



kansas
working
papers
in
linguistics

Volume 8
1983
No. 2

STUDIES
IN
NATIVE
AMERICAN
LANGUAGES
II

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We would like to thank the faculty of the Linguistics Department and the Graduate Student Council for their continuing encouragement and support.

Studies in Native American Languages II

Kansas Working Papers in Linguistics

Volume 8, number 2, 1983

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THE POSITION OF OPATA AND EUDEVE
IN UTO-AZTECAN

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Introduction

The goal of this paper is to discuss the position of the Opata and Eudeve languages within the Uto-Aztecán family, specifically within the subgrouping known as Taracahitic,¹ shown in Map 1. Phonological and lexical data will be presented, and then the proposed classifications for Taracahitic are discussed with the possibility of shedding light into the prehistory of the State of Sonora.

The Opata (Teguima), Eudeve (Heve, Dohema) and Jova (Jobal, Ova) have remained in a shadowy position in Uto-Aztecán classifications until very recently. Thomas and Swanton (1911:7-8) frequently err in their classifications based on colonial documents, as pointed out by Sauer (1934). Sauer points out that in the Rudo Essayo, a contemporary Jesuit author states that Opata and Eudeve are as close as Spanish and Portuguese or as French and Provençal, but that Jova was "very difficult and different from all the languages of the Province" (Sauer 1934:50). Johnson (1950) repeats this passage, as did Pimentel (1874). The latter author grouped Tepiman (see below) and Opata as a single family, probably on the basis of some sound changes that are considered below.

The Opata (Op) and Eudeve (Eu) languages are usually grouped into a Taracahitic subfamily of the Uto-Aztecán family along with Guirijio (Gu), Tarahumara (Tr), Yaqui (Yq) and Mayo (My). The inclusion of Tubar (Tu) in this grouping will be attempted below. Kroeber (1934:10) noted that Opata, Yaqui, Mayo, Guarijio and Tarahumara contrast with Tepiman (Pima Bajo, Papago-Pima, Northern Tepehuan, Southern Tepehuan), pointing out that the Tepiman subfamily is so radically different that it cannot be formed into a Sonoran subgroup with Corachol (Cora, Huichol) and Taracahitic. Mason (1936; written 1923) groups the Uto-Aztecán (UA) languages of Sonora as Kroeber later did, except that he joined Cora and Huichol into a subfamily, harking ahead to Lamb (1964). The Mason-Kroeber scheme is as follows: Tepiman, Taracahitic, Cora/Huichol (Corachol). Lamb (1964:110) maintains Mason's grouping; his internal scheme for Taracahitic is as follows in (1).

- (1) Taracahitic
 1. Tarahumarish (Tarahumara)
 2. Cahitish (Cahita, Guarijio?)
 3. Opatish (Opata, Jova)

Two UA languages of Sonora are not mentioned (Eudeve, Tubar), and one is



Map 1. Location of Sonoran Uto-Aztecan

Note that Seri is not Uto-Aztecan.

Tr and Gu developed /w/ after all vowels. In Ca, $**/k^w/$ became $/b^w/$ in all forms in the data except 'coyote'. The development of $**/k^w/$ as a labial sound is restricted to Ca, Op, and Eu.

The glide UA $**/w/$ developed as a nasal, parallel to a continuum first given by Langacker (1976) in only one morpheme in the data set (TWO) as in (4).

(4) $w > \tilde{w} > \eta^w > g$

Ca		Op
		Eu
		Gu

In 'two', Tr has deleted the /w/ and Tu shows $/n^y/$. The UA $**/y/$ changes systematically, as in (5).

(5) $y > n^y \sim n > d$

Ca	Tu	Op
Gu		Eu
Tr		

In Tr and Gu, $**/k^w/$ and $**/w/$ merged. Op, Eu and Ca exclusively developed $**/k^w/$ as a labial stop. Tu generally retained $**/k^w/$, though there is a good amount of allophonic variation. Two changes ($**/p/$ to $/v/$ and $**/y/$ to $/d/$) separate Eu and Op from Tr, Gu, and Ca. Hence, one may make the following subdivisions on the basis of initial consonants.

(6) 1. Op-Eu
2. Tr-Gu
3. Tu
4. Ca

It might be preferable to detach Tu. A special relationship between Op-Eu and Ca may be indicated by the development of $**/k^w/$ as a labial stop in all three.

The correspondences in Table 1 basically hold for the medial consonants in the data. The $/p/$ to $/b/$ to $/v/$ to $/w/$ series holds; there is much fluctuation between $/p/$ and $/b/$ in all varieties, with a development as $/v/$ only in Op-Eu.

The labio-velar $**/k^w/$ usually develops in the following way in one morpheme (BREATHE) as in (7).

(7) $k^w > b^w > v > w$ / ___ i

Ca	Eu	Tr
		Gu

In another morpheme (TEARS), one finds the following development.

(8) $k^w > b^w > k \sim p / _ e$

Ca Tr Op
 Gu Eu

Since only two secure cases of medial $**/k^w/$ development occur in the data, it is not possible to draw any secure conclusions.

The pattern of $**/y/$ to $/n^{(y)}/$ to $/d/$ holds.

For the most part, $**/w/$ remained medially. In Ca, $**/w/$ is reflected as a $/b/$ in two forms (EGG, FOREHEAD2), as well as in Eu. In one morpheme (DAY/SUN), $**/k^w/$ is reflected as $/g^w/$.

Medially, a phoneme $/l/$ or $/r/$ developed in southern UA languages from $**/n/$ in some forms in Tepiman and fairly regularly in the rest of the southern languages. Within Taracahitic, Ca and Tu always reflect $/l/$; the others nearly always reflect $/r/$ (but see HARE). Kroeber (1934:19) notes for Eudeve (which he calls Opata), Yq, My, Gu and Tr a single phone $[r]$ which is "tip trilled and devoiced in its progress; r in érat is acoustically almost l ". Thus, the two realizations are phonetically very close.

There are no surprising developments with the medial consonants; this data reinforces the findings for the initial consonants. It has been pointed out several times (Kroeber 1934:10-11; Lionnete 1978; Miller 1980) that the development of a series of voiced stops from a series of glides is found in varying degrees in Taracahitic, while it is a characteristic feature of the neighboring Tepiman subfamily.

(9) <u>$**/k^w/ > /b/$</u>	<u>$**/y/ > /d/$</u>	<u>$**/w/ > /g/$</u>
Tep	Tep	Tep
Op	Op	Op
Eu	Eu	Eu
Ca		Gu

Op and Eu have the entire series, while Gu has one development and Yaqui may be considered to have a different development ($/w/$). It must be noted that the development of $**/w/$ to $/g/$ seems to be lexically conditioned. Nonetheless, Op and Eu must have had a period of intensive interaction with Tepiman at some time in the past.

Vowels and Stress Patterns

The vowels $/i e a o u/$ remain in all six varieties. These vowels may be inherited from a common Southern UA intermediate ancestor. The vowel $/e/$ developed from UA $**/ɛ/$ in all the southern languages, except Tepiman.

A number of medial consonant variations and variations in the first

vowel may be discussed under the rubric of syllable shape,⁴ but of more importance are stress patterns, seen in Table 2. Toward the south, stress falls on the second syllable or a suffix. This occurs in Tr and Gu (exception: stress on second syllables in verb roots). This usually occurs in Op, Eu and Tu. Stress is always initial in Ca. However, Op and Eu may have initial stress. Heath (1977) points out that stress in UA may have been variable with respect to verb morphology.

It has already been shown that Op and Eu may be grouped together, as may Tr and Gu. Tu may not even belong to Taracahitic. Op-Eu and Ca may be grouped together on the basis of two shared phonological innovations.

