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Miller

A Grammar of Jamul Tiipay

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In memory of Gennie Walker

Contents

Abbreviations and conventions

ABS	absolute case
ADVERS	adversative
ALI	alienable
CAUS	causative
COM	comitative case
COND	conditional
DEM	demonstrative
DES	desiderative
DIM	diminutive
DS	different-subject, realis mood
EMP	emphatic
HAB	habitual
HORT	hortative
IMPERF	imperfective
IMV	imperative
IMV/1	imperative subject, first person object
INDEF	indefinite argument in relative clause
INF	inferential
INSTR	instrumental case
IRR	irrealis mood
IRR+DS	different subject, irrealis mood
IRR+SS	same subject, irrealis mood
IRS	irrealis stem
LEX	lexical prefix or suffix
LOC	locative case
locd	located
LS1	first person logical subject
LS2	second person logical subject
mt	mountain
NEG	negative
NEG+NOM	nominal form of negative
NOM	nominalizing morpheme
NONPL	nonplural
NR	nominal realis
OBLIG	obligative
ORS	oblique relative stem
PL	plural-subject form (of verb), plural form (of noun)
PROM	promised future
PURP	purposive
Q	question
QUOT	quotative

RECIP	reciprocal
REFL	reflexive
SJ	subject case
SJREL	subject relative
SRS	subject relative stem
SS	same subject, realis mood
st	*status quo ante*
WARN	warning, cautionary
WE	syntactic morpheme of uncertain meaning, found in some embedded clauses

1	first person subject or possessor
1/2	first person subject, second person object
2	second person subject or possessor
2/1	second person subject, first person object
3	third person subject or possessor
3/1	third person subject, first person object
3/2	third person subject, second person object

-	morpheme boundary
*	separates an incorporated nominal element from the inflected stem
.	(i) in forms, separates clusters of like vowels; (ii) in glosses, separates the parts of a multi-word gloss
+	separates the parts of a portmanteau gloss
/	separates variant forms of a morpheme
~	separates variant forms of a stem
| |	encloses morphophonemic forms and forms in intermediate stages of derivation
{ }	when a phonological rule applies in more than one conditioning environment, its conditioning environments are enclosed in curly brackets

Citation forms of lexical verbs are given infinitival glosses when cited in the text. This is intended to differentiate verbs from nouns and is not meant to imply that the verb forms are grammatically infinitival. Infinitival *to* is omitted from the glosses of auxiliaries cited in the text.

Chapter 1
Introduction

1.1. Jamul and its people

The Jamul Band of Mission Indians was officially recognized by the federal government in 1976. Their reservation consists of 6.03 acres of land located at the edge of their aboriginal territory (Shipek 1987: 102-105) and about 20 miles east of downtown San Diego, California. In 1990 the resident population of the reservation was 28,[1] with other band members living on other reservations or in nearby urban areas. Today fewer than ten people still speak the language. All speakers are adults of at least middle age.

1.2. The Yuman family and the Kumeyaay (Diegueño) languages

The Yuman languages are spoken in Arizona, California, and Baja California. The Yuman family comprises four subgroups: Pai, to which belong the languages Paipai, Havasupai, Hualapai, and Yavapai; River, consisting of Mojave, Yuma, and Maricopa; Delta-California, consisting of Cocopa and the Kumeyaay (Diegueño) languages, which include 'Iipay, Tiipay, and Kumeyaay proper; and finally an isolate, Kiliwa.

The term Kumeyaay (Diegueño) refers to a continuum of speech varieties spoken aboriginally in San Diego and Imperial Counties, California, and in northern Baja California. In previous linguistic literature these speech varieties have been referred to as Diegueño. Variants of the term Kumeyaay have long been used by at least some groups as the preferred name for themselves (see Langdon 1975b, Luomala 1978: 607). This preference has recently become more widespread and is now accepted by both linguists and anthropologists (see Shipek 1987, Langdon 2000). The term Kumeyaay is potentially confusing since, as we will see below, it is used to refer not only to a continuum of speech varieties but also to a particular language cluster within this continuum, and to minimize confusion I shall use the term *Kumeyaay (Diegueño)* to refer to the continuum and *Kumeyaay proper* to refer to the language cluster within it.

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[1] This figure is from Jane Dumas (personal communication). Shipek (1987: 188-189) gives the resident population of Jamul as 25 and total band membership as 41.

