower Fraser River Region.

Acknowledgements:

On behalf of Stó:lō Nation, we thank Betty Charlie, Cliff Hall, the late Geno Peters, Mike McCoy, Peter Merchant, Monty Mitchell, Jim Spafford, the late Riley Lewis, Dean Jones, Ken Langdale, Dave Hobbs, Gene Macinnes, Jerry Kennah, Gail Starr, Tia Halstad, Ford Mountain Correctional Institute staff and work-crew, Doug Glaum, and Vince Stogan. Thanks are also extended to the *Ts'elxweyéq̓w* Tribe Leadership.