- (10) 1. reflection of UA ****/k^w/** as a labial stop
2. development of initial stress

Although separated from each other by historic times, Op-Eu and Ca may once have been neighbors in a dialect chain. On the other hand, Op-Eu has developed a series of stops from glides, pointing to interaction between Op-Eu and Tepiman.⁵ This latter innovation in Op-Eu has been the subject of some speculation about the prehistory of the Tepiman dialect chain and the Taracahitic grouping. I will return to this topic below.

Lexical Data

Swadesh (1955) and Hale (1958, 1959) conducted the first work in UA lexicostatistics. Taken as a relative (rather than precise) chronological indicator when applied within a known family, this early work confirmed the overall classification of Sonoran UA by Mason and Kroeber.

The most recent lexical survey of UA is Miller (1980), who sampled 32 languages for a 107-item list (Hale used 17 languages and the Swadesh 100-item list). Data relevant to Taracahitic is given in Table 3. Tu has more than 50% in common with only one of its neighbors (Ca). Eu shares more than 50% with both Ca and Gu, making them lexically almost as close as Eu's nearest linguistic relative, Op (55% and 57% as compared to 64% between Op-Eu). Op exhibits the same pattern, but to a lesser degree. It is geographically more distant from Ca. This suggests that once Op-Eu was adjacent to Ca and Gu.

A convenient way of checking this situation are cognate splits that occur in the present data. Certain of the cognate sets, such that two or more languages (but not all) share the same lexeme in contrast to the other languages, which usually form a sodality sharing a root that is different from the root that forms the basis of the first grouping. There are three major patterns that emerge from the data, shown in Table 4. One is that Eu and Op form a group by themselves (7/28 = 25%). Op-Eu and Tr-Gu share a number of lexemes in common (4/28 = 14%). The most significant pattern is for Op-Eu and Ca to share one lexeme in contrast to the other (14/28 = 43%). This suggests that the three were once adjacent.

By comparing some of the Taracahitic split cognate data with reconstructed UA forms (Miller 1967) and reconstructed Proto-Tepiman forms (Bascom 1965), it is possible to show that Op-Eu (Opatan) may have had a special lexical relationship to Tepiman that other Taracahitic languages lack. In Table 5, the only six relevant lexical items in the data set are displayed. Only one (CHILE) suggests a special relationship between Tepiman and non-Opatan Taracahitic. The other five show that the Op-Eu forms are in agreement with the reconstructed Tepiman forms, while their semantic equivalents in the other Taracahitic languages do not. This hints at the possibility of Tepiman loanwords into Taracahitic (Miller 1967:22). In two of the items, however, the Tepiman-Opatan forms (BOW, HOUSE) have cognates farther south in Cora, Huichol or Nahuatl. This suggests that some Tepiman-Opatan lexical sharing could be due to geographic adjacency at an earlier time than when the posited phonological interaction (glides becoming voiced stops) took place between Tepiman and Opatan.

Discussion

In the two preceding sections, it was inferred that Op-Eu and Ca were once contiguous as a part of a Taracahitic dialect chain, and that subsequently Op-Eu and Tepiman were in contact. During this period, Op-Eu developed phonological characteristics of Tepiman. Tepiman loanwords (?) in Op-Eu appear to be lacking in other Taracahitic languages, and the weak development of UA **/w/ to /g/ in Op-Eu (only in two related items: TWO, FOUR) argue for the direction of influence of Tepiman to Opatan. The questions raised here about the prehistory of Sonora have lingered on from the time of Sauer and Kroeber's work on the area (1934). I suggest that Opatan (Op-, Eu) were once next to Cahitan. Then the Tepiman dialect chain split Taracahitic, separating Ca from Opatan. Subsequently, Opatan was in intense contact with Tepiman. Study of Taracahitic morphological systems could shed light on the relation of Opatan to Cahitan. Additional etymological work could test the hypothesis that innovation spread from Tepiman to Opatan lexically and phonologically. It seems clear, though, that Taracahitic, whatever its status as a subfamily within UA, was a dialect chain. It may eventually be possible to correlate linguistic models of Sonoran prehistory with models of the state derived from other prehistory research, notably archaeology. In this regard, the material culture work of Campbell Pennington will be of great help. It should be possible to compare lexemes for cultural specifics among the language groups of the area, looking for patterns which could then be compared to any items of material culture that were found to be markers of distinctive archaeological cultures in the area.

NOTES

1. Abbreviations and sources for the languages are as follows: Opata (Op) Lombardo (1702), Balbastro (n.d.), Johnson (1950); Eudeve (Eu) Loaysa (ca. 1640), Smith (1865), Kroeber (1934) and Escalante H. (1964); Tarahumara (Tr) Brambilla (1976), Hilton (1959), and Lionnet (1970); Guarijio (Gu) Johnson and Weitleiner (1954), Miller (1979); Tubar (Tu) Lionnet (1978); Cahitan (Ca) Collard and Collard (1962), Johnson (1962), and Lindenfield (1973). For a survey of the Uto-Aztecan family, see Lamb (1964), Langacker (1977) and Steele (1979). For materials on Eudeve, see Lionnet (1979b).

2. The following symbols used for transcription here require comment; [c] is a dental to alveolar affricate, [r] is a tap or trill, [v] is a bilabial fricative, glottal stop [ʔ] is rendered as [ʔ], vowel length is indicated by a raised dot [Vː], an acute accent indicates stress [ˈ], and [f] follows the usage of Brambilla. Interpretation of documentary sources follows Lionnet (1979a) and Escalante H. (1964) for Eudeve, Lionnet (1978) for Tubar and Escalante H. (1964) for Opata. The critical edition of Loaysa's grammar of Eudeve by Campbell Pennington (1982) will become invaluable in Taracahitic studies.

3. Certain languages of groups of Sonora which may have been Uto-Aztecan or which are grouped with the family on the basis of a few but clear-cut cognates include the following: Tepahue, Tahue, Guasave, Acaxee, Xixime, Ocoroni, Suma, Jumano, Concho, Toboso, Jocome, and Jano. These are sometimes grouped inside Taracahitic, but in the absence of any accurate lexical data, it seems to be the safest position to limit consideration to whether they are Uto-Aztecan or not, and leave the classification there. For a review of this literature, see Sauer (1934), Kroeber (1934), Mason (1936), and Lamb (1964).

4. A number of medial consonant variations appear in the data: /s/ and /r/ (CLOUD, LUNGS), /k/ and /p/ (HEAT), /č/ and k and /kw/ (BUZZARD, EXTINGUISH), /č/ and /t/ and /c/ (SIT sg.), /č/ and /s/ (SLEEP). These may be of interest in a broader framework of research or in probing Taracahitic in depth. A number of vowel alternations in the first vowels are found in the data: /e/ to /i/ is common with the location of stress on the final syllable or suffix. There is a variation of /i/ and /u/ (DOG, FISH, ANT), /e/ and /a/ (in ten stems), /i/ and /e/ (BITE, DREAM, DRINK), and /a/ and /o/ (LUNGS). In a number of cases, a diphthong /ai/ was produced in Opata from medial /h/-loss, changing into /ei/ in Eu: UA **pahi 'three' became Op pai and Eu pei.

5. It has been suggested by Miller (1990:41-42) that the development of a voiced series of stops from glides may reflect borrowing by the Tepimans, with Taracahitic being the source(s) of the variation. However, the fact remains that only Op-Eu and Tepiman have the complete

series. Further, within Taracahitic, only Op-Eu has the complete series. Opatan has the essential development of **/y/ to /d/ everywhere the change is applicable in the data set. It is the only Taracahitic language exhibiting this change. Thus, whatever the direction of influence, Op-Eu and Tepiman underwent a period of mutual contact during which time both speech communities maximized this series of sound changes.

6. The terms Tepiman is adopted after Bascom (1965) and Corachol follows current usage among Uto-Aztecanists. Both terms give an idea of the constituencies involved, while the corresponding terms proposed by Lamb (Pimic for Tepiman, Coric for Corachol) do not.

