

# Contact and change in Central Salish words for salmon\*

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**Abstract:** Within comparative Salish linguistics, the problems of frequent irregular sound correspondences and overlapping lexical isoglosses are well known. In this paper, the possible effects of contact on lexical change within the Central Salish branch are examined, focusing on the semantic domain of words for salmon. This builds on previous work by Thom Hess, Donna Gerdts, Aert Kuipers, and others, studying lexical diffusion within the Salish family. All cognate sets shared by two or more languages are listed, and comments on phonological form and meaning are given. The geographic distribution and phonological irregularity of certain sets imply a mechanism of diffusion which has likely been ongoing for most of Central Salish history, and suggest that alternatives to the traditional tree model are required to account for these processes of change.

**Keywords:** Central Salish, historical linguistics, language contact, irregularity, diffusion

## 1 Introduction

The goal of this paper is to examine the words for salmon in the Central Salish family to see what patterns they show in their distribution. Salmon was the most important food resource for Central Salish speaking peoples, and likely has been for millennia (Donald, 2003:296). All five species of Pacific salmon spawn in streams within Central Salish territory, but they are not evenly distributed throughout this area. During the spawning season, people would travel long distances to fish in the most productive streams, possibly providing an opportunity for contact between speakers of different dialects or languages (Suttles, 1990:457). Because of these cultural and historical factors, names for salmon provide a potentially interesting domain for the study of lexical change within Central Salish.

The distributions of certain lexical items in Central Salish are known to have a wave-like patterning (Hess, 1979), but investigation of this phenomenon has been limited. The wave-model of language change, which views innovations as spreading outwards from a central point like ripples on a pond, has a long history in comparative linguistics. It is used especially frequently in dialectology, where isoglosses are expected to intersect, since dialects may share innovations with multiple neighbouring dialects (François, 2015:169). This is

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very similar to the situation described for Central Salish languages, which form a chain where each language shares features with those neighbouring it (Thompson & Kinkade, 1990:36). Therefore, we may expect wave-like patterns in the lexicon to be the norm rather than the exception.

Section 2 provides a listing of all terms for salmon that are found in at least two Central Salish languages, with some comments on their form and meaning. Section 3 examines the distribution of some of these sets, and outlines how these distributions may have arisen, where there is historical evidence. Section 4 discusses the implications of these and previous findings, as well as suggesting some avenues for future research. The paper concludes with Section 5, which summarizes the key findings of the study.

## 2 Cognate sets

Most of the data for this paper come from the comparative Central Salish lexical database I have been working on with Peter Jacobs. Sources are as follows: Comox-Sliammon words are from Watanabe 2003, Kuipers 2002, and First Voices, Sechelt words from Beaumont 2011, Squamish words from “Sk̓w̓x̓wú7mesh Sk̓exwts” 2011, Kuipers 1967, and Kuipers 1969, Halkomelem words from Gerdts 1977, “Hul̓q̓um̓i̓n̓um̓ Words” 1997, Suttles 2004, and Galloway 2009, Nooksack words from Richardson & Galloway 2011, Galloway 1988, and Kuipers 2002, Northern Straits words from Montler 1991 and Kuipers 2002, Klallam words from Montler 2012, Lushootseed words from Bates, Hess & Hilbert 1994, Twana words from Kuipers 2002 and Nile Thompson, personal communication, Kwak’wala words from Grubb 1977 and Fortescue 2007, Nuuchah-nulth words from Fortescue 2007 and First Voices. Any errors in transcription are my own.

A note on reconstructed forms: the majority of these are from Kuipers (2002), some of which have been slightly modified. Where no source is provided, these are my own reconstructions. Unless otherwise noted, these do not represent Proto-Central Salish level reconstructions, but simply the most plausible ancestor of the attested forms.

### 2.1 List

- (1) ‘any fish, salmon’: \**sčaliltən* (Kuipers, 2002:24, modified); Sechelt *sčaliltən* ‘fish, salmon (generic)’, Squamish *sčáyiltən* ‘fish (a ‘high’ word)’, Halkomelem (Island and Downriver) *scé:ltən* ‘salmon (generic)’.

