

THE LINGUISTIC HISTORY OF THE CUPEÑO

WILLIAM BRIGHT AND JANE HILL

THE CUPEÑO PEOPLE

Several Uto-Aztec groups are found in Southern California. Three of these, the Cahuilla, Luiseño, and Cupeño, are closely related, but the exact nature of the relationship is problematic. The Cupeño were one of the smallest tribes in California in aboriginal times; Kroeber (1925, p. 689) estimates their maximum strength at 500. They were encountered by the Spanish in the 18th century, living in two villages near Warner's Hot Springs in San Diego County. These villages, Cupa and Wilakalpa, were permanent sites; Gifford (1926, p. 395) states that Cupa, the larger village, was a "self-sufficient political unit" inhabited by members of seven patrilineages, "which, although living in a single village and therefore bound by certain territorial ties, nevertheless maintained their distinctness, each lineage having its own land upon which wild products were gathered, each having its patriarchal chief, and each keeping fresh the story of its origin". The seven lineages in Cupa were divided into two exogamous moieties, Coyote and Wildcat. Three of the Coyote lineages, the Kaval, Blacktooth, and Norte, were said to be the "original" Cupeño lineages, descended from the three sons of the hero-founder of Cupa. Two Coyote lineages were said to be of Cahuilla origin. The Wildcat lineages were all said to be "foreign", of Luiseño, Diegueño, and Cahuilla derivation. The smaller Cupeño village, Wilakalpa, had two lineages, both of Wildcat affiliation. Gifford points out that Wilakalpa men were forced to seek wives outside their village, and that Wilakalpa thus was not "independent" in the sense that Cupa was.

The Cupeño lived in their two villages until 1902, when the Warner's Hot Springs site was sold to a white man to be developed as a resort. The Cupeño were then evicted from their land and removed to the Luiseño town of Pala. The remnants of the tribe are now scattered through several towns in Southern California.

clue to the affiliations of the Cupeño with their neighbors. The Kaval, Blacktooth, and Norte lineages of the Cupeño, descended from three sons of a single father, and further fitting the criteria of territoriality, group consciousness, and linguistic unity, may be considered a patri-sib like those described for the Cahuilla by Bean (1960). It is possible that the Cupeño are originally a patri-sib which became detached from the larger body of the Cahuilla.

Kroeber considers evidence from mythology, ceremony, and linguistics in his discussion of Cupeño origins. He finds their mythology close to that of the Cahuilla, but their ceremonialism closely resembling the Luiseño forms. The Cupeño language, he finds, is clearly an independent one, although closer to Cahuilla than to Luiseño. He suggests that the Cupeño, in order to have developed an independent language, must have experienced a period of isolation from the Luiseño and Cahuilla, and must have split off early from an undifferentiated Luiseño-Cahuilla group.

Two explanations have thus been offered concerning the Cupeño relationship with the Cahuilla and Luiseño. The ethnographic evidence suggests that they are a southern offshoot of the Cahuilla. But Kroeber proposed, on the basis of linguistic data, that the Cupeño "detached from the still somewhat undifferentiated Luiseño-Cahuilla group at some former time" (1925, p. 690). The evidence from a systematic comparison of the three languages should suggest a decision between the two possibilities, or offer a third solution: that the Cupeño split off from the Luiseño after the Luiseño-Cahuilla split.

THE USE OF LINGUISTIC EVIDENCE

The use of rigorous comparative linguistic techniques can often clarify historical relationships between peoples when other methods prove inadequate. When a proto-language has been reconstructed, the comparativist examines the innovations that appear in the daughter languages. Where he finds that certain daughter languages share an innovation from the proto-language, he must assume that they share a period of common history.

Two factors complicate this procedure, however. First is the problem of borrowing: two languages may diverge, but the speakers may maintain contact, and borrowings from one language into the other may occur after the initial split. Such loanwords will resemble cognate pairs between donor and receiver language. The second problem is that of "drift", the phenomenon described by Sapir, who noted that some language groups

exhibit an apparently "built-in" tendency to change in certain directions — tendencies perhaps determined by stresses in the pattern of the proto-language. Drift phenomena may be confused with shared innovations. However, both borrowings and resemblances due to drift may usually be distinguished from true cognates because they stand out from the pattern of regular correspondences determined by comparative techniques.

Ideally, a strict application of comparative techniques should include treatment of grammar and lexicon as well as phonology. In the present case, however, it is necessary to restrict the discussion mainly to phonology, since complete morphological and syntactic descriptions of the languages concerned are not available. Our procedure, then, is as follows: By comparison of cognate sets in Cahuilla, Cupeño, and Luiseño, we reconstruct the phonemic system of their ancestor language. We then consider features that represent innovations from the reconstructed proto-language. If two of the languages share an innovation not found in the third, we assume that they shared a period of common history after separating from the third language. Finally, we make a preliminary survey of lexical data to support the findings based on phonology.¹

THE CUPEÑO PHONEMES

The Cupeño data presented here are from the speech of Miss Rosinda Nolasquez, a native of Cupa, now living in Pala, California. The following are Miss Nolasquez's Cupeño phonemes:

Consonants:

p	t	c	k	kw	q	ʔ
(f)	s	ʃ	x	xw		h
v	(d)	y	(g)	w		
	l	ly				
	r					
m	n	ny	ŋ			

Short vowels:

i	u
(e)	ə (o)
	a

Long vowels:

i:	u:
(e:)	ə: (o:)
	a:

¹ Data on Cupeño used in this paper were collected by Jane Hill in 1962 and 1963, with support from the Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley, and from the Center for Research in Languages and Linguistics, University of California, Los Angeles. The data on Cahuilla were collected between 1961 and 1963 by William Bright, with support from the Department of Anthropology and from the Committee on Research of the University of California, Los Angeles. Data on Luiseño were collected by William Bright in 1965, with the aid of a grant from the Penrose Fund of the American Philosophical Society.

Primary stress: '

Phonemes in parentheses occur only in Spanish loanwords.

Cupeño has four syllable types: CV and CVC (stressed or unstressed), CV: and CV:C (stressed only). Consonants in the first position in syllables are said to occur initially; those in the second position are said to occur finally. The following consonants occur in both positions, except as otherwise stated.

/p/ is a voiceless bilabial stop: pivət "tobacco", náʔəp "I, in the past ..."

/t/ is a voiceless dental stop: túkut "wildcat".

/c/ is voiceless and alveopalatal. In syllable-final position it has the sibilant allophone [š], elsewhere it is the affricate [č]: Páclɣəm "cattle", ciciqə "he is gathering."

/k/ is a voiceless velar stop: kúʔut "elderberry", túk "will sleep".

/q/ is a voiceless back-velar stop: qəʃily "sagebrush", pónəq "he came".

/kw/ is a voiceless stop with simultaneous lip-rounding, extremely rare in final position. Before unaccented /a/ it is back-velar, like /q/; elsewhere it is velar, like /k/: kwəʔíc "food", kwáqə "he is eating", nəśəlákwnən "I scratched."

/ʔ/ is a glottal stop: náʔət "basket", ɲíʔyə "go away".

/f/ is a voiceless labiodental spirant, occurring only initially in loanwords: fyé:stə "fiesta".

/s/ is a voiceless alveolar sibilant: nəʔásismə "my brother's daughter".

/ʃ/ is a voiceless retroflex sibilant: ʃəŋəʃəŋəyəqə "it is fuzzy", nónəʃ "my mother's elder sister".

/x/ is a voiceless velar spirant: wáxəcily "frog", máx "will give".