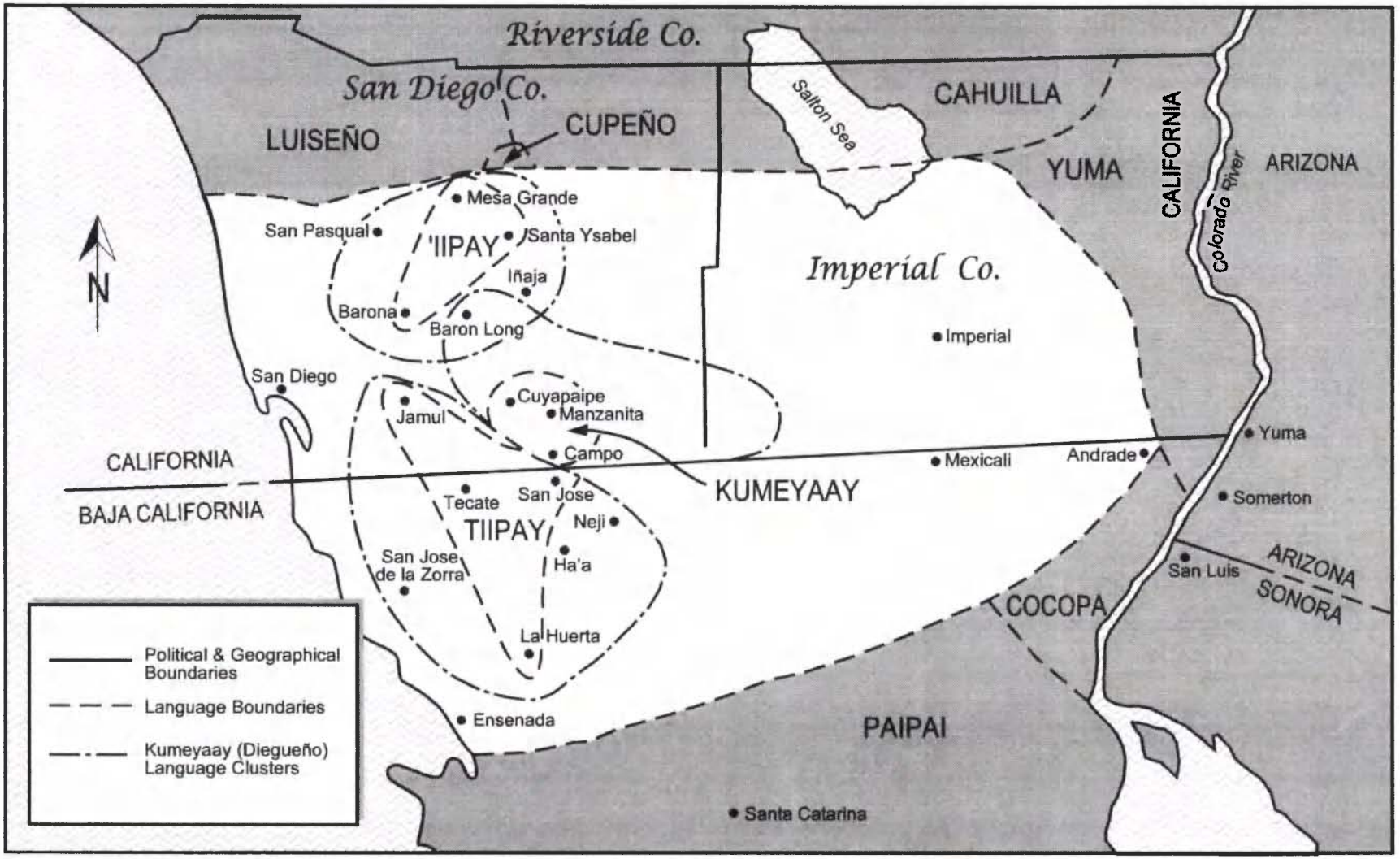

Figure 1. The Kumeyaay (Diegueño) languages (from Langdon 1991a: 189)

Linguistic variation within Kumeyaay (Diegueño) territory is widely acknowledged; see for instance Waterman (1910: 272), Kroeber and Harrington (1914: 177), Winter (1957: 20-23), Joel (1964: 99), Wares (1968: 19, 39-42), and Langdon (1970: 2-3; 1976b). Problems with mutual intelligibility among some speech varieties have been reported by Winter (1957: 20), Langdon (1970ms: 1), and Luomala (1978: 592-593); these reports are corroborated by my consultants. While it is clear that more than one language must be recognized in Kumeyaay (Diegueño) territory, language boundaries are difficult to identify.

Langdon (1991a) observes that there is more lexical diversity among Kumeyaay (Diegueño) speech varieties than among the languages of either the Pai or River subgroups. She finds that some Kumeyaay speech varieties pattern together in consistently sharing lexical items: "... Mesa Grande [MG] and Barona [BA] almost always pattern together. Similarly, Jamul [JA] , San José [SJ], and La Huerta [LH] almost always pattern together. As to Campo, it is sometimes closer to MG-BA and sometimes closer to JA-SJ-LH, while being unique in a few other cases" (Langdon 1991: 188). Arguing that these three clusters should be recognized as distinct languages, Langdon designates the Mesa Grande-Barona cluster (which also includes Santa Ysabel) as 'Iipay, the Campo cluster (which also includes Manzanita and Cuyapaipe) as Kumeyaay (i.e., Kumeyaay proper), and the Jamul-San José-La Huerta cluster as Tiipay.[2] Langdon's (1991a: 189) map is reproduced in Figure 1; she notes that the "three core areas [are] encircled by solid lines which include within them localities which contain speakers who clearly belong to that language ... [t]he areas in broken lines which extend beyond the focal areas above are assumed to belong to the focal area they enclose, but more work is needed to place them accurately" (Langdon 1991a: 188).

Jamul, then, is a variety of the Kumeyaay (Diegueño) language Tiipay. It should be noted that in previous linguistic literature Jamul has been referred to as a dialect of Diegueño (see for instance Langdon 1976, Gorbet 1976, Miller 1989a,b) or as a Diegueño language (Miller 1990a,b). Tiipay is sometimes spelled Tipai (Luomala 1978, Norwood 1981) and sometimes referred to as Southern Diegueño (Hinton and Owen 1957: 97, Shipek 1991: 8). A detailed discussion of names for Kumeyaay (Diegueño) peoples and languages may be found in Luomala (1978: 605-608).

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[2] While there is some confusion about the matter in the literature, the terms 'Iipay, Tiipay, and Kumeyaay probably reflect the terms which these groups of people once used to identify themselves. See Kroeber (1976:725) for Kumeyaay proper (Kamiyai or Kamiyahi); Spier (1923:298) and Joel (1964:99) for Tiipay (Tipai); and Kroeber (1976:710) for 'Iipay (Ipai).

While surveys have been made of many of the Kumeyaay (Diegueño) speech varieties, and while particular aspects of some of these varieties have been studied in depth (see for instance Gorbet 1976, Hinton and Langdon 1976, Norwood 1981), only Mesa Grande 'Iipay has been systematically described. A comparison of descriptions of Mesa Grande (Langdon 1970, Couro and Hutcheson 1973, Couro and Langdon 1975) with the results of my own research reveals that differences between Mesa Grande and Jamul pervade the phonology, lexicon, derivational morphology, inflectional morphology, syntactic morphology, syntax, and discourse. Some specific examples are included in Appendix 1.