The sound correspondences in these words are mostly regular, although some require explanation. The long vowel and lack of \**l* in Halkomelem is probably due to reduction of a secondary \**lh* cluster, with compensatory lengthening of the preceding vowel (see Suttles, 2004:18). The reduction of the cluster \**lt* in Squamish is paralleled in the word *ʔiltən* ‘to eat’ from Proto-Salish \**ʔilt(t)n* (Kuipers, 2002:16), but this does not appear to be a regular process. Kuipers tentatively connects this form \**sčaliltən* to the Proto-Salish root \**ciltən* ‘fish,

food' (2002:24), noting that the initial consonant correspondences are irregular. There is the possibility that this root contains the plural infix *-l-*, though this morpheme does not otherwise occur in Sechelt and Squamish.

- (2) 'any fish, salmon': \**sčananx*<sup>w</sup>; Samish and Songish *sče:nəx*<sup>w</sup> 'fish (generic)', Saanich *sče:nəx*<sup>w</sup> 'salmon', Klallam *sčanənəx*<sup>w</sup> 'salmon', Lushootseed *sčədadx*<sup>w</sup> 'salmon'.

The correspondence of Straits *č* to Lushootseed *č* is not regular, since the phoneme *č* in Straits generally derives from \**p* or \**y*, while Lushootseed *č* comes from earlier \**k*. This may suggest that this form was borrowed, although determining the direction of borrowing is impossible without knowing which Proto-Salish consonant the \**č* is derived from.

Kuipers (2002:38) reconstructs Proto-Salish \**kanax*<sup>w</sup> because of the Interior Salish words for 'Kokanee salmon' (Lillooet *kəkn'i*, Thompson *kəkn'iy*, Shuswap *kəknəx*<sup>w</sup>, and Okanagan *kəkn'i*), as well as the Upper Chehalis word *sčanánx*<sup>w</sup> 'salmon'. The ending in several Interior languages is unexpected, and raises doubts that these words are related to the Coastal ones, although Shuswap is a perfect match. Kuipers suggests that the *-i* forms may be borrowed from English *kokanee* (2002:38), in which case only the Shuswap and Upper Chehalis forms would be directly related to \**sčananx*<sup>w</sup>. The direction of borrowing in this case would be Lushootseed to Straits.

- (3) 'pink, humpback salmon': \**hənun*; Sechelt *hənun*, Island Halkomelem *ha:n* ~ *hanən* (Chemainus, Nanoose and Nanaimo, respectively), Downriver Halkomelem *hu:n*, Upriver Halkomelem *ho:liye*, Samish and Saanich *hənən*, Klallam *hənən*, Lushootseed *hədú?*, Twana *hədiq*<sup>w</sup>.

The forms of this set are phonetically divergent, but clearly related. The Island and Downriver Halkomelem words show an unexpected *a : u* correspondence, where the long vowel appears to derive from reduction of a cluster of identical resonants, with compensatory lengthening (Suttles, 2004:18). Lushootseed lacks the final *-n* of most other languages, while both Upriver Halkomelem and Twana have added suffixes to the root. Cognates occur in Interior Salish that lack final *-n* (Kuipers, 2002:35), noting that the Columbian form is likely borrowed from Lushootseed (Kinkade, 1995:42), which may indicate that *-n* is an innovation in some Central Salish languages (possibly a form of final reduplication). Kuipers reconstructs Proto-Salish \**hənəw* ~ *hənəy* to account for the varied reflexes (2002:35).

- (4) 'dog, chum salmon': \**k<sup>w</sup>'úlux*<sup>w</sup> (Kuipers, 2002:225, modified); Comox-Sliammon *k<sup>w</sup>'úlux*<sup>w</sup> 'smoked/dried fish', Sechelt *sk<sup>w</sup>'úlux*<sup>w</sup> 'dried fish', Downriver and Island Halkomelem *k<sup>w</sup>'ál'əx*<sup>w</sup> 'chum salmon', Upriver Halkomelem *k<sup>w</sup>'á:ləx*<sup>w</sup>, Nooksack *k<sup>w</sup>'óləox*<sup>w</sup>, Songish *k<sup>w</sup>'ayəx*<sup>w</sup>, Samish and Saanich *k<sup>w</sup>'al'əx*<sup>w</sup>, Klallam *q<sup>w</sup>'aʔələx*<sup>w</sup>.