/xw/ is a voiceless velar spirant with simultaneous lip-rounding, very rare in final position: páxwit "blister", ʔisəxw "will sing a man's song".

/h/ is a voiceless glottal spirant, and relatively rare: həwvákə "he is smelling", wíh "two".

/v/ is a voiced labiodental spirant, never occurring in word-initial position except in loanwords: návət "cactus sp.", táv "will put it down", vá:ka "cow".

/d/ is voiced and dental; after nasals it is a stop, elsewhere it is a spirant [d]. It occurs only in loanwords, and never in word-final position: dyé:go "Diego", səndí:yə "watermelon".

/y/ is a voiced palatal glide, devoiced in word-final position: yunávíc "buzzard", pəyúy "it snowed".

/g/ is a voiced velar fricative [ɣ]. It occurs in only one native Cupeño morpheme, and never occurs finally: ɣəyí:nə "chicken", tégələm "take it away (pl.)".

/w/ is a voiced labiovelar glide, devoiced in word-final position: wáwəmə "far", nəwíw "my acorn gruel".

/l/ is a voiced alveolar lateral, devoiced in word-final position. It is rare in word-initial position: láwíq "he's flicking it", ʔálwit "crow".

/ly/ is a voiced alveopalatal lateral, devoiced in word-final position. It is rare in word-initial position: lyáwyəxwənət "hole", tǎvily "spark".

/r/ is a voiced alveolar flap. It occurs in Spanish loans and in a very few native words: ʔətírə "very", kwəxá:r "to sour".

/m/ is a voiced bilabial nasal: mánit "toloache drink", ʔislyəm "coyotes".

/n/ is a voiced alveolar nasal: nǎʔən "I".

/ny/ is a voiced alveopalatal nasal, not occurring finally: nyímiqə "he's folding it", wányic "flood".

/ŋ/ is a voiced velar nasal: ŋǎŋ "will cry".

/i/ is a high front vowel. It is slightly lowered before /t c s/, and when unstressed after consonants other than /q h ʔ/: míʔi "which", híc "what".

/e/ is a mid-front vowel. It occurs in unstressed syllables of Spanish loanwords: ló:te "ear of corn".

/u/ is a high-back rounded vowel. It tends to be lowered and centralized in unstressed syllables: túkut "wildcat".

/o/ is a mid-back rounded vowel. It occurs in unstressed syllables of Spanish loanwords: ló:ko "crazy, drunk".

/ə/ is a mid-central vowel, slightly raised and rounded after /s/: mǎmət "ocean", ʔəʃǎʔə "flower".

/a/ is a low-central vowel: támit "sun", ʔəxwǎʔaw "over there". It occurs in unstressed syllables only before /y w/ and in reduplicated syllables; otherwise it is morphophonemically replaced by /ə/: compare kwáqə "he is eating", but kwəʔíc "food".

Long vowels occur only in stressed syllables. The mid vowels /e: o:/ (only in loans) are slightly higher than the corresponding short vowels; other long vowels have the same qualities as the corresponding short vowels do when stressed. Examples of long vowels are: ní:n təm "pregnant women", ʔiglé:sə "church", má:t "gopher", pá:nət "tarantula", mú:t "owl", ló:ko "crazy".

In addition to the primary stress /'/, there is a phonetic secondary stress. Although it tends to occur on alternate syllables counting from

the primary stress, fully adequate rules for its prediction have not yet been formulated.

THE CAHUILLA PHONEMES

Cahuilla data have been obtained principally from Mrs. Katherine Saubel, a speaker of the Mountain dialect. Her speech corresponds closely to the Desert Cahuilla described by Seiler (1957). The phonemes of Mrs. Saubel's Cahuilla are as follows:

Consonants:

p	t	č	k	q	qw	ʔ
(f)	s	š	x		xw	h
v	(d)	y	(g)		w	
	l	ly				
	r					
m	n	ny	ŋ			

Stress: '

Short vowels:

i	u
e	
	a

Long vowels:

i:	u:
e:	o:
	a:

The values of the symbols listed above are similar to those described for Cupeño. Fuller information on Cahuilla phonetics and on Cahuilla historical phonology can be found in Bright (1965a). It is relevant here, however, to point out certain distributional and historical peculiarities of the Cahuilla phonemes.

1) The alveopalatal affricate and fricative, which are in complementary distribution in Cupeño, are not quite so in Cahuilla. To be sure, /č/ occurs only before vowels, and /š/ occurs mostly before consonants or word-finally; but there are a few occurrences of /š/ before vowels, for example, ʔinyišily "little". There is frequent morphophonemic alternation between /č/ and /š/, for example, in púčily "eye", hépuš "his eye". All these facts suggest that we might set up a pre-Cahuilla phoneme *c, with allophones like those of Cupeño /c/.

2) The only labiovelar stop phoneme in Cahuilla has back-velar occlusion; hence the writing /qw/, contrasting with a rare intervocalic cluster of /k/ plus /w/, as in tükwet "mountain lion".

3) Of the consonants /v d g f/, /d g f/ and word-initial /v/ occur only in Spanish loans. Word-medial /v/ occurs in native words, however, just as in Cupeño.

4) The alveolar flap /ɾ/, as in Cupeño, occurs in Spanish loans and in

a small number of other items, for example, wí:ru- "to blow a flute".

5) The phoneme /l/ is common in medial position, but (again as in Cupeño) is rare initially; examples are lamé:sa? "table" and lúmu?ily "measles".

6) Cahuilla /e/ is clearly a front vowel when stressed, but is centralized when unstressed, approaching the sound of Cupeño /ə/. Cahuilla /a/ also has a schwa-like allophone when unstressed, but contrast with /e/ is preserved. Cahuilla is thus more conservative in this matter than Cupeño, which merges unstressed /a/ and /ə/.

7) Long vowels are rare in Cahuilla. They occur as the result of contractions, for example, in pí:ly "fur" from *píhily; as the replicas of accented vowels in Spanish loanwords, for example, in ví:ru "donkey"; and in a few other words, for example, sá:msa- "buy", which may be loans from other Indian languages.

8) Cahuilla /o:/, with no short counterpart, occurs only in Spanish loans like tó:ru? "bull", and in mó:mat "ocean", presumably a borrowing from Luiseño mó:mat.

9) The position of Cahuilla stress is, for the most part, morphologically predictable: it falls on stem-initial syllables, but moves to prefixes before monosyllabic stems, for example, in ?áçily "pet", but né?aš "my pet". Departures from this rule are suspect of being loans, for example, paxá:ʔ "red racer snake, assistant chief" (cf. Luiseño paxáʔ).

THE LUISEÑO PHONEMES

The Luiseño data used here were originally taken from the works of Harrington (1933), Kroeber and Grace (1960), and Malécot (1963, 1964). Most of them, however, have been checked with Malécot's informant, Mrs. Gertrude Chorre. The phonemic inventory is as follows (cf. Bright, 1965b):

Consonants:

p	t	č	k	kw	q	qw	ʔ
(f)	s	š	x	xw			h
v	d	y	(g)	w			
	l						
	r						
m	n		ŋ				

Stress: '

Short vowels:

i	u
e	o
	a

Long vowels:

i:	u:
e:	o:
	a:

The following comments are relevant to our comparative treatment:

1) Luiseño /č/ and /š/ are in near-complementary distribution, as in Cahuilla, with /č/ before vowels and /š/ elsewhere; however, the pattern is broken by a few examples such as páčxam- "to wash (clothes)". There is frequent morphophonemic alternation, for example, in wá:ʔiš "meat", plural wáʔčum "cattle".