Table 1. Initial Consonants in Taracahitic

UA	Op	Eu	Tr	Gu	Tu	Ca
p	b, v	b, v	b, p	p	v, w	p
t	t	t, r	t, r	t	t	t
k	k	k	k, g	k	k	k
k ^w	g, b, p	b, b, p	w	w	k ^w , k ^v	b ^w
c	č, c	č, c	č	č	c	č
m	m	m	m	m	m	m
n	n	n	n	n	n	n
s	s, č	s, c	s	s	s	s
w	w	w	w	w	w	w
y	d	d	y	y	n, n ^y	y
?	?	?	?	?	?	?
h	h, ø	h, ø	h, ø	h, ø	h, ø	h, ø

Notes.

1. **/p/ remains /p/ in two items (BLOW, HARE). 2. **/t/ to /r/ in Eu occurs in only two forms (HAWK, WE). 3. **/c/ is sporadically reflected as /t/. 4. **/k^w/ is sporadically reflected as /w/ in Ca. 5. **/n/ to /n^y/ in Tu occurs in only one item (FLY verb). 6. **/c/ remains /c/ allophonically in Op, Eu and Tu. 7. **/w/ becomes /g/ in only two stems (TWO, FOUR). 8. Voicing of original stops is restricted largely to Tr.

TABLE 2. Stress Patterns

1. $v : \overset{(\prime)}{v} : \left\{ \begin{array}{c} \overset{(\prime)}{v?} \\ v? \end{array} \right\} : \left\{ \begin{array}{c} v? \\ v_h \\ v?v \end{array} \right\} : v : \overset{(\prime)}{v}cc$
2. $v : \left\{ \begin{array}{c} \overset{(\prime)}{VV} \\ \overset{(\prime)}{v} \end{array} \right\} : v : v : v : \overset{(\prime)}{v}$
3. $\left\{ \begin{array}{c} \overset{(\prime)}{VV} \\ \overset{(\prime)}{v} \end{array} \right\} : \left\{ \begin{array}{c} \overset{(\prime)}{VV} \\ \overset{(\prime)}{v} \end{array} \right\} : v : \left\{ \begin{array}{c} \overset{(\prime)}{VV} \\ \overset{(\prime)}{v?v} \\ \overset{(\prime)}{v} \end{array} \right\} : \left\{ \begin{array}{c} \overset{(\prime)}{VV} \\ \overset{(\prime)}{v} \end{array} \right\} : \overset{(\prime)}{v}v$
4. $v : \overset{(\prime)}{v} : \left\{ \begin{array}{c} v \\ v? \end{array} \right\} : v_h : \left\{ \begin{array}{c} \overset{(\prime)}{VV} \\ \overset{(\prime)}{v} \end{array} \right\}$
5. $v : \left\{ \begin{array}{c} \overset{(\prime)}{VV} \\ \overset{(\prime)}{v} \end{array} \right\} : v? : \overset{(\prime)}{v} : v : \overset{(\prime)}{v}v$
6. $v : \overset{(\prime)}{v} : v : v : v : \left\{ \begin{array}{c} \overset{(\prime)}{v?v} \\ \overset{(\prime)}{VV} \end{array} \right\}$

Notes

1. The order given is: Op, Eu, Tr, Gu, Tu, Ca.
2. VV indicates a long vowel; CC indicates a long consonant.

Table 3. Lexical Data (After Miller 1980)

	Op	Eu	Gu	Tr	Tu	Ca
Op	--	64	50	46	39	49
Eu		--	55	49	48	57
Gu			--	79	48	58
Tr				--	43	50
Tu					--	51

Note

1. Figures are percentages of lexical sharing of a 107-item sampling list.

Table 4. Cognate Splits in Taracahitic

GROUP I: Op-Eu vs. Tr-Gu-(Tu)-Ca

CHILE	FEATHER
EARTH	FOREHEAD
ENEMY	SEED
FEAR	

GROUP II: Op-Eu-Tr-Gu vs. Tu-Ca

BLACK
FIRE
FOOT
FOUR

GROUP III: Op-Eu-Ca vs. Tr-Gu-(Tu)

BELLY	HEAD/HAIR
COTTONTAIL	MILK
COUGH	ONE
CRY	SKIN/HIDE
EAT	STICK/WOOD
HAND	WASH

Table 5. Tepiman-Opatan Lexical Resemblances

GLOSS	UA	*TEP	OP-EU	TR	GU	TU	CA
BOW	**kata (M53) (Num, Tb, Hp, Tep, Nah)	*gá·toi	ata, váko-ci	(w)atá	atá	wiko-lít	wíko'ori
CHILE	**ko(ko) (M129c 'hurt') (Sr, Tep, Nah)	*ko'okori	urú-k (<'hot')	korí	ko'okorí	kokól	kó'okori
EARTH	*tewa <**tep (M150a) (Num, Hp, Tep)	*dávárai	tevet, tevat	kawí	we'e(hé)	k ^v irát	b ^w ípa
ENEMY	*opa < **?	*ó·bai	opa-wa,	sayé	sahí		sáayo
FOOT	**tara (M187) (Tep, bound in Num)	*tára	tarát	fará	tará	n ^y okír	wóki
HOUSE	**ki (M240a) (Tak, Hp, Tep,	*kí·	ki-t, kí·t	karí	karí	kitá	káali

Notes

1. Abbreviations: Ca Cahitan, Cr Cora, Eu, Eudeve, Gu Guarijio, Hch Huichol, Hp Hopi, Nah, Náhuatl(an), Num Numic subfamily, Op Opata, Sr Serrano, Tak Takic subfamily, Tb Tübatlabal, Tep Tepiman subfamily, Tr Tarahumara, Tu Tubar, UA Uto-Aztecan.
2. In EARTH, Tepiman should reflect **/y/, not **/t/.
3. Miller (1967:22) suggested that BOW may have been borrowed into Taracahitic from Tepiman.

APPENDIX: Data Set

- Notes: 1. Abbreviations: Ca Cahitan or Cahuilla (Cahuilla in distributions of UA forms given in parentheses after a UA citation), Cr Cora, Eu Eudeve, Gu Guarijio (Varihio), Hch Huichol, Hp Hopi, Mn Mono, My Mayo, Nah Nahuatl(an), NT Northern Tepehuan, Num Numic subfamily, Op Opata, Pg Papago, pl plural, Pn Panamint, re reference, sg singular, SP Southern Paiute, Sr Serrano, ST Southern Tepehuan, Tak Takic subfamily, Tb Tübatlabal, Tep Tepiman subfamily, Tr Tarahumara, Tu Tubar, Yq Yaqui, UA Uto-Aztecan.
2. This data set is not meant as a definitive treatment of Taracahitic.
 3. Opata and Eudeve forms are cited in the original spelling and in transcription.
 4. Tubar forms are cited in Lionnet's transcription.
 5. Cahitan (Yq, My) long vowels are written as VV.
 6. Morpheme boundaries have been inserted as a dash (-) in citations.
 7. Long consonants have been written as CC.
 8. Cahitan forms always have stress in the first syllable.