This form is widespread in Central Salish, and is also found in Lillooet *k<sup>w</sup>'al'x<sup>w</sup>* (likely borrowed from Halkomelem due to the vowel) and Thompson *k<sup>w</sup>'úluʔx<sup>w</sup>*. The semantic shift in Comox-Sliammon and Sechelt is interesting, and may reflect the importance that preservation of this species played in the diet of the northern Central Salish (Kennedy & Bouchard, 1990:444). Kuipers includes under this root a Squamish word *k<sup>w</sup>'ál'ax<sup>w</sup>m* ‘Dog Salmon River’, referring to the Qualicum River, which is probably borrowed from Halkomelem, as shown by presence of *a* rather than expected *\*u*. However, the regular word for this species in Squamish is *q<sup>w</sup>áχnis*, a loan from Kwak’wala *q<sup>w</sup>axnis*. The *l* in the Klallam form is irregular.

- (5) ‘dog, chum salmon’: *\*λ'əx<sup>w</sup>ay*; Comox-Sliammon *lox<sup>w</sup>ay*, Klallam *λ'χ<sup>w</sup>ay?*, Lushootseed *λ'əx<sup>w</sup>ay?*

This form is limited to only three languages, but these include the northern- and southernmost Central Salish languages, making borrowing unlikely. This makes *\*λ'əx<sup>w</sup>ay* a good contender for the Proto-Central Salish term for ‘dog, chum salmon’, which was then replaced by words of Set 4 in most Central Salish languages.

- (6) ‘dog, chum salmon’: *\*syanx<sup>w</sup>*; Comox-Sliammon *janx<sup>w</sup>* ‘fish, salmon’, Sechelt *syanx<sup>w</sup>* ‘dog salmon’.

The original referent of this set is difficult to determine, since the two languages disagree in meaning. Both semantic narrowing and widening seem plausible here.

- (7) ‘coho salmon’: *\*caw'in* (Kuipers, 2002:223); Comox *səʔn*, Squamish *cáw'in*, Island Halkomelem *θeʔwən*, Samish and Saanich *sew'ən*.

The forms in this set are phonologically regular apart from the Comox word, which lacks a reflex of *\*w*. A possible explanation is that the glide was vocalized and then reduced: *\*caw'in* > *\*caw'n* > *\*cəw'n* > *\*cuʔn* > *\*cəʔn* > *səʔn*. This form is also found in Lillooet *cáʔwin*, which could be a loan from Squamish. Similar forms also appear in all Wakashan languages, and reflexes display sound correspondences consistent with descent from a Proto-Wakashan root *\*dzəw'in* (Fortescue, 2007:131, modified). The word therefore appears to be ancient in both families, and determining the direction of borrowing may be impossible.

- (8) ‘coho salmon’: *\*k<sup>w</sup>əx<sup>w</sup>ic* ~ *\*k<sup>w</sup>əx<sup>w</sup>ac*; Downriver and Upriver Halkomelem *k<sup>w</sup>əx<sup>w</sup>əθ*, Nooksack *k<sup>w</sup>óx<sup>w</sup>əc*, Lushootseed *sk<sup>w</sup>x<sup>w</sup>ic*, Twana *k<sup>w</sup>áx<sup>w</sup>ac*.

Although the words in this set show clear phonological similarities, the vowel correspondences are not regular, and in fact contradict each other. The vowels in the initial syllable of the Halkomelem and Nooksack forms suggest either *\*u* or *\*ə*, while the Twana form suggests *\*a*. The Lushootseed final syllable vowel points to *\*i*, but Twana implies *\*a*.

- (9) ‘coho salmon’: \**q’əčqs*; Island Halkomelem *q’əčəqs*, Nooksack *q’əčqs*, Lummi *q’əčqs*, Klallam *q’əčqs*, Lushootseed *sq’əčqs*.

The medial *č* in the forms of this set is irregular: generally, Halkomelem *c*, Lummi *s*, and Klallam *c* would be the expected to correspond to Nooksack and Lushootseed *č*. This strongly suggests borrowing has occurred.

- (10) ‘sockeye salmon’: \**scəqay*’ (Kuipers, 2002:215, modified); Comox *səqay?*, Sechelt *scəqay*, Squamish *scəqi?*, Island Halkomelem *sθəqi?*, Downriver Halkomelem *sθəqay*’, Upriver Halkomelem *sθəqi ~ sθəqay*, Saanich *θəqay*’, Songish *səqe?*, Klallam *scəqi?*, Lushootseed *scəqi?*, Twana *scəqay*.

This word is found in every Central Salish language except for Nooksack, and all reflexes are phonologically regular. Therefore, it can be securely reconstructed as the Proto-Central Salish term for ‘sockeye’. Lillooet *scqaz*’ ‘barbequed salmon, dried and stored away’ also belongs to this set, with a similar semantic shift as found in Sliammon and Sechelt in Set 4.

