PROTO-SALISH *r[1]

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1. Introductory
2. Reflexes of *r in Interior Salish
3. Development of *r outside of Interior Salish
4. Chronology

1. It has been noted before that r, an alveolar flap, and its glottalized counterpart ř occur in four Salishan languages: Coeur d'Alene, Spokane, Okanagan, and Columbian, all Interior Salishan. Both r and ř contrast with other phonemes in these languages, and they are clearly distinctive. Swadesh (1952:242) found it necessary to reconstruct *r for Proto-Salish on the basis of its occurrence in these four languages. Its usual reflex in other Salishan languages is l.

But the occurrence of r or ř in any of these languages is defective--they may only occur as C_2 of a root; i.e., they cannot occur initially or in an affix. This limitation on their occurrence has also been commented on previously (Reichard 1938:535, 1958:298; Vogt 1940b:18; Watkins 1970: 35). This is not to say that they cannot occur more than once in a word--they may be repeated by any of the usual reduplication patterns affecting C_2. E.g., Cm wərwəriwaʔ red-winged blackbird is an inherently reduplicated stem; Cm núrnurt dull has collective reduplication of núr dull; Cm xʷə́rrpəm nervous from xʷə́rp shake, and Ok xʷrrápp he became anxious from xʷráp he trembled both have inchoative reduplication. All apparent instances of r as C_3 are to be ac-

counted for in this way--as reduplications of C_2. A se-
quence of two r's from reduplication is articulated as a
trill.

2. The Thompson language, however, also offers direct
evidence of original *r, which has there developed regularly
to 1, but did not merge with original *1 (the latter had
earlier shifted to y: Th kéyx, Cm kálx hand; Th cíykst, Cm
cílkst five; Th yíq̓-, Cm líq̓- bury).

(1) Cm čár-, čə́r; Cv čár-; Cr čór-; Sp čúr-; Ka čól-; Sh
čál-; Li čól-; Th čál- salt, čúl- sour; PIS *čár-, *čúr-,
*čə́r- salt, sour (perhaps different ablaut grades of the same
root, perhaps originally two different roots but now confused
in some languages).

(2) Cm k̓ə́r-; Ok k̓r-; Cr Sp č̓ár-; Ka č̓ál- (C); Th k̓ə́l-;
PIS *k̓ə́r- cut.

(3) Cm kʷár-, kʷr-; Ok kʷr-; Cr kʷár-; Ka kʷa·1-; SSh
kʷél-, NSh kʷál-; Th kʷə̓ʔál-, kʷə̓l-; PIS *kʷar- yellow.

(4) Cm tə́r̓-; Cv tar̓-, tə́r̓-; Cr tár- untie, loosen; Ka
taál untie, unwrap; (? Sh tál- stretch, extend); Th tə́l-;
PIS *tə́r- unravel.

(5) Cm xʷə́r-; Cv xʷərá-; Cr xʷár-; Ka x̣ʷál-, x̣ʷa·lí-
(initial perhaps in error?); Sh xʷəlé- spin around; Th
xʷələ́- fluttering; PIS *xʷərə́- shake.

(6) Cm yə́r- spherical; Cr yar- hoop-like object rolls;
Sp yír round; Ka yál- round circle, hole; Sh yəl- turn; Th
zə̓l- go around in circle, complete circumference; PIS *yər-
around. (Presumably related, but not directly cognate, is
Cv ciʔár̓kʷ curved.)

As these etymologies show, other Interior languages
besides Thompson also have a regular development of 1 from
*r, but there the reflexes have fallen together with those

of *1. In addition to the cognates with r, internal evidence in Kalispel and Shuswap indicates that 1 has two sources; these are distinguished by differences in preceding vowels. The regular reflexes of PIS vowels are as follows (see Kinkade and Sloat 1972 for detailed discussion of these vocalisms):

PIS	*i	*u	*a	*ə
Li	i	u	e	ə
Th	i	u	e	ə
NSh	i	u	e	ə
SSh	i	u	e	ə/e
OkCv	i	u	i	a
Sp	i	u	e	i
Ka	i	u	e	i
Cr	i	u	i	e
Cm	i	u	a	ə

But before back consonants (back velar stops and fricatives, and pharyngeals), another set of reflexes of these same PIS vowels appears:

PIS	*i	*u	*a	*ə
Li	i	u/o	e	ə
Th	[E]	[ɔ]	e/a	[ʌ]
NSh	i	u/o	e/a	ə/a
SSh	i	u	e	ə/a
OkCv	i/a	[ɔ]	a	a
Sp	[e]	o	a	a
Ka	i/a	o	a	a
Cr	[é]	o	a	a
Cm	[e]	u	a	ə

(In this table bracketed vowels are lower allophonic variants of higher vowels.)