- AFFINE Op monigua, monégua-t [moní-wa], Eu mon 'son or daughter-in-law', Tr mo'né, Tu moa-sakár [mo a], Ca mo'one 'son-in-law', UA M505 *mona (SP, Hp, Yq, Cr, Nah)
- ANT₁ Op [sikku], Eu [sikú-č], Tr sikú-i, Gu sekúi, sekwí, Ca ere'e-suúki-m, UA M5 [*sikV] (Tr, Gu, Nah)
- ANT₂ Op ari, Eu ari-t, Tu ali-sík, UA M4 *ane (SP, Tb, Ls, Ca, Sr, Hp, ST?)
- ARROYO Eu hakí-t, Tr aki-či, Gu akí'creek', Ca hakí-a, UA M348 *aki (Tepiman)
- ASHES Op napo, napo-t, Eu napósa-, nápsa'a, Tr na'pisó, Gu nahpisó, náapisó, Tu nasí-t, Ca náposa, not equal to UA M11 *mat (Tep, Yq-My, Cr)
- ASK Op nettema, [nete-ma, Tr náre, nári, Gu ihta-ní, Ca nátema, UA M13 *ta (Tep, Nah)
- BATHE Op uba-ria, Eu huba, Tr úba, ubá, Gu u'upá, Ca ubba, UA M27 *upa (Yq, My, Cr, Hch)
- BEANS Op muni, [muu], Eu muni, Tr muní, Gu muní, mu'uní, Tu vo-posí-t, toló-m, Ca muúni-m, UA M29 *(various) (Hp, Pg, Yq, My, Cr, Hch)
- BEE Op cobara, Eu mumuwo, Tr rikó, wikó, Gu momohá 'honey', Tu say-vól, Ca múmmu, UA M31 *mumu, *meme (Hp, Tep, Gu, Yq, My)
- BELLY₁ Op siwa-či, Eu síwa-t, [síwa-t], Ca síwa-m 'guts'
- BELLY₂ Tr fopá, Gu tohpá, tóppa, UA M417 *to (Tak, Gu, My, Yq)
- BIG Op we, werá, gueri [weri], Eu vveca-t, wei, Tr o'weri (pl.), Gu weru-, Tu weé [we'é], Ca bwéere, bwé'u, bwé'uru, Ua M39d *kwe (Yq, My)

- BIRD₁ Eu wikí-c, viquitz, [wikí-c/č], Ca wíki-t, UA M40
 *wici, *wiki (Yq, My)
- BIRD₂ Gu ču/rukí, tú'učuhkí, Tr čurugí, UA M41 *cutu (Tb, Hp)
- BITE Op kiki-a, Eu ké, Tr i'ki-, Gu ki'-cu-, Tu ke-,
 Ca keke, ke'eye, UA M45 *ke(y) (pan-UA)
- BITTER Op chipu, Eu cipú-, Tr či'pú-, Gu cihpú-, Ca ciibu,
 UA M43 *cipu (Tak, Hp, Cr, Hch, Yq, My)
- BLACK₁ Op sovai, sowai, Eu sóvei
- BLACK₂ Tr čona-, Gu oh-čóna-ni
- BLACK₃ Tu tokú-r, Ca čúku-li, UA M45b *tuk and M45c *cuk
 (45b pan-UA; 45c Tr, Yq, My)
- BLOOD Op era, Eu eerá-t, Tr e·rá, Gu elá, heerá, Tu ará-t,
 avá-t, Ca 'ohbo, ohovo, UA M47a *et (Sr, Tr, Gu, Tep) vs.
 M47b *ew (Tak, Hp)
- BLOW Op nunu-a, Eu pupúca, Tr púca-, Gu pupúce, Ca puhtí-a,
 UA *puci (Tr, Tb, Pg, Cr, Nah)
- BONE Op owa, Eu hówa, Tr o'čí, Gu o'á, ho'owá, Tu hotará-,
 Ca 'otta, UA M52 *o, *oho (pan-UA)
- BOW (weapon)₁ Eu vácotzi, Tu wiko-lít, Ca wíko'ori
- BOW₂ Tr atá, watá, Gu ata, UA M53 *[(k)ata] (Num, Tb, Hp,
 Tep; Nah atl; into Tr < Tep?)
- BREAST (female) Eu vi'it, Gu pi'wá, Tu wimú-r, Ca píppi-m,
 UA M58 *pi (pan-UA)
- BREATHE Eu hí-si, híbes, Tr iwí 'breathing', Gu iwí, hih-,
 Ca hiap-, híab-ihte, UA M60c *hikw (Hp, Tep, Tr)
- BURN₁ Op coso-a, Eu náda 'stir fire', na'i 'fire', Tr na'i
 'fire', Gu na'yá, Ca náanna 'build fire', UA M62a *na(i)
 (Mn, SP, Tak, Hp, Tep, Tr Gu, Yq)
- BURN₂ Eu tahá, Tr fahá, Gu taha- 'light a fire', Tu taha-
 mét 'fire', Ca táyya-k (Mayo táhhi, UA M423d *ta(h)i
 (Tep, Tr, My, Yq, Cr, Hch)
- BUZZARD₁ Op técó, Eu tecó, Tu tekó, Ca tekwé
- BUZZARD₂ Tr wirú, Yq wíiru, UA M67 *witu (Yq, Hch)

- CAPTIVE/SLAVE/POSSESSION Op bucqua, Eu bukú-t, Tr bukú
'thing owned', Gu puhkú, Ca buku, buké- 'pet', UA M135
*puku 'dog/pet' (Num Tb, Hp, Yq, My)
- CHEST Op tawa9či), tagua(chi), Tr fawí, tawé, Gu sulú,
suláci, Tu peson^yva-r, Ca táuwi, UA M59 *tawi (Hp, NT,
Gu, Yq, Cr, Hch)
- CHILD/DAUGHTER Op mara 'daughter', Eu mári 'daughter',
Tr mará'daughter' (man sp.), Gu mala 'daughter',
te'-mari 'young man', Ca maála 'daughter' (man sp.), UA
M86 *ma(1) (Tak, Hp, Tep, Hch, Yq, My; in Hp, Yq, My,
as well as most of Taracahitic, the meaning is 'daughter')
- CHILE₁ Op uru, urú-k 'hot', Eu [ʔurú-k]
- CHILE₂ Tr korí, Gu ko'okóri, Tu kokól, Ca kó'okori, UA M129c
*ko(ko) 'hurt' (Sr, Tep, Cr, Nah; of these, only Tep and
Cr have the sense of 'chile')
- CLOUD Op me mori (pl.), Eu mosí-t, Tr bemorí, Gu tomóa-r,
Tu mosí-t, Ca naámu
- COLD Op sepi- 'freeze', sipí 'get cold', Eu sepé,
sepá 'get cold', Tr fúrá 'cold', Gu tu'urawá, Tu sevé,
Ca sebbe, UA M94b *si(p) (Tb, Sr, Hp, Nah, Tr) does not
equal M94c *sap (Ls, My, Yq)
- CORN Op sunu, [šuuu'u], Eu sunú-t, Tr su·nú,bači 'squash'
(cf. the Yq form), Gu sunú, Tu koi-t, Ca tátči, UA M102
*sunu (Tep, Nah)
- COTTONTAIL Op tabu, Eu távu, Tr fowí, Gu toí, to'owí,
Tu owilá, Ca taabu, UA M323 *to (Tep, Tr, Nah) does not
equal M334a *tapu (Num, Tb, Hp, Yq, My)
- COUGH Op tatasi (N), [tatta], Eu tatás-, [tatsa],
Tr rosó-wa, Gu tohsoá-, Ca tasse, UA M106 *tas (Yq, My,
Nah)
- COYOTE Op goó, [go'o], Eu woi, [gól], [wól], Tr basačí,
Gu wo'í, go'í, Tu wawínál, wowínál, vavonál 'wolf',
Ca wo'i, UA M110b *wa (Sr, My, Yq, Cr) approximates M110a
*kwa (Hp, Tep, Nah)