- (11) ‘spring, chinook salmon’: \**sc’uqʷay*’ (Kuipers, 2002:224); Squamish *sc’uqʷi?* ‘fish, salmon (generic)’, Island Halkomelem *sθ’aqʷi?* ‘spring salmon’, Downriver Halkomelem *sθ’áqʷay*’ ‘spring salmon, salmon (generic)’, Upriver Halkomelem *sθ’á:qʷi* ‘fish, salmon (any kind)’, Nooksack *sc’uqʷay?* ‘salmon’, Samish *sθ’áqʷi?* ~ *sc’áqʷi?* ‘spring salmon’, Saanich *sθ’aqʷi?*.

The phonological forms of this set are consistent; however, the meanings vary across, and sometimes within, languages. Squamish, Upriver Halkomelem, and Nooksack have a more general meaning of ‘salmon’ or ‘any fish’ for this word. Evidence suggests that in earlier times, spring salmon, not sockeye, was the primary catch in most of Central Salish territory (Ware, 1983:9). This includes Lillooet territory (Romanoff, 1992:228), the only language outside Central Salish with a cognate from this set in *sc’uqʷaz*’ ‘fish, salmon’. This may imply that speakers of some languages generalized the name of an economically and culturally significant species to refer to the category as a whole.

However, since the more general meaning of ‘any fish, salmon’ for this root is just as common, it is possible that the semantic shift went the other way. A generic term for ‘fish, salmon’ could come to refer to a key species representing the prototypical fish in the minds of the speakers. A comparable shift has affected the words for ‘meat’ in some Central Salish languages, where it now means ‘deer’, the primary source of meat (Hess, 1979:8). For the sake of simplicity, I have followed Kuipers’ reconstruction.

- (12) ‘spring, chinook salmon’: \**yumač* (Kuipers, 2002:230, modified); Sechelt *yumač*, Nooksack *yuməč*, Samish *yaməč*, Lushootseed (Northern dialect) *yúbəč*.

This set is phonologically regular except for the Samish reflex, where the consonantal reflexes are irregular (the expected form would be something like *\*čaŋəc*; Thompson, Thompson & Efrat, 1976). The only other language with a related form is Lillooet *zúmak* ‘spring salmon’, which clearly indicates that the original form must have been *\*yumak*. If this form was borrowed into Lillooet from Central Salish, it must have occurred prior to the fronting of *\*k > č* in the latter (Galloway, 1988:304).

- (13) ‘spring, chinook salmon’: *\*sac’əm ~ cac’əm*; Sliammon *θáθ’əm*, Lushootseed (Southern dialect) *sác’əb* ‘king salmon’.

The fact that this word is found in only in the languages at either end of the Central Salish continuum makes direct borrowing between them unlikely. Note that the initial *θ* in Sliammon implies earlier *\*c*, while the Lushootseed form implies *\*s*.

- (14) ‘spring, chinook salmon’: *\*sineʔəč*; Island Halkomelem *sinéʔəc ~ siné:c* ‘tyee (large spring salmon)’, Saanich *sinéʔəč* ‘large salmon going upstream’.

The final *č* in Saanich is irregular; the expected correspondent to Island Halkomelem *c* is either *s* or *θ*. This could suggest that one language borrowed the term from the other. However, the term does not appear to be morphologically analysable in either language, so this principle cannot be used to determine the direction of borrowing.

- (15) ‘steelhead’: *\*qiw’χ* (Kuipers, 2002:149); Comox-Sliammon *qiw’χ*, Sechelt *sqíwəχ*, Squamish *sqíw’χ*, Island Halkomelem (Nanaimo dialect) *qiw’χ*, Downriver Halkomelem *qiw’χ*, Upriver Halkomelem *qí:wχ ~ qáywχ ~ qé:wχ ~ qéwχ*, Lushootseed (Northern dialect) *qiwχ*.

This set is widespread in Central Salish, with related forms also found in Upper Chehalis *sqíw’χ* and the Mount Currie dialect of Lillooet *qiw’χ*. Most likely, this is the Proto-Central Salish word for ‘steelhead’, and it subsequently diffused into neighbouring the Tsamosan and Interior branches. The Southern Wakashan languages show very similar forms (see Nuuchah-nulth *qiw’añ*), indicating that the word was likely borrowed from Central Salish speakers. The Kwak’wala word *gəχ<sup>w</sup>a* may also be connected (Fortescue, 2007:35), although the initial plain velar is unexpected.