1.3. Neighboring languages

Geographically, Jamul Tiipay is situated in the middle of Kumeyaay (Diegueño) territory; see Figure 1. Neighboring Tiipay speech communities to the south include the Tecate area, San José, La Huerta, Neji, Ha'a, San José de la Zorra, and San Antonio Necua, all in Baja California.[3] To the east are the Kumeyaay (proper) speech varieties of Campo, Cuyapaipe, and Manzanita, and to the north are the 'Iipay speech varieties of Barona, Mesa Grande, and Santa Ysabel, as well as the presumed 'Iipay varieties San Pascual, Iñaja, and Baron Long. Kumeyaay (Diegueño) territory is bordered on the north by the Uto-Aztecan languages Luiseño, Cupeño, and Cahuilla, on the east by the Yuman languages Yuma (Quechan) and Cocopa, and on the south by the Yuman language Paipai.

1.4. Previous work

The first description of this language was my 1990 University of California, San Diego dissertation, *A Grammar of Jamul Diegueño.* The present volume is a revision of that grammar. Two of my papers (Miller 1989b and 1990b) are subsumed in the present work, and one (Miller 1989a) is superceded here. Miller (1991b) provides a unified treatment of the topic of speaker variation, which spans various levels of the grammar and which thus is touched on in various chapters of the present volume. A fifth paper (Miller 1991a) provides more detail about the predicate nominal construction than it is possible to in-

[3] According to Paula Meyer (personal communication), speakers of Tecate area Tiipay regard La Huerta as "somewhat different" from the other Baja California varieties of Tiipay.

clude here, as well as a discussion of the construction's historical significance.

Aspects of the language are discussed in several works researched during and after a two-quarter field methods class at the University of California, San Diego. Achard (1991) investigates the phonological process of lenition and provides interesting data and discussion. Epstein (1994: 254-271, 2000ms) argues for the hypothesis that the demonstrative clitic *-pu* is a definite article. Kellogg's (1991, 1992) papers, which provide data and discussion of locational auxiliaries, supplement the discussion of speaker variation in §9.2.1.

Information on La Huerta Tiipay may be found in Hinton (1976) and Hinton and Langdon (1976). Information on Tecate area Tiipay may be found in Meyer and Cuero (ms).

1.5. A brief sketch of Jamul Tiipay

The phoneme inventory of Jamul Tiipay contains 21 consonants. There are three vowels, /i,a,u/, which may be short or long, as well as the inorganic vowel schwa.

In this language, as in Yuman languages in general, the word consists of a stressed syllable, which may be surrounded by any number of unstressed syllables. The stressed syllable contains the morphological root, which has the shape (C)V(C). The word may also contain one or more prefixes and/or suffixes. Prefixes are abundant and widely used, but only a few suffixes are found. References to lexical structure pervade many aspects of the grammar, including statements of phoneme distribution, morphophonemic rules, and descriptions of derivational processes and of the placement of inflectional prefixes.

The major word classes are verb and noun. Verbs outnumber nouns, and many nouns and most nominal kinship terms appear to derive historically from verbs. Loan words, borrowed primarily from Spanish, are numerous. Adverbs are found, but most adverbial notions are expressed with verbs.

Plurality is a derivational category. Plural stems are formed using various combinations of a number of derivational processes which include prefixation, suffixation, and length ablaut of the root vowel. The shape of a plural stem cannot be predicted from that of the nonplural form. Many but not all verbs have derived forms indicating plurality of subject, and a few have derived forms indicating the plural notion of distributive action. For most verbs the use of plural forms is not obligatory, as nonplural stems may be used with plural as well as nonplural reference. Few nouns have plural forms.

Derivational processes are also used to form causative verb stems, nominalizations, relative stems, irrealis stems, derived stative stems, and diminutive stems. These, like plural stems, are formed by various combinations of derivational processes including prefixation, suffixation, and length ablaut of the root vowel. The inventories of causativizing, nominalizing, pluralizing, and relative and irrealis stem-forming processes show considerable overlap.

The unmarked order of constituents in a verbal clause is (SUBJECT) (OBJECT) VERB. Person of subject and object are marked by inflectional prefixes on the verb. Lexical noun phrases are not obligatory, and often a clause consists simply of an inflected verb. Verbs may be transitive or intransitive, and a few ditransitive verbs are attested.

Two types of major constituents must be recognized: the noun phrase and the clause. Reference to noun phrase and clause boundaries is crucial to the description of both the morphosyntax and the phonology. Most syntactic morphemes are clitics which follow either the noun phrase or the clause. The synchronic phonological process of lenition affects a subset of these clitics when they immediately follow noun phrase or clause boundaries.

Nominal syntactic morphemes include a demonstrative clitic and five overt case-marking clitics; these follow the noun phrase. They appear optionally; their appearance is probably conditioned by discourse, but more research must be done before it is fully understood.

Tense is not marked. Mood is variously indicated by affixes, auxiliary constructions, clause-linking clitics, clitics which attach to the independent clause, and lexical conjunctions. Most aspectual notions (such as imperfective, inchoative, perseverative, and habitual) are marked by auxiliary constructions.

In addition to the marking of modal and aspectual notions, auxiliary constructions are used in the expression of negation and in periphrastic inflection. Four syntactically distinct types of auxiliary construction are found. Some auxiliaries occupy a clause distinct from that of the main verb, while in others the clause boundary is blurred, and in others the main verb and auxiliary share a single clause. Some auxiliaries are stable, fully inflecting verbs, while others are in the process of losing their verbal characteristics and a few have entirely ceased to be verbs.