- CRY₁ Op nara-quia, Tr nará-, Gu nalá, UA M113 *na (Cm, Tb, Ls, Ca, Gu)
- CRY₂ Op baon-ia, Eu bá'ana, Ca bwaána
- DANCE Op dagui-a, Eu dáhdauh, da'uen, Tr awi-mea, Tu n^ya, Ca ye'eye
- DAY/SUN Op tawe, Eu tauí 'sun', Tr fawé, Gu taawé, Tu ta-i, oít, Ca taágwa-ri, UA M423a *ta (pan-UA)
- DEER Op maso, Eu masó-t, Tr čo'marí, Gu mahóí, Tu suhá-t, suká-t, Ca maáso, UA M125 *mas (Gu, My, Yq, Cr, Hch, Nah) does not equal M124b *cu (Tr, NT, ST)
- DEFECATE Op bita, Eu bíta, Tr witá, Gu wihtá, Ca bwíta, UA M126 *kwit(a)
- DIE (sg.) Op mukia, Eu mukú, [múki], Tr muku-, Gu muke-, mugu-, Tu hoo-, huu- (sg.? pl.?), Ca muúki, UA M128a *muk- (pan-UA)
- DIE (pl.) Op co, Tr suwi-mea, Gu ko'ya-, Ca kokko, UA M129a *ko(ko) 'hurt/die' ('kill' in Sr, Hp; 'sick' in Tep, Yq, My) vs. M130 *su(w)a 'die' ('die' in Hp, Tr; 'kill' in Yq, My)
- DOG Op chita, Eu cú-ci, [čúuci], Tr čúri 'puppy', Gu cuhcufí, Tu cucú, Ca cu'u, UA M139 *cu (Pg, Yq, My, Tr)
- DOWN/FUR/BODY HAIR Op boguá, Eu barí- 'soft' (cognate?), Tr bo'á, Gu po'á, Ca bowwa-m, UA M212b *po (pan-UA)
- DREAM Op temu-quia, Tr rimú, Gu temú-, Ca téenku, UA M140 *te plus *mu 'die' (Tb, Hp, Nah, Yq, My)
- DRINK Op bais, [hi], [vai], Eu hí-, hiá-, [bahí-], Gu ihí-, Tr bahi-, Ca hé'eye, UA M141 *hi('e) (pan-UA)
- DRY Op guaqui, Eu wake-, [waaki], Tr waki-, Gu wagi-, Tu moronír, Ca wakía, UA M143 *waki (Tb, Tak, Hp, Tep, Ca, Cr, Hch, Nah)
- EAGLE Op pawe, Eu páue, Tr waćó'heron', Gu wa'wé, Tu kwamowé-t, Ca buaûe, UA M146a *kwa (pan-UA)

- EAR Op menacá, Eu nacá-t, Tr naká, Gu nahká, Tu naká-r,
Ca nákka, UA M148a *naka (pan-UA)
- EARTH Jova tevá, Op tebe, [teve-t], Eu tevá -t, Tr gawí,
kawí, Gu we'e, we'ehé, Tu kvirá-t, Ca bwíya, UA M151 *kwi
(Pg 'mud', Yq, My, Cr, Hch)
- EAT₁ Tr go'mea, ko'wa 'food', Gu ko'a-, Tu koa, koko,
UA M152d *ku, *ko (Ca, Tep, Gu)
- EAT₂ Op wai-, Eu ba'i, Ca hi'i-bua, UA *[kwa]
- EGG Op ogua, Eu ákavora, Tr gawá, Gu ka'wa(rá), Tu netelú-r,
Ca kábba, UA M156 *kawa (Yq, My)
- ENEMY₁ Jova topa, Op opa-gua, Eu oví-gua, *[opa]
- ENEMY₂ Tr sayé, Gu sahí, Ca sáayo, behri, UA M158 *say
(NT, My)
- ENTER (sg. subject) Op muiba-ria, Eu vaké-, [bá'ak], Tr bakí,
Gu pahkí, páki-, Ca ki-bake, UA M159 *paki (pan-UA)
- EXTINGUISH (re 'fire') Op tucha-ria, Tr čo'wí-a, Gu čo'a-,
Tu tokú-r, tukú-r, u-túk, Ca tuuča, UA M171 *cupa (Mn,
Tb, Yq, My, Nah?)
- EYE Op tam bú-gua, Eu vusí-t, Tr busí, Gu pusí, Tu telú-r,
tilú-r, Ca puúsi-m, UA M160a *pusi (pan-UA)
- FALL (sg.) Op guechi-a, Eu vece, huetzén, Tr wiči-mea,
Gu wihči-, Tu wece, mwecé, Ca weče, UA M163 *we- (pan-UA)
- FAR Op mecaag, Eu mekú, Tr meká, Gu mehká, Ca mekka, UA
M165 *meka (Tep, Yq, My)
- FEAR₁ Op seguichi-, Eu scuitzen,
- FEAR₂ Tr mahá-ame, Gu maha-, Ca mahwe, maha-hue, UA M167
*ma (Hp, My, Yq, Cr, Hch, Nah)
- FEATHER₁ Op chi-jusa, Eu hunsa
- FEATHER₂ Tr ma'sá, Gu ma'sá, ma'asá, Tu masá-t, Ca masa,
UA M466 *masa (Sr, Hp, Yq, My, Cr)
- FIGHT Op nacha-quia, Eu nácodan, náhodan, Tr nakoma,
Gu nasuwá-, Ca nássua

- FISH Op cuchu, Eu kucú-t, Tr kučú-ki, Gu so'o-či,
 Tu kicú-t, Ca cuchu, UA M173 *(various shapes), *[kucu]
 seems to be general in the southern languages
- FIVE Op marig, [mariki], Eu mári-ki, Tr mari-ki, Gu marikí,
 Tu mamuní-r, Ca mamni, UA M513 *(various, but all include
 *ma 'hand')
- FLEA Op teppu, Eu tepú, Tr ripučí, Gu tehpučí, Tu tipú-t,
 Ca téppu-t, UA M175 *tepu(ci) (NT, ST, Yq, My, Cr, Hch, Nah)
- FLOWER Op segua, Eu sewá-t, Tr sewá, siwá, Gu sewá, seewará,
 Ca seewa, UA M178a *se (pan-UA) alternating with M178b *si
 (Hp, Tep, Tr)
- FLY (insect) Op saibori, Eu sévor, Tr se'eorí, Gu so'ori',
 Tu haya-vól, Ca sé'ebori, UA M181 (Yq, My, Cr, Hch, Nah)
- FLY (verb) Op nis, Eu née-n, Tr 'i'ní, Gu ni'i-, niré,
 Tu ha-n^yá, Ca né'eye, UA M184 *ne (Pg, Gu, My, Yq)
- FOOT₁ Eu tará-t, Tr fará, Gu tará, UA M187 *ta, *to (Mn,
 Cm, SP, Hp, Pg, NT, Gu)
- FOOT₂ Tu n^yokí-r, Ca wókki
- FOREHEAD₁ Op sobe, Eu [sóoba'a]
- FOREHEAD₂ Tr kowa-rá, Gu koa-tá, Tu ková-r, Ca koba méhe'eria,
 UA M190 *kowa (Tep, Cr, Nah)
- FOUR₁ Op naag, [nago], Eu náwoi, Tr naó, Gu naó, *[nawoi]
- FOUR₂ Tu narikí-r, Ca naíki, *[nariki]
- FROG Op temo, Eu tema-t, Tr remó, awáka, sakwá, Gu te'emó,
 Tu koa-n^yí-t, Ca báta'ači, UA M191 *kwa (SP, Hp, Tep, Cr,
 Nah) parallels M192 *waka (SP, Tb, Tak, Mn?)
- GIVE Op maqui-a, Eu maká, Tr ama, yama, Tu maka-, mika-,
 Ca miíka, UA M196a *maka (pan-UA)
- GO Eu -sim-, se-, Tr simea, Gu simi-, Tu simi-, semé-,
 Ca síime, UA M198 *simi, *sime (Tep, Gu, Yq, My)
- GREEN Op sidoy, Eu sidei, Tr siyóna-, Gu siyoéme 'blue',
 Tu n^yoaká-r, Ca síali

