PROTO-MAIDUN PHONOLOGY

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1. This paper[1] presents the data from Konkow, Maidu, and Nisenan and discusses the validity of and the problems encountered in reconstructing a Proto-Maidun phonemic system.

In 1961 Shipley[2] initiated the historical reconstruction of Proto-Maidun, using Maidu and Nisenan material. Since then data on a third Maidun language, Konkow,[3] has become available and it is hoped that this comparison of all three languages may help in clarifying the proto situation.

These languages were spoken in the area roughly bounded by Mount Lassen, Honey Lake, Carson Pass, and Sacramento, Nisenan being distributed over the valley, Konkow in the foothills, and Maidu in the mountains.

There may have been a fourth language, spoken in the area of Chico and south thereof but, since it appears to be extinct and the only recordings of it were obtained by Gatschet in 1877, there is some doubt as to whether it constituted another language or merely a widely divergent dialect of Konkow. As Shipley pointed out, lexically Chico seems to be closer to Maidu, although it does share a few items with both Konkow and Nisenan which do not occur in Maidu. Grammatically however, it is almost identical with Konkow, both morphologically and syntactically.

Of the total 1,036 possible cognate sets examined, 386 sets, comprising largely those containing cognates in all three languages, along with a handful of two-way sets of particular interest, form the basis for this comparison. It may be worthwhile noting that the total number of probable two-way cognate sets was distributed in the following fashion: 82 between Konkow and Maidu, 24 between Konkow and Nisenan, and one between Maidu and Nisenan. 543 sets were eliminated from comparison due to doubtful sound correspondences or unjustifiable semantic differences or a combination of both factors. In all instances, one-to-one correspondences are overwhelmingly the most frequent by actual count. There are, however, a number of divergent correspondences which are indicative of various types of phonological change, some of which undoubtedly reflect genetically related phonemes as well as those resulting from different layers of diffusion, both among the Maidun languages and between these languages and their neighbors: the Yana, Atsugewi, Paviotso, Washo, Northern and Plains Miwok, Patwin, and Nomlaki. These

[1] This paper was prepared for a Seminar in American Indian Linguistics given during the fall of 1963 under the direction of Mary R. Haas, whose help and comment are gratefully acknowledged.

[2] Data used in the preparation of this article was obtained from the following sources: (1) William F. Shipley, Maidu Grammar (in press), (2) William F. Shipley, Maidu and Nisenan: a binary survey, IJAL 27.46–51 (1961), (3) William F. Shipley, Maidu Texts and Dictionary, UCPL vol. 33 (1963), (4) Hans J. Uldall, Maidu Phonetics (written in 1932), IJAL 20.8–16 (1954), (5) Hans J. Uldall, Nisenan Dictionary (typescript), (6) Hans J. Uldall, Notes on Nisenan Grammar (typescript), (7) A. L. Kroeber, The Valley Nisenan, UCPAAE 24.253–290 (1929).

[3] The Konkow material was collected during summer 1961, fall 1962, and summer 1963 under the auspices of the Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley, and with the additional aid of a fellowship from the American Council of Learned Societies (1962–1964).

correspondences are, with the exception of those pertaining to relationships between stress, vowel length and syllable-final h, represented by extremely few cognate sets in every instance thus making it impossible to segregate older borrowed from genetic material with the evidence from Maidun alone.

Undoubtedly due to the style of description which Uldall (1954) employed in his transcription of Nisenan, certain inconsistencies are patent. At times the items listed in the Dictionary may be phonetic, phonemic or morphophonemic. There is no overt indication given although, from the few phonotactic statements which are made in his Maidu Phonetics, the phonemic shape of some items may more or less safely be deduced. Nevertheless, in other instances, there can be no certainty as to what is actually intended. This ambiguity is particularly distressing where vowel length, which plays an important role in reconstructing the proto phonology, is concerned.

2.1. The phonemic system of Proto-Maidun which is reconstructed here is based on one-to-one correspondences for all the segmental phonemes (see **4.1** for a discussion of the suprasegments).

b	d				i	y	u
ṗ	ṫ	ċ	ḳ				
p	t		k	ʔ	e	a	o
	s			h			
	l						
m	n						
w		j					

Maidu and Konkow have, in addition, a rare phoneme, /c/ (cf. 322). Konkow and Nisenan share a seventh vowel phoneme /ə/ which is not present in Maidu (cf. **4.9**). Neither of these can be reconstructed.

2.2. Only those statements which are pertinent to the discussion are given here. For all three languages:

(1) the syllable canon is CV(·)(C), (2) $V_1C + V_2 > V_1CV_1$ where C is a velar stop, (3) glottalized stops occurring before any consonant or juncture are unreleased, i.e., become the corresponding plain stops (for Nisenan, Uldall does not specify the environment before juncture), (4) imploded stops do not occur syllable-finally.

For Konkow and Maidu: /h/ ~ /ʔ/ in a limited number of morphemes.

For Maidu: CV́C + V > CV̀CV́; elsewhere it remains CV́C.

This alternation is represented by the morphophoneme ||^|| which appears in several forms in the lexicon.

For Nisenan: syllable-final /ċ/ and /h/ do not occur.

3.1. In keeping with the comparative method, the regular correspondences, which are almost entirely one-to-one, must be reconstructed as Proto-Maidun phonemes. Of the large number of remaining correspondences, some show fragmentary patterns of change but the evidence is too scanty to do anything more than suggest the directions of change. In reality, the situation is untenable. The reconstructions indicate virtually no divergence between the three languages which, in practical terms, means that we are dealing with the same language or at best dialects thereof. Yet the facts are quite contradictory. The languages are not mutually intelligible. Although there appears to be a fairly large number of lexical similarities, there are structural differences of both a morphological and a syntactic nature. Thus it would seem that the only plausible hypothesis which could be set forth to account for this apparent paradox would be one which assumes a great deal of convergence, perhaps covering a long period of time, but either particularly active in the more recent past or occasioned by more or less continuous reborrowing of forms. This is supported in some small measure by the presence of a few precious cognate sets which involve doublets where one set contains one-to-one correspondences and the other of the pair one of the rarer correspondences. The latter instances may represent genetically related

forms or older layers of borrowing. Given the paucity of the data, the kind of relationship cannot be determined. This is not to say, of course, that all one-to-one correspondences must be spurious from a genetic standpoint. Obviously some phonemes tend to be more stable than others in a given language and may well undergo no change even during lengthy periods, but the likelihood that all the phonemes of each of three distinct and presumably related languages should remain unchanged is practically nil.

3.2. A few examples of the occurrences of each reconstructed phoneme, wherever possible in different positions, are given below. The numbers following each proto phoneme refer to the cognate set listed in the lexicon.

PM *b 3, 7, 9, 13, 317
*d 27, 42, 48, 182, 198, 240, 330
*ḍ 98, 226, 231, 236
*ṭ 146, 271, 272
*ć 7, 25, 26, 27, 40, 325
*ǩ 3, 125, 128, 134, 146, 344, 346
*p 195, 198, 199, 200, 203, 216, 225, 351, 356
*t 172, 203, 257, 259, 260, 262, 270, 356
*k 42, 109, 195, 295
*ʔ 295, 298, 304, 373
*s 162, 216, 233, 236, 240, 294, 317, 345, 361
*h 10, 27, 51, 59, 61, 67, 330
*m 109, 149, 158, 162, 168, 172
*n 3, 42, 168, 181, 182, 185, 195, 198, 231, 270
*l 128, 134, 149, 294, 354
*w 25, 59, 279, 280, 289, 290, 294, 360, 362
*j 40, 61, 98, 102, 125, 126, 158, 236, 257, 259
*i 7, 48, 67, 172, 182, 185, 203, 262, 317, 351
*e 26, 27, 61, 98, 134, 182, 200, 203, 240, 279, 298
*y 40, 236, 270, 346
*a 3, 27, 42, 109, 125, 195, 198, 236, 257, 271, 272
*u 42, 146, 231, 325, 373
*o 9, 13, 102, 168, 213, 216, 294, 356.