In Kalispel and Shuswap, most l's are preceded by the regular reflexes of PIS vowels, but others are preceded by the vowels characteristic of position before back consonants. In Okanagan, Colville and Columbian, r patterns like back consonants in this respect, having lower values of vowels in this environment. Thus the instances of Kalispel and Shuswap l following lowered vowels may be presumed to be derived from *r, even if cognates with r do not occur in Okanagan, Spokane, Coeur d'Alene, or Columbian. (Spokane, for the most part, has the regular reflexes of PIS vowels before r, indicating that apparently Spokane r does not function as a back consonant.) Thompson also has a lower variant of u and ə, and the low vowel a under certain morphophonemic conditions rather than the usual e before l, further supporting the derivation of Thompson l from PIS *r.

The special limited distribution of r in those languages where it does occur begs the question whether it may not earlier have occurred in other positions in words. Here again Thompson cognates provide direct confirmation. In a few etymologies stem-initial l in the other Interior languages corresponds to l in Thompson, where the expected correspondence would be y. It seems reasonable to assume that this correspondence reflects stem-initial *r-, and to conclude that a general shift *r > l has already been under way for some time in the entire Interior Salish territory, but simply has not been completed in Columbian, Coeur d'Alene, Okanagan (and Colville), and Spokane. Some examples of initial *r follow.

(7) Cm láp̓ bend, sláp̓ wood, stick; Ok slíp̓ wood; Cr líp̓ wood; Sh lép̓- bend branch down; Th láp̓- bend (something) over; PIS *ráp̓- bend (wood).

(8) Cm líw- clatter, ring; Ka lu- sound of rolling object; Th ləwə́- knock, hammer, lílutən male thunder spirit; PIS

*riwə́-ʔ <u>rumble</u>.

(9) Cm lə́x, snləxíča? <u>fish scales</u>; Th lə́xt [fish, meat]
<u>is improperly cooked, has bloody taste</u>, ləʔíx <u>get slimy</u>;
PIS *rə́x-, *ríx- <u>slime; fishy taste</u>.

The correspondence of Thompson $\underline{l}$ to other IS $\underline{l}$ is not
limited to stem initial, as a matter of fact: the same cor-
respondence is also found in the position of C_2 and in cer-
tain lexical suffixes. This suggests that we are dealing
with *r in these cases as well.

(10) Cm qʷíl-; Cv qʷíl-; Ka qʷíl-; Cr qʷíl-; Th qʷíl-;
PIS *qʷír- <u>cheat</u>.

(11) Cm x̣ə́l-, x̣əl-; Ka x̣al-; Cr x̣él; Th ʔes-x̣ə́l <u>cribbed</u>,
n-x̣əl-íẉs <u>bridge</u>; PIS *x̣ər- <u>lay evenly</u>.

(12) Cm q̓ə́ls- <u>cook in a pit</u>; Ka sə-láq̓ist (with metathesis);
Cr líq̓- <u>bake</u> (with metathesis); Sh s-q̓ílyə; Li Th n-q̓ə́lzetən;
PIS *q̓ər- <u>to steam</u>, *q̓ə́r-ya <u>sweathouse</u>.

These facts suggest a split of PIS *r, but an immediate
question arises as to the conditioning factors. The shift in
root-initial position seems self-evident, but the evidence
later in words is more complex. An examination of the cases
in which C_2 of stems shows the correspondence Th $\underline{l}$ to $\underline{l}$ else-
where reveals that the forms contain also postvelars as C_1.
It seems possible that the change of *r to $\underline{l}$ may have begun
in cases where a postvelar preceded *r in the same stem. A
rapid inspection of the available material in r-languages re-
veals that there are no roots in which r follows a back con-
sonant of any sort. (There are a few cases in which r <u>pre-</u>
<u>cedes</u> a back consonant; analysis at this point is inadequate
to determine whether these constitute C_3 in the stems in-
volved or whether they represent segmentable suffixes, but
there are enough cases to indicate that apparently back con-
sonants in that position did not condition shift of a