- (16) ‘steelhead’: *\*sχəw’q’əm*; Island Halkomelem *sχəw’q’əm*, Saanich *sχəw’q’əm*.

This set, like Set 14, is limited to the Island dialect of Halkomelem and the neighbouring Saanich dialect of Northern Straits. The fact that the Saanich form has *m* and not expected *\*ŋ* may indicate that this word was loaned from Halkomelem into Straits, although the presence of labials in Straits does not necessarily imply a foreign origin (Montler, 1997:299). The initial portion of the

word resembles words for ‘salmon backbone’: Sechelt *sχəwa*, Squamish *sχəw*,  
Island Halkomelem *sχəw’ə*, Upriver Halkomelem *sχəwə*.

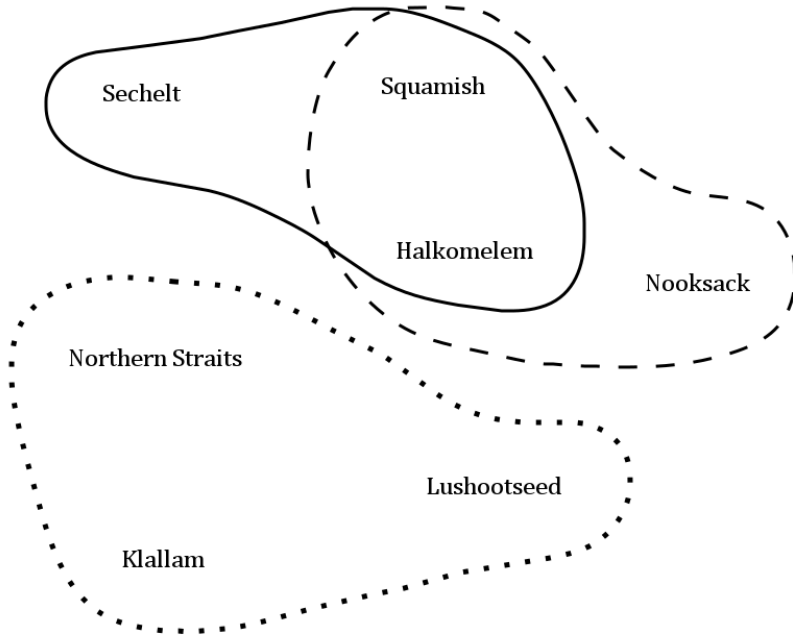
(17) ‘steelhead’: Lushootseed *sk<sup>w</sup>əwəl*, Twana *sk<sup>w</sup>əwal*.

This set is limited to the Central Salish languages spoken on Puget Sound. There do not appear to be any morphological or phonetic factors that suggest borrowing in either direction.

### 3 Distribution

Examining the geographic distribution of the various cognate sets for salmon reveals interesting, but inconsistent, patterns. Originally, I had planned on presenting the cognate sets using maps, like those found in Hess’ original paper which inspired this one. However, this proved to be ineffective, since the diagrams quickly became cluttered with text. In the end, I opted for a more abstract visualization using isogloss maps (Hock & Joseph, 2009:340-342; Anttila, 1989:304-306). Each map represents a specific meaning, so all the forms with that meaning occurring in two or more languages are included. This means, for instance, that Set 11 *\*sc’úq<sup>w</sup>ay*, is included in the maps for both ‘any fish, salmon’ and ‘spring salmon’. If multiple isoglosses overlap within the same language, this could mean either that different dialects of that language participate in different isoglosses, or that multiple forms with the same meaning occur in that language. The specific examples can be consulted in those cases.