Clauses are often linked together in long chains. The most widely used clause-linking devices are the switch reference markers; these are extremely versatile, expressing interclausal relations which in English are encoded by coordination, subordination, and embedding. Other clause-linking devices have purposive, conditional, and adversative meanings. While most clause-linking devices are clitics, several lexical conjunctions are found.

Relative clauses are head-internal, and the role of the relative clause in the matrix clause is marked by demonstrative and case marking clitics which follow the relative clause. Nominalized complement clauses are also found.

Predicate nominal clauses are much less common than verbal clauses. In a predicate nominal clause, constituent order is (LOGICAL SUBJECT) PREDICATE NOUN; no verb (not even a copula) appears. Person of logical subject is marked by pronominal prefixes on the predicate noun, and the logical subject need not be lexically realized.

1.6. Fieldwork methods

My two primary consultants were the late Mrs. Gennie M. Walker of San Diego and her half-sister, Mrs. Jane Dumas of Lemon Grove, California. Mrs. Walker, the elder of the two, was raised by her great-aunt and great-uncle in the villages of Potrero and Dulzura, which are located in San Diego County, east of Jamul along what is now Highway 94. She was taught many of the traditional ways, and she also attended the local schools. As an adult, Mrs. Walker's ties with Jamul were not always strong, but she was an active member of San Diego's urban Indian community. I worked with Mrs. Walker at her home in San Diego on a weekly basis from 1985 until her death at the age of 70 in September, 1989.

Mrs. Dumas, on the other hand, was raised by her parents on her father's ranch for much of her early childhood, and she learned a great deal about traditional ways from her mother, who was an herbalist and healer. At the age of nine she joined Gennie at the home of her great-aunt and great-uncle in order to attend school. Mrs. Dumas has had a great deal of contact with the county's numerous reservations during her career as an outreach worker for the San Diego Indian Health Center, and she is now a leader of the urban Indian community in San Diego. She remained close to her father, with whom she spoke her language "ninety-nine percent of the time," until his death in 1980. I worked with Mrs. Dumas at her daughter's home in San Diego, and on the campus of the University of California, San Diego, on a more-or-less weekly basis for fifteen months in 1989-1990.

On a small number of occasions I worked with Mrs. Helen Cuero and Mrs. Mary Sanchez, both of whom lived in Jamul.

Mrs. Walker and Mrs. Dumas stated emphatically and on numerous occasions that each speaker of their language talks differently and that the way she talks is representative of no-one's speech but her own. My own observations have confirmed their intuition, and in fact a startling amount of variation is found even between these two women, who are half-sisters. This of course

presents a problem for description, and I have approached this problem by focusing on Mrs. Walker's speech, making comparisons with Mrs. Dumas's speech where possible. Data cited in the grammar are from Mrs. Walker unless otherwise identified. A unified discussion of linguistic differences between the two speakers may be found in Miller (1991b).

In writing the grammar I have used both textual and elicited data. Elicited data were crucial to the phonemic analysis and formed the basis for my understanding of lexical and derivational morphology, ditransitive constructions, reflexives, the auxiliary *naynaa* 'do oneself', and certain conjunctions. Discourse data, on the other hand, contributed greatly to my understanding of clause structure, switch reference marking, auxiliary verbs, and the use of plural forms. Further work on discourse is needed and will, I hope, lead to a better understanding of all of the morphosyntax (and, in particular, of the use of those morphemes which appear optionally, such as case markers and switch reference markers).

1.7. Acknowledgments

I remain deeply grateful to my primary consultant, Gennie M. Walker, who worked with me for four years. Her interest in her own language, and her desire that it be preserved for future generations, made this work possible; her patience, good humor, and outspoken individuality made field work a pleasure. I also extend my deep appreciation to Jane Dumas for her dedicated work and for her friendship and moral support.

I thank Helen Cuero and Mary Sanchez for helpful data, and I thank Steve Elster for introducing me to them. I am grateful to Paula Meyer for information about the language situation in Baja California.

I am indebted to Farrell Ackerman and Matthew Chen for constructive criticism of my dissertation, on which this grammar is based, and to Bernard Comrie and Carl Rubino for detailed and particularly helpful comments on an intermediate version of this grammar. I thank Matthew Hanser for proofreading the manuscript.

Finally, I thank Margaret Langdon for introducing me to the Kumeyaay (Diegueño) community, for her guidance and good advice in the writing of the dissertation on which this grammar is based, and for the support and encouragement which have made this volume—and fifteen glorious years with Yuman languages—possible.

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ties Dissertation Year Fellowship; the Linguistics Department and the Office of Graduate Studies and Research at the University of California, San Diego; and National Science Foundation grant BCS-9910654.

Chapter 2
Phonology

2.1. A note about stress and word structure

Since the discussion of phonemes makes reference to position relative to a stressed vowel, and since some distributional statements and morphophonemic rules refer to structural positions within the word, it is necessary to begin with a brief description of stress and word structure. Jamul exhibits the lexical structure and stress pattern typical of Yuman languages and described by Langdon (1975a: 219): A word contains a single stressed syllable, which may be surrounded by any number of unstressed syllables. Structurally, the word is composed of several layers of morphology. At the deepest layer is the morphological root. The root has the shape (C)V(C), where V stands for any vowel (short or long) and C for any consonant (including glides). The root contains the only stressed vowel of the word, and the terms *stressed vowel* and *root vowel* are used interchangeably. The root may be surrounded by any number of unstressed morphemes which together with the root form a meaningful unit called the stem. Inflectional morphemes are affixed to the stem, and syntactic prefixes and suffixes surround inflected stems.[4] In general, prefixes outnumber suffixes by a wide margin, and for this reason stress typically falls on the final syllable of the word. Stress is marked, using an acute accent, only when it falls on a non-final syllable.[5]

Lexical structure is further discussed in chapters 3, 4, and 5.