preceding *r to <u>1</u>. E.g., (13) Cm tə́ɫq-; Cv tɫ́q- <u>kick</u>;
Sp təɫq-; Ka təlɋ-; Cr táĺq <u>step on, kick</u> (probably bor-
rowed from Ka); PIS *tə́ɫq- <u>kick, dance</u>; and the derivatives
Cm stəɫíqxən; Cv stəɫíqxən (K); Ka stəláqsšən; Cr staré^q-
šən; PIS *stəríq(s)xən <u>mudhen</u>.)

In suffixes there are no cases of r at all in the r-
languages. Nevertheless, Thompson sometimes shows the cor-
respondence 1:1 in suffixes.

(14) Cm -áĺqs; Ka -áĺqs; Cr -áĺqs; Th -éĺqs; PIS *-árqs ?
<u>clothes</u>.

(15) Cm -ələwás; Cr -ílgᵂes <u>heart, stomach; seat of mind</u>
<u>or intelligence</u> (R); Th -élus ~ -álus; PIS *-arwás <u>inside</u>;
<u>feelings</u>.

(16) There is also the Th element -éleʔ-, occurring most
commonly with the suffix -xən <u>leg, foot</u>. No cognates have
been found for the sequence -éleʔxən <u>leg, foot (in more</u>
<u>general sense)</u>, but it seems that Th -él- may be cognate
with an element Cm -ál-, Cr -íl- (-ál-, -él-), which is
common in the formation of various other lexical suffixes;
e.g., Cm -álps <u>back of neck</u>, -álqᵂp <u>throat</u>, (perhaps un-
stressed in -əlqs <u>nose, point</u>); Cr -ílps <u>throat</u>, -álqs <u>end</u>,
-álp <u>feeling</u>, -ílup ~ -élup <u>foundation</u>; cf. also Cr -íl- ~
-él- ~ -1- <u>place where two elements meet</u> (R); PIS *-ár- ?

Given our earlier hypothesis about the partial shift
of *r to <u>1</u> following postvelars, it seems reasonable to sup-
pose further than original suffixes with *r developed al-
ternants with <u>1</u> following back consonants in preceding
stems. These would have been fairly frequent, and it is
easy to imagine that these 1-alternants were subsequently
generalized.

In connection with these developments we should note
that r-1 alternations are common in many languages. In

some they are at least to some extent complementarily
distributed (e.g., Korean). In fact, it appears that in
general languages with an r/1 contrast are less common
than those that are less complex in this respect (i.e.,
have only r or 1 or neither or such elements in non-con-
trastive distribution; cf. Hockett 1955:121-4). Cases
have also often been noted in languages with contrastive
1 and r where historic forms have been altered to place
1 earlier than r in words (e.g., Spanish palabra word,
Latin parab(o)la; Spanish peligro danger, Latin peric(u)-
lum). Dissimilation of r to 1 before another r has also
been noted (e.g., French pèlerin [English pilgrim], Latin
peregrinus). And it is interesting to recall that there
are difficulties in reconstructing any initial *r- in
Proto-Indoeuropean.[2]

In the same vein it is interesting to note that
Thompson shows phonetic r (here a weak retroflex spirant
similar to English r) in a reduplicative formation where
otherwise the sequence -1V1- would occur: xʷəlélmectən
[xʷərélmečtən] drumstick with rattle (cf. xʷələ́p rushing
sound), apparently involving a reduplicative suffix -éC$_2$
repetitive. There is unfortunately only this example in
the native material (this reduplicative formation is rare)
but the likelihood that it is a productive alternation is
heightened by the fact that the same phenomenon recurs in
the informant's English: salal is rendered [šəræl].

3. Up to the present it has been thought that PS *r
fell together with *1 in all the other branches of the
family (i.e., Swadesh's Coast Salish, Bella Coola and Til-
lamook), developing in all cases just as PS *1 did. In
four languages--Comox, Squamish, Clallam, and the Sooke

dialect of Northern Straits Salish--*l developed to a
semivowel (usually y, but w under certain circumstances
in Comox). Like the inherited semivowels, they have vo-
calic alternants in positions calling for vowels. Of
these languages, Squamish is particularly interesting,
because it has both 1 and y corresponding to 1 in other
languages. Kuipers (1967:247, 1970b:48) has explained
this as a mixture of original 1- and y-dialects. Borrow-
ing is very likely involved in a number of cases, especial-
ly where the same word appears in both 1- and y-forms (e.g.,
λíλlx̣iws, λiλix̣íws speckled trout [i from y]; qṕálstn,
qṕáy?əqʷstn knee-cap).