Additional examples may be found among the reconstructed sets in **6.1.**

4.1. Probably the most striking general pattern of change concerns developments of syllable-final consonants, particularly *h, *j, and *k, and their relationships to length and stress. Stress and vowel length must be reconstructed to account for a variety of correspondences in the modern languages. While both of these are phonemic in Konkow, stress is in large part predictable, either phonologically or morphologically. From Uldall's description, a similar situation exists in Nisenan. In Maidu, only stress is phonemic. Therefore, although the proposed solution is somewhat unsatisfactory in explaining some of the data, it reasonably does so for most of the sets. There were then four situations[4] pertinent to stress and length in Proto-Maidun:[5]

	PM		K	M	N	Examples
(1)	*V	>	V	V	V	(numerous examples in lexicon)
(2)	*V·	>	V	V	V·	6, 29, 33, 128, 238, 300
(3)	*V́	>	V	V́	V	(numerous examples in lexicon)
(4)	*V́·	>	V·	V́	V·	13, 53, 54, 74, 91, 96, 115, 144, 202, 203, 211, 217, 219, 251, 293, 295, 340, 369
			V	V́	V·	7, 64, 70, 133, 140, 351
			V·	V́	V	236, 259, 266, 334, 355.

Situation (2) may be spurious since five of the six possible sets could contain delayed stress morphemes. For situation (4), it can only be assumed that length has been lost in Konkow or in Nisenan either in sporadic instances or due to conditions which are no longer evident. In this connection, the occa-

[4] Correspondences relating to delayed stress in Maidu are discussed in **4.3.**

[5] Since stress has such a low functional yield in Konkow and Nisenan as opposed to vowel length, it is not employed as a significant factor in reconstructing the suprasegments. Thus, in the formulaic vowel correspondences given here stress is omitted from the Konkow and Nisenan types.

sional variation between short and long vowels (which is presumably free or of a phonetic nature) observed in Uldall's transcription should be kept in mind as well as an apparently functional length ablaut in Nisenan. Although scant reference to this was found in Uldall's fragmentary grammatical notes, there is evidence of its existence (cf. 71, 63, 70, and ni *I* vs. ni· *my*, myse *they* vs. myse· *their*, syḵyj *scratch* vs. sy·ḵyj *have itch*). Syllable-final *h is retained in Konkow, lost in Maidu (with one exception, 86), and becomes vowel length in Nisenan with three exceptions which remain unaccounted for (11, 49, 207). A definite structural parallelism exists between the developments of *V̌h and *V̌· (see above).

In Konkow, syllable-final /h/, /j/, and more rarely /w/ regularly alternate with length before certain suffixes (e.g., /h/ 27, 10, 67, 23, 97; /j/ 19, 86, 240, 311; /w/ 117). Furthermore, there are a very few forms in which other final consonants alternate morphophonemically with zero or length (e.g., ḵómbo ~ ḵómbot- *mouth*; ḵádi· ~ ḵádik- *rain*; cf. also 159, 198). In Nisenan, syllable-final /j/ varies freely in at least one case with length, my· ṯ myj *that*. In Maidu, syllable-final /h/ is extremely rare, occurring in only one of the present cognate sets (86). It is therefore conceivable that such sequences may appear only in recently borrowed forms. /j/ is of fairly common occurrence but is lost in two environments: following the stressed second vowel of a disyllabic form before a juncture (311, 240, 19, 25) or following an unstressed vowel before a consonant (86, cf. also ċûj *on top of* vs. ʔóscumi *tip, top*). But this hypothesis is somewhat weakened by the existence of a now non-productive morph, -j (cf. 88), which functions as a nominalizer or a verbalizer. Furthermore, syllable-final /j/, /t/, and /w/ alternate with zero before the durative, -nù, in a small number of suffixes (e.g., 41, 52, 172). There are four examples in which Konkow length corresponds to Nisenan /j/ (194, 342, 337b, 63). Since these forms were never elicited in the pertinent environment for a normal j-allomorph, it may be reasonably assumed that length alternates with /j/ in these cases. Perhaps the same applies to one instance where Konkow /j/ (alternating with length) corresponds to Nisenan length (311).

Although the evidence does not permit the segmentation of the various syllable-final consonants discussed above, the existence of doublets like 288 and 289 which may reflect a semantic as well as a formal distinction between -h and zero casts reasonable suspicion on the comparison of these elements.

4.2. There are a few puzzling correspondences involving /k/ or /ḵ/ in one or two of the languages which point to earlier *k or *ḵ which has developed differently under only partially ascertainable environments and probably with some dialect admixture which further clouds the picture. Two possible significant environments in the evolution of an original syllable-final *k are: (1) in unstressed syllables, *k remains k in Maidu, becomes h in Konkow, and is lost in Nisenan (11, 373, also K. ċájtih- M. ċájtik- *different*), (2) in stressed syllables, *k undergoes the same changes in Maidu and Konkow, but develops into length (presumably via an intermediate *h) in Nisenan (364, 289, 168). At least one of these sets may be questionable on morphological grounds. In 168, Maidu jók- may represent a reshaping or a popular etymology. Compare jók *to pound*, jó *flower*, also Konkow jóh- and Nisenan jo· *flower*, -men *time, season*.

There are two sets having syllable-final /k/ or /ḵ/ (possibly due to assimilation to another glottalized stop in the same form) in Konkow and Maidu and zero in Nisenan, and two sets with syllable-initial /k/ or /ḵ/ to Nisenan /h/ which seem to be related although, aside from the positional environment, they cannot be included with *k or *ḵ on distributional criteria (see 180, 131, 271, 357 and cf. 326).

4.3. Shipley's (1961) proposed disyllabic harmonic base to account for correspondences of Maidu delayed stress to either short

or long vowel in Nisenan is further reinforced by the discovery of a few additional doublets of the type V(·) ~ V(·)ħH[6] in all three languages, and those sets containing doublets are reconstructed on the basis of the fuller form (90, 173, 238, 54, 212, 9, 224, 190, 264). Nevertheless, since some of the Maidu delayed stress morphemes have CV́ allomorphs (e.g., 51, 85, 232), it is somewhat doubtful that the fuller form can be extrapolated in reconstructing those sets which do not have the confirming evidence of doublets on the analogy of the sets which do. It should however be noted that Nisenan contains two common suffixes: -hH a nominalizer and -ʔo an intransitivizer. In some instances, these may well be segmentable (see especially 8, 9, 288, 289); in others, the possibility of further analysis is doubtful. Cognate sets without doublets are here reconstructed as though the Maidu form contained an unstressed vowel (e.g., 51, 289, 37, 290, 232, 305, 85).

4.4. There are a number of isolated examples of reduction of an original sequence: vowel + semivowel, h, or ʔ + vowel > vowel (long or short). The vowels are usually harmonic and Nisenan tends to contract more often than either Konkow or Maidu. Those cases which are not due to reshaping in one language or another are almost certainly the result of differing degrees of deliberate or allegro speech. This is clearly shown in the Nisenan variants for *west* (259) q.v. The following types are represented in the lexicon: ajo, aju > a·w (329); aha > a· (349a); awa > a· (259); awa > á, e· (160); aʔa > a· (339a); eʔe > e· (66); owa > o· (267); yʔy (~ y) > y (224) (cf. also **4.3**).

4.5. Fragmentary evidence exists for positing a pattern of change from proto word-initial consonant to /ʔ/ with Konkow and Maidu generally tending to be more conservative than Nisenan in this respect. Despite the paucity of data, particular weight should be attached to these sets in view of the probable high degree of stability inherent in the glosses (with the exception of 369 and perhaps 325 which may be suspect on onomatopoetic grounds). Two examples of Konkow /ʔ/ to Maidu /b/ in medial position (280, 320) belong to the same pattern. Morphologically, it is probable that both *bós- (320) and *bís- (318) were originally free morphemes. It would appear that intervocalic *b in Konkow went to /ʔ/ but was retained in Maidu. The doublet in Konkow, which represents a dialect isogloss, supports this thesis. For 280 then, *-webís- > K. *-weʔis, and with loss of stress followed by a common pattern of vowel harmony with intervening /ʔ/, > -weʔes ~ -we·s ~ -wes. If the Nisenan form is cognate, it must have evolved in the same manner. For the remaining sets, see 323, 342, 343, 345, 213, 216, 128. Konkow and Maidu initial /w/ to Nisenan /ʔ/ occur in two sets (360, 361).