2.2. Phonemes and their allophones

Phonemes are presented in a practical orthography adapted from that of Couro and Hutcheson (1973). Consonant phonemes are given in Table 1.[6]

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[4] In some words an incorporated nominal element is procliticized to the stem (see §3.1.5).

[5] When a long vowel (which appears as a VV sequence in my practical orthography) must be accented, it is my convention to write the accent over the first letter of the sequence.

[6] A voiced stop /b/ is found in one native word, *nyímbi* ~ *nyími* 'anyway; in spite of

When an orthographic symbol differs from a corresponding phonetic symbol, the phonetic symbol appears in brackets beside it. Vowel phonemes are presented in Table 2. A vowel is doubled to indicate length.

Table 1. Consonant phonemes

	Labial	Dental	Alveolar	Alveo-palatal	Velar	Labio-velar	Glottal
Nasals	m	n		ny [n^y]			
Stops	p	t [t̪]	tt [t]		k	kw [k^w]	'[ʔ]
Affricate				ch [č]			
Voiceless fricatives							
central		s		sh [š]	x	xw [x^w]	
lateral			ll [ɬ]	lly [$ɬ^y$]			
Voiced continuants							
central			r				
lateral			l	ly [l^y]			
Glides				y		w	

Table 2. Vowel phonemes

Front	Central	Back
i ii [i·]		u uu [u·]
	e [ə]	
	a aa [a·]	

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that'. I suspect that the form *nyímbi* originated as a complex form consisting of a lexical demonstrative *nyim* followed by an allomorph of the demonstrative clitic *-pu*, followed by the locative case marker *-i*. Falling at a noun phrase boundary, the /p/ of the demonstrative clitic would have been subject to lenition (see §2.5) and realized as [b]. Synchronically, however, no lexical demonstrative *nyim* is attested (although the existence of an incorporated nominal element *nyim** 'with an instrument' provides evidence that it may once have existed), so *nyímbi* is not analyzable, and its *b* cannot be accounted for in terms of lenition. *b* is therefore regarded as a phoneme. Because it is found in only one native word, /b/ is not included in Table 1.

2.2.1. Consonant allophony

Allophonic statements hold within the inflected stem but do not apply across major constituent boundaries unless otherwise stated. Lenition at major constituent boundaries is described in §2.5.

/t/ [t̻] is made with the tip of the tongue against the upper teeth; in final position and before a stressed vowel it may be interdental. This segment is somewhat rare in post-stress position but occurs frequently otherwise.

tiipay [t̻] 'person'
stu [t̻] 'to pick up, gather, get'
kwatay [t̻] 'it is big'
maat [t̻] 'body'

/tt/ [t] is made with the tip of the tongue against the alveolar ridge. In post-stress position, /tt/ may be distinguished acoustically from /t/ by its higher-pitched release. /tt/ is common in root-final position; in a few words it occurs in pre-stress position.

ttim [t] 'to shoot'
xattpa [t] 'coyote'
shuupitt [t] 'to be closed; to close (something), enclose (in enclosure)'
aakatt [t] 'to cut'

/k/ is backed to [q] following a stressed non-front vowel; elsewhere it is a voiceless velar stop.

kuutu [k] 'to pound (acorns)'
kaakap [k] 'to go around'
chepik [k] 'to squash many'
ak [q] 'bone'
chuutuk [q] 'to kiss'

Glottal stop is found only in certain structural positions: in stem-initial and root-initial positions (where it is always followed by an organic vowel), and immediately preceding the root (where it may be followed by either a stressed vowel or a consonant).

'iinyaay [ʔ] 'to be morning'
nya'ru [ʔ] 'money'
s'aay [ʔ] 'to be dry'

When words are spoken in isolation, it is difficult to distinguish an initial sequence of glottal stop followed by vowel from an initial vowel not preceded by glottal stop. This is because initial vowels lack the aspirated onset found in some other Yuman languages. In connected speech, however, initial glottal stops are usually heard. Stem-initial glottal stops are always recoverable when a stem is prefixed.

/ch/ is realized as [t^{y}] in post-stress position and as an alveo-palatal affricate [č] elsewhere.

chaw [č] 'to fix'
achuuyaw [č] 'to know, know how (pl)'
shechaak [č] 'screech owl'
mach [t^{y}] 'to eat (soft food) (pl)'
wiich [t^{y}] 'to give (pl); to give to them, give repeatedly'

/n/ is made with the tip of the tongue against the upper teeth. It is syllabic in initial position when followed by /t/ or /ch/ and an organic vowel.[7]

nta'chany [n̩] 'older sister'
netepach [n̩] 'to exit (pl)'
nemii [n] 'to be angry'
xenu [n] 'to be sick'
sewan ~ swan [n] 'to be unappetizing'

/m/ may be syllabic in post-stress position following a consonant. This statement applies across major constituent boundaries as well as in inflected stems and thus affects the segment /m/ when it occurs in clitics.

mewaap [m] 'to want (pl)'
aamuuch [m] 'to kill'
tiinyam [m] 'to be night'
wiikm [m̩] 'to the west'

/s/ is apico-dental.

spir [s] 'to be strong'
mesaaw [s] 'you eat'
kwiinuus [s] 'to be cute'

[7] All attested instances of syllabic /n/ are found in kinship terms. For Mrs. Dumas, /n/ is syllabic only when followed by /t/ or /ch/ and a stressed vowel.