2) The fricatives /v d/ are never initial in native words, though they may be in Spanish loans; /f g/ occur only in loans.

3) Basic /ʃ r/ are replaced by /s d/ respectively in diminutive forms: šú:kat "deer", súkmal "fawn"; ɟarúɟruš "jar-shaped", diminutive ɟadúɟdumal.

4) There is no contrast in unstressed syllables between /i/ and /e/, or between /u/ and /o/; we write only /i/ and /u/.

5) Vowel length in Luiseño is predictable to a considerable extent: vowels in stressed open syllables are usually long, those in stressed closed syllables or in unstressed syllables are usually short, as in mó:mat "ocean" vs. its derivative mómyum "white men". But there are exceptions to this pattern, for example, nukún "my sack" vs. nušú:n "my heart", yáʔqa "it's running" vs. pá:ʔkal "sunflower", šú:kat "deer" vs. táka:t "straight". The historical background of these cases has not been completely worked out, though many of the Luiseño long vowels are clearly due to contraction, as in kwí:la "oak sp." as compared to Cupeño kwínily, Cahuilla qwíñily, or as in mómq̄a:š "white man" as compared with its alternative form mómq̄axwiš.

COMPARATIVE PHONOLOGY

The comparison of apparent cognates in Cupeño, Cahuilla and Luiseño reveals a set of systematic phonological correspondences, which in turn indicate the major outlines of the phonemic system of the prehistoric parent language. The languages are here indicated by abbreviations: Cu[peño], Ca[huilla], and Lu[iseño]. The reconstructed proto-language is called Cupan, after Cupeño and the aboriginal town of Cupa; this nomenclature is based on the geographical central position of Cupeño, on its conservatism in certain phonological respects (such as the preservation of *ə), and on the desire to pay some belated tribute to the much-abused people of Cupa. (We reject, on esthetic grounds, the term "Luisish" suggested by Lamb (1962).)

Only a few cognate sets are given in this section to exemplify each correspondence; a fuller presentation of cognates is given in the Appendix to this paper. Hyphens are used to set off verb stems and bound noun stems; as elicited from informants, the latter normally have possessive prefixes attached.

Cu /p/, Ca /p/, Lu /p/ = Cupan *p: Cu -pi, Ca -piʔ, Lu -piʔ "breast"; Cu kúp-, Ca kúp-, Lu kúp- "sleep". The P[roto-] U [to-] A [ztecan] correspondence, as reconstructed by Voegelin and Hale (1962), is *p; for example, *pi "breast", *ku_up(i) "close eyes, sleep".

Cu /t/, Ca /t/, Lu /t/ = *t: Cu -tə, Ca tá-t, Lu ʔa-táʔ "sinew"; Cu -təmʔə, Ca táma-l, Lu -tamá "tooth, mouth". PUA has *t, as in *ta- "sinew", *ta_sma "tooth".

Cu /c/, Ca /č ~ š/, Lu /č ~ š/ = *c: Cu cóm, Ca čém, Lu čá:ʔam "we"; Cu -puc, Ca púči-ly, -puš, Lu pú:či-l, púš-la, -púš "eye". PUA has *s in *pu_{nsi} "eye", but most other Cupan terms containing this correspondence have not yet been traced to PUA. One set, in which Cahuilla is not represented, has PUA *c: Cu cív, Lu čí:v- "bitter", PUA *ci_spu.

Cu /k/, Ca /k/, Lu /k/ = *k: Cu kút, Ca kút, Lu kút "fire"; Cu túkmet, Ca túkmaš, Lu tú:kumit "night". PUA has *k, as in *ku "fire", *tu_ski "night". In a few words, Cu has /q/ corresponding to Ca and Lu /k/; see "bite" (PUA *ki), "fish" and "nettle" in the Appendix.

Cu /kw/, Ca /qw/, Lu /kw/ = *kw: Cu -kwálʔə, Ca qwálma-l, Lu -kwalma "armpit"; Cu kwínily, Ca qwínyily, Lu kwí:la "oak sp." Reliable PUA cognates are not available.

Cu /kw/, Ca /qw/, Lu /qw/ = *qw: Cu kwásic, Ca qwásiš, Lu ʔá-qwša "cooked, ripe"; Cu kwa-, Ca qwa-, Lu qwaʔ- "eat". PUA has *k^w, as in *k^wa_{nsi} "cooked", *k^wa(ʔa) "eat".

Cu /q/, Ca /q/, Lu /q/ = *q: Cu -qa, Ca -qaʔ, Lu -qaʔ "paternal grandfather"; Cu náqəl, Ca náqal, Lu náqla "ear". PUA has *k before low vowels, as in *ka_sku "father's mother"; or *k after *V_n, as in *na_nka "ear". In a few cases, Cu has /k/ corresponding to Ca and Lu /q/; see "buckwheat", "fox", "quail", "rat", and "rock" in the Appendix.

Cu /ʔ/, Ca /ʔ/, Lu /ʔ/ = *ʔ: Cu ʔás-, Ca ʔáʔas- (reduplicated), Lu ʔás- "bathe"; Cu wáʔ- "to roast", wáʔic "meat", Ca wáʔiš "meat", Lu wá:wa- "to roast", wá:ʔiš "meat". PUA has *ʔ, as in *ʔasi "bathe", *wa_sʔi "to roast".

Cu /v/, Ca /v/, Lu /v/ = *v, reconstructed only in word-medial position: Cu pívət, Ca pivat, Lu pí:vat "tobacco"; Cu návət, Ca návet, Lu ná:vut "prickly pear". PUA has *p after *V_s, as in *pi_spa "tobacco", *na_spi "prickly pear".

Cu /s/, Ca /s/, Lu /s/ = *s- (i.e., word-initial *s): Cu súʔul, Ca súʔ-wet, Lu šúʔla "star"; Cu sílyi-, Ca sílyi-, Lu ší:li- "pour". PUA has *s, as in *su "star". But Lu has unexplained initial /s/ in two cases: see "buy" and "one" in the Appendix.

Cu /s/, Ca /s/, Lu /s/ = *-s- (i.e., word-medial *s). It is hypothesized that this correspondence represents noninitial occurrences of the same proto-Cupan *s which was set up in the preceding paragraph. Examples are Cu qusá-, Ca híkus-, Lu hakwí:s- "breathe"; Cu ʔíswit, Ca ʔíswet, Lu ʔíswut "wolf". PUA again has *s, as in *hikwísi "breathe".

Cu /s/, Ca /s/, Lu /s/ = *ʃ: Cu -ʃú:n, Ca -sun, Lu -ʃú:n "heart"; Cu kuʃ-, Ca kús-, Lu kuʃáni- "take". The PUA of Voegelin and Hale has *s, as in *sula "heart", *kʷísi "take". A problem that remains unsolved is whether rules can be formulated to show when PUA *s becomes Cupan *s, and when it becomes *ʃ. Or must the PUA system be revised to recognize separate *s and *ʃ?

Cu /x/, Ca /x/, Lu /x/ = *x, reconstructable only in noninitial position: Cu ʔátaxʔə, Ca táxlis-wet, Lu ʔatá:x "man, person"; Cu háx, Ca háxʔi, Lu háx "who". PUA has medial *k after *a (other than *a_n), as in *taka "man", *haki "who".

Cu /h/, Ca /h/, Lu /h/ = *h: Cu húyəl, Ca húyal, Lu hú:la "arrow"; Cu páh, Ca páh, Lu pá:hi "three". PUA has *h, as in *hu "arrow", *pahi "three".