In two instances, Konkow and Maidu initial /b/ corresponds to Nisenan /w/ (9, 321). Phonetically, such a change is highly plausible since /b/ before /y/, /u/, and /o/ tends to have a pronounced labio-velar release, i.e. [bʷ]. This could possibly go with *b- > N. /ʔ-/ before front vowel (318).

4.6. In addition to the regular correspondences of glottalized stops which are reconstructed as such, a few correspondences show glottalized stop in one or two languages to plain voiceless in the remaining language(s). Some of these undoubtedly represent proto glottalized stops which, in the languages reflecting plain stops, were recorded only before consonant or juncture, i.e., are morphophonemically glottalized (87, 198, 129, 254, 43, 148, 359, 297, 215, 235, 258, 284, 131, 358, 38, 228); some others are possibly due to assimilation to other glottalized stops in the same form (e.g., 32, 227); but others cannot be so explained. This apparent capriciousness in the area of glottalization has been noted elsewhere in Northern and Central Californian languages[7] and within Maidun it

[6] H will be used throughout this paper to indicate a vowel harmonic with the preceding one.

[7] See Harvey Pitkin and William F. Shipley, A

does suggest that diffusion both within and from outside the family has played an important role. Very generally, from the present data, it can be stated that Konkow tends to favor glottalized stops rather more than Maidu, and Maidu more so than Nisenan. Where the morphophonemics indicate such a possibility, a glottalized stop is reconstructed. For the remaining situations, where two languages reflect a glottalized stop, the latter is tentatively reconstructed.

4.7. Ten sets contain examples of a medial geminate consonant in one or two languages corresponding to a simple consonant in the other(s) (369, 371, 229, 284, 350, 351, 272, 259, 365a, 371a). Of these, eight follow *V́ and two precede *V́. 284 and 365a could be attributed to a morpheme of reduplication, C_1- (stem-prefixed) with iterative meaning (attested at least in Konkow and probably in Nisenan), especially in view of the semantic content of the forms. 371a and 351, which contain problematic length in Konkow and Nisenan respectively, may reflect proto geminates with loss and compensatory vowel length, but this solution is admittedly ad hoc. Such a process is not normal in connection with Maidun sonorants in medial position although it does occur before final nasals in Konkow and perhaps Nisenan. It should be noted again that recordings of non-morphological geminates in deliberate or emphatic utterance are more suspect than they would otherwise be and especially here where, in all instances, they were either immediately preceded or succeeded by *V́.

4.8. The vowels generally show little divergence but there are two situations which present special problems and there are two structural factors which in many cases bring on vowel change.

As with other Penutian languages, vowel harmony was at one time a very productive process in Maidun. The modern languages all retain some vestiges of it and, at least in one morphophonemic situation common to all three languages (see **2.2**), it is still productive. Where there is apparent irregularity in certain vowel correspondences, vowel harmony is fairly often involved. One widespread type of vowel harmony consists of the total assimilation of the vowel of a CV- instrumental prefix to the following stem vowel. This probably occurred with all vowels. Furthermore, the basic allomorph of the CV- prefixes appears to have been either Ci-, which did not harmonize, or Co-, which did. The Co- allomorph, exceptionally, could vary freely with the other vowel allomorphs before any other vowel. This, in all likelihood, eventually led to the creation of a semantic contrast to parallel the formal contrast which is evident in sporadic instances of apparent functional ablaut. Once the device becomes a structural feature of the language, it may be subject to extension in other environments than the original one. It is proposed that this may be the case with a few doublets which appear in the lexicon (see 364, 294, 136 vs. K. -ki- M. ki *pinch*, 138, 346, 242 vs. 245, 274 vs. 288, 62 vs. 75, 157 vs. 165; cf. also N. *double up, bend in a circle* wiṗonospaj (larger objects) vs. wiṗələspaj (smaller objects).

4.9. Both Konkow and Nisenan have a seventh vowel, /ə/, which is not found in Maidu. The presumed cognate sets containing this vowel are rare and correspond to all vowels in Maidu. There are only four reliable examples of /ə/ to /ə/ between Konkow and Nisenan (366, 337a, 346a, 350a, and 337a and 350a may be identical). The relative frequency of this vowel in both languages is low and it tends to occur chiefly in totally harmonized forms. It is also found anomalously in Plains Miwok, adjacent to Nisenan territory. (see also 347, 370a, 229, 350, 346, 365).

4.10. There are five vowel correspondences which occur in what are usually considered semantically stable examples and which cannot be accounted for by differ-

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Comparative Survey of California Penutian, IJAL 24, p. 186.

ences in distribution from the regular correspondences. When they are examined as possibly being part of an older system, an interesting pattern emerges, viz.

K	:	M	:	N	Examples
i		i		e	128, 317, 340, 344, 351
e		e		a	66, 181, 199, 337, 370
a		a		o	294, 360, 361, 362
o		a		o	13, 330, 364
u		u		y	333, 345, 354.

If, with the exception of o:a:o, the other correspondences are grouped on a conventional vowel chart, and we assume that Konkow and Maidu represent the proto situation, these four vowels in Nisenan indicate a counter-clockwise shift, namely:

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i     y ← u
↓
e → a → o
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5. Metathesis occurs in one set (7) with the shift apparently taking place in Konkow.

The auxiliary verb (328) poses a special problem. Konkow /h/ to Maidu /k/ to Nisenan /h/ is a unique correspondence but the Maidu form has delayed stress which may reflect an original disyllable. There appear to be two likely possibilities: (1) a dimorphemic *ka-ĥá- with loss of the first syllable in both Konkow and Nisenan and subsequent split of *..ĥá into Konkow ha *be* (aux.) and ʔa- *anaphoric demonstrative.* In Maidu the original compound split into ka.ˊ *be* and ʔa.ˊ *anaphoric demonstrative* (although this does not account for delayed stress in the latter). (2) *kahá > K. ha, > M. ka.ˊ, > N. ha and *ĥa- > K. ʔa-, > M. ʔa.ˊ, > N. ha-, i.e., merger in Nisenan. The forms glossed *to say* (368) are homonymous with the anaphoric demonstrative and are probably ultimately related to the latter, having developed from an original * *say* or *do this*. Compare Shipley's (1961) etymology.

In two sets, Konkow and Maidu /l/ correspond to Nisenan /n/ (346, 351) and, in a third set, the situation is reversed, i.e., n:n:l (370). Since both *l and *n appear to be relatively stable phonemes, these two correspondences must remain unexplained. However, it may be noted that Nisenan seems to fluctuate between /l/ and /n/ in a few forms, viz., wiṗonospaj *double up* (large objects) vs. wiṗələsṗaj *double up* (smaller objects) (vowel ablaut accounts for the difference in size of object); somle·nu ʃ somle·lu *hat*; wake·nu ʃ wake·lu *cowboy* (both Spanish loanwords).

In four sets (126, 158, 317, 341), an unexplained /h/ following a sonorant (j, l, m) and preceding /i/ appears to have been retained in either Maidu or Nisenan. Although these forms cannot be analyzed, it seems possible that there may have been a morpheme boundary between the sonorant and /h/ (cf. N. -hi a nominalizer). In 126 and 158 this assumption is reflected in the reconstruction.