/sh/ [š] is a voiceless alveo-palatal fricative. It reflects Proto Yuman **ṣ*.

shemay [š] 'to look for, seek'
weshiich [š] 's/he reads'
kush [š] 'to be tall'

/x/ is realized as a voiceless velar approximant in post-stress position and varies between a fricative and an approximant elsewhere.

xantuk [x] ~ [ɯ̥] 'to be straight, right, as one should be'
wexap [x] ~ [ɯ̥] 's/he enters'
ptax [ɯ̥] 'to slap'

Labialized consonants /kw/ [k^{w}] and /xw/ [x^{w}] are found only in pre-stress position. They appear syllable-initially.[8]

kwatay [k^{w}] 'it is big'
tepkwir [k^{w}] 'to spin'
xwepill [x^{w}] 'rosin from piñon'
aaxway [x^{w}] 'to kill'

/l/ and its voiceless counterpart /ll/ [ɬ] are made with the tip of the tongue against the alveolar ridge.

lexux [l] 'to be empty'
melay [l] 'to not know, not know how'
kuupal [l] 'bow and arrow'
mell'is [ɬ] 'to be stingy'
wellup [ɬ] 'it is uprooted'
uumall [ɬ] 'to write'

/ly/ [l^{y}] and its voiceless counterpart /lly/ [ɬ^{y}] are pronounced with the blade of the tongue raised against the alveo-palatal region while the tip of the tongue is lowered.

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[8] I distinguish orthographically between /kw/ or /xw/ and sequences of /k/ or /x/ followed by /w/ by placing a period between the phonemes of the sequence, as in *ak.wan* (variant of *akewan* 'to turn around, return, to do in return, do again') and *kex.wak* 'they who are two'.

lyemash [lʸ] 'to be small (pl)'
melyyay [lʸ] 'to be ugly'
mewaly [lʸ] 'to be soft, overripe'
llye'yum [ɬʸ] 'quickly, promptly'
kwa'llyaw [ɬʸ] 'many (lit. those which are many)'
shemally [ɬʸ] 'ears'

/r/ is trilled immediately before a stressed vowel; it is a tap in final position and a tap varying occasionally with a trill elsewhere.

riipuy [r] ~ [ɾ] 'to disappear'
mereyuy [r] ~ [ɾ] 'to be ashamed, embarrassed'
werap [r] 'it hurts'
spir [ɾ] 'to be strong'

/y/ and /w/ may occur in initial, medial, and final position. Both /y/ and /w/ form diphthongs with a preceding stressed vowel, but /y/ rarely—and /w/ never—forms a diphthong with a preceding unstressed vowel. Diphthongs are further discussed in §2.2.4.

yeryar 'to be circular'
teyaamátta 'to make dirty'
naynaa 'to do oneself'
kuuyum 'to face that way'
xuuy 'to hide, be hiding'
wa'nya 'road'
xewak 'to be two, be two with'
saaw 'to eat'

2.2.2. Vowel allophony

With the exception of schwa, vowels may be short or long. Short vowels are often followed by aspiration in final position. Jamul is typical of Yuman languages in that the quality of a vowel is often influenced by the consonants which surround it,[9] while (as we have seen in §2.2.1 above) the effect of vowels on neighboring consonants is minimal.

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[9] See Crawford (1966: 22-26) for Cocopa, and Langdon (1970:33-40) for Mesa Grande 'Iipay.

In some other Yuman languages, initial vowels have an aspirated onset (see Halpern 1946a: 30, Langdon 1970: 33, Munro 1976: 2), but no such onset is found in Jamul.[10]

2.2.2.1. Stressed vowels. Stressed short /i/ has the quality [ɛ] between /m/ or /xw/ and /r/; it is [i] between palatal consonants and [ɪ] elsewhere.

xmir [ɛ] 'not yet'
nyilly [i] 'to be black'
lyepish [ɪ] 'to be small'
tepsi [ɪ] 'liver'
spir [ɪ] 'to be strong'

Stressed long /ii/ is [ɪ·] ~ [ɪə] before /w/, [ɪ·] in the environment of an adjacent /x/, and [i·] between palatals and in final position. It is [i·˘] elsewhere.

yiiw [ɪ·] ~ [ɪə] 'face'
txiil [ɪ·] 'to get dressed'
nemii [i·] 'to be angry'
aapiitt ~ *a'piitt* [i·˘] 'covering'

Stressed short /u/ varies in quality from [o] to [ʊ] in final position; it is [u] when followed by /y/ and [ʊ] elsewhere.

xu [o] ~ [ʊ] 'nose'
kur [ʊ] 'to be far'
llye'yum [ʊ] 'quickly, promptly'
kwa'kuy [u] 'old woman'

Stressed long /uu/ is [o·] ~ [oɔ] in the environment of a following velar consonant, /tt/, or /y/. It is [u·˘] elsewhere.

mechereyuuy [o·] ~ [oɔ] 'to be ashamed, embarrassed (pl)'
achtuuk [o·] ~ [oɔ] 'to pour, spill on many occasions'
semuutt [o·] ~ [oɔ] 'to be thick'

[10] I used prefixation tests to distinguish glottal stop-initial stems from vowel-initial stems.

teyuut [u·˘] 'to greet'
shuutuur [u·˘] 'to roll'

Stressed short /a/ is raised to [ɛ] between a palatal and a following palatal other than /ny/, and also between a consonant other than /p/, /t/, or /'/ and a following /y/.[11] It is [o] before /w/ and [a] elsewhere.

shemay [ɛ] 'to look for'
iichash [ɛ] 'heart'
pshaw [o] 'to take care of, protect'
tiipay [a] 'person'
iima [a] 'to dance'
wany [a] 's/he accompanied him/her'
xechany [a] 'girl'

Stressed long /aa/ is slightly fronted before /w/ and is [a·] elsewhere.

'iinyaay [a·] 'to be morning'
nekxaap [a·] 'to enter (pl) in many places'
saaw [a·˂] 'to eat'

2.2.2.2. Unstressed vowels. Unstressed vowels other than schwa exhibit a length contrast when they immediately precede the root.[12] Elsewhere the contrast is neutralized.