- GRIND Op tucia, Eu tusá, Tr rusú, batusú 'corn meal', Gu tusú, Ca tuíse, UA M206c *[tus-V] (SP, Tb, Hp, Yq, My, Cr, Hch, Nah)
- HAND₁ Op mama, Eu mamá-t, Tr matagá 'palm', Ca mámma-m, UA M215 *ma, with the Op, Eu, Ca and Hch forms reduplicated)
- HARE/JACKRABBIT Op paró Eu buasos, barós [paaros], Gu pu'loísi, Ca paáros, UA M336 *pa (Ls pá·xu-t, My, Yq), more at *[palosi]
- HAWK Op tagua-, Eu toháuo 'large hawk', Tr rawíwi, Gu tahi'iwe, Ca taáwe, UA M217 (ST, Gu, My)
- HEAD/HAIR₁ Tr kupá 'head hair', Gu kupá, Ca kóbba 'head', UA M209 *kupa (Hp, NT, ST 'head hair')
- HEAD/HAIR₂ Tr mo'ora 'head', Gu mo'ó, Tu womó-r, UA M218 *mo'o (Tep, Cr, Hch 'head')
- HEAD/HAIR₃ Op choni 'head', Eu coní-t 'head', Ca čóóni-m 'head hair', UA M219c *coní (My, Yq, Nah 'head hair')
- HEAR Op cai-sa, Eu ké-, Tr akema, Gu nehína, Ca híkkaha, UA M221 *ka (Tb, Sr, Tep, Yq, My), more at *[kai]
- HEART₁ Op gida, Eu hibés-, hiberde, [hibme'e], Ca híapsi 'life', Gu hiiká, *[hikwa]
- HEART₂ Tr surá, Ca suula, UA M222a *sula (pan-UA)
- HEAVY Op bette, Eu beté-, [beté'e], Tr be'téame, Gu pehté-, Ca bette, UA M223 *pete (Tb, Hp, Tep, Yq, My, Cr, Hch, Nah)
- HOUSE₁ Op qui, Eu kí-t, Tu ki-tá, UA M240a *ki (Tak, Hp, Tep, Cr, Hch)
- HOUSE₂ Tr karí, Gu karí, Ca káali, UA M239 *kali (pan-UA)
- HUNT Op amu-a, Eu amú-, Tr serúrema, Gu we'mó-, Tu himoa, himwa, Ca amu, UA M242 *amu (Ls, Ca, Yq, My)
- HUSBAND Op cuna-gua, Eu kun, Tr biré, kuná- 'be widowed', Gu kuná, Tu sonekám, Ca kuuna, UA M504a *kuna (Ls, Hp, Tep, Tr, Gu, Yq, My, Cr, Hch)
- I Op ne, Eu nee, ne, Tr nehé, ne, neeri, Gu nee'é, Tu ené, iné, Ca inápo (My), inépo (Yq), UA *ne (pan-UA)

- KILL (sg. object) Op mia-ria, Eu méa, Tr me'á-, mi'yá,
Gu me'á-, merí-, Tu ma-, wa-, Ca me'a, UA M128d *me(a),
(Tak, southern languages)
- KILL (pl. object) Eu kóda-, Tr ko'yá-, Tu kon^yá-, UA M129a
*koi 'die (pl.)' (pan-UA)
- KNIFE₁ Op bi, bica-gua, Eu biká-t, wiká-t, Tr re-piga-ka,
UA M246 *pika (Tb, Hp)
- KNIFE₂ Gu na'waso, pehtúri, Ca nabá'asom, UA M248 *napa
(Pg, Yq, Cr, Hch)
- LAUGH Op achi-a, Tr ači-mea, Gu ači-, Tu nawi-, Ca aáče,
UA M251 *ac (Tep, My, Yq, Cr, Hch)
- LEAF Op saguá, Eu sáwa-, Tr sawá, Gu sawá, sawará, Tu samóa-r,
Ca sáwa, UA M255 *sawa (Tep, My, Yq, Cr, Hch)
- LIE DOWN (sg. subject) Op [vo], Eu vo'o, bói, Tr biči, Gu po'í,
Ca bo'oka, UA M260 *po (Pg, My, Yq)
- LIVER Op gema, Tr imará, Gu emá, Tu yamá-t, Ca heéma-m,
UA M265 *nema (pan-UA)
- LONG/TALL Op haube, Eu [tebéi], Tr ripá 'up', Gu té'epa,
tépih-, Tu weé, Ca teebe, UA M268 *te(p) (Mn, Tep, Yq, My,
Hch, Tb?)
- LOUSE Op atte, Eu até-t, Tr té, Gu ehté, Tu até-t, Ca éttem-m,
UA M269 *ate (Sr, Hp, Yq, My, Cr, Hch)
- LUNGS Op tan match, Eu coná-t, Tr sonorá, Gu so'locá,
Tu sorá, soró-, Ca sáre'ečia-m, UA M270 *sono (Mn, Pn, SP)
- MAT Op gipé Eu hipé-t, Tr pé-ka, Gu ihpetá, Ca hípeta-m,
UA M277 *peta (Gu, My, Yq, Cr, Hch)
- MEAT Op sá, Eu sába, Tr sa'pá, Tu tikon^y-wá-t,
Ca waakas, sáawa-m], UA M280 *wa'i, (SP, Tak, Tep, Cr,
Hch)
- METATE Op mata, Eu metá-t, Tr mata-ka, Gu mahtá, Tu matá-t,
Ca matta, UA M283 *mata (SP, Tb, Ca, Hp, Yq, My, Cr, Hch,
Nah)
- MILK Op cagui, Eu [kawíra'a], Tr či'mú, Gu mu'i, Ca kauwa-m,
UA M284 *mu (SP, Cr?)

- MOON Op mecha, Eu mechá-t, Tr mečá, Gu mečá, Tu meča-t,
Ca meéča, UA M286b *meca (Tep, Gu, Yq, My)
- MOTHER Op deé, de-guat, Eu dé, Tr eyé, Gu ye'yé, yeyé,
Tu in^yá-r, Ca aiye, UA M486a *ye (Tak, Hp, Tep, Yq, My)
- MOUNTAIN Op chareba, chuea, Eu kawí-t, Tr kawí, Gu kawí
'hill', Ca kauwi, UA M289a *kawi (Tak, Yq, My)
- MOUNTAIN LION Op tuhchi, naidogua, Eu mavíro, tucí,
[mavíro-t], Tr ma'wiyá, Gu mawíá, Tu mawí-t, Ca óuseri,
cf. yooko 'tigre', UA M291 *ma (Pg, Cr)
- MOUTH Op teni, Eu teni-t, Tr finí, Gu téeni, Tu tiní-r,
Ca teeni, UA M293 *tena (pan-UA)
- NAIL Op me sutu, Eu sutú-t, Tr sutú, Gu suhtú, Tu alapé-r,
Ca sutu, suttu 'finger', UA M298a *sut (Cm, SP, Sr, Nah)
- NAME (noun) Jova teguán, Op ur, tegua, Eu tewá-t, Tr finí,
Tu temwa-ra(k), Ca téwa-m, UA M300a *tew 'be named' (Ca,
Hp, Pg, Yq, My Tb, Tak?)
- NAVEL Op siqui, Eu siiká-t, Tr sikú, Gu sikú, Tu sikú-r,
Ca siiku, UA M301 (Pn, SP, Sr, Nah)
- NECK Eu kutá-t, Tr kutá, Gu kúhta-, kuhtá 'throat', Tu kwái-r,
móa-r, Ca kutá'anawa, UA M303a *kuta (pan-UA)
- NO/NOT Jova cá, Op cay, Eu ka, Tr -ke, Gu ka'i, Tu ka-, katé,
kole, Ca kaa, e'e 'no', UA M306 *ka(i) (pan-UA)
- NOSE Op daca, Eu daká-t, Tr a'ká, Gu yahká, Tu níki-ser,
Ca yekka, UA M308 *yaka (SP, Tb, Hp, Tep, Tr, Gu, Yq, My,
Nah)
- OAK Op tóa, toaa, Eu tohá, Tr fohá 'black oak', Gu tohé,
tohá, Tu amoá-t, tosi'white oak', UA M309 *tua (Tep, Cr,
Hch, Gu)
- OLD Op oche, oatzi, Eu dotzi, Tr ócé-rame, Ca ó'ola-, ó'ora-,
UA M310 (Tb, Yq, My): *[oče] vs. *[o'ola]
- ONE Op seb, Eu sé-i, Tr bire, Gu piré, Tu hemé, Ca seenu,
UA M507a *se (pan-UA)