A limited study of the Squamish material yields a
number of examples in which Squamish 1 corresponds to PIS
*r. For some of the etymologies cited above, there are
Squamish cognates: (7) PIS *ráp̓- bend (wood); Sq láp̓-
warped, skew. The root (6) PIS *yər- around is presumably
cognate to the root involved in Sq s-il-?ánm year, and
probably also to that in Sq s-yilíq̓ top for spinning,
hílit roll (something). Similarly, (3) PIS *kʷar- yellow
is probably related to the root in Sq kʷlúlay alder. There
is possibly a connection between (8) PIS *riwə́- (?) rumble,
clatter, ring, etc. and Sq lúlum to sing, between (4) PIS
*tər- unravel, extend out in a line and Sq tá?lm lengthwise,
parallel; and conceivably Sq x̣ə́l?- write may be related to
(11) PIS *x̣ər- lay evenly. (12) PIS *q̓ə́rya sweathouse is
clearly directly comparable with Sq q̓ə́lya take a steam bath;
here the best cognates are in the North Interior, and we
may, of course, be dealing with an old loan; cf. also Cx
q̓ə́lǰetən, very close to Th Li nq̓ə́lzetən (Cx ǰ is regular
from *y but the 1 is not expected).

Of the suffixes, (15) PIS *-arwás <u>inside; feelings</u>
may be connected with the suffix in Sq həw?-álus <u>wish to</u>
<u>accompany</u> (cf. ḥəwa? <u>accompany</u>); Kuipers (1967:392) further
notes that in addition to the common connective -ay- (re-
duced -i-) there is a less common element -al(?)(-), which
he suggests may be the 1-form of -ay- (he cites examples on
p. 133; it may also be in the suffix -alap <u>thigh</u>); this may
reflect the same element we have suggested in (16) PIS *-ár-.

There are a few further etymologies to mention. Some
are of limited scope or problematic status.

(17) Sq ləs <u>bottom, lower part, deep</u> (with derivatives);
Tḥ lə́s <u>low (viewed from higher vantage point)</u> (with various
derivatives).

(18) Sq x̣lq̇án <u>roll, knock down, off</u>; Cm x̣əlq̇- <u>kill, butcher,</u>
<u>beat up</u> (here Cm <u>1</u> would be expected for PS *r after the post-
velar initial).

(19) Sq c̣c̣ə́l; Hl θəcə́lə; Ch Cz c̣ələ́m; Th c̣ələ́s; Cm c̣ərís;
Cv c̣arís; Ka c̣alís; Cr c̣alús (presumably a loan, but source
unclear); PS *c̣kər- ? <u>kingfisher</u>.

One etymology suggests that Proto-Salish (or a some-
what later stage) may have had doublet roots in *1 and *r.
It may well be that some cases of Squamish roots with both
<u>1</u>- and y-forms are to be explained on this sort of basis.

(20) Cm sə́l- <u>round</u>; Ka sélp <u>somersault</u>, səlp- <u>dizzy</u>; Cr
selp <u>spin</u>, sɬlúp <u>set spinning</u>, sil <u>turn</u>; Ti selúhs <u>thread</u>;
Hl (Cw Ms) sə́l?səl?tən <u>spindle</u>; Sq səl- <u>spin thread</u>; Th səl-
<u>turn</u>, səlk- <u>turn, whirl</u>, səɬp- <u>dizzy</u>, səɬseɬə́ɬx̌ʷ <u>wobbly</u>,
siyə́- <u>twist</u>; PS *sár-, *sál-, *sər-, *səl- <u>spin</u>. Presumably
the *1-version of the root (with a different extension) is

involved in Th si-q̇- <u>turn pages</u> (i < y); Sq sə́y-q̇- <u>switch,</u>
<u>transfer</u>; SPg sál-q̇- <u>turn around</u>; cf. also Sg sə́lʔ-q̇-tən
<u>overcome with dizziness</u> (M).