Comox-Sliammon

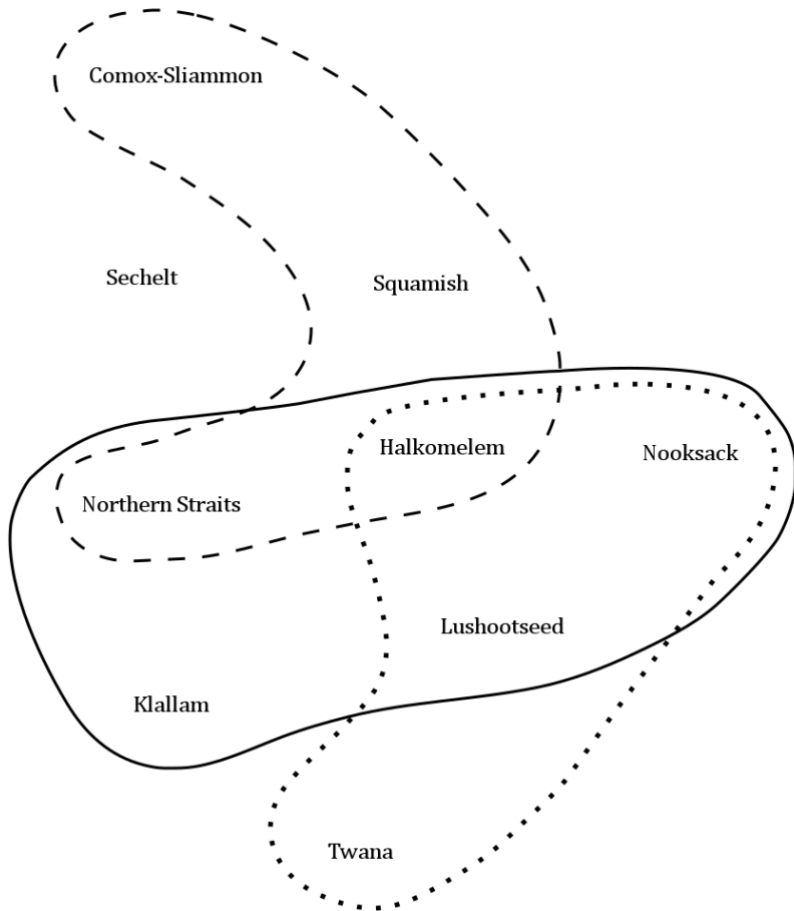


Twana

**Figure 1:** Words for ‘any fish, salmon’. Solid line: *\*scaliltən*; Dashed line: *\*sc’úqʷay’* ‘spring salmon’, semantic shift to ‘fish, salmon’; Dotted line: *\*ščananxʷ*

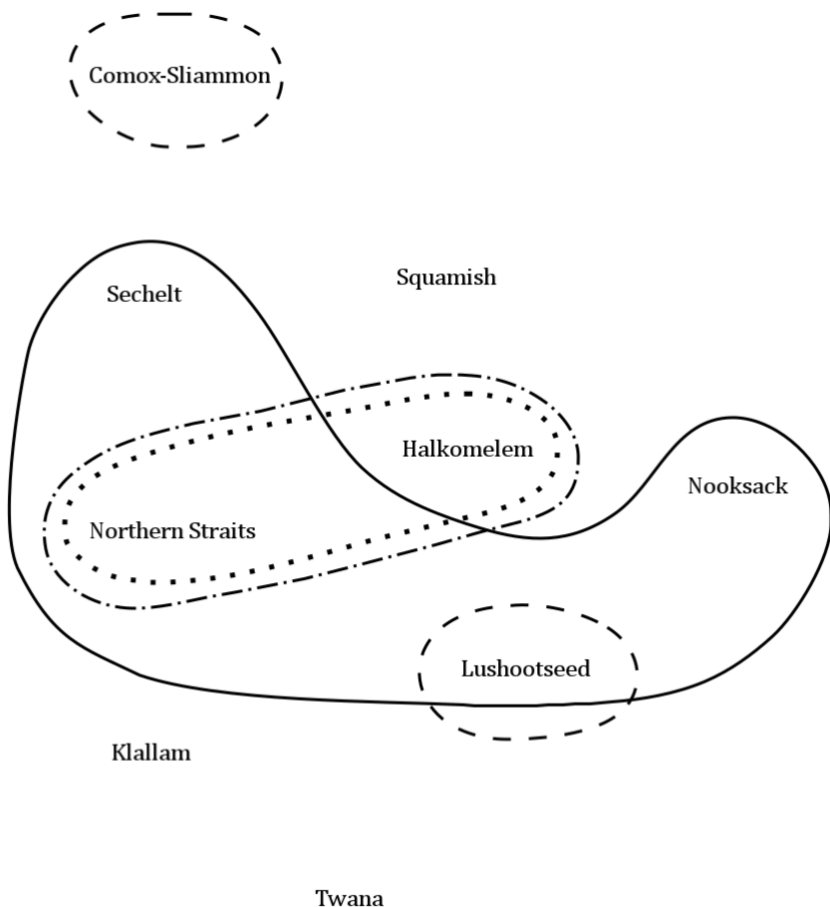
The overlap of the *\*scaliltən* and *\*sc’úqʷay’* isoglosses in Squamish and Halkomelem is of particular interest. Although the word *sčáyitən* occurs in Squamish, speakers considered it to be a “high word” (Kuipers, 1967:58), while *sc’úqʷi?* was the more common word. This may indicate that the word was more archaic, but had not yet been fully replaced by the more common word, *sc’úqʷi?*. Assuming the latter’s original meaning was ‘spring salmon’, the shifting of the word to a generic meaning must have caused the older form to be gradually replaced. In the Island dialect of Halkomelem, *sθ’áqʷi?* refers specifically to the spring salmon, in Downriver, it refers to both ‘spring salmon’ and ‘fish, salmon’ in general, while in Upriver it only has the more generic meaning. The evidence seems to imply that this semantic shift was still in progress, possibly spreading from an origin in the Upriver Halkomelem-Nooksack area.