- OPUNTIA Op nacoó, Eu navú-c, [nakó'], Tr irá, erá, Gu napó, Tu nakasí-t, Ca naabo, UA M70 *nap (Tak, Hp, Tep, Yq, My, Nah)
- OWL Op muju, Eu muhú-t, Tu mutá, Ca muu'u, UA M312 *muhu (Mn, SP, Tb, Ls, Sr, Hp)
- PARCHED Eu saqué-t, Tr saki, Ca saake, saáki 'popcorn', UA M328 *saki (NT, My, Tr, Pg, Tb, Eu; has meaning 'parched' in NT, My and Eu)
- PINE Op goco, Eu wokó-t, Tr (y)okó, Gu wohkó, Tu n^yokó-t, Ca wókko, UA M320a *woko (Num, Tb, Hp, Yq, My)
- PLANT (verb) Op [ehč], Eu zivadai, vehri, ['eč], Tr icá, acá, Gu eca-, héči, Tu sa, Ca eéča, UA M324 (NT, ST, Tr, Gu, My, Yq, Cr)
- RAIN Eu dúku-, Tr uku-mea, u'ki, (y)uku, Gu yu'ku-, yu'kí, Tu horó-y, Ca yukku, UA M337 *yuk (Hp, Tep, Gu, Yq, My)
- REED Op bacaá, Eu omácane, húerigo, Tr baká, Gu paká, Tu waká-t, Ca baáka-m, UA M344 *paka (pan-UA)
- RIPE Op bi guasabe, Eu basé, Tr wasá, Gu wahsé- 'roast', iwá'be ripe', Tu kwasi-rá-t, Ca buasse, UA M152 *[kwasV] (Num, Tb, Hp, Tak, Yq, My, Cr, Hch)
- ROAD Op bogue, Eu vowé-t, Tr bowičí 'in the road', Gu po'owé, Tu wotá, Ca boo'o, UA M350 *po (pan-UA)
- ROOT Op nagua, Eu náwa, Tr nawá, Gu nawá, Tu namusí, Ca naáwa, UA M356 *na (Hp, Yq, My, Hch, Nah)
- ROT(TEN) Op bica, Tr bika-mea, Gu piga-, Ca biká-ra (re food)
- SALT Op ona, Eu oná-t, Tr oná, koná, noná, Gu woná, Tu Tu oná-t, Ca oona, UA M359 *ona (pan-UA)
- SAND Op sate, Eu sá, Tr saté, Gu seté, Tu shiá-t, Ca see'e, UA M361 *sa (Cr, Nah) parallels M362 *se (Yq, My, Cr)
- SAY Op tusia, Eu áwa-, Tr ani-mea, Tu amwá-, Ca hiawa
- SEED Op suba(chi), Eu suvútzi, Tr faká, cf. bači 'squash', Tu wacirán, Ca bačia, ečimu

- SING Op guiquia, Eu biká-t, Tr wika-ra (re sacred), Gu wiká-,
 Tu n^yayta-, kusú-, kosú-, Ca buiica [bwiika], UA M379
 *kwika (Gu, Yq, My, Cr, Hch)
- SIT (sg. subject) Jova cachi, Op catte, Eu káte-, Tr (y)asa
 (sg.), Gu kahtí-, Ca káttea, UA M381a *kate (pan-UA)
- SIT (pl. subject) Eu dáse 'sit down', Tr moči (pl.), (y)asa
 (sg.), Gu yasi-, yasa-, Tu nesá- 'be sitting', Ca yeésa
 (sg./pl.), UA M380 *ya(s) (Tb, Sr, Hp, Tep, Yq, My)
- SKIN/HIDE₁ (cf. DOWN/FUR/HAIR) Op begua, Eu peguat, Ca beéwa,
 *[pe-wa], cf. M212a *pé (Num, Tb, Tak, Tep)
- SKIN/HIDE₂ Tr wičí, Gu wi'íčí, Tu kucí-t, kvici-, kamosá,
 *[kwici]
- SLEEP Op cochi-a, Eu kocó-, Tr koči-mea, Gu koci-, Tu kos,
 Ca kotče, UA M129b *koci (Tep, Cr, Hch, Yq, My, Nah)
- SMELL Op jupia, Eu húhba, Tr saema, Gu uparé-, Ca huúba,
 UA M341b *hupa (Hp, Pg, NT, Tr, Yq)
- SNAKE Op bakom, coó'rattlesnake', Eu vokóc, Tr sinowi, sinoi,
 Gu sí'ino'wé, Tu koó-t, Ca baákot, *[pa-ko] 'water-snake'
- SNOW Op quebá, Eu sutéhri, Tr gepá, kipá, Gu nepá, nebá-,
 kehpá-, Tu kewá-t, Ca sappa-m, UA M400 *kepa (Tep, Tr, Gu)
- SPEAK Op nigua, Eu nener, [neneh], Gu né'e-ča, Ca nooka
- STAND Op gué-, Eu wehre, Tr wirí-, Gu werí-, Ca wé'iye-k,
 UA M411 *we(ne) (pan-UA)
- STAR Op chiapore, Eu síbora, Tr sopori, Gu so'póri, Tu sóo,
 Ca čokki, UA M413 *su, *cu (Tb, Tak, Hp, Yq, My, Cr, Hch),
 more at *[copo-ri]
- STICK/WOOD Op cug, Eu kú-t, [kutá-t], Tr gusí, kusí,
 Gu kusí, Tu utá, otá, Ca kutta, UA M170c *kusi (Mn, Tr)
 parallels M170d *kuta 'stick' (Mn, Sr, Hp, Pg, My, Yq)
- STONE Op tucsá, [te-t], Eu té-t, [tetá-t], Tr rité, Gu tehté,
 Tu tetá-t, terá-t, Ca tetta, UA M354b *te (Ls, Tep, Yq, My)