Cu /w/, Ca /w/, Lu /w/ = *w: Cu wáxni-, Ca wáx-, Lu wáxni- "to dry"; Cu tów-, Ca téw-, Lu tów- "see". PUA has *w, as in *waki "dry", *tiwa "find".

Cu /l/, Ca /l/, Lu /l/ = *l, reconstructable only in word-medial or word-final position: Cu -ʃulʔə, Ca sálul, Lu ʃulát "fingernail, claw"; Cu məlál, Ca málal, Lu malá:l "metate". PUA has medial *t, as in *su_utu "fingernail". Although Cupan *l and *t both derive from PUA *t, they appear to contrast, at least in final syllables; cf. Cu pú:l, Ca pú:l, Lu pú:la "doctor" with Cu mú:t, Ca mú:t, Lu mú:ta "owl".

Cu /ly/, Ca /ly/, Lu /l/ = *l after *i: Cu kwínily, Ca qwínyily, Lu kwí:la "oak sp."; Cu -qilyʔə, Ca -qilyʔi, Lu -qli "nape".

Cu /l/, Ca /l/, Lu /r/ is attested only in Cu móləkwi-, Ca méli-, Lu mó:ri- "twist"; and in Cu čšli- "cut", Lu čóri- "chop wood". A reconstruction *r may be indicated, but there is no evidence to relate this to PUA *r.

Cu /y/, Ca /y/, Lu /y/ = *y: Cu -yə, Ca -yeʔ, Lu -yoʔ "mother"; Cu yúy-, Ca yúy-, Lu yúy- "to snow". PUA has *y, as in *yiʔi "mother".

Cu /m/, Ca /m/, Lu /m/ = *m: Cu muha-, Ca múh-, Lu muʔán- "shoot";

Cu támit, Ca támit, Lu timét "sun". PUA has *m, as in *muhu "shoot".

Cu /n/, Ca /n/, Lu /n/ = *n: Cu kīnə-, Ca ná- or kīna-, Lu náp- "burn" (intr.); Cu sánət, Ca sá:nat, Lu sá:nat "gum". PUA has *n and *l, as in *na_uʔa "to burn", *sala "sticky, gum". Some Cu and Ca examples have /ny/ next to *i; see "bend" and "river".

Cu /ŋ/, Ca /ŋ/, Lu /ŋ/ = *ŋ: Cu ŋaŋ-, Ca ŋá:ŋ-, Lu ŋá:- "weep"; Cu ŋíy-, Ca ŋíy-, Lu ŋé- "go away". PUA has *ŋ, as in *ŋola "return".

Note that no correspondences have been found for the following consonant phonemes: Cu /xw g r ny/ and initial /x l/; Ca /xw r ñ/ and initial /x l/; Lu /xw d/ and initial /x l/.

Cu /i/, Ca /i/, Lu /i/ = *i: Cu wíly, Ca wíly, Lu ʔa-wíʔ "fat"; Cu ʔiʔi ~ ʔiví, Ca ʔiʔ ~ ʔivʔi, Lu ʔivíʔ "this". PUA has *i, as in *wi- "fat", *ʔi "this". Most of the Cupan examples are in stressed syllables; elsewhere, less regular correspondences are found. Thus Cu has /ə/ instead of /i/ in Cu ʔəyál, Ca ʔiyál, Lu ʔiyá:la "poison oak".

Cu /i/, Ca /i/, Lu /e/ = *e: Cu wíh, Ca wíh, Lu wéh "two"; Cu pít, Ca pít, Lu pét "road". PUA has *o, as in *wo- "two", *po "road". Before *x, Ca has /e/ instead of /i/: Cu wəxítit, Ca wéxet, Lu wixéʔtut "pine" (PUA *wo_gko).

Cu /ə/, Ca /e/, Lu /o/ = *ə: Cu qó-, Ca ké-, Lu kóʔi- "bite"; Cu ménily, Ca ménily, Lu móyla "moon". PUA has *i, as in *ki "bite", *miya "moon". When unstressed, Lu forms have /u/ instead of /o/: Cu tóvət, Ca tévat, Lu tuvát "conifer sp.".

Cu /a/, Ca /a/, Lu /a/ = *a: Cu pál, Ca pál, Lu pá:la "water"; Cu -ma, Ca -ma, Lu -maʔ "hand". PUA has *a, as in *pa "water", *ma "hand". In unstressed position, Cu has /ə/ instead of /a/: Cu náqmə-, Ca náqma-, Lu náqma- "hear".

Cu /u/, Ca /u/, Lu /u/ = *u: Cu túl, Ca túl, Lu tú:la "charcoal"; Cu -mu, Ca -mu, Lu -mú:vi "nose". PUA has *u, as in *tu "black", *mu_gpi "nose". In unstressed position, Cu sometimes has /ə/ instead of /u/: Cu hənúvət, Ca húnuvat, Lu hunú:vət "Yucca mohavensis".

Cu /V/, Ca /V/, Lu Ø in unstressed medial syllables = *V of the quality indicated by Ca: Cu ʔəwəl, Ca ʔéwíl, Lu ʔówla "blood" point to reconstructed *ʔéwila.

Cu Ø, Ca Ø, Lu /V/ in unstressed final syllables = *V of the quality indicated by Lu. This is illustrated by the final vowel of the preceding example. The historical loss of unstressed vowels, reflected in this and the previous correspondence, also plays an important role in the morphophonemic alternations of the present-day Cupan languages, as in Cu ʔísily "coyote", plural ʔísly-əm; Lu kamíisa "shirt", nu-kmíisaki "my shirt".

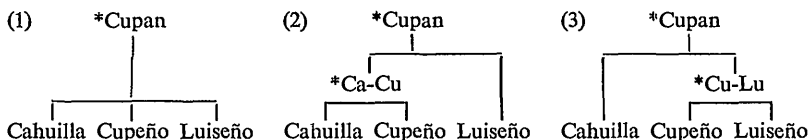
Words in which all three languages have initial stress are reconstructed as having initial *^ˈ, as in Cu ʔáʔalxi-, Ca ʔáʔalxi-, Lu ʔá:alvi- "tell a story", and other examples above. No suprasegmental phonemes have been reconstructed for PUA, and the earlier history of Cupan *^ˈ is not known at present.

Words in which Cu and Lu have stress on the second syllable, and Ca has stress on the first syllable, are reconstructed with *^ˈ on the second syllable: Cu ʔəwál, Ca ʔáwal, Lu ʔawá:l "dog"; Cu kəvəʔmal, Ca kávaʔmal, Lu kaváʔmal "pot".

In a few sets of cognates, Cu and Lu show different stress patterns; such sets will not fit either of the above correspondences. Examples are Cu támit, Ca támit, but Lu timét "sun"; Cu qəʃily, Ca qásily, but Lu qá:ʃil "sagebrush".

CONCLUSION

This study has applied the methods of linguistic comparison and reconstruction to three Uto-Aztecan languages of Southern California, which apparently form a genetic grouping. By reconstructing features of their common ancestor — the language we have named Proto-Cupan — we have hoped to shed light on the specific relationships of the languages to each other, and specifically to choose between the following possible patterns of descent:



The criterion for choice is that of shared innovations: if two of the languages share a feature that is not in the third and not in the proto-language, then they are assumed to have had a period of shared history and to constitute a separate subbranch. By this criterion we can find two reasons for grouping Cahuilla and Cupeño as a separate subbranch of Cupan. One is the development of *l to Ca and Cu /ly/ after *i, where Lu retains /l/; the other is the merger of *c and *i to Ca and Cu /i/, where Lu retains contrasting /e/ and /i/. On these bases, family tree 2 seems the most likely.