6. The lexicon is divided into two sections. The arbitrary number assigned to each set is used as a reference throughout the text of this article. Konkow and Maidu forms which are not enclosed in phonemic brackets (/ /) are transcribed morphophonemically. **6.1** contains reconstructed sets which, when polymorphemic, include morpheme boundaries indicated by hyphen wherever they may be determined. The items are arranged in English alphabetical order for the reconstructed Proto-Maidun form. **6.2** contains all other presumed cognate sets which cannot be reconstructed in part or in toto. They are arranged similarly to **6.1** but the alphabetic order is based on the Konkow form. The English gloss is given at the end of each cognate set. Where there may be a difference in glosses in one of the languages, the particular gloss immediately follows the individual form for that language and the common gloss at the end of the set. The abbreviations used are as follows: * Proto-Maidun, K Konkow, M Maidu, N Nisenan.

6.1. Reconstructed sets:

1. *-b, K -be *2S hort.*, -by *cavet.*, M /-bene/ *2S hort.*, -by *cavet.*, N -bene *2S*

persuasive, -by *prohib*. OPTATIVE. *e HORTATORY; *y CAVETIVE.

2. *bá, K bá, M bá, N ba SALT.

3. *banáǩ, K bánaǩ, M banáǩ, N banaǩa LIGHT.

4. *ba·-no, K báno ~ bán, M bân, N ba·no SPREAD.

5. *-be, K kónojbè *girl*, M -be, N konobej *girl* DIMINUTIVE.

6. *be(·)téj-, K bétej *mythical* (?), M betéj *tell stories* (cf. beté *ancient*), N be·tej, MYTH.

7. *bićí·, K ćíbi, M bîć, N bići·, CLAW.

8. *bo-, K bó-, M bo.! *hit by throwing*, N bo ~ bo· *hit with stone in hand*, WITH ROCK.

9. *bóh-ʔo, K bóh-, M bónno *throw downhill*, N. boʔo ~ boʔo *throw* ACTION WITH ROCK.

10. *bóh-, K bóh-, M bó, N bo·, TRAIL.

11. *bomýh, K/bómyhmỳhno/, M bomý, N bomy PITY.

12. *bón, K bóndaw, M/ǩódom bónnodi/ *west*, N bon *fall* LIMIT.

13. *bó·-no, K bó·no, M/lýlykbòno/ *flock of wild geese* (basket design), N bo·no WRITE.

14. *bonóh, K bónoh, M bonó, N bono· EAR.

15. *bosó, K bóso, M bosó, N boso *knife, spear* FLINT.

16. *búh, K búh, M bú, N bu· ~ bu BREAK WIND.

17. *bukúj, K búkuj, M bukúj, N bukuj *smoulder* DIE (of fire).

18. *búǩ, K búǩ, M bûk, N buk TAIL.

19. *bu-túj, K bútuj (cf. bún *pubic hair*), M butú, N butuj (cf. bun *pubic hair*) HAIR.

20. *býh, K býh, M bý, N by· BLOW.

21. *býj, K býj, M býj, N byj LEACH ACORNS.

22. *bým, K bým, M bým, N bym BONE.

23. *ćáh, K ćáh, M ćá, N ća· ~ ća TREE.

24. *ćáj, K ćáj, M ćâj, N ćaj DIFFERENT.

25. *ćawáj, K ćáwaj, M ćawá *chin, jaw*, N ćawaj TOOTH.

26. *-će, K -će, M -ćet, N -će WHILE$_1$.

27. *ćedáh, K ćédah, M ćedá, N ćeda· ~ će·da· BREAKFAST.

28. *ćej, K ćéj, M ʔójćej, N ʔyćej *waste* DIRTY.

29. *ći·ćí, K ćíći, M ćićí *flank*, N ći·ći RIB.

30. *ćíh, K ćíh, M ćí, N ći· ~ ći CLOTHING.

31. *-ćik, K -ćik, M -ćik, N by·ćik *inhale* COVER.

32. *ćitóǩ, K ćítoǩ, M ćiťóǩ, N ćitoǩ POISON OAK.

33. *ćíw, K ćíw, M/ćíwćiwì/, N ćiwi· CLOVER.

34. *-ćo, K -ćo, M -ćo, N -ćo AROUND.

35. *ćóh-, K ćóh, M ćó, N ćo· BURN (intr.).

36. *-ćoǩ, K -ćoǩ, M -ćôǩ *both*, N -ćoǩ DUAL (nominal).

37. *ću·, K ću, M ću.!, N ću· MELT (intr.).

38. *ćúṕ, K ćúṕ, M ćûṕ *willow*, N ćup *basket sticks* STICK.

39. *ćýh, K ćýh, M ćýwak, N ćy· SCRATCH$_1$.

40. *ćý·j, K/ćý·je/, M ćýj, N ćyj ~ ćy·j, FOUR.

41. *-dah, K -dah (~-daw; cf. also dáh- *wipe off*), M -da (~-daw), N -da· OFF. Cf. 46—these appear to be two proto morphemes which have syncretized in Konkow and possibly Maidu. K. -dah occurs as a rare alternant of -daw with both meanings.

42. *dakú, K dáku, M dakú, N daku LEFT (hand).

43. *dáǩ, K dáǩ, M dâǩ, N wa·ćadak (cf. mədəkpaj) ADHERE.

44. *dám, K dám, M dâm, N dam BORROW.

45. *(-)das, K -das-, M/widásdo/ (cf. hédas *crack open*), N dasdasdasti *operate a slap-stick* SPLIT OPEN.

46. *-daw, K -daw, M -daw, N -daw HITHER$_1$. Cf. 41.

47. *-de, K -de, M -ǩade, N hode *where* INTERROGATIVE.

48. *-di, K -di, M -di, N -di LOCATIVE.

49. *díh, K díh, M dí, N di HEAD LOUSE.

50. *-dik, K -dik, M -dik, N -dik *arrive* UP TO.

51. *dóh, K dóh, M dó, N do· BITE.

52. *-doj, K -doj, M -doj, N hadoǩoj

get up with load on back (-do- occurs only with -ǩoj *go*) UP.

53. *dú·, K dú·, M budú *tie into a bundle*, N du· TIE.

54. *dý·hy, K dý·, M dý, N dy· ~ dy·hy BUSH.

55. *-dyǩ, K -dyǩ, M dýǩ, N dydyǩy *exactly alike* JUST (only).

56. *ha, K há, M ha.ˊ, N ha CARRY.

57. *ha, K hámit, M ha.ˊ *move something in water*, N hama·n *something wet* SOAK (tr.).

58. *halé, K hále, M halé, N hale WIN.

59. *háw, K háw, M hâw, N haw FOX.

60. *hedé, K héde, M hedén *close, near*, N hede *this* HERE.

61. *-héj, K -hej, M -hej (cf. syhehéjno *alongside of*), N -hej ALONGSIDE.

62. *héj, K héj, M héj, N hej *follow* CHASE.

63. *héla, K héla, M héla (cf. hélaj *gamble*), N helaj (cf. hel *play handgame*) GRASS GAME.

64. *hé·m, K hém, M hêm, N he·m COALS.

65. *hés, K hés, M hés *thing*, N hes SOMETHING.

66. *he?é, K hé?e, M he?é, N he· (cf. ha·n *yes*) YES.

67. *híh, K híh, M hí, N hi· SMELL (intr).

68. *hín(-i-)pýj-, K hínpy(·), M/hìní pypýj/, N hinipypyj- DIZZY.

69. *hín, K hín, M hîn, N hin- FLOAT.

70. *hín, K hín, M hîn, N hi·n (cf. hin *look*) EYE.

71. *hín, K hín, M hínwo, N hinnan (cf. hi·n *precede*) FRONT (ahead). Cf. 70 above.

72. *..pín, K hípin, M ?epín, N hipin ABOVE.

73. *hís, K hís, M hís, N his WEAVE (baskets).

74. *hó·, K hó·, M hó, N ho· *greet* ALL RIGHT.

75. *hój, K hój, M hój, N hoj *near* FOLLOW.

76. *hójja, K hója ~ hójjà, N hojja *old* LONG AGO. Cf. 75, 330.