**Figure 2:** Words for ‘coho salmon’. Solid line: *\*q'əčqs*; Dashed line: *\*caw'in*; Dotted line: *\*kʷəxʷic*

The isoglosses for ‘coho salmon’ show a significant amount of overlap. All three forms are found in the Halkomelem speaking area, while Northern Straits, Nooksack, and Lushootseed have reflexes of 2/3 forms. The geographic distribution and phonological regularity of *\*caw'in* suggests that this is the oldest form. The form *\*q'əčqs* is clearly more recent. As Hess (1986:72) recognized, this word must have originated in Lushootseed, since it is analysable in this language (meaning ‘bent/crooked nose’, from *q'əč* ‘bent, crooked’ and =*qs* ‘nose’) but not in the others. It must have been borrowed after the shifts affecting the phoneme *\*č* in Halkomelem and Straits. The word *\*kʷəxʷic* is more obscure in origin. Although the languages that have it are geographically contiguous, there is no direct evidence that it was borrowed.



**Figure 3:** Words for ‘spring, chinook salmon’. Solid line: *\*yumač*; Dashed line: *\*sac'əm*; Dotted line: *\*sc'uq'ay*; Dashdotted line: *\*sine?əč*

The most widely distributed term is *\*yumač*, although the Northern Straits Samish word is likely a loan from Lushootseed, making its earlier distribution somewhat less contiguous. The Lillooet form *zúmak* shows that this word originally had final *-k*, and must have been loaned from Central Salish before the fronting shifts affecting velars in that branch. The discontinuous distribution of *\*sac'əm* strongly implies that it is either an ancient term that has been replaced in the central part of Central Salish territory, or that Comox-Sliammon and Lushootseed have independently borrowed the term from Wakashan. All Wakashan languages have words clearly related to this form (see Kwak'wala *sac'əm*, Nuuchah-nulth *sac'up*; Fortescue, 2007:487). Fortescue states that the Wakashan languages borrowed the term from Salish, however, the limited

distribution of the form in Salish compared with its ubiquity in Wakashan suggests that the borrowing was actually in the opposite direction.

The word *\*sc'uq<sup>w</sup>ay'* has a more compact distribution, even when including the semantically shifted forms in Figure 1. The form *\*sineʔəč* has the most limited distribution, only occurring in Saanich and Island Halkomelem, suggesting diffusion at a late stage.

## 4 Discussion

### 4.1 Implications

The distributional patterns outlined in this paper confirm that geography plays a significant role in the spread of cognates, since related forms almost always occur in geographically contiguous languages. It is more difficult to determine what causes these patterns. A common form in multiple languages could be a borrowing, a shared retention, or a shared innovation (Gerdts, 1977:25), and distinguishing between these three possibilities is not always easy. Hess (1986) outlines six principles to infer the presence and direction of borrowing, and these have been applied here where possible (Set 9 illustrates his Principle 1, for example).

One problem which Hess does not explicitly mention is the widespread occurrence of irregular sound correspondences in Salish. Kuipers states that “the reason is not borrowing in the narrow sense, but interpenetration of languages resulting from bi- and even trilingualism” (1996:209). Multilingualism was probably the norm in the Central Salish area, since intermarriage among language groups was common. Once one considers that Central Salish languages have remained in contact over the entire course of their history, the probability of “multiple correspondences” becomes magnified. However, these irregular correspondences allow the comparative linguist a window into the relative chronology of changes in the family, which is otherwise difficult in languages without written history.