Grammatical and lexical comparisons are desirable, of course, to

support the hypothesis of a historical Cahuilla-Cupeño unity. In the area of lexicon, we find the following classes of terms:

1) Those in which the three languages show no relationship, for example, Cu *míʔaw-*, Ca *píš-*, Lu *wukó:ʔa-* "arrive".

2) Those in which Cu and Ca have related terms, whereas Lu has an unrelated form, for example, Cu *ʔísily*, Ca *ʔísily*, Lu *ʔanóp* "coyote".

3) Those in which Cu and Lu agree, whereas Ca has an unrelated form, for example, Cu *-múcʔə*, Lu *-mú:ʃi*, but Ca *yultámál* "beard".

4) Those in which Ca and Lu agree, whereas Cu has an unrelated form, for example, Ca *ʔinily*, Lu *ʔéŋla*, but Cu *yəwál* "salt".

Of the stem-lists available to us from the three languages, we find two-language agreement for Cupeño and Cahuilla in 64 cases, for Cupeño and Luiseño in 42 cases, and for Cahuilla and Luiseño in 10 cases. Although this lends some support to our belief that Cupeño and Cahuilla form a genetic unit, further study of individual vocabulary items should be made. At present only one lexical set will be mentioned: in the meaning "west", Cu has *kəwí-kə* and Ca *qáwi-ka*, while Lu has *payó:m*. The Cu and Ca forms can be etymologized as "toward the mountains" (Cu *kəwí-c*, Ca *qáwi-š* "rock", Lu *qawí:ča* "mountain".) The Lu form perhaps contains *pá:-la* "water" and *yó-t* "big", referring to the ocean. These forms suggest that Cahuilla and Cupeño once shared a common home in the deserts to the east of the Coast Range. Cahuilla social organization has recently been described (Bean, 1960) in terms of patri-sibs, that is, groups of lineages with a shared territory, a distinctive dialect, and a consciousness of group identity. The Cupeño may well have originated as one such sib of a larger Cahuilla-Cupeño entity.

APPENDIX: LIST OF COGNATES

The following is a list of forms believed to be cognate in the three languages, Cupeño, Cahuilla, and Luiseño, together with their proto-Cupan reconstructions, so far as these can be made. Where a corresponding proto-Uto-Aztecan form has been reconstructed by Voegelin and Hale, it is given along with its reference number from the appendix of their work.

Absolute suffix (1): Cu *-t* (as in *mút:* "owl"), Ca *-t* (as in *mút:* "owl"), Lu *-ta* (as in *mút:ta* "owl") or *-t* (as in *kút* "fire"): **-ta*.

Absolute suffix (2): Cu *-c* (as in *kíc* "house"), Ca *-š* (as in *kíš* "house"), Lu *-ča* (as in *kí:ča* "house") or *-š* (as in *ʃuʔíš* "jack-rabbit"): **-ca*.

Absolute suffix (3): Cu -l (as in pú:l "doctor"), or -ly (as in múkɪly "a sore"), Ca -l (as in pú:l "doctor") or -ly (as in múkily "a sore"), Lu -la (as in pú:la "doctor") or -l (as in mú:kil "a sore"); *-la.

Acorn mush: Cu wíwic, Ca wíwiš, Lu wí:wiš (wíw- "cook acorn mush"): *wíw-.

Agave: Cu ʔəmúl, Ca ʔámul, Lu ʔamú:l: *ʔamúl.

And: Cu mə, C mán "well, ...", Lu man "and, also": *ma-.

Ant: Cu ʔánət, Ca ʔánet, Lu ʔá:nat: *ʔánVt.

Armpit: Cu -kwálʔə, Ca qwálmal, Lu -kwálma: *kwál-.

Arrow: Cu húyəl, Ca húyal, Lu hú:la; *hú-. PUA *hu (78).

Artemisia dracunculus (a plant): Cu wácic, Ca wáciš, Lu wá:čiš: *wácic.

Ashamed, be: Cu həmán-, Ca sunháman- (with sun- "heart"), Lu hamó:ya-; *hamV-.

Augmentative suffix: Cù -wit, Ca -wet, Lu -wut: *-wət? PUA *wi- "big" (100). (For an example of the suffix, see "wolf".)

Aunt, maternal: Cu -nəʃ, Ca -nes, Lu -nós: *-nəʃ.

Aunt, paternal: Cu -pah, Ca -pa, Lu -pá:-may: *pa.

Awl: Cu ʔivic, Ca ʔiviš, Lu ʔé:viš: *ʔévic.

Bathe: Cu ʔás-, Ca ʔápas- (with reduplication), Lu ʔás-: *ʔás-. PUA *Pasi (139).

Be (1): Cu qáʔ, Ca qál, Lu qál-: *qá-. PUA *ka_sti "sit" (42).

Be (2): Cu míyəxwə "there is ..., hello", Ca miyaxwe "there is ..., hello", Lu mí:x- "be", míyu "hello": *mí-.

Bear: Cu húnwit, Ca húnwet, Lu húnwut: *húnwət. (This is apparently the augmentative (q.v.) of "badger", Ca húnal, Lu hú:nal.)

Bear fruit: Cu tú-, Ca tú-, Lu tú:-Paviš "barren": *tú-.

Bend: Cu nyími-, Ca nyími- (cf. lámi- "to fold"), Lu né:mi-: *némi-?

Bewitch: Cu piʔ-, Ca pí-, Lu piʔáni-: *pi-.

Bite, to: Cu qó-, Ca ké-, Lu kóʔi-: *kó-ʔ. PUA *ki_n(ʔi) (43).

Blood: Cu ʔəwəl, Ca ʔéwil, Lu ʔówla: *ʔəwila.

Bloom, to: Cu šə- (cf. pəʃəʔə "flower"), Ca sé- (séʔiš "flower"), Lu šo:ʔ-: *šə-.

Blue bird sp.: Cu cáʔic, Ca čáʔiš, Lu čá:ʔiš: *cáʔic.

Body: Cu -táxwi, Ca táxawily, Lu -tá:xaw: *táxawi-. (Cf. "person".)

Borrow: Cu tóʔə-, Ca téʔe-, Lu tó:ʔ-: *táʔ-.

Bread, to make: Cu šáw- (cf. šáwic "bread"), Ca sásaw- (with reduplication, cf. sáwiš "bread"), Lu šá:wka-: *šáw-.

Breast: Cu -pi, Ca -piʔ, Lu -piʔ: *pi. PUA *pi (6).

Breathe: Cu qusá- (cf. hiqšáʔ- "to sigh"), Ca híkus- (cf. -híkuspa "breath"), Lu hakwís- (híkwsa-š "breath"): *hikwVsa-ʔ PUA *hikwisi (55).

- Bring*: Cu yáw-, Ca yáw- "catch", Lu yá:w- "have, hold, take": *yáw-
Brother, elder: Cu -pásmə, Ca -pas, Lu -pá:Paʃ: *paʃ?
Buckwheat: Cu wilákəl, Ca húləqəl, Lu wuláqla: *huláqala?
Burn (intr.); Cu kíñə-, Ca ná-, kíñə-, Lu náʔ-: *na-. PUA *naʔa (95b).
Burrow, a: Cu tókic, Ca tékiš "cave", Lu tóvkiš "storage cave": *tókic?
Buy: Cu sámsə-, Ca sá:msa-, Lu sá:msa-: *sámsa-? (The unexpected long vowel of Ca and the initial /s/ of Lu suggest borrowing from some non-Cupan language.)
Buzzard: Cu yuṇávic, Ca yuṇaviš, Lu yuṇá:viš: *yuṇávic.
Carry a load: Cu túku-, Ca tük-, Lu tukwáni-: *tuk-.
Ceremonial enclosure: Cu wánkic, Ca wámkiš "brush lean-to", Lu wámkiš: *wámkic.
Charcoal: Cu túl (cf. túlnək-ic "black"), Ca túl (túlek-iš "black"), Lu tú:la: *túla. PUA *tu "black" (23).
Chia: Cu páʃəl, Ca pásal, Lu pá:ʃal: *páʃal.
Chief: Cu nó:t (long vowel unexplained), Ca nét, Lu nó:ta: *néta.
Child: Cu kí:-mal "boy", Ca kíat "child", Lu kihá:t "small": *kiha-.
Chipmunk: Cu səkáwit, Ca sika-wet, Lu şuká:wut "tree squirrel": *sVká-wət.
Cholla cactus: Cu mútəl, Ca mútal, Lu mú:tal: *mútal.
Claw/nail: Cu -ʃulʔə, Ca sálu-l, Lu -ʃla, şulá-t: *ʃula- (with apparent metathesis of vowels in Ca). PUA *su_{ut}u (26).
Come: Cu mənmax-, Ca ménvax-, Lu mon-: *mən-.
Conifer sp.: Cu tévət, Ca tévat, Lu tuvát: *tevat.
Cooked/ripe: Cu kwáʃic, Ca qwásiš, Lu ʔá-qwşa: *qwaʃ-. PUA *kʷa_{isi} (50).
Crow: Cu Pálwit, Ca Pálwat, Lu Pálwut: *PálwVt.
Daughter of man: Cu -ʃuṇámə, Ca -sūṇama, Lu -ʃawá:may (cf. ʃuṇá:l "woman"): *ʃuṇáma? (apparently the diminutive (q.v.) of "woman").
Deer: Cu súqət, Ca súqat, Lu sú:kat: *súqat?
Dig: Cu wáli-, lyáw-, Ca wáli-, Lu láwi-: *wáli-, with metathesis in Cu and Lu.
Diminutive suffix: Cu -mə, -mə-l, Ca -ma, -ma-l, -ma-ly (cf. -mályuʔa "woman's son"), Lu -mal, -may: *-ma-l? PUA *mala "child (with female reference)" (84).
Doctor: Cu pú:l, Ca pú:l, Lu pú:la: *púla (with Cu and Ca long vowels unexplained).
Doctor, to: Cu tɪŋələʔəc "medicine", Ca tɪŋʔaypiš "medicine", Lu téŋal- "to doctor", téŋal-kat "doctor": *téŋ-.
Dog: Cu ʔəwál, Ca Páwal, Lu ʔawá:l: *Pawál.

Dove: Cu mǝxily, Ca máxily, Lu mixé:l: *mVxél.

Down/below: Cu tá- (cf. tǝmál "earth"), Ca tǝmál "earth", Lu tó:-ɲax "down" (cf. tó:-ta "stone", tó:-mal "small stone"?): *tǝ- "down", *tǝ-mal "earth".

Drink: Cu pá-, Ca pá-, Lu pá:ʔ-: *pa-. (Cf. "water".)

Dry, to: Cu wǝxni-, Ca wǝx-, Lu wǝxni-: *wǝx-. PUA *waki (99).

Eagle: Cu Pǝšwit, Ca Pǝswet, Lu Pǝšwut: *Pǝšwǝt.

Ear: Cu náqǝl, Ca náqal, Lu náqla: *náqala. PUA *na_nka (47).

Eat: Cu kwa-, Ca qwa-, Lu qwaʔ-: *qwa-. PUA *k^wa(ʔa) (48).

Egg: Cu -pǝnic "testicle", Ca pǝnet, Lu pá:nil: *pǝn-.

Eye/seed: Cu -puc, Ca pǝčily, -puš, Lu pǝšla, -pǝš: *pǝčila. PUA *pu_nsi (5).

Fat: Cu wily, Ca wily, Lu ʔa-wiʔ: *wí-. PUA *wi- (102).

Father: Cu -na, Ca -naʔ, Lu -naʔ: *-na.

Fire: Cu kút, Ca kút, Lu kút: *kút. PUA *ku (137).

First/before: Cu mǝluk, Ca mǝluʔuk, Lu ʔamú:la: *mǝl-.

Fish: Cu qǝyúl, Ca kiyul, Lu kiyú:l: *keyúl?

Flat: Cu takǝtǝkǝʔǝc "bald", Ca táka- "be flat", Lu táka:t "straight": *tǝka-.

Flea: Cu mǝkwác, Ca múkaš, Lu mukwǝʔčiš: *mukwǝc?

Fox: Cu kǝwǝšʔic, Ca qǝwiʔsiš, Lu qiwé:wiš: *qawé...ic?

Foxtail grass: Cu wǝvic, Ca wǝ:viš, Lu wǝ:viš: *wǝvic.

Frog: Cu wǝxǝcily, Ca wǝxačily, Lu waxǝwʔla (cf. waxǝ:-wut "frog sp."): *waxa-.

Girl: Cu nǝwíc-mǝl (cf. nǝwíkǝt "wife"), Ca náwiš-maly (cf. náwítaly "teen-age girl"), Lu nawí:l "young woman", nawít-mal "girl": *nawí-.

Give: Cu max- (cf. nǝmǝx- "sell"), Ca máx-, Lu námxan- "give away": *max-. PUA *ma_nka (83).

Go away: Cu ɲiy-, Ca ɲiy-, Lu ɲe-: *ɲe-. Cf. PUA *ɲola, *ɲowa "return" (152).

Goose: Cu lǝʔǝl, Ca láʔlaʔ, Lu láʔla: *láʔala?

Gopher: Cu mó:t, Ca mé:t, pl. méht-am, Lu mó:ta: *móhota.

Gourd: Cu nixic, Ca néxiš, Lu né:xiš: *néxic.

Grandfather, maternal: Cu -kwa, Ca -qwaʔ, Lu -kwǝʔ: *-kwa. PUA *k^waʔa (127).

Grandfather, paternal: Cu -qa, Ca -qaʔ, Lu -qǝʔ: *-qa. Cf. PUA *ka_nku "father's mother" (170).

Grass: Cu sǝmát, Ca sámát, Lu šǝ:mut: *samVt.

Gum: Cu sǝnǝt, Ca sǝ:nat, Lu šǝ:nat: *sǝnat. PUA *sala (147).

Guts: Cu -šǝʔi, Ca sǝʔily, Lu šǝʔiš "excrement": *sǝʔi-.

Hair of body: Cu -píʔi, Ca -píhʔi, pí:ly, Lu ʔa-péʔ "feathers": *péʔ (but Ca -h- is unexplained).

Hand: Cu -ma, Ca -ma, Lu -maʔ: *-ma. PUA *ma (128).

Hat: Cu yúməʔət, Ca yúmuʔ- "put on hat", Lu yumúʔi- "put on hat": *yumu- "put on hat".

Hear: Cu náqumə-, Ca náqma-, Lu náqma-: *naqma-, from *naqa- "ear".

Heart: Cu -šú:n (long vowel unexplained), Ca -sun, Lu -šú:n: *-šún. PUA *sula (98).

Heat, to: Cu sóxi- "burn" (tr.), sóxnə- "cook"; Ca séx- "cook", séxiʔ "hot springs", Lu séxli- "to warm water": *sóx-.

Hell: Cu tálmiʔiʃ, Ca télmikily, Lu tólmik: *tálmik.

Horned toad: Cu cəlákə, Ca čálakaʔ, Lu čálaka: *caláka.

House: Cu kíc, Ca kíʃ, Lu kí:ča: *kica.

Hull, to: Cu siʔay- "to hull acorns", siʔáyic "hulled acorns", Ca siʔay- "to peel", Lu ʃi:ʔawiʃ "hulled acorns": *siʔa-.

Hunt: Cu ʔámu-, Ca ʔámu-, Lu ʔá:mu-: *ʔámu-.

I: Cu nó, Ca néʔ, Lu nó:: *nə.

Jackrabbit: Cu súʔic, Ca súʔiʃ, Lu ʃuʔiʃ: *suʔic.

Jackrabbit, young: Cu páwxət, Ca páxwut, Lu pá:xut: *páxwut?

Jealous, to be: Cu náwi-, Ca náwa:n-, Lu ná:win-: *náv-. (Cf. also Cu náʔaw- "blame", náwvi- "fight".)

Kill: Cu móqə-, Ca méqa-, Lu mókna-: *móq-?

Leach: Cu pácik-, Ca páčik-, Lu páška-: *pá cik-.

Leaf: Cu -pəlʔə, Ca pálat, Lu pávlaʃ (from reduplicated *pa-pala-): *pala-.

Left (hand): Cu ʔicvá-wit, Ca ʔiʃva:x, Lu -ʔéčva: *ʔecva-.

Lizard sp.: Cu yúʔəl, Ca páyul (with pá- "water"?), Lu yulúʔ: *yu...l.

Look for: Cu hál-, Ca há:l-, Lu há:l-: *hál-.

Manzanita: Cu kóləl, Ca kélil, Lu kól:lul: *kólVI.

Metate: Cu məlál, Ca málal, Lu malál:l: *malál.

Mistletoe: Cu cáymə, Ca cáyal, Lu ʔačá:yaka: *cáy-.

Mockingbird: Cu təmáwit, Ca támawet, Lu tamá:wut; *tamá-wət "mouth-big".

Moon: Cu mónily, Ca ménily, Lu móyla: *mónila? PUA *miya (158).

Mortar, bedrock: Cu ʔilyəpəl, Ca ʔilypalʔa, Lu ʔé:lapal: *ʔélapal?

Mother: Cu -yə, Ca -yeʔ, Lu -yoʔ: *-yə. PUA *yiʔi (106).

Mouth/tooth: Cu -təmʔə, Ca -támʔa, Lu -tamá: *-tama. PUA *ta_sma "tooth" (29).

Nape: Cu -qilyʔə, Ca -qilyʔi, Lu -qli, qilá-t: *qel-. Cf. PUA *ku_sta "neck" (154)?

Net, carrying: Cu ʔíkət, Ca ʔíkat, Lu ʔí:kat: *ʔíkat.

Nettle: Cu síciqily, Ca čikišily, Lu šakišla. (Metathesis and irregular correspondences make it impossible to reconstruct a proto-form.)

Night, to pass: Cu túk- (cf. túkmət "night"), Ca túk- (túkmaš "night"), Lu tú:k- "to camp out" (tú:kumit "night"): *túk-. PUA *tu_ski "night" (144).

Nit: Cu sárwət, Ca sárwa-, Lu šárwut: *sárwV-.

North: Cu təmám-, Ca témam-, Lu tumá:m: *təmám.

Nose: Cu -mu (cf. -muv "snot"), Ca -mu (-muv "snot"), Lu -mú:vi: *-mu(v). PUA *mu_spi (15).

Oak sp. (1): Cu kwínily, Ca qwínyily, Lu kwí:la: *kwínila?

Oak sp. (2): Cu wiʔət, wiʔáwlət "oak spp.", Ca wiʔat, wiʔasily "oak spp.", Lu wiʔá:šal: *wiʔa-.

Old man: Cu nəxáncuʔvəl (cf. nəxánic "man"), Ca náxaluʔvel (náxaniš "man"), Lu naxán-mal (cf. naxá:ča- "become old"): *naxá-.

Old woman: Cu níclýəvəl, Ca nišlyuʔvel, Lu néšmal: *néc-.

One: Cu súpləwit, súlit, Ca súplyiʔ (cf. súpul "other"), Lu supúl: *su-. Cf. PUA *si- (65).

Owl: Cu mú:t, Ca mú:t (plural múht-am), Lumú:ta: *múhuta.

Palm tree: Cu má:wəl, Ca mául, Lu má:xwal, má:xul: *máxwal?

Person: Cu ʔatáxʔa, Ca táxlis-wet (cf. táx "self"), Lu ʔa-tá:x "person, self": *tax. PUA *taka "man" (145).

Pet: Cu -ʔác (cf. ʔácily "cow"), Ca -ʔaš, ʔácily, Lu ʔá:š, ʔášla; *ʔáci(la).

Pine: Cu wəxitit, Ca wéxet, Lu wixéʔtut: *wexét-. PUA *wo_sko (142).

Poison oak: Cu ʔəyál, Ca ʔiyal, Lu ʔiyá:la: *ʔiyála.

Possession: Cu -míxən, Ca -méxan, Lu -mí:x; *-míx. Cf. "be" (2).

Pot: Cu kəváʔməl, Ca kávaʔmal, Lu kaváʔmal: *kaváʔmal.

Pour: Cu sílyi-, Ca sílyi-, Lu ší:li-: *síli-.

Pregnant woman: Cu nít, Ca nít, Lu nét: *nét.

Prickly pear: Cu návət, Ca návet, Lu ná:vut: *návət. PUA *na_spi (16).

Pull out: Cu xúwi-, Ca hú:-, Lu hú:yaki-: *hú-?

Push: Cu núli-, Ca núʔaqan-, Lu nú:li: *nú-.

Put: Cu távən-, Ca táve-, Lu taváni-: *tav-.

Put on: Cu yúl- "string beads", yúti- "build"; Ca yúl- "string beads, build", Lu yú:li- "put on": *yú(l)-.

Quail: Cu kəxál, Ca qáxal, Lu qaxá:l: *qaxál?

Raccoon: Cu ʔayáməl, Ca ʔáyamal, Lu páʔyamal (with pa- "water"?): *ʔayámal.

Race, to: Cu námi- (cf. nónmi- "chase"), Ca némi- "chase", Lu ná:mi- "race" (nánmi- "chase"): *námi-, reduplicated *ná-nami-?

Racer snake: Cu pəxáʔə, Ca paxáʔ, Lu paxáʔ: *paxáʔ.

Rat: Cu káwəl, Ca qáwəl, Lu qáwla: *qáwalaʔ

Rattlesnake: Cu sówit, Ca séwet, Lu só:wut: *sówət.

Raw: Cu sáwit, Ca sáwit, Lu šawút: *sawitʔ

Reed: Cu sáyily, Ca séyily, Lu šóyla: *sáyila.

River: Cu wáuyic "flood", Ca wáníš, Lu waníš: *wanic.

Road: Cu pít, Ca pít, Lu pét: *pet. PUA *po (4).

Roadrunner: Cu púwic, Ca púwiš, Lu púypuy: *púwiʔ

Roast, to: Cu wáʔ- (cf. wáʔic "meat"), Ca wáʔiš "meat", Lu wá:wa- "to roast" (wá:ʔiš "meat"): *wá- "to roast", *wáʔic "meat". PUA *wašʔi "to roast" (162).

Rock: Cu kəwíc, Ca qáwiš, Lu qawí:ča "mountain": *qawícaʔ

Rot, to: Cu písaʔic "rotten", Ca písʔiš "rotten", Lu písáʔ- "to rot": *pisaʔ-.

Run: Cu yáʔ-, Ca yáʔi- "run fast", Lu yáʔ-: *yaʔ-.

Sagebrush: Cu qəšily, Ca qásily, Lu qá:šil: *qasil.

Say: Cu ya-, Cu yá-, Lu ya-: *ya-.

See/find: Cu təw-, Ca téw-, Lu tów-: *təw-. PUA *tiwa "find" (21).

Sew: Cu ʔúʔlə-, Ca ʔúʔla-, Lu ʔuláʔna-: *ʔula-. The Cu and Ca forms may be from reduplicated *ʔú-ʔula-.

Shoe: Cu wáqəʔ, Ca wáqat, Lu wáčxat: *wá...at.

Shoot: Cu mú-, muhán-, Ca múh-, Lu muʔán-: *muh-ʔ PUA *muhu (81).

Shoulder: Cu -šókʔə, Ca -sékʔa, Lu -šó:ka: *-šóka.

Sinew: Cu -tə, Ca tá-t, Lu -táʔ: *ta. PUA *ta- (125).

Sister, elder: Cu -qísmə, Ca -qis, Lu -qé:ʔis: *-qé ... s.

Sky: Cu túkəʔəc, Ca túkvaš, Lu tú:paš: *tú ... ac.

Sleep: Cu kúp-, Ca kúp-, Lu kúp-: *kúp-. PUA *kuup(i) "close eyes" (153).

Smoke: Cu míʔəʔ, Ca míʔat, Lu kú:mit (cf. kú-t "fire"): *mi-.

Smoke, to: Cu pívət "tobacco", Ca pív- "to smoke", pívət "tobacco", Lu pí:vat "tobacco": *pív- "to smoke", *pívət "tobacco". PUA *pišpa "tobacco" (12).

Snow, to: Cu yúy-, Ca yúy-, Lu yúy-: *yúy.

Sore, a: Cu múkʔily, Cu múkily, Lu mú:kil: *múkilʔ

South: Cu kicám-, Ca kíčam-, Lu kí:čam: *kicam.

Springtime: Cu tášpə, Ca tášpa, Lu tášpa: *tášpa.

Spruce: Cu yúyily, Ca yúyily, Lu yúyla: *yúyila.

Squirrel: Cu qínjic, Ca qínjic, Lu qé:ɲic: *qénjic.

Star: Cu súʔul, Ca súʔ-wet, Lu súʔla: *súʔ-. PUA *su (71).

Sting: Cu súyi-, Ca súyily "scorpion", Lu súyla "scorpion": *súyi- "sting", *súyila "scorpion".

Stir: Cu wəlawəli- "irrigate", Ca wáluš- "to hoe", Lu wáli- "stir", wəlawəli- "irrigate": *wal-.

Suck: Cu mis-, Ca mímiš- "chew" (with reduplication), Lu mé:či- "chew": *mé-.

Sumac: Cu nákwit, Ca nákwet, Lu nákwut: *nákwet.

Summer: Cu táwpə, Ca táwpa?, Lu táwpa: *táwpa.

Sun/day: Cu támit, Ca támit, Lu timét: *tVmet.

Sunflower: Cu páʔəqily, Ca páʔakal, Lu pá:ʔqal: *páʔaq-?

Sweat oneself: Cu háclə- (cf. hácləʔəc "sweathouse"), Ca hášlavaʔal "sweathouse", Lu hášla- (hášlaš "sweathouse"): *hácla-.

Sweep: Cu wáqi-, Ca wákaʔa-, Lu wá:qi-: *wáq-?

Sycamore: Cu səvíly, Ca sívíly, Lu sívé:la: *sevəla.

Tail: Cu -kwəš, Ca -qwas, Lu pí-qwsiv: *-qwas? PUA *kʷa_usi (51).

Take: Cu kuš-, Ca kús-, Lu kušáni-: *kuš-. PUA *kʷiʂi (52).

Teardrop: Cu -ʔis, Ca -ʔis, Lu -ʔés: *-ʔes.

Tell a story: Cu ʔáʔalxi-, Ca ʔáʔalxi-, Lu ʔá:ʔalvi-: *ʔáʔal-.

That: Cu pó "he", Ca péʔ "that", Lu pó:ʔ "he": *pə.

This: Cu ʔiʔi, ʔiví-, Ca ʔiʔ, ʔivʔi, Lu ʔivíʔ: *ʔi(vi).

Three: Cu páh, Ca páh, Lu pá:hi: *pah-. PUA *pahi (1).

Throw away: Cu wícəxi-, Ca wíčahan-, Lu wí:či-: *wíc-.

Thunder: Cu táwšənvə (= "autumn"), Ca táwvat, Lu táwšəŋva "autumn": *táv-.

Tick (the animal): Cu máciy, Ca máčil, Lu ʔamáča: *mác-?

Tie, to: Cu túcin-, Ca túčín-, Lu tú:či-: *túci-.

Track, to: Cu tápi-, Ca tétpi- (reduplicated), Lu tópi-: *tápi-.

Turtle: Cu ʔáyily, Ca ʔáyily, Lu pá:ʔila (perhaps from *pá-ʔayila, with pa- "water"): *ʔáyila.

Twist: Cu móləkwi-, Ca méli-, Lu mó:ri-: *móri-?

Two: Cu wih, Ca wih, Lu wéh: *wéh.

Urine: Cu sícə- "defecate", Ca síʔily "urine", Lu šiʔiš: *sí-. PUA *si (67).

Wake: Cu kwáti-, Ca qwápi-, Lu kwáta-: *kwa-.

Wash: Cu qáyə-, Ca qáyi-, Lu qá:yi-: *qáyi-.

Water: Cu pál, Ca pál, Lu pá:la: *pála (cf. "drink"). PUA *pa (123).

We: Cu cóm, Ca čém, Lu čá:ʔm: *c ... m.

Weep: Cu ɳáŋ-, Ca ɳá:ŋ-, Lu ɳá:-: *ɳa-.

What: Cu híc, Ca híčʔa, Lu hí:ča: *híc-.

When: Cu mípə, Ca mípaʔ, Lu mí:ki-ŋa: *mí-.

Who: Cu háx, Ca háxʔi, Lu háx: *háx-. PUA *haki (138).

Wildcat: Cu túkut, Ca túkut, Lu tú:kut: *túkut.

Wing: Cu -wíkʔi, Ca -wákʔa, Lu -wki, -kawí, kawí-t: *kawí-ʔʔ

Wolf: Cu ʔiswít, Ca ʔiswet, Lu ʔiswut: *ʔiswət. This is apparently the augmentative of "coyote" (Cu ʔisaly, Ca ʔisily).

Wood, to gather: Cu kəlaw- (kəlawət "wood"), Ca kélaw- (kélawat "wood"), Lu kulá:w- (kulá:wut "wood"): *kəlaw- "gather wood", *kəlawat "wood".

Yes: Cu hó:hə:, Ca hé:heʔ, Lu ʔuhó:: *hə.

You: Cu ʔə, Ca ʔéʔ, Lu ʔóm: *ʔə.

Yucca mohavensis: Cu hənúvət, Ca húnuvat, Lu hunú:vət: *hunúvat.

Yucca whipplei: Cu pənál, Ca pánal, Lu paná:l: *panál.

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