Unstressed short /i/ has the quality [ɪ].

inyemash [ɪ] 'to do again'
kuri'ak [ɪ] 'to be an old man'

Unstressed long /ii/ is [ɛ·] in the environment *x* __ *m* and [i·˘] elsewhere.

nyexiimir [ɛ·] 'to injure'
chiillich [i·˘] 'to misbehave, be ornery, uncooperative'

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[11] In Mrs. Dumas's speech, /a/ is raised to [ɛ] before any palatal and in some words between a preceding palatal and a following /p/.

[12] In Mrs. Dumas's speech, this contrast is found in a larger range of environments which cannot yet be specified.

kiima [i·˘] 'dance!'
'iixan [i·˘] 'to be good, be in good condition'

Unstressed short /u/ is [o] before glottal stop and [ʊ] elsewhere.

nyeku'am [o] 's/he outdid me'
kur'ak [ʊ] 'old man'

Unstressed long /uu/ has the quality [u·˘].

uukwii [u·˘] 'to buy'
shuupitt [u·˘] 'to be closed; to close (something), to enclose (in enclosure)'

Unstressed short /a/ is raised to [ɛ] between palatals; elsewhere it is [a].

yayllich [ɛ] 'to be unhappy'
paycha [a] 'to think'
naynaa [a] 'to do oneself'
axpu [a] 'to thresh (grain)'

Unstressed long /aa/ has the quality [a·].

aayum [a·] 'to gather (acorns)'
temaawása [a·] 'to soften (something)'

Schwa (orthographically *e*) is found only in unstressed position. Its quality is determined by the environment in which it occurs, in most cases by the consonants which surround it. Schwa is realized as [ɪ] or [ə] in the following environments: (i) before a dental, alveolar, or palatal consonant, and (ii) after a palatal consonant. Schwa may be realized as [ʊ] or [ə] before a labio-velar, and also after /w/; it is [ʊ] between labials. When followed by a sequence of glottal stop and a vowel, schwa may take on the quality of the short version of the vowel, or it may be realized as [ə]. Elsewhere, schwa is the central vowel [ə].

It often happens that a single instance of schwa occurs in two overlapping conditioning environments. When this happens, any of the allophones appropriate to either environment may be heard, but the allophone predicted by the consonant which follows schwa is the more common. For instance, in the word *llyexwiiw* 'skunk', schwa follows the palatal consonant /lly/ (where it is

expected to have allophone [ɪ] or [ə]) and at the same time precedes the labialized velar consonant /xw/ (where it is expected to have allophone [ʊ] or [ə]), and it may be pronounced [ɪ], [ʊ], or [ə].

kwe'iimatt [ɪ] ~ [ə] 'that which is dirty'
le'uny [ʊ] ~ [ə] 'to be short (said of a dress)'
llyexwiiw [ɪ] ~ [ʊ] ~ [ə] 'skunk'
mentaly [ɪ] ~ [ə] 'your mother'
mewar [ʊ] 'to be fine-grained'
nekxap [ə] 'to enter (pl)'
nyeway [ɪ] ~ [ʊ] ~ [ə] 'to be located (pl)'
se'illy [ɪ] ~ [ə] 'to be salty'
shenay [ɪ] ~ [ə] 'to scratch'
temaawása [ə] 'to soften (something)'
weluum [ɪ]~ [ʊ] ~ [ə] 'it is crippled, crooked'
wepatt [ʊ] 's/he lies down'
werap [ɪ] ~ [ʊ] ~ [ə] 'it hurts'
xekwall [ʊ] ~ [ə] 'child'
xpa ne'ur [ʊ] ~ [ə] 'cactus apples'

2.2.3. The schwa problem

Schwa is an inorganic vowel. It is inserted between consonants to break up clusters, making words easier to pronounce. Schwa is nonetheless a phoneme, since it contrasts not only with other short unstressed vowels but also with zero (the absence of schwa).[13] Minimal and near-minimal pairs demonstrating these contrasts are given in §2.2.4.

Schwa presents problems for analysis throughout the Yuman family.[14] One particularly difficult problem is that schwa cannot always be phonemi-

[13] Inorganic schwa is regarded as a phoneme in other Yuman languages; cf. Langdon (1970: 37-40), Hinton 1984: 31-32). For Hualapai, Winter (1966:19) recognizes schwa but raises the possibility that it might be analyzable as an allophone of /e/. Halpern (1946a: 30-33) recognizes inorganic schwa as a phoneme only in post-stress position; pre-stress inorganic vowels he phonemicizes with organic /a/.

[14] See Halpern (1946a: 31), Winter (1966: 19-20), Langdon (1970: 37-40), Munro (1976: 2) and Shaterian (1983: 55-56) for further discussion.

cized in an unambiguous way. Some allophones of schwa overlap in quality with allophones of other short unstressed vowels in the same environment; for instance, the schwa in *ketaasípa* 'turn off (the light)!' may have the same quality that short unstressed /i/ would have in the environment *k* __ *t*. Knowledge of the morphology is helpful in such circumstances: if one knows that in this form the stem is *taasípa* and that *k-* is the imperative prefix, it is clear that the ambiguous vowel must be schwa.

Another characteristic of schwa is that it is elusive. It may appear in some but not all pronuciations of a given word. For instance, the word meaning '(someone's) back' has two pronunciations, *xetat*, in which schwa appears, and *xtat*, in which it does not. Second, it is often the case that schwa appears between two particular consonants in an uninflected form, but does not appear in—or appears in a different position in—an inflected form of the same word. Compare the uninflected form *xekwall* 'child' with the inflected form *nyexkwall* 'my/her/his child'; *shema* 'to sleep' with the inflected form *meshma* 'you slept', and *mesheyaay* 'to be afraid' with inflected *memsheyaay* 'you are afraid'.