- SUCK Op chuba, Eu ciá-, Tr čii, Gu čii'-, Ca čuune, UA M421
*ci (Tep, Yq, Cr, Hch, Nah)
- SUN Op táa, [ta-t], Eu táwi, Tr rayena-ri, Gu tahá, cf.
rawé, tawé 'day', Tu táta, tasa-lí-t, Ca taa'a, cf.
tahi 'light', UA M423a *ta (pan-Ua) parallels M423d 'hot'
(Tr, Gu, My, Yq, Nah)
- SWALLOW Op guairuna, Tr a'wa, Tu soro-kva-lí-r, Ca wí'uk-tia,
ahuiuta, UA M152a *kwa (Tb, Tak, Tep, Yq, My, Nah)
- TAIL Op guag, Eu basí-t, Tr wasira, wasé, Gu wahsí,
Tu bakusí-r, Ca buasia, UA M430 *kwasi (pan-UA)
- TEARS (re crying) Op opeta, Eu opet, Tr o'ke-wá, Gu o'ké-wa,
Ca ópua-m, UA M115 *kwa (My, Yq)
- THREE Op baid, Eu vei-, Tr beikiá, baikiá, Gu paiká,
Tu vayí-t, Ca bahi, UA M510 *pahi (pan-UA)
- TOBACCO Op biy, biba-ta, Eu vivá-t, Tr péwa 'smoke',
péwari 'tobacco', Gu wipá, Ca bíba, UA M440 *pipa (Tak,
Hp, Tep, Yq, My)
- TONGUE Op nene, Eu nené-t, Tr ča'mé-koa, Gu yení, Tu niní-r,
Ca ninni UA M441a *nene (Tep, Yq, My, Hp)
- TOOTH Op tami, Eu tá mi-t, Tr ramé, Gu tame, táami,
Tu tamá-r, Ca tammi, UA M442 *tam (pan-UA)
- TWO Op gad, gode, Eu godun, wo-, wodí, Tr oká, okwá,
Gu woká, gohká, Tu n^vó-r, Ca woóyi, M509b *woka (Tep, Gu)
- URINATE Eu sísa, Tr isí, Gu si'a-, si'í 'urine', Tu síí-r,
Ca síise, síisi 'urine', UA M447 *si' (pan-UA)
- WASH₁ Op bagochia, [hipako], Eu ba-kóra, [hipáko], Tr baka-,
Ca bak-sia
- WASH₂ Tr wíčo, Gu wíčo
- WATER Op ba, Eu vá-t, Tr ba'wí, Gu pa'wí, Tu watú, watá,
wóta, Ca baa'a, UA M455a *pa (pan-UA)
- WE Jova ítemi, tooma (to us), Op tamido, Eu tami-, ta,
támide, Tr tamu, tamí, Gu teemé, Tu ité, ití, Ca itépo
(Yq), itápo (My), UA *[(i)ta(m̃)]

- WHEN Op jaico, Tr ekó, Tu hakeró, Ca hakwó (Yq), hawée (My)
- WHITE₁ Op tossay, Tr fósá-, Gu tohsána, Tu tosá-r, Ca tósali,
UA M458 *tosa (pan-UA)
- WHITE₂ Eu sutei, [sú'utei]
- WIFE Op hubi-gua, Eu huve 'have a wife', [huubel], Tr upí,
Gu upí, huupí, Tu soná-r, honaká-m, Ca huúbi, UA M471 *hupi
(Tep, Tr, Gu, My, Yq; does this include: Mn, Hch; Miller
gives 'woman' as the gloss, but the meaning 'wife' seems
to be constant in the Taracahitic data)
- WIND Op geca, Eu va-héka, Tr eká, yeká, Gu egá, hehká,
Tu honí-t, Ca heéka, UA M462 *heka (Mn, Tb, Hp, Yq, My, Cr,
Nah)
- WOMAN Op joqui, oqui, nay, Eu hoquiz, [ho'í-t], Tr mukí,
muhí, Gu hó'owiduamé, Tu tuli, Ca hámmu-t
- YE Op emido, Eu emét, emide, Tr emi(hé), tumu-, Gu he'emé,
Tu emé, Ca emé'e, UA *[i-mi]
- YELLOW Op saguai, Eu sáwei, Gu sa'wató-, Tu araká-r, mokvasakar,
Ca sawári, sahuáli

REFERENCES

- [Balbastro, Pablo]. n.d. Vocabulario en la lengua Opata- Dialecto Teguima. Ms. no. 485, Bancroft Library, University of California, Berkeley.
- Bascom, Burton B. 1965. Proto-Tepiman. Unpub. Ph.D. Dissertation, University of Washington.
- Brambilla, David. 1976. Diccionario Raramuri-Castellano. Mexico: Orozco y Barra.
- Collard, H. 1954. In Key (1954).
- _____, and E. S. Collard. 1962. Vocabulario Mayo. México: Instituto Lingüístico de Verano.
- Esacalante H[ernandez]. 1964. Material lingüística del oriente de Sonora: Tonichi y Pónida. Anales de Instituto Nacional de Antropología e Historia 16:149-178.
- Hale, Kenneth. 1958, 1959. Internal diversity in Uto-Aztecan. IJAL 24:101-107, 25:114-121.
- Heath, Jeffrey. 1977. Uto-Aztecan morphophonemics. IJAL 43:27-36.
- Hilton, K. Simon. 1959. Tarahumara y Español. México: Instituto Lingüístico de Verano.
- Johnson, Jean B. 1950. The Opata: an Inland Tribe of Sonora. University of New Mexico Publications in Anthropology 6.
- _____. 1962. El Idioma Yaqui. Mexico: Instituto Nacional de Antropología e Historia.
- _____, and I. Weitleiner. 1954. In Key (1954).
- Key, Harold. 1965. Uto-Aztecan Vocabularies. University of Chicago Microfilm no. 37.
- Kroeber, Alfred L. 1934. Uto-Aztecan Languages of Mexico. Ibero-Americana 8.
- Langacker, Ronald. 1976. A note on Uto-Aztecan consonant gradation. IJAL 42:374-379.
- _____. 1977. An Overview of Uto-Aztecan Grammar. Dallas: Summer Institute of Linguistics.

- Lamb, Sydney M. 1964. The classification of Uto-Aztecan languages: a historical survey. In William Bright, ed., Studies in Californian Linguistics, 106-125. UCPL 34.
- Lindenfield, J. 1973. Yaqui Syntax. UCPL 76.
- Lionnet, Andres. 1970. Los Elementos de la Lengua Tarahumara. Mexico: Universidad Nacional Autonoma de Mexico.
- _____. 1978. El Idioma Tubar y Los Tubares. México: Universidad Iberoamericana.
- _____. 1979a. A Sample of Eudeve. Paper presented at the Friends of Uto-Aztecan meeting, México, Universidad Nacional Autónoma de México.
- _____. 1979b. Apuntes para una bibliografía del eudeve. Anales de Antropología 16:527-530.
- [Loaysa, Baltasar de]. ca. 1640. Arte de la lengua dohema, heve...; see Pennington (1982).
- Lomabardo, Natal. 1702. Arte de la lengua Teguima, vulgarmente llamada Opata. México.
- Mason, J. Alden. 1936 [1923]. The classification of the Sonoran languages. In Robert Lowie, ed., Essays in Anthropology in Honor of Alfred Kroeber, 183-198. Berkeley: University of California Press.
- Miller, Wick R. 1967 Uto-Aztecan Cognate Sets. UCPL 48.
- _____. 1979. Guarijio Cognates. Paper presented at the Friends of Uto-Aztecan meeting, México, Universidad Nacional Autónoma de México.
- _____. 1980. The classification of Uto-Aztecan Languages Based on Lexical Evidence. Paper presented at the Uto-Aztecan Historical Linguistics Symposium, June 24 to 26, 1980, University of New Mexico.
- Pennington, Campbell, ed. 1982. Prologo, notas y version paleografiada, de Arte y Vocabulario de la lengua dehema, heve o eudeva. México: Universidad Nacional Autónoma de México.
- Pimentel, Francisco. 1874. 2nd. ed. Cuadro Descriptivo de la Lenguas Indígenas de México. México: Tipografía de Isidoro Epstein. 3v.
- Smith, Buckingham. 1861. A Grammatical Sketch of the Heve Language. Shea's Library of American Linguistics. New York.

- Sauer, Carl. 1934. Distribution of the Aboriginal Tribes and Languages of Northwestern Mexico. Ibero-Americana 5.
- Swadesh, Morris. 1962. Nuevo ensayo de glotocronología yutonahua. Anales del Instituto Nacional de Antropología e Historia 44:263-302.
- Steele, Susan. 1979. Uto-Aztecan. In L. Campbell and M. Mithun, eds., The Languages of Native America, 444-544. Austin: University of Texas Press.
- Thomas, C. and John R. Swanton. 1911. Indian Languages of Mexico and Central America. BAE Bulletin 44.
- Voegelin, C. F., F. M. Voegelin and K. Hale. 1962. Typological and Comparative Grammar of Uto-Aztecan: Phonology. IJAL Memoir 17.