Forms in which Squamish shows <u>l</u> apparently cognate
with original *l can reasonably have been borrowed from
l-languages, which surround Squamish. In fact, the presence
of inherited <u>l</u> (< PS *r) would have facilitated the borrow-
ing of l-forms from adjacent languages. But Squamish y
apparently corresponding to PIS *r would raise difficulties.
(The only diffusional explanation that seems possible would
be that Squamish had borrowed an l-form very early, prior to
the *l > y shift.) In the material studied a single case of
this sort has appeared (noted, in fact, by Kuipers [1970b:
57] as reflecting PS *r):

(21) Sq ṗiṗiám (from a root *ṗəy-) <u>overflow</u>; Sh ṗə·lt
<u>overflowing</u>; Cr ṗer-t <u>flood, be in excess, overflow</u>.

Unfortunately there are no cognates available in any of the
other diagnostic languages, but the *r seems well supported
by the unusual vowel in Shuswap, as well as by Coeur d'Alene
r. One wonders whether possibly this may reflect a PS root
with alternating *r and *l--like (20) <u>spin</u> above--but there
are no available forms to support such a hypothesis. In
spite of this etymology, it seems wise to keep in mind the
possibility that Squamish retains the distinction between
PS *r and *l in modern <u>l</u> and y.

As our knowledge of the intricacies of Salishan com-
parison advances, it becomes possible to recognize more and
more cases of diffusion among closely related languages.
Suttles (1965) has already made clear that a complex borrow-
ing situation existed among languages in the area around the
Strait of Georgia. This very likely involved Squamish in a
close relationship with at least Halkomelem and Straits

Salish. A variety of phonological correspondences are in-
volved in this picture, but one is of particular interest
to us here because it throws light on a Squamish form con-
taining l:

(22) Sq čl?áqł; Hl k̫-cəléqəł, Cw cəléqəł (Kv) (k̫ is
presumably a demonstrative element equivalent to the particle
k̫i which usually precedes this word in both Sq and Straits)
Lm čəl?éqł; Sg čəléqəł; Cl či?áqł yesterday.

In this etymology we see an apparent correspondence Sq č :
Hl c : Straits (Lm, Sg and Cl) č. But this is not the ex-
pected set of reflexes, judging from broader Salishan com-
parison. For Sq č we should expect Hl c, but Lm Sg s and
Cl c (from PS *k). For č in Straits languages, on the other
hand, we should expect in both Hl and Sq either y or p. The
reasonable conclusion is that the word for yesterday has
been borrowed. However, the direction of the borrowing is
difficult to determine, since the forms seem structurally
well integrated in the systems of all the languages and
there at first seem to be no phonological clues. For words
of this sort lacking a wider Salishan etymology the direction
of borrowing is then problematic. Fortunately there are
further cognates for this word:

(22a) Cm płáqəl; Th s-pi?-héwt yesterday.

In Thompson the root seems clearly comparable, and it points
to PS *l; the Columbian word seems an exact cognate for the
Straits forms--p : č, l̇ : l? (Cl i?), q : q, -l : -ł being
all well attested correspondences. Thus the form must have
been borrowed from Straits into both Halkomelem and Squamish,
providing an independently confirmed example of what may have
been an extensive set of borrowed l-forms in Squamish--an
overlay which would obscure a possible basic pattern of

Sq l < PS *r beside y < *l. Obviously this whole complex situation among the Georgia Strait languages needs full and careful study.

In another part of the Coast there is a small hint that PS *r may turn out to have a distinct reflex. Corresponding to (7) PIS *ráp- bend (wood) we find a Cowlitz form yápa- bend down (a branch), suggesting that PS *r may have developed to Cz y while *l remained l.

4. Given the limitations of the material and the apparent infrequency of original *r, it has seemed worthwhile to present the facts that have been uncovered. These facts not only reaffirm the necessity to reconstruct PS *r, but suggest certain other things about it. (1) *r had wider privileges of occurence originally than r now has in any of the r-languages: it apparently appeared as C_1 in roots and in certain suffixes. (2) Its conversion to l is recent. In fact, it may have survived in some form distinct from *l beyond the split of Interior Salish from the rest of the family. As Swadesh (1952:242) explains, the shift of *r to l in Thompson necessarily followed the shift of *l to y (just as perhaps, we now see, also in Squamish); furthermore, this latter shift must have followed a still earlier change of *y to z. A similar sequence is involved in Straits Salish, where PS *y developed to č before vowels prior to the shift of *l > y (which, of course, affects only certain dialects of the group, in any case). The presence of r in the r-languages, where it apparently is in the process of being converted to l, suggests that this change as a whole is very recent. It seems at least conceivable that *l > y may have begun in Thompson, spreading to Squamish and perhaps on to Clallam, Sooke and Comox. The shift *r > l may reasonably have