77. *hóm, K hóm, M hóm, N hom *cook mush, soup* BOIL (tr.).

78. *homó, K hómo, M homó, N homo WHERE.

79. *hón, K hón, M hôn, N hon HEART.

80. *hón, K hón, M hôn BREATHE. Cf. 79, probably the same morpheme.

81. *hu-, K hú-, M husíp *take off clothing*, hudáw *assume a burden*, N hu ~ hy *take, put* PUT.

82. *huhú·, K húhu·, M huhú, N huhu· LUNGS.

83. *-húp, K -húp, M hup ~ ?up, N -hup INSERT.

84. *hý·, K hý, M hý, N hy· ~ hyj GATHER.

85. *hý, K hý, M hý ~ hy.ˊ, N hy HOUSE$_1$.

86. *hýh-wej, K hýhwej, M/hýhwepàj/ *talk loudly*, N hy·wej PRAY.

87. *hýǩ, K hýkwo, M hýkwo, N hyǩ, GROUSE.

88. *-j, K méj *give* (cf. méh *accept*), M méj *give* (cf. mé *take*), N me·j *give* (cf. me· *get, catch*) STEM FORMANT (verb from verb). Cf. 165, 166.

89. *ja(·), K já, M ja.ˊ, N ja ~ ja· NAME.(n.)

90. *jahá, K já, M ja.ˊ, ja ~ jaha MAKE.

91. *já·, K já·, M já, N ja· CLOUD.

92. *jakán, K jákan, M jakán, N jakan SALIVA.

93. *jáǩ, K jáǩ, M jâǩ, N jaǩ BRIDGE.

94. *jamán, K jáman, M jamán, N jaman MOUNTAIN.

95. *ja-wíh, K jáwih, M jawí, N jawi· NAME (v.). Cf. 89.

96. *jé·, K jé·, M jé *wing of insect*, N je· WING.

97. *-jeh, K -jeh, M -je, N -je· *go along* TOWARD.

98. *jéṗ, K jéṗ, M jêṗ, N jeṗ MAN.

99. *jím, K jím, M jîm, N jim ARM.

100. *jím-dyǩ, K/jímdyknà·/, M/jím-dyǩỳ/, N jimdykna·n RIGHT (hand). Cf. 99, 55.

101. *jo-, K jó-, M jo.ˊ *hit with hand*, N jo WITH FIST.

102. *-jo ~ *jo-, K -jo, N jo- ~ -jo (cf. hujo *hide things*) PLURAL (distrib.).

103. *jó·, K jó·, M jó *move through water*, N jo· *swim underwater* DIVE.

104. *jóh, K jóh, M jó, N jo· FLOWER.

105. *jóǩ, K jóǩ, M jôk, N jok POUND.

106. *jóm, K jóm, M jôm, N jom DOCTOR (shaman).

107. * júh, K júh, M jú, N ju· *scrape with knife* RUB ON.

108. *káj, K káj, M káj, N kaj LOG.

109. *kám, K kám, M kâm *nephew*, N kam SIBLING'S CHILD.

110. *kán, K kán, M kân *all*, *the whole of it*, N kanno *last of a series* END.

111. *kán, K -kàni *and*, *and then*, M kán, N kan *again* THEN. Cf. 110.

112. *kát, K kát, M kât, N kati AUNT.

113. *-kit, K -kit, M -kit ~ -ki, N -kit DOWN$_1$.

114. *kíw, K kíw *behind*, M kîw, N kiw ~ ƙiw BACK (body).

115. *kó·, K kó·, M kó, N ko· *frost* SNOW.

116. *kó·(-m-)ċylý-, K/kò·mċýċyli/, M/kóm ċylýly/, N ko·ċyly HAIL. Cf. 115.

117. *komów, K kómow ~ kómo·, M komó *north*, N komow *south* EAST.

118. *konó(j) K kónoj *woman*, *wife*, M konó *infant* (cf. konójto *a couple*), N kono (cf. konoj *girls*) GIRL.

119. *-kót-, K -kot-, M hekótto *break by cracking*, N -kot (cf. mokot *bite off*) BREAK$_1$.

120. *kó(-)w, K ków *white*, *gray*, M kôw, N kow *silver*, *white* GRAY. Cf. 115.

121. *-ky, K -ky, M -ky, N -ky AGENTIVE.

122. *kylé, K kýle, M kylé, N kyle WOMAN.

123. *kýl(-)la, K kýllà, M kýlla, N kylla LIVER.

124. *ƙa(·)-, K/ƙápokno/ *crush with hand*, /ƙàtánno/ *push downhill*, M ƙa.' *move*, *cause to move*, N ƙa ~ ƙa· ACTION WITH HAND$_1$.

125. *ƙáj, K ƙaj, M ƙâj, N ƙaj EVENING.

126. *ƙaj(-), K/ƙáje ~ ƙáje·/, M ƙajhí, N wakaj WORM.

127. *ƙákkin, K ƙákkin, M ƙákkin, N ƙákin SPIRIT.

128. *..-ƙál-, K ʔíƙal, M ṗiƙál *dried out*, N ʔe·ƙal ~ ʔeƙal DRY.

129. * ƙamáƙ, K ƙámaƙ, M ƙamák *unripe*, N ƙamak DOUGH$_1$ (acorn).

130. *-ƙan, K -ƙan, M -ƙan, N -kan COMITATIVE.

131. *ƙáṗ, K ƙáṗ, M ƙâp, N ƙaṗ RIPE.

132. *ƙáw, K ƙáw, M ƙâw, N ƙaw GROUND (earth).

133. *ƙedé·, K ƙéde, M ƙedé, N ƙede· BROTHER-IN-LAW.

134. *-ƙel-, K -ƙel-, M ƙel, N meƙel *have a gap between teeth*, peƙəl *slit*, *cut* HOLE.

135. *(-)ƙet-, K -ƙet-, M/ʔókket/, /loƙét/ *tiptoe*, N ƙet *sneak* CAUTIOUS.

136. *ƙo, K ƙó, M ƙo.', N honƙo *cough* CHOKE.

137. *-ƙoj, K -ƙoj, M -ƙoj ~ -ƙo, N -ƙoj *go away* AWAY.

138. *ƙóm, K ƙóm, M ƙôm, N ƙomi SEED.

139. *ƙót, K ƙót, M ƙôt, N ƙot (to) FACE.

140. *ƙowó·, K ƙówo(·), M ƙowó, N ƙowo· ARMPIT.

141. *ƙu, K ƙú, M ku.' *drained*, N ƙu DRY UP.

142. *ƙúj, K ƙúj, M ƙûj, N ƙujsoƙ NECK.

143. *ƙúƙ, K ƙúƙ, M ƙûƙ, N ƙuƙ STRING.

144. *ƙú·lu, K ƙú·lu, M ƙúlu *orphaned*, *widow*, N ƙu·lu ORPHAN.

145. *ƙúm, K ƙúm, M ƙûm *hole*, N ƙum ROUNDHOUSE.

146. *ƙúť, K ƙúť, M ƙûť, N ƙuť *deer* ANIMAL.

147. *ƙýs, K ƙýs *hill* (?) (cf. ƙýsky· *cliff*, ƙýsƙysi *healthy*), M ƙýs, N ƙysƙys *solid* RIDGE.

148. *láƙ, K láƙ, M lâƙ, N lak RED.

149. *lám, K lám, M lâm, N lam LONG.

150. *láť, K láť, M lât, N lať LEAK.

151. *lo-, K/lóƙetoto/ *to tiptoe*, /lóhonkỳ/ *have tuberculosis*, M loƙét *tiptoe*, N lo- LAME.

152. *lóƙ, K lóƙ *group*, *bunch*, M lôk, N loƙ MANY.

153. *lú·-, K lú·l, M lulú ~ lûm *stem*, *tube*, N lu·l LEG.

154. *lýl, K lýl, M lŷl, N lyl REDBUD.

155. *-m, K -m, M -m, N -m *subordinating connective* ATTRIBUTIVE$_1$.