One aspect of the schwa problem which plagues Kumeyaay (Diegueño) languages in particular is that while certain generalizations may be made about where schwa does and does not appear in these languages, its appearance is not entirely predictable. In some word forms, schwa always appears between two particular consonants, while in other word forms schwa never appears between the same consonants. For instance, in Jamul, schwa always appears between /x/ and /kw/ in uninflected forms of the word *xekwall* 'child', but it never separates the same consonants in the word *xkwak* 'to be bitter'. Additional examples are:

alemi 'beard' vs. *xalma* 'gourd rattle'
wanepu 'buttocks' vs. *xenpall* 'tongue'
xemuk 'to be three' vs. *xemull* ~ *xmull* 'to be foamy'

Because of its unpredictability, I have adopted Langdon's (1970: 36-40) policy of writing schwa wherever it occurs phonetically. Where schwa falls at a morpheme boundary in an analyzed form, it is my convention to write it to the left of the hyphen that indicates the boundary.

2.2.4. Minimal and near-minimal pairs

The following minimal and near-minimal pairs demonstrate phonemic contrasts:

/t/ and /tt/ *kuutu* 'to pound'
kuuttu 'to kick'

/k/ and /kw/ *kiip* 'to give away'
kwiip 'to mist, rain'

/x/ and /xw/ *xatt* 'dog'
xwatt 'blood'

/n/ and /ny/ *naam* 'to leave (pl)'
nyaam 'really'

/l/ and /ly/ *sewal* 'armpit'
mewaly 'to be soft'

/l/ and /ll/ *newil* 'to drive (mules)'
newill 'to forbid'

/ly/ and /lly/ *shemaly* 'to touch'
shemally 'ears'

/ll/ and /lly/ *shemall* 'be quiet!'
shemally 'ears'

/a/ and /aa/ *man* 'to get up'
maan 'to get up (pl)'

/i/ and /ii/ *wir* 'to be stiff'
wiir 'to be stiff (pl)'

/u/ and /uu/ *llup* 'to be uprooted'
lluup 'to be uprooted (pl)'

unstressed /a/ and unstressed /aa/
akway 'to turn, return'
aakwin 'to wrap'

unstressed /i/ and unstressed /ii/
tiptik 'to be stuck (in a tight place)'
tiipay 'person, people'

unstressed /u/ and unstressed /uu/

kuman 'one who comes from (a particular place)'
kuumall 'write!'

schwa and ∅

xekwall 'child'
xkwak 'to be bitter'

schwa and unstressed /a/

nye'iny 's/he gave (something) to me'
nya'iny 'when I gave her/him (something)'

schwa and unstressed /i/

timtim 'to flicker'
tem'ur 'to be full'

schwa and unstressed /u/

nye'iny 'she gave (something) to me'
nyu'iich 'they gave (something) to me'

2.2.5. Diphthongs

The following diphthongs are attested in stressed position: /ay/, /aay/, /aw/, /aaw/, /iw/, /iiw/, /uy/, /uuy/.

shemay 'to seek'
mesheyaay 'to be afraid'
pshaw 'to take care of, protect'
puushaaw 'to take care of, protect (pl)'
yiw 'to come'
yiiw 'eye, face'
riipuy 'to disappear'
tuuy 'to be pregnant'

The only diphthongs attested in unstressed position are /ay/ and /aay/; examples are *naynaa* 'to do oneself' and *maayxa* 'God'. A root-initial glide never closes a diphthong.

2.2.6. Consonant clusters

Consonant clusters may occur in initial, medial, and final position. Most clusters are biconsonantal, but triconsonantal clusters are attested in both initial and medial position. The following statements hold within the inflected stem, unless otherwise specified.[15]

Clusters consisting of one dental and one alveolar consonant are not permitted, and clusters of one alveolar and one alveopalatal are very rare. Clusters of identical consonants are not permitted, except for *chch*, which is well attested (e.g., in *chchap* 'to be wide awake', *kwechcheyaaw* 'singer', *yaaw kwechchaaw* 'dentist'). Clusters of consonants sharing a place of articulation, however, are well attested (for example, *chshuk* 'to wipe, erase', *akkwi* 'to ask question',[16] and *melyyay* 'to be ugly'). Labialized consonants /kw/ and /xw/ do not occur as the first consonant of a cluster.[17]

In most cases, permissible clusters need not be considered obligatory clusters; the same consonant sequences that have been recorded as clusters have also been recorded broken up by schwa. There are, however, certain clusters that are never broken up by schwa: (i) those consisting of /s/ or /sh/ followed by a stop other than glottal stop or /kw/, and (ii) those consisting of a glottal stop and a following root-initial consonant. Words with clusters of type (i) include *spir* 'to be strong'; *stu* 'to pick up, gather, get'; *skan* 'to flee'; *shpa'áwa* 'to stand (something) up'; *shttu* 'to shove'; *mespa* 'to be dead'; *mestuuyay* 'to be afraid (pl)'; *ti'nyay meskellyápa* 'moth'; *yiiw askwit* 'to blink'. Words with clusters of type (ii) include *a'naak* 'chair, bench'; *a'ttim* 'gun'; *a'wi* 'snake'; *cha'saw* 'food'; *ka'tuuch* 'mortar'; *kwa'kuy* 'old woman'; *nya'ru* 'money'; *u'mall* 'book, picture, writing'; *wa'nya* 'road'.

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[15] In particular, these statements do not hold between an incorporated nominal element (see §3.1.5) and the inflected or uninflected stem, nor between the reflexive morpheme *mat-* (described in §6.6) and the inflected or uninflected stem. Syllabic incorporated nominal elements are never immediately followed by schwa, nor is reflexive *mat-*, and the range of consonant clusters which may span the boundary between one of these elements and the stem is greater than that found within stems.

[16] It is clear from inflected forms such as *nyeke'kwi* 's/he asked me' that the first consonant of the cluster is /k/ rather than /kw/.

[17] Since the subject relative prefix is not considered part of the inflected stem, this statement does not exclude clusters the first consonant of which is the subject relative prefix *kw-* (such as *kwllyap* 'that which is burning').