begun somewhere more centrally in Interior Salish--in the
present r-languages, where it perhaps operated at first
in dissimilatory circumstances. As it spread beyond these
languages, however, it spread in more generalized form,
merging *r with *l in Kalispel dialects north and east of
Spokane dialect, and in Shuswap and Lillooet, and reaching
Thompson and Squamish after their change of *l > y was al-
ready completed. (3) The effect of *r on neighboring
vowels may also be a rather recent development, since it
seems not to apply in Spokane, and in more limited fashion
in Thompson and Lillooet; and there seem to be no effects
in Squamish or any other Coast Salish language.

In any case, *r is strongly reaffirmed as a PS phoneme
with a considerably wider distribution than was earlier ap-
parent, although even so it was presumably still of quite
limited occurrence.

FOOTNOTES

[1]This paper has grown out of a more general Salishan comparison undertaken by the authors during the academic year 1971-72. We are grateful to several agencies for support during this period: The University of Kansas, which made possible Kinkade's sabbatical leave; the University of Hawaii, which made arrangements between the Department of Linguistics and the Pacific and Asian Linguistics Institute for Thompson's full-time participation during autumn semester 1971; and the National Science Foundation, which has supported not only the present research, but collection of much of the fresh material on which it is based.

The following abbreviations are used: Ch Upper Chehalis, Cl Clallam, Cm Columbian, Cr Coeur d'Alene, Cv Colville (dialect of Okanagan), Cw Cowichan (dialect of Halkomelem), Cz Cowlitz, Cx Comox, Hl Halkomelem, IS Interior Salish, Ka Kalispel (except Spokane dialect), Li Lillooet, Lm Lummi (dialect of Northern Straits Salish), Ms Musqueam (dialect of Halkomelem), NSh Northern Shuswap (dialects), Ok Okanagan, PIS Proto-Interior Salish, PS Proto-Salish, Sg Songish (dialect of Northern Straits Salish), Sh Shuswap, Sp Spokane (dialect of Kalispel), SPg Southern Puget Sound Salish (dialects), Sq Squamish, SSh Southern Shuswap (dialects), Th Thompson (Ntlakapamx), Ti Tillamook.

All forms have been converted to the same transcription system for easy comparison. A few non-obvious vowel symbols are involved: e for a low front unrounded vowel, o for a low back rounded vowel; i and u are used for the relatively higher vowels, although they may be phonetically

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considerably lower than those symbols suggest in IPA notation.

A number of forms are cited from Kinkade and Sloat 1972, covering primarily Cm and Cr. Some additional forms in Cr are cited from Reichard 1938, 1939 (marked R). Other sources are as follows: Cv, Anthony Mattina's field notes, or Kinkade's field notes (marked K); Hl (Cw and Ms), Elmendorf and Suttles 1960, or Tiiu Kava's field notes on Cw (marked Kv); Ka, Vogt 1940a, 1940b, or Barry F. Carlson's field notes (marked C); Li, Lillian Nakai Campbell's field notes; Ok, Watkins 1970; Sg, Barbara S. Efrat's field notes, or Mitchell 1968 (marked M); NSh, Kuipers 1969, 1970a, 1970b; SSh, James A. Gibson's field notes (forms cited simply as Sh show no difference between northern and southern dialects); Sp, Barry F. Carlson's field notes; SPg, Snyder 1968; Sq, Kuipers 1967, 1969; Ti, Melville Jacobs' field notes. Other forms are cited from the authors' own field notes: Ch, Cm and Cz (Kinkade); Cl, Cx, Lm and Th (Thompson). We acknowledge gratefully the materials that various scholars (as just noted) have made available for this study.

For each etymology a general gloss is given at the end; these glosses are appropriate also for the forms in the various languages except where individual forms are otherwise glossed.

[2]We are indebted to Gordon H. Fairbanks for calling this similarity to our attention.

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