156. *-ma, K -ma *place where*, *agentive* (?), M -ma *that which*, *where*, N -ma *result of action*, *place which* THAT WHICH.

157. *máh, K máh, M má, N ma· HAND.

158. *maj-(hi), K máj, M màjhí ~ mahí, N maj SALMON.

159. *máj-dyk, K májdy ~ májdyk, M májdy, N majdyk PERSON. Cf. 55, K. máj- *human* (?), M. máj *3d pers. pron.*

160. *mák, K mákpaj, M/mákpàj/ *find out, learn*, /mákwonò/ *try to*, N wo·mamak *make a motion to hit with a stick* TRY.

161. *mán, K mán, M mân, N man CEDAR.

162. *más, K más, M mâs, N mas SIBLING-IN-LAW.

163. *má·wyk̀-H, K/má·wyk̀ỳ/, M/má-wyk̀ỳ/, N ma·wyky FIVE. Cf. 157, 297.

164. *ma-ʔá, K/máʔati/ *do like that*, M maʔá ~ ma.ˊ, N ma· DO.

165. *méh, K méh, M mé, N me· *get, catch* TAKE.

166. *mé·-j (*méh-j (?)), K méj, M méj N me·j GIVE. Cf. 157.

167. *mén, K mén (also -men), M mén, N -men *temporal* SEASON (time).

168. *..-men, K/jóhmèni/, M/jókmèni/, N jo·men SPRINGTIME. Cf. 104, 105, 167.

169. *-men, K -men-te *without, but not*, M -men, N -men- NEGATIVE.

169a. *-mi, K -mi, M -mi ~ -m (cf. ʔóśćumì *tip, top*, pyćý ~ pyćými *ant*), N mom *water*; perhaps also ma·ćamin *ten* NOMINALIZER.

170. *mín, K mín, M mín, N min YOU.

171. *mín, K mín, M mîn, N min BREAST.

172. *-mit, K -mit, M -mit ~ -mi, N -mit INTO.

173. *mo·hó, K mó, M mo.ˊ, N mo· ~ mo·ho DRINK.

174. *mól-, K -mol-, M/pomólmoli/ *slimy, wet*, N mol *skin an animal* SLIP.

175. *mý, K mý, M mý ~ my.ˊ, N my THAT ONE.

176. *mýh, K mýh, M mý ~ mú, N my· SHOOT (tr.).

177. *my-kán, K mýkan, M mykán, N mykanim (the) SAME. Cf. 110, 175.

178. *-n, K -n, M -n, N -n *go down* DOWN$_2$.

179. *-nan, K -na ~ -na·, M -nan, N -nan ABLATIVE.

180. *-nak, K -nak, M -nak ~ -na, N -na ALLATIVE.

181. *né, K né, M né, N ne (cf. na· (voc.)) MOTHER.

182. *nedíh, K nédih, M nedí, N nedi· DREAM.

183. *nén, K nén, M nén, N nen MOVE (travel).

184. *nehé, K nénoh *myth, story*, M/nenó/, N ne· ~ nehe OLD$_1$.

185. *-ni, K -ni, M -ni, N -ni INSTRUMENTAL.

196. *ník, K ník, M ník, N nik ME.

187. *-no, K -no, M -no, N -no *go and get* ALONG (go).

188. *-no-jeh, K -nojeh, M -noje, N -ne· AIMLESSLY AROUND (go). Cf. 97, 187.

189. *nók̀, K nók̀, M nôk̀, N nok *top, end* ARROW.

190. *-nHʔH, K/-no/ *2S indic.*, /-ni/ *2S interr.*, /-ny/ *2S cavet.*, M/-ny ~ -nyʔy/ *2S cavet.*, /-ne ~ -neʔe/ *2S hort.*, N -bene *2S persuasive* SECOND PERSON SING (opt.).

191. *-p, K -p, M -p, N -p IMPERATIVE (sing.).

192. *..pa(·), K pá, M ʔópa, N pa·pa GRANDFATHER$_1$.

193. *-paj, K -paj, M -paj ~ -pa, N -paj *go up to* AGAINST.

194. *pákaj, K páka·, M pâk, N pakaj SINEW.

195. *pakán, K pákan, M pakán, N pakan POND.

196. *pákpak̀, K pákpak̀, M/pákpakà/, N pakpak EGG.

197. *pán, K pán, M pân, N pan TOBACCO.

198. *pándak̀, K pánda ~ pándak, M pándak̀, N pandak BOW. Cf. K pán *braid, roll on thigh* and 43.

199. *pe, K pé, M pe.ˊ, N pe (cf. also pa ~ pa·) EAT.

200. *-pe, K -pe, M -pe, N-pe ATTRIBUTIVE$_2$.

201. *péj, K péj, M pêj, N pej GRANDCHILD. Cf. 192.

202. *pé·n, K pé·ne ~ pé·n, M péne, N pe·n TWO.

203. *petí·, K péti·, M pêt, N peti· CHILD-IN-LAW.

204. *pi-, K pí-, M pi.ˊ ~ pe.ˊ ~ py.ˊ, N pi- SWIM.

205. *pín, K pín, M pín, N pin HEAR.

206. *-pin, K -pin, M -pin, N -pin HITHER$_2$.

207. *pinéh, K píneh, M piné, N pine LUNCH.

208. *pít-ćaǩ, K pítćaǩ, M/pítćaǩà/, N pitćaǩ LIZARD.

209. *píw, K píw *root, vine*, M pîw, N piw *grapevine rope* ROOT.

210. *po-, K pó-, M po.!, N po SKIN.

211. *pó·, K pó· *brother's daughter*, M pó, N po· DAUGHTER.

212. *pó·ho, K póh, M pó, N po· ~ po·ho NIGHT.

213. *póǩ, K póǩ, M pôǩ, N po·mboko *moon, month* (with assimilation of *p > b in N.; cf. also ʔok *day, sun*) LUMINARY.

214. *poló, K pólo, M/wájpolò/ *sp. plant with edible root*, N polo BUCKEYE.

215. *póṗ, K póṗ, M póp *shoot out* (intr.), N pop BLAST.

216. *pós, K pós, M pôs, N posi *term of address used by Coyote when speaking to the Creator* (cf. also ʔo·s *brother's child, stepson*) COUSIN.

217. *pú·, K pú·, M pú, N pu· SWELL.

218. *pú-, K púmmàli, M púm, N pu (to) PEEL (tr.).

219. *pyćý·, K pýćy·, M pyćý, N pyćy· ANT.

220. *pylý, K/pýlylỳmi/, M pylým, N pylyly SPHERICAL.

221. *pýn, K pýn, M pŷn *pimple, pustule*, N pyn *wound* SORE.

222. *pýp, K/hèpýpdoj/ *trip on something*, M pýp, N pyp BOUNCE (intr.).

223. *pýs, K pýs, M pŷs, N pe·npys *double-barreled* VAGINA.

224. *-pHʔH, K/-pe/(pl.), /-py ~ -pyʔy/ (du.), M/-pe ~ -peʔe/ (pl.), /-py ~ -pyʔy/ (du.), N -pe (pl.), -py (du.) HORTATORY OPTATIVE (1st pers.). *e PLURAL SUBJECT, *y DUAL SUBJECT.

225. *ṗé-, K -ṗel (húṗeli *cut open*, ṗéleǩ-*sharp*), M/huṗék/, N pe OPEN.

226. *ṗi-, K ṗí-, M ṗi.!, N ṗi- HOT.

227. *ṗi-ka.., K/ṗíǩaǩò/, M ṗiǩál *dry*, N ṗikak STIFF. Cf. 128, 226.

228. *-ṗit-, K -ṗiť-, M/támṗiṗìtǩoj/ *go very fast*, /támṗiť ìn/ *swoop down*, N ćuṗitṗit STRAIGHT.

229. *ṗoǩós, K ṗóǩos, M poǩós, N ṗəkkəsi *elbow* (the ə-vocalism suggests possible diminutive ablaut, i.e., *little knee*) KNEE.