Set 2, *\*ščananx<sup>w</sup>* ‘any fish, salmon’, is a good demonstration of this. The Straits forms here show an irregular *č* reflex of Proto-Salish *\*k*, while the Lushootseed word is phonologically regular. The simplest conclusion is that the Straits languages borrowed this word from Lushootseed after the shifts fronting the *č* series (Galloway, 1988:304). Interestingly, the correspondence of Northern Straits *e* to Klallam/Lushootseed *a* is regular and expected, implying that the shift of *\*a > e* in Northern Straits happened after the borrowing of this word. The sequence of changes in Straits must have been: (1) *\*č > \*c*, (2) borrowing *\*ščananx<sup>w</sup>* from Lushootseed, (3) *\*a > e* in Northern Straits. The Samish word *yaməč* under Set 12, *\*yumač* ‘spring, chinook salmon’ reinforces this conclusion, since the vowel correspondences are regular while the consonant correspondences are irregular. Examination of more cognate sets will reveal whether this pattern is consistent, and serves as a useful starting point for investigating the relative chronology of sound changes in Central Salish.

One implication of this and similar research is that it argues against the classification of Central Salish into a binary-branching tree (see the

lexicostastical analysis in Swadesh, 1950), since this does not allow for overlapping isoglosses. The Central Salish branch, and perhaps the Salish language family more generally, therefore seems to be a prime example of a linkage: “a group of communalects which have arisen by dialect differentiation” (Ross, 1988:8). This agrees with Thompson & Kinkade’s description of Central Salish as “the surviving heart area of the original dialect continuum” (1990: 36). François (2015) suggests “historical glottometry” an alternative to the tree model in historical linguistics. This model allows intersecting subgroups, incorporating insights from the wave model as used in dialect studies, while maintaining the focus on shared innovations that is the foundation of the comparative method. This approach for understanding change in Central Salish may be more useful than one which relies on exclusively shared innovations and non-intersecting subgroups.

## 4.2 Future directions

Although this study was limited in both its scope and detail, it can hopefully serve as a useful exploration of language contact and language change within Central Salish. It largely reaffirms what other linguists have said about the problems intersecting isoglosses and irregular correspondences in the family. However, the strong wave-like patterns of “innovations emanating from centrally located Halkomelem” (Hess, 1979:14) that Hess described in words for ‘deer’ and ‘lake’ were not found in the data here. Instead, different words show different focal points of diffusion, which create diffusion areas that frequently overlap, sometimes even within languages. This phenomenon was noted in Gerdts’ (1977) survey of Halkomelem dialects, where she found that when the Island and Mainland dialects differ on a particular lexical item, the Island dialect shares more cognates with Straits, while the Mainland dialects share more cognates with Sechelt, Squamish, and Nooskack (26). The simplest explanation for these patterns is that the central position of the Halkomelem language created many points of contact with neighbouring languages, which would have facilitated diffusion both into and from Halkomelem.

Speculation on the pre-contact sociolinguistic situation of Central Salish languages may help explain the processes by which diffusion occurred. For example, people from across Halkomelem-speaking territory, as well as from Squamish and Northern Straits, would have converged on the Fraser River at certain times of the year to fish the prolific runs of salmon and eulachons that migrate up the river to spawn (Suttles, 1990:457). It is easy to imagine that words for salmon or fishing techniques and equipment could diffuse across language boundaries in such an environment. Inter-marriage and trade are well known as means of language contact in the Salish family, but it may be possible to examine more detailed sociolinguistic factors. By examining patterns of shared innovations, retentions, and borrowings in specific semantic categories, we can gain further insight into ancient language contact and change.

## 5 Conclusion

This investigation of the distribution of cognate sets for salmon within Central Salish reveals patterns of lexical diffusion similar to those described by previous researchers. Over a very long period, this diffusion could result in the complicated system of multiple sound correspondences observed in modern Central Salish languages. This aligns exactly with descriptions of the branch as an old dialect continuum which has diverged while the languages remained in contact, implying that the distinction between “shared innovations” and “borrowings” may not always be clear cut. Since language differentiation is a process rather than a single event, there is no specific moment in time when a shared innovation becomes an example of borrowing. In the case of Central Salish, both are important processes of differentiation, but also convergence.

I suggest that the “problem” of multiple correspondences is actually a very useful example of linguistic stratigraphy, which can be used to establish a relative chronology of change in Central Salish languages. This is especially true in a family like Salish, where written records cannot be used to provide an absolute dating of linguistic shifts. If a solid relative chronology of changes can be established, other lines of evidence such as archaeology and oral history, can be consulted to shed light on the history of the Central Salish languages and their speakers.

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