230. *ṗoṗó· ~ *ṗo·ṗó, K ṗóṗo, M ṗoṗó, N ṗoṗo· ~ ṗo·ṗo HAY.

231. *ṗún, K ṗún, M/wiṗún/ *tie*, N ṗun *tie knots* KNOT.

232. *sá, K sá, M sá ~ sa.!, N sa FIRE.

233. *-sa·, K -sa·, M -sa, N -sa DUAL (pronominal).

234. *sáǩ, K sáǩ, M sâǩ *grandchild*, N sak GREAT-AUNT.

235. *-sap-, K -sap-, M/mýsap/ *shoot through something*, N ʔosap *try to penetrate thick brush* PENETRATE.

236. *sáṗyj, K sáṗyj ~ sá·ṗy, M sáṗyj ~ sáṗy, N saṗyj THREE.

237. *-sas-, K -sas-, M/hésaswàjto/ *fall apart*, N ʔosaspaj *butt against with head* BREAK$_2$.

238. *sa·-wó-, K/sáwomćà/, M sawó *fire-drill*, N sa·wo, TINDER.

239. *-se, K -se, M -se, N -se PLURAL (pronominal).

240. *sedéj, K sédej, M sedé, N sedej BLOOD.

241. *séw, K séw, M sêw, N sew RIVER.

242. *si-, K sí-, M si.! ~ sy.! N sido·do *hold in hand*, sihjə *awaken by pushing* ACTION WITH HAND$_2$.

243. *sím, K sím, M sîm, N sim MOUTH.

244. *-sip, K -sip, M -sip, N -sip OUT OF.

245. *sóh, K sóh, M só, N so· CARRY ON SHOULDER. (M só *action with hand*).

246. *sojó, K só, M/hámsim sojó/, N so *soft round bun of acorn mush* DOUGH$_2$.

247. *sól, K sól, M sôl, N sol SING.

248. *..sól, K/pú·sòli/ *a callus*, M posól, N po·sol *boil, v.* (sic!) BLISTER. This could be a reshaping or popular etymology in K. See 210, 217.

249. *soló, K sólo, M soló, N solo SHOE.

250. *súǩ, K súǩ, M sûǩ, N suǩ SMOKE (fire).

251. *sumú·, K súmu·, M sumú, N sumu· SUGARPINE.

252. *sy-, K sý- *with slender, pointed instr.*, M sy.′ *action with hand*, syḵét *point with finger*, N sy- *point, insert finger* ACTION WITH FINGER. Cf. 242.

253. *sykýn, K sýkyn, M sykýn *creel*, N ʔole·sykyn *rainbow* ('Coyote's cache'?)) STORE (cache).

254. *sýḵ, K sýḵ, M sýk, N syk DIG.

255. *syḵýj (*syḵý-j (?)), Ksýḵy·j, M syḵýj, N syḵyj SCRATCH$_2$ (an itch). Cf. 88, 254.

256. *sýn, K sýn ~ /sýndaḵà/, M/sýndakà/, N syn FOREHEAD.

257. *-taj-, K -taj-, M sitáj *grab at and miss*, watájto *throw at and miss*, N -taj MISS (hitting).

258. *táṗ, K táṗ, M/ḵítap/, /sitápin/ *hug*, N ḵatapsip *squeeze out a liquid* SQUEEZE.

259. *ta(·)waj-, K tá·j, M táj, N taj ~ tawaj ~ ta·waj ~ ta·wwaj WEST.

260. *-te, K -te, M -ćet *while, although*, -wet *although*, N -te *concessive* BUT (though).

261. *téh, K téh *young of species*, M té, N te· *son* CHILD.

262. *-ti, K -ti, M -ti, N -ti CAUSATIVE.

263. *-ti, K -ti, M -t, N wentin *well* ADVERBIAL.

264. *to·hó, K tó, M to.′, N to·ho *torch* IGNITE. This may be *to(·) *ignite* + *-hH *nominalizer*.

265. *-to, K -to, M -to (transitivizing ? distributive ?), N -to (cf. nenćakto *move together from different directions*, peto *eat together*) DISTRIBUTIVE (general).

266. *..tó·, K tó·, M kotó, N koto (cf. also to·m *parent's older sibling* ?) GRANDMOTHER.

267. *towán, K tó·n, M towán, N to·n *pinenut* DIGGER PINE.

268. *-toto, K -toto, M -totò, N -toto RECIPROCAL.

269. *túj, K túj, M tûj, N tuj SLEEP.

270. *týn, K týn, M tŷn, N tyne (cf. ty (voc.)) YOUNGER BROTHER.

271. *-ťa, K -ťa, M -ťa, N bo·ťa *sit astride*, leťa *cover, bury* ON.

272. *ťáťa, K/ťáťadàḵa/, M/ťáťa/ *palm, sole*, N ma·ťatťa *palm* FLAT.

273. *ťóḵ, K ťóḵ *sharp point, awl*, M ťôk, N tok SHARP.

274. *wa-, K wá-, M/waťá/ *plate, flat object for eating*, /waťán/ *slap*, N wa- *hit with an instrument* WITH FLAT INSTRUMENT.

275. *wá-, K wá, M wá, N wa MUSHROOM.

276. *wadáh, K wádah, M wadá *healthy, well*, N wada· RECOVER.

277. *wáj, K wáj, M/wájpolò/ *sp. plant with edible root*, N waj *potato* TUBER.

278. *wáḵ, K wáḵ, M wâḵ, N waḵ FLESH.

279. *-we, K -we, M -wet *although*, -wetèn *having just*, N wete *even, before, although* WHILE$_2$.

280. *-we-bís, K -wè?es ~ -wè·s ~ -wès, M -webís, N -wes (cf. ʔymitwes *about to enter*) CONTINUATIVE.

281. *wé·da, K wé·da, M wéda, N jo·we·da, sawe·da *sp. feasts* SPRING FEAST.

282. *wéh, K wéh, M wé, N we· VOMIT.

283. *wéj, K wéwej (cf. wéj *bawl someone out*), M wéj ~ wéje, N wej SPEAK.

284. *wél-leṗ, K wéleṗ, M wéllep, N wellep *fan smoke into a hole* (cf. wel- *to fan*) (to) FAN.

285. *wé(-)m-, K wém ~ weh *just, only, bare, without*, M wém *enough*, N wem *bare, only*, we *just, right* BARE.

286. *wené, K wéne, M wené, N wene MEDICINE.

287. *wi-, K wí-, M wi.′, N wi- WITH HAND.

288. *wo-, K wó-, M wo.′ *action with instr.*, N wo ~ wo· *action with instr.*, wo·mamak *make motion as if to hit with stick* WITH STICK.

289. *wóh-, K wóh-, wó- *hit with instr.*, N wo· ~ o *action with instr.* ACTION WITH STICK.

290. *wo(·)- ~ *woh-, K wó ~ wóh-, M wo.′, N wo· CRY$_1$.

291. *wojóh, K wójoh, M wojó, N wojo· SEND.

292. *..wok̓, K hówok̓, M/wókkolò/, N howoko BEADS.

293. *wó·le, K wó·le, M wóle, N wo·le WHITE MAN.

294. *wolós, K wólos ~ wálas *string*(?), M wolós (cf. walás *buckskin counting string*), N wolos BUCKSKIN.

295. *wó·no, K wó·no, M wóno, N wo·no DIE.

296. *wo?ó(·) (?), K/wú?u(·)/, M wo?ó, N wo· *cry* HOWL.

297. *wýk̓, K wýk̓, M wŷk̓, N wyk- ONE.

298. *?ék, K ?ék, M ?êk, N ?ek DAY.

299. *?ép-ti (?), K ?épti *frighten, brave*, M ?épti *strong, frightening*, N ?etti *strong* FRIGHTEN. If the N. form is cognate, *p > t by assimilation, but cf. 302.

300. *?e·pén, K ?épen, M ?epén, N ?e·pen YELLOWJACKET.

301. *?és-, K ?és-, M ?és-, N ?esto MIDDLE.

302. *?et.., K ?étos, M ?etós, N ?etti STRONG. Cf. 299.

303. *?i· (?), K ?í·, M/?ihéj/ *scrape stems for baskets*, N ?i·ċok *shear* SCRAPE.

304. *?ín-, K ?ín-, M/?ínno/ *buttocks*, ?ínwok *thrust with hips*, N ?in- WITH BUTT.

305. *?o- ~ *?ós-, K ?ó- ~ ?ós-, M ?o.ˊ ~ ?ós-, N ?o-, ?oskon *old man* WITH HEAD.

306. *?óh, K ?óh, M ?ó, N ?o· ROCK.

307. *?ók̓, K ?ók̓, M ?ók, N ?ok̓ HUNGRY.

308. *?olé·(l), K/?òle·lwódo·/ *rainbow*, M ?olél, N ?ole (cf. ?ole·sykyn *rainbow*) COYOTE.

309. *?o-nó, K ?óno, M ?onó, N ?ono HEAD.

310. *?ós-ko-n, K ?óskon, M ?óskon, N ?oskon *old man* GRAY HAIR.

311. *?otój, K ?ótoj, M ?otó, N ?oto· ARISE.

312. *?ú-j, K ?új, M ?ûj, N ?uj *hide*, ?ujdi *inside* HOUSE$_2$. Cf. 373.

313. *?y-, K ?ý-, M ?y.ˊ, N ?y- ~ ?u- FIRST POSITION SLOT FILLER (before directionals).

314. *?ýs-, K ?ýs-, M ?ýs, N ?ys *devil*, ?ysty *burying place* DAZED (with supernatural connotations).

6.2. Unreconstructed sets:

315. K bák̓, M botó, N bakka·lEAF. L

316. K báwah, M ċebá *yearn for*, N -be· *try* WANT (try to).

317. K -bílis, M bilís, N tapbelhis *move around very quickly* QUICK.

318. K bís, M bís, N ?is STAY (live at, in).

319. K wónnò, M wonó, N bono ~ bo·no *get lost* LOSE.

320. K -bos ~ -?os, M -bòs COMPLETIVE.

321. K býmpy, M bŷm *bone*, N wýmpy SHIN. Cf. 22.

322. K ċáťaťà, M catáta, N ċatatatti *make a quick roll with slap-stick* RATTLE (as snake).

323. K ċé, M ċe.ˊ, N ?e SEE.

324. K ċúbi *suck*, ?óċubà, M ċobót, N ċobop *make sucking noise* KISS.

325. K ċúċu(.), M ċuċú, N ?uċu URINATE.

326. K ċúk̓uť, M ċuk̓út ~ ċuk̓ú, N juċu· WASH (tr.).

327. K dádak̓, M dadák, N dádat SHOULDER.

328. K ha, M ka.ˊ (cf. ka?á *do*), Na ha (cf. k̓a· *do*) BE.

329. K hájompè, M hájujum, N ha·w YAWN.

330. K hódo, M hadá, N hodo YONDER.

331. K hík, M hît *douse*, N hik- *with water* THROW LIQUID.

332. K hílo, M hiló, N hiləw GROUND SQUIRREL.

332a. K hómma·ti, N homa· *why, what*, homa·tihi *what to do* WHY.

333. K/húmpujdì/, M pûj, N pyjċadi *out of doors* OUTSIDE.

334. K hú·ť (cf. hútk̓ili *whistle a tune*), M hûk (also húkk̓el), N k̓ut WHISTLE.

335. K hýh, M mòmhý, N ?y· (cf. hy· *spin web*) FISH WITH NET.

336. K hýj-, M ?ís-, N hys- WITH LEG$_1$.

337. K hýpe, M hypé, N pa COPULATE.

337a. K -həp̓- ~ -həp-, N -həp- FIT.

337b. K/jáha·/, N ja·haj GRAVEL.

338. K jómpa, M jómpa, N pe SORCERY.

339. K jýlyj (cf. wítjyli *split with hands*), M wijýl *split*, N. juluj POUND (ACORNS).

339a. K ká?aj, N ka·j *nephew's child, great grandfather* GRANDFATHER (recip.)$_2$.

340. K ké·j, M kéj, N he·se OLD$_2$.

341. K ƙámin, N ƙamhin *name of a dance* DANCE.

342. K/ƙé·/, N ʔej OLDER BROTHER.

343. K ƙéť, M/ʔéti/, N ʔet OLDER SISTER.

344. K -ƙi, M -ƙi, N -ƙe POSSESSIVE.

345. K ƙúse *rival, grandmother* (?), M ʔusú *elder brother*, N kyse (cf. ʔy·se *cousin brother*) YOUNGER PATERNAL UNCLE.

346. K ƙýly, M ƙylý, N ƙynyn ∼ ƙənə (cf. ƙələ- *turn back*) ROLL (intr.).

346a. K ƙəh, N ʔinƙə·pu *sit on haunches* SIT.

347. K ƙó·s, M póƙys, N ƙən- *stoop* HUNCHBACKED.

348. K láƙ, M lýlyƙy, N la·laƙ GOOSE.

349. K lól, M lól *mourn*, N lo·lo *old burnt bones* ASHES.

349a. K má·ť, M mahát ACORN BREAD.

350. K mósu·mpò, M mussú, N məsəw *chin* CHEEK.

350a. K méhəƥ, N məhəp *agree* TRUE.

351. K pímmil ∼ pímel, M pímmil, N pi·men GRAPE.

352. K píť, M píť, N pići FECES.

353. K pólolò, pólpol, M pólpòl, N molmol BUBBLE (intr.).

354. K púl, M púl, N pyl OPEN (tr.).

355. K pú·lba, M ʔèlespújka, N pulba DOVE.

356. K -pùto, M -pytò, N pyto ALMOST.

357. K ƥáli·ƙ *trout*, M palík *shiner*, pala FISH.

358. K ƥíťuƥ, M ƥiťúp, N ƥićuƥ *cooked soft* BURNED UP.

358a. K sí·mƥýƙ, N sihi DEW.

359. K sýdoƙ, M sudóƙ, N sudok *back posts in roundhouse* CENTERPOLE.

360. K wásasà *personal property*, M wasása, N ʔose THINGS.

361. K wássa ∼ wás, M wasá, N ʔos BAD.

362. K -waw-, N ʔowow *chalk* WHITE.

363. K wíƥul, M wiƥól *extract*, N. wiƥul UPROOT.

364. K wóh, M wâk, N wo· ∼ wa· CRY$_2$.

365. K wós-, M wóspoj *walk with one short leg*, wósdot *hop on one foot*, N wəskət *limp* WITH LEG$_2$.

365a. K/wàlǿwsi·tò/ *swing across*, M wílliw *twirl* (tr.) SWING.

366. K wǿskətjeh, M wýsƙytƙyt *hop with skipping movement*, N wəskət *hop with limp* HOBBLE. Cf. 365.

367. K ʔa-, M ʔa.′, N ha- ANAPHORIC DEMONSTRATIVE.

368. K ʔá, M ʔa.′, N ha SAY. Cf. 367.

369. K ʔá·ƙ, M ƙákƙa ∼ ʔáʔa, N ʔa·ƙ CROW.

370. K ʔén, M ʔên, N ʔal TONGUE.

370a. K ʔésƙeť (cf. ʔés- *with mouth*), M ʔésƙoćò, N ʔəskət GNAW ON.

371. K ʔípekan, M ʔypéƙanbe, N ʔypekkan ALL.

371a. K ʔó·lolòƙ, M ʔóllolòƙ, N jələl *one of four posts around fire in roundhouse* SMOKEHOLE.

372. K ʔómis, M -ʔùs, N -ʔomis REFLEXIVE.

373. K -ʔu ∼ ʔúh, M ƙáʔuk *hide oneself*, N -ʔu *active construction becomes static* BE THERE. Cf. 312.

6.3. English index: