

Wailaki Grammar

By

Kayla Rae Begay

A dissertation submitted in partial satisfaction of the
requirements for the degree of

Doctor of Philosophy

in

Linguistics

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Justin Spence, Co-Chair
Professor Andrew Garrett, Co-Chair
Professor Line Mikkelsen
Professor Beth Piatote

Fall 2017

Wailaki Grammar
© 2017
by Kayla Rae Begay

ABSTRACT

Wailaki Grammar

By

Kayla Rae Begay

Doctor of Philosophy in Linguistics

University of California, Berkeley

Justin Spence, Co-Chair

Andrew Garrett, Co-Chair

Wailaki, a Dene language of northwestern California, is known as what is referred to in academic literature and sources such as the *Ethnologue* as an “extinct” language. While Wailaki descendant people may remember an older generation of relatives who spoke Wailaki to one another, as far as is known, there are no people alive today who grew up speaking this language (Golla 2011:81). This term *extinct* used to describe such languages, however, does not reflect the desire of communities for languages to be spoken again, and the efforts many are taking towards language revitalization. Extinct conveys finality to language loss and shift; however, the term *sleeping* is today used to describe dormant languages with substantial documentation that may be spoken again (Leonard 2011). Wailaki is one such language.

For Wailaki, documentation exists; however, no detailed description of the language exists prior to this work. For any scholar and language learner interested in the language, published materials on related languages such as Hupa or Mattole are referenced in order to make sense of available Wailaki documentation. This dissertation puts forth a phonological, morphological, and limited syntactic description of Wailaki, which is a cover term, used by many tribal descendants, for a dialect continuum also known as Eel River Athabaskan/Dene (Golla 2011).

Chapter 1 gives background information regarding the people, the resources available for analysis. Chapter 2 is a description of phonological processes within the dialect continuum. Chapter 3 is a description of word classes in Wailaki, and what criteria and behavior (either morphological or syntactic) that may be given to delineate classes. Chapter 4 describes the verbal morphology, and Chapter 5 describes the nominal morphology. Chapter 6 titled Clitics and Syntax describes clitics that express categories such as tense, aspect or mode, or perform syntactic functions. In addition, Chapter 6 gives limited description of aspects of Wailaki syntax such as conjunctions, negation, question formation, and some discussion of word order.

Dedicated to the language advocates,
past present future.

Acknowledgements

Ts'ehdiyah niwho:ng-xw wha: 'a:wilaw 'ahtine' whima:lyo' wha: yehk'it'ul.

Niwe:syo' whunchwing Melodie George-Moore, whita' Chance Carpenter, whita'-wilchwe:n Glenn Moore II, whunchwing-wilchwe:n Supaha McCovey.

Ts'ehdiyah niwho:ng-xw wha-'a:wilaw, k'il-dinił'a'-ya'ilchwe – Danny Ammon, Jackie Martins, Kay Inong, Carl Begay Sr., Andrew Garrett, Justin Spence, Line Mikkelsen, Beth Piatote, Belen Flores, Verdena Parker, Victor Golla.

Whixung' Carl Begay Jr., whiq'it-ch'iwine', wun-ch'ino:t'aw. Ting niwe:syo', ting niwhdin.

'Ayge whi-k'isdiyun ne'in, Ray Baldy, Winnie George, Edith Fogus, Jimmy Jackson, Timisha Carpenter. Nitsige' 'a:whte'.

Hay k'isdiyun ne'in, naha' le:ya:na'nilay. Naha k'ide:ts'eh na'k'ischwe'n.

Hay q'anya'wilchwil, k'iwinya'nya:n mixine:whe' cho:ya:łts'it-te.

K'iwinya'nya:n-q'eh xiniwidye:wh-te.

K'iwinya'nya:n mi'awine:w cho:yałts'it-te.

Wun'-nowht'aw.

TABLE OF CONTENTS

<i>Acknowledgements</i>	<i>ii</i>
<i>Source Abbreviations</i>	<i>vi</i>
<i>Grammatical abbreviations:</i>	<i>vii</i>
1 INTRODUCTION	1
1.1 <i>Linguistic Relatives</i>	<i>3</i>
1.2 <i>Hai Kinist'e' – The People</i>	<i>6</i>
1.3 <i>Resources and Materials</i>	<i>10</i>
2 PHONOLOGY	13
2.1 <i>Overview</i>	<i>13</i>
2.2 <i>The Phoneme Inventory and Orthographies</i>	<i>13</i>
2.3 <i>Consonants</i>	<i>20</i>
2.3.1 <i>Stops</i>	<i>20</i>
2.3.2 <i>Fricatives</i>	<i>26</i>
2.3.3 <i>Nasals</i>	<i>30</i>
2.3.4 <i>Approximants</i>	<i>34</i>
2.3.5 <i>Affricates</i>	<i>36</i>
2.4 <i>Vowels</i>	<i>37</i>
2.5 <i>Phonological Processes</i>	<i>44</i>
2.5.1 <i>Consonant Processes</i>	<i>44</i>
2.5.2 <i>Vowel Processes</i>	<i>54</i>
2.6 <i>Syllabification</i>	<i>58</i>
2.6.1 <i>Consonant Length and Transcription Geminates</i>	<i>58</i>
2.6.2 <i>Syllabically Ambiguous Consonants</i>	<i>60</i>
2.6.3 <i>Transcription of Syllabic and Stressed <ń></i>	<i>62</i>
2.6.4 <i>Reduced Syllables</i>	<i>64</i>
2.6.5 <i>Syllable Types</i>	<i>65</i>
2.7 <i>Stress</i>	<i>66</i>
2.8 <i>Variation and Dialects</i>	<i>69</i>
2.8.1 <i>[ky, ky'] ~ [ch, ch']</i>	<i>70</i>
2.8.2 <i>[ch'] ~ [ts']</i>	<i>72</i>
2.8.3 <i>[b] ~ [m] Variation</i>	<i>74</i>
2.8.4 <i>[ɣ] ~ [w] Variation</i>	<i>75</i>
2.8.5 <i><θ> Variation</i>	<i>76</i>
3 WORD CLASSES	78
3.1 <i>Overview</i>	<i>78</i>
3.2 <i>Nouns</i>	<i>78</i>
3.3 <i>Pronouns</i>	<i>80</i>
3.4 <i>Modifiers of Nouns</i>	<i>84</i>
3.4.1 <i>Demonstratives</i>	<i>84</i>
3.4.2 <i>Numerals</i>	<i>86</i>
3.5 <i>Postpositions</i>	<i>90</i>
3.5.1 <i>Spatial Postpositions and Extensions</i>	<i>93</i>
3.5.2 <i>Other Postpositions</i>	<i>118</i>
3.6 <i>Verbs</i>	<i>120</i>
3.7 <i>Modifiers of Verbs</i>	<i>122</i>
3.7.1 <i>Adverbs of Location</i>	<i>124</i>
3.7.2 <i>Directional Adverbs</i>	<i>129</i>
3.7.3 <i>Temporal Adverbs</i>	<i>136</i>

3.7.4	Manner Adverbs	141
3.7.5	Quantificational Adverbs	142
3.8	<i>Clitics</i>	143
3.9	<i>Interjections</i>	144
4	VERBAL MORPHOLOGY	145
4.1	<i>Overview</i>	145
4.2	<i>Verb Structure</i>	145
4.3	<i>Verb Stems</i>	149
4.3.1	Stem Structure	149
4.3.2	Stem Variants	151
4.3.3	Heavy and Light Forms	153
4.4	<i>Classifiers – Position 1</i>	157
4.5	<i>Subject Prefixes – Positions 2, 8</i>	166
4.5.1	1st and 2nd Person Subjects	166
4.5.2	3rd Subjects	172
4.6	<i>Mode Prefixes – Position 3</i>	176
4.6.1	Unmarked Imperfective Mode	178
4.6.2	Perfective Mode	178
4.6.3	<i>yi-</i> Progressive	184
4.6.4	<i>yi-</i> Passive	185
4.6.5	<i>'e-</i> Inceptive	186
4.6.6	<i>oo-</i> Optative	187
4.7	<i>Distributive Prefix – Position 4</i>	187
4.8	<i>Conjunct Adverbial Prefixes – Position 5</i>	189
4.9	<i>Thematic Prefixes – Position 6</i>	191
4.10	<i>Object Prefixes – Position 7, 11</i>	195
4.10.1	<i>shi-</i> 1st Person Singular Object Prefix	195
4.10.2	<i>ni-</i> 2nd Person Singular Object Prefix	196
4.10.3	<i>ηhoh-</i> 1st and 2nd Person Plural Object Prefix	196
4.10.4	Unmarked 3rd Person Object	197
4.10.5	<i>kii-</i> Indefinite 3rd Person Object Prefix	197
4.10.6	<i>ky'i-</i> 3rd Person Thematic Object Prefix	198
4.10.7	<i>li-</i> Reciprocal Object Prefix	199
4.10.8	<i>'aa=di-</i> Reflexive Object	200
4.11	<i>Plural Prefix – Position 9</i>	200
4.12	<i>Iterative, Reversative Prefixes – Position 11</i>	202
4.13	<i>Other Disjunct Prefixes – Position 11</i>	203
4.14	<i>Conclusions and Future Research</i>	206
5	NOMINAL MORPHOLOGY	207
5.1	<i>Overview</i>	207
5.2	<i>Noun Types</i>	207
5.2.1	Primary Nouns	207
5.2.2	Dependent Compound Noun Stems	211
5.2.3	Secondary Nouns	214
5.2.4	Alienable and Inalienable Nouns	216
5.3	<i>Possessive Prefixes</i>	220
5.3.1	1st Person and 2nd Person Possessive Prefixes	222
5.3.2	3rd Person and Other Possessive Prefixes	230
5.4	<i>Plural Prefix</i>	235
5.5	<i>Borrowing and Lexical Innovation</i>	235

6	CLITICS AND SYNTAX.....	237
6.1	<i>Clitics</i>	237
6.1.1	Tense, Aspect and Mode Enclitics	237
6.1.2	Locative Enclitic <i>diŋ</i>	251
6.1.3	Diminutive Enclitic <i>chi'</i>	253
6.1.4	Augmentative Enclitic <i>kyoh, choh</i>	255
6.1.5	Adverbial Enclitic <i>k</i>	256
6.1.6	Relative Enclitic <i>i</i>	257
6.1.7	Emphatic Relative Enclitic <i>yey</i>	257
6.1.8	Other Syntactic Clitics.....	258
6.2	<i>Conjunctions</i>	260
6.3	<i>Negation</i>	262
6.3.1	<i>dow</i> Negation Proclitic.....	262
6.3.2	<i>shot</i> Negation Modal.....	265
6.4	<i>Question Formation</i>	266
6.4.1	Content Questions	266
6.4.2	Polar (Yes/No) Questions	266
6.5	<i>Word Order</i>	267
7	REFERENCES.....	271

Source Abbreviations

All examples given herein are quoted from documentation of Wailaki (Eel River Dene) speakers. The speaker and source, including page number or notecard number are noted, as is polity dialect if available. See section 1.3 for more details about each source.

Speakers

AS	Albert Smith, To-kub-be (Lassik)
CH	Charlie Heath, (Wailaki)
CJ	Captain Jim, (Wailaki)
FM	Fred Major, Tsen-nah-ken-nes (Wailaki)
GB	George Burt, Loh-lahn-kok (Northern Sinkyone)
JT	John ‘Wylakke’ Tip, Tsen-nah-ken-nes (Wailaki)
LY	Lucy Young, Set-ten-bi-den (Lassik)
MGB	Mrs. George Burt, Kit-tel (Nongatl)
MM	Mary Major, (Lassik)
ND	Nancy Doty, Tsen-nah-ken-nes (Wailaki)
SB	Sally Bell, To-cho-be (Southern Sinkyone)
JY	Jenny Young, (Sinkyone)
JW	Jack Woodman, (Sinkyone)

Sources

AKPG	Alfred Kroeber and Pliny Earle Goddard. 1967. Goddard’s Athabaskan Texts
CHM	C. Hart. Merriam. 1920s. C. Hart Merriam Papers. <i>Unpublished</i>
EG	Edward Gifford. 1922. California Kinship Terminologies.
ES	Edward S. Curtis. 1924. Wailaki. <i>The North American Indian</i> .
FE	Frank Essene. 1942. Cultural Element Distributions
GN	Gladice Nomland. 1977. Sinkyone Notes
HH	Harry Hoijer. 1963. Studies in the Athapaskan Languages.
LFK _M	Li Fang-Kuei. 1930. Mattole: An Athabaskan Grammar
LFK _N	Li Fang-Kuei. 1927. Wailaki notecards. <i>Unpublished</i>
LFK _T	Li Fang-Kuei. 1927. Wailaki texts. <i>Unpublished</i>
LFK _V	Li Fang-Kuei. 1927. Wailaki verb stem and word list. <i>Unpublished</i>
MAB	Martin A. Baumhoff. 1958. California Athabaskan Groups
PG _{LT}	P.E. Goddard. 1906. Lassik Texts
PG _{LN}	P.E. Goddard. 1902-1908. Lassik Fieldnotes: Notebooks 1-4. <i>Unpublished</i>
PG _{NN}	P.E. Goddard. 1907-1908. Nongatl Fieldnotes: Notebooks 1-23. <i>Unpublished</i>
PG _{SN}	P.E. Goddard. 1903-1908. Sinkyone Fieldnotes: Notebooks 1-4. <i>Unpublished</i>
PG _{WN}	P.E. Goddard. 1908. Wailaki Fieldnotes: Notebooks 1-10. <i>Unpublished</i>
PG _T	P.E. Goddard. 1923. Wailaki Texts
PG _{PW}	P.E. Goddard. 1924. Habitat of the Pitch Wailaki
VKC	V.K. Chestnut. 1902. Plants Used by the Indians of Mendocino County, California
WS- _{WT}	William Seaburg. 1977. A Wailaki (Athabaskan) text with comparative notes
WS- _{NCT}	William Seaburg. 1977. The Man Who Married a Grizzly Girl. <i>Northern California Texts</i>

Grammatical abbreviations:

Linguistic glosses given herein follow Leipzig glossing conventions, and those generally accepted in other contemporary California Dene linguistic literature:

Abbreviation	Gloss	Abbreviation	Gloss
1	1st person	OBV	Obviative
2	2nd person	OPT	Optative
3	3rd person	PASS	Passive, gerund
ADJ	Adjective	PFV	Perfective aspect
ADV	Adverb, Adverbial	PL	Plural number
AREAL	Areal-situational	POSS	Possessive
AUG	Augmentative	POST	Postposition
CAUS	Causative	PPO	Postpositional object
CLS	Classifier	PROG	Progressive
COLL	Collective	PRON	Pronoun
DEF	Definite	PST	Past
DEM	Demonstrative	RECP	Reciprocal
DET	Determiner	REFL	Reflexive
DIM	Diminutive	REV	Reversative
DIR	Directive	REM	Remote past tense
DIST	Distributive	S	Subject
EMP	Emphatic	SG	Singular number
EP	Epenthetic	STEM	Stem
EVID	Evidential	THM	Thematic element
EXCL	Exclamation	Q	Question particle
FUT	Future tense		
IMM	Immediate future tense		
IMP	Imperative		
INC	Inceptive		
INDF	Indefinite		
INT	Interrogative		
IPFV	Imperfective		
ITER	Iterative		
MOD	Modal		
N	Noun		
NEG	Negation		
NUM	Number		
O	Object		

1 INTRODUCTION

The following is a reference grammar of Wailaki, also known as Eel River Athabaskan/Dene¹, a language of northwestern California historically spoken in villages along the majority of the Eel River drainage, its tributary the Van Duzen River, as well as the upper Mad River of northwestern California. As many as 34 separate polities spoke varieties of a language that have been classified into four dialects in most previous ethnographic and linguistic literature (Elsasser 1978:191). This dialect network by all estimations represented the largest Dene language spoken in California by the early 19th century, both in number of speakers and in geographical spread. Descendants often use Wailaki as an ethnonym and name for the language as a whole. Wailaki is also the most documented dialect of Eel River Athabaskan. For this reason, I refer here to the language as Wailaki, and refer to the particular dialect of the upper Eel River as Wailaki dialect.

This grammar provides a description of the language as it was spoken in the early twentieth century. Though documentation of the language ranges from the 1870s to as late as 1942, the bulk of wordlists and texts used for this grammar were recorded from two sources. The first is speaker John “Wylakke” Tip on the Round Valley Reservation whose speech in 1927 was documented by linguist Li Fang-Kuei. Though transcribed less accurately than Li’s documentation, the second substantial contribution also comes from material recorded from speaker Captain Jim by linguist Pliny Earle Goddard from two trips to the Round Valley Reservation in fall 1901 and summer 1906. Only some of the material was published as texts in 1922. Where possible, information from other speakers and mutually intelligible dialects is included, though less extensive documentation exists overall for each variety than what may be considered the Wailaki dialect. Other varieties are often identified as Lassik, Nongatl, and Sinkyone dialects. Limited discussion of each is included in this grammar, which is intended as the basis for further comparative research and discussion.

While it is believed that the last fluent first language speaker of Wailaki passed sometime in the decades following the 1940s, individuals living today still remember older family members who spoke the language to one another. Though younger tribal descendants have not had the opportunity to hear Wailaki spoken, many today carry a strong interest in using and revitalizing the language from prior documentation. This is reflected in part by the fact that at least three different Wailaki language teams have participated in the Advocates for Indigenous California Language Survival (AICLS) and the University of California, Berkeley’s Breath of Life workshop. The program pairs linguists with heritage language learners to retrieve and make use of U.C. Berkeley archival language material. In 2012, I was paired with Tichetsa Thelili, a great-granddaughter of Lucy Young, who shared language and cultural information as a consultant with C. Hart Merriam and Frank Essene. Realizing very little was published on the Lassik dialect and Wailaki language, I became interested in further Wailaki language research. Prior Wailaki language Breath of Life teams have also included individuals such as Perry

¹ In 2012 at the Athabaskan Languages Conference it was decided that the language family known as Athabaskan/Athapaskan would be better referred to as the Dene language family, reflecting cognates in the language family for ‘person’ or ‘people.’ The origin of the term Athabaskan is in fact Cree, and a Cree place name [ah̄ɔpaska:w] for a major lake in Western Canada (Krauss 1987:105). During this time of transition I use Athabaskan and Dene interchangeably, with a preference for Dene.

Lincoln and Mike Lincoln, and have resulted in several community language researchers and language learners. In 2014, the work of another team with linguist Justin Spence resulted in two levels of high school classes taught by Cheryl Tuttle and Rolinda Wantt at Round Valley High School. Students of the high school classes in turn lead some community language classes, and share language lessons online (Tuttle 2015). A group in Garberville and Southern Humboldt has also undertaken language study and transcription of materials to aid language revitalization, including Ben Schill who has worked with Goddard's published and unpublished materials.

Given the high level of interest in the language among community language activists, the present work is meant to be useful to a variety of readers including researchers, language teachers, learners, and future speakers, and emerges from the desire for sleeping² California Indian languages to be spoken again, supported by archival research and grassroots community language learning methods and efforts (Hinton 2001).

Access to documentation held in archives such as those at the University of California, Berkeley, the American Philosophical Society in Philadelphia, and private holdings have made analysis and learning Wailaki possible. Notably, the acquisition and digitization of Li Fang-Kuei's notes on Wailaki in the Cultural Resources Facility at Humboldt State has been a crucial resource for recent efforts. California Dene groups, except for maybe Hupa, remain some of the least described in published ethnographic and linguistic literature among California tribes. Baumhoff (1958) attributes this to "an accident in the history of ethnology," commenting that in the 1930s, "there were many good Athabaskan informants still available" (157).

The documentation available today for Wailaki represents a limited, closed corpus. Materials may also be considered snapshots of language use when the language was experiencing obsolescence. A closed corpus in general presents challenges to language revitalization and description and there are no known substantial audio recordings of Wailaki language. When there are only a few examples of a particular phenomenon, it is difficult to determine patterns. The information and analyses presented in this dissertation are limited by what is actually attested in the corpus. Lack of attestations may be an accidental artifact of the documentation, and can't be checked with grammaticality judgements with a living speaker.

One mitigating factor is the close relationship of Wailaki to other California Dene languages. Comparison with other closely related California Dene languages, such as Kato, Mattole, and Hupa is of considerable aid to these efforts. For instance, gaps in the language for modern vocabulary desired in the classroom are at times currently filled by strategies for lexical innovation present in other related languages such as Hupa or Tolowa (Oregon Dene). Both languages are still spoken and have developed considerable modern vocabulary to meet the needs of today's speakers and language learners. Though knowledge of related languages can help, aspects of the language which are uniquely Wailaki, and at times, unique to the particular dialects called Lassik, Nongatl, and Sinkyone, have long been of interest to language learners and researchers interested in speaking particular varieties their relatives spoke. The effect of not having documentation of particular semantic domains, or certain verb paradigms, may limit what learners express in Wailaki.

Each chapter in the present work explores different aspects of Wailaki language structure. Topics include phonetics, phonology, morphology, and limited discussion of syntax. Chapter 1 gives background information regarding the people, the resources available for

² The term sleeping emphasizes the possibility that languages can be reawakened and lacks the terminal narrative connotation of the term "extinct."

analysis, and a short grammatical summary of the language. Chapter 2 is a phonological description, covering the Wailaki phonemic inventory, phonological processes, syllabification, stress patterns and phonetic variation found in the dialect continuum. Chapter 3 is a description of word classes in Wailaki, and what criteria and behavior (either morphological or syntactic) may be given to delineate word classes. Chapter 4 describes the complex verbal morphology present in Wailaki that is characteristic of verbs in Dene languages, while highlighting aspects of Wailaki verbs that are unique. Chapter 5 describes nouns and nominal morphology and further discussion of nouns. Chapter 6 titled Clitics and Syntax describes clitics and limited description of syntactic phenomena such as negation, word order, and question formation.

I want to begin first with some discussion of the peoples, land and history of the Eel River basin. Remembrances by tribal elders obtained using the memory culture methodology adopted by Kroeber and his students of anthropology often accompanied linguistic research of California Indians in the early 20th century (Lightfoot and Parrish 2009:77). However, the methodology was predicated on the idea that tribal cultures were largely unchanging, and accounts often attempted to ignore the effects of colonization. The perspectives shared from an earlier time period are nonetheless important to understanding any possible sociolinguistic variation, the circumstances under which Wailaki became a sleeping language, as well as challenges present in revitalizing the language today.

1.1 Linguistic Relatives

Linguistic and ethnographic literature attributes four regional dialects to the Eel River Athabaskan/Dene language, which are Sinkyone, Nongatl, Lassik and Wailaki dialect (Elsasser 1978:191-192). The fourth, which I at times describe as “Wailaki dialect” to distinguish the variety from the language at large, may be further subdivided into three regional cultural groups – Eel River Wailaki, North Fork Wailaki, and Pitch Wailaki, a division whose relationship to sub-dialects is unknown (Golla 2011:80).

Wailaki’s closest relatives are the three other California Dene languages - Hupa-Chilula to the north, Mattole-Bear River to the west, and Kato to the south. A closely related sub-group of the Dene language family group, California Dene languages have many similarities, and represent what is believed to be the most recent indigenous California language family group to have entered California (Golla 2011:69). The other five proposed phylogenetic classifications present in California are Uto-Aztecan, Algic, Penutian, Hokan and those termed Unaffiliated, or language isolates that have no hypothesized phylum-level linguistic relatives. The Yuki language for example, immediately south of Wailaki territory, has only one possible accepted relative– the Wappo language, and together as the Yukian language family are considered unaffiliated with any other languages at the phylum classificatory level with any other languages (Mithun 1999:574). Some have argued that language contact rather than genetic relationship is responsible for similarities between Yuki and Wappo (Sawyer 1980). Though not termed unaffiliated, scholars remain divided similarly on evidence for Hokan and Penutian phyla as well, and which languages belong in these genetic classifications (Kaufman 1988; Shipley 1980; Campbell 1997). Hokan and Penutian according to Golla (2011:83) are then perhaps best understood as “frameworks for historical and typological investigation.”

In contrast, California Dene languages are clearly closely related. Golla gives a time depth of 900-1,000 years to the California Dene group, emphasizing that the language differentiation “can be compared to the continuum of Dutch and German local dialects along the

Rhine from Holland to Switzerland, with Hupa-Chilula analogous to Amsterdam Dutch and Kato to the Swiss German of Zürich” (Golla 2011:76). Wailaki speakers nonetheless would have had difficulty understanding the other California Dene languages. According to Golla, Hupa-Chilula is the most divergent of the group and could not be understood well by the others (76). Speakers of Wailaki also had difficulty understanding Kato and Mattole-Bear River, reflected in comments made by Little Charlie (Northern Sinkyone), that “Garberville they talk like us. Wailaki [dialect] talk pretty near us too but too tight. Can’t understand Mattole, awful tight” (Goddard 1902-22:29). Little Charlie could understand Nongatl and Wailaki dialect speech, but had difficulty with Mattole. Lucy Young, Lassik, also reported, “The Nongatl language is so much like Lassik that it was easy to understand what he said” (Essene 1942:92).

Within the larger Dene language family, there are approximately forty closely related languages that are spread across Western North America from Alaska to Mexico (Golla 2012:68). The family is often discussed according to three geographic regions: Northern, Southern, and Pacific Coast, all reflecting movements out of northwestern Canada and/or eastern Alaska within the last 1,000 to 1,500 years. The geographic spread of the family is from Northern Athabaskan in Alaska and Western Canada, to Apachean in the southwestern United States, and with Pacific Coast Dene (PCD) in Northern California, Southwestern Oregon, and Southern Washington; however, clear branching in historical relationship models is not always clear (Krauss and Golla 1981).

-
- Hupa-Chilula (Hupa) language
 - Hupa
 - Chilula-Whilkut
 - Mattole-Bear River (Mattole) language
 - Mattole
 - Bear River
 - Wailaki (Eel River) dialect network
 - Sinkyone (South Fork)
 - Nongatl (Van Duzen)
 - Lassik (Lower Main Eel)
 - Wailaki (Upper Main Eel)
 - Kato language
-

Table 1. The California Dene Language Family (Golla 2011:77)

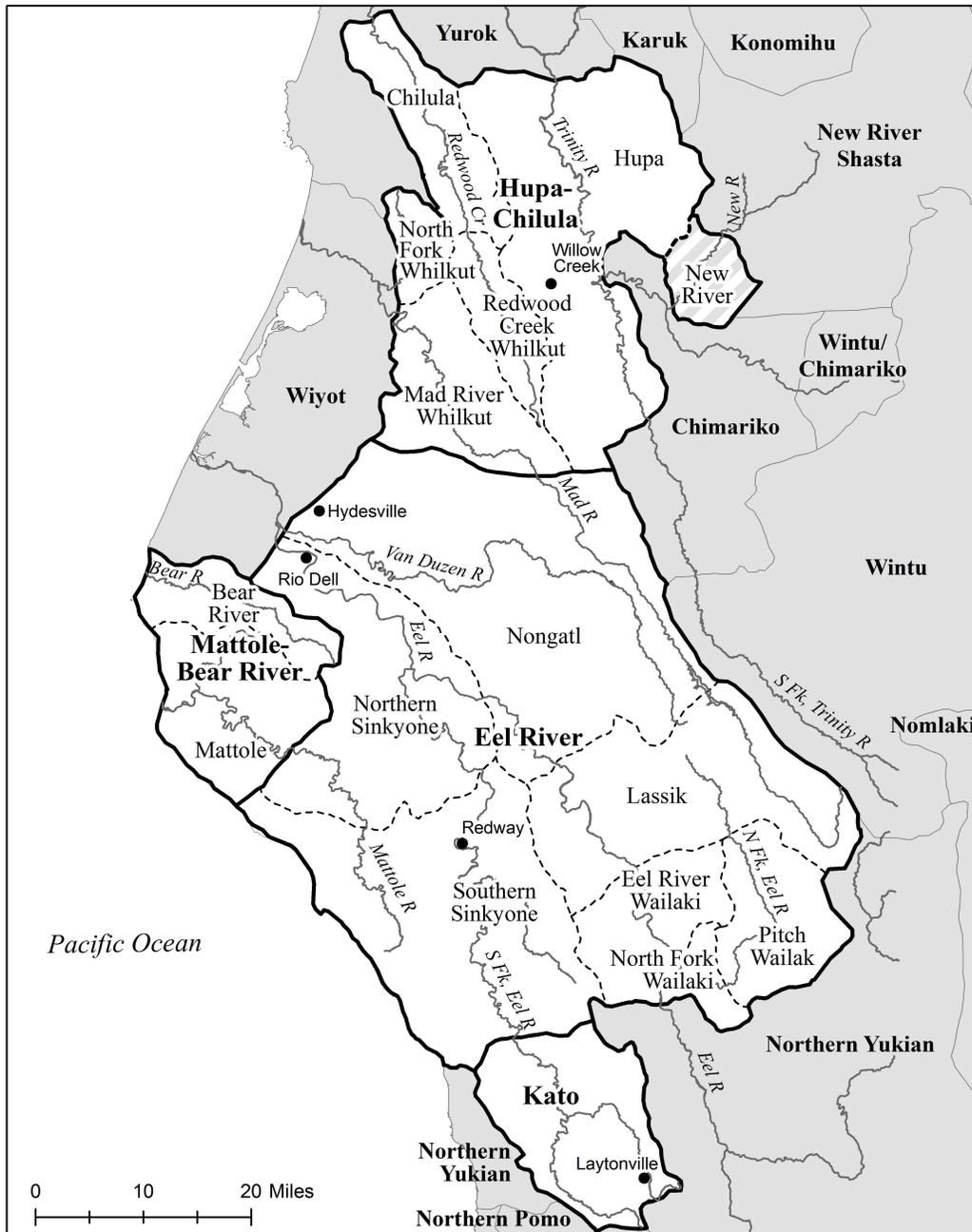


Figure 1. California Dene Languages and Dialects³

³ Reprinted with permission from UC Press.

Map 9, “3.7 California Athabaskan Languages” in *California Indian Language* by Victor Golla. (c) 2011 by the Regents of the University of California. Published by the University of California Press.

While there is confidence that Eel River Dene belongs to a California Dene subgroup, the historical significance of a larger PCD subgroup comprised of Oregon Dene and California Dene is uncertain (Golla 2012:69). A lack of shared lexical innovations indicative of a common migration into a region suggest that differentiation of PCD occurred prior to migration, rather than in situ after a single Dene-speaking group migrated into the California-Oregon region. Recent work by Spence (2013) examines the status of PCD languages in relation to each other and to the rest of the family using computational methods adapted from the biological sciences. While not definitive, Pacific Coast Dene languages emerge as a well-supported subgroup of Dene in all conditions considered in that study (11). As linguistic relatives, evidence from Oregon Dene languages (i.e. Tolowa, Tututni) may also be considered when analyzing Wailaki.

Depending on the dialect, Wailaki groups were in contact with a number of other ethnolinguistic groups of California with which they did not share genetic linguistic relationships. Nongatl speaking peoples were in contact with Wiyot (Algic) speaking peoples to the northwest, along with Chimariko (Hokan) and Wintu (Penutian) to the northeast. Lassik also shared a border with both Wintu and Nomlaki peoples (both Penutian) to the north and east, and it is believed that the term Lassik itself may be of Wintu or Nomlaki origin (Golla 2011:80).

To the south of Lassik, among Sinkyone and the Wailaki dialect speaking groups, Northern Yukian (unaffiliated) speaking groups shared borders with each of the southernmost California Dene speaking groups. As in many areas of northwestern California, considerable multilingualism likely existed between groups that shared borders, intermarriage, trade, and good sociopolitical relationships with one another. Early accounts contend that Eel River Wailaki, North Fork Wailaki, and Pitch Wailaki groups shared considerable ceremonial and social ties with Yukian peoples, and were similar in physical appearance (Gifford 1926). Based on such ties, Golla (2007:72) believes that a Yukian substratum is likely for Kato and the Wailaki dialect, though “actual linguistic influences from Yuki may be hard to identify.”

1.2 *Hai Kinist'e'* – The People

The four regional dialects of the Eel River drainage together represent the largest Dene language spoken in California in the early 19th century, both in number of speakers and in geographical spread. With traditional territory spanning parts of present-day Mendocino, Trinity and Humboldt Counties, as many as 34 separate sovereign tribal polities⁴ encompassing over 200 villages spoke a mutually intelligible language around the mid-19th century (see Figure 1).

Historical population estimates for Dene groups of California vary. Kroeber (1925:883) estimated that prior to contact with Euro-Americans in early to mid-19th century the combined Wailaki population numbered just 3,000, though his estimates have since undergone scrutiny. Examining known permanent villages, Cook's (1956) estimates yield a total of 11,050 for

⁴ Anthropologist Alfred Kroeber (1932:258) coined the term ‘tribelet’ to describe a politically significant social grouping in California within a larger ethnolinguistic group. A tribelet typically features a main principal village, linked to nearby smaller villages that ‘acted as a homogeneous unit in matters of land ownership, trespass, war, [and] major ceremonies.’ Bean and Lawton (1976) and Leventhal et al. (1994) challenge the term tribelet as denoting simple, small-scale, and primitive groups. Lightfoot and Parrish (2009) describe California Indians as complex hunter-gatherers with small but complex polities, a neutral term I employ here.

Lassik, Nongatl, Sinkyone, and Wailaki dialect speaking populations combined. Though slightly more conservative, Baumhoff (1958:223) later also found Kroeber’s numbers to be low, positing a combined 10,717 based on village and housing information as well as available fishing resources. Baumhoff, who gives the most recent historical population study, also doubles Kroeber’s Hupa-Chilula speaking population estimate of 2,000 to 4,000, and Mattole-Bear River speaking populations from Kroeber’s 500 to 2400. Baumhoff triples Kroeber’s Kato speaking population estimates from 500 to 1500. The largest California Dene language-speaking group for each estimate is Wailaki.

While four regional dialect groups are often used to describe the language – Sinkyone, Nongatl, Lassik and Wailaki (Elsasser 1978:191-192), Golla (2011) contends that divisions in general among “the Eel River Athabaskans are largely of Goddard’s and Kroeber’s making” and “are based on external linguistic observation, not internal social attitudes” (303-4). Merriam’s terms for groups are distinct from those used by Goddard and Kroeber, and reflect some of the polities that were important internally to the larger group (see 1.3 for more details about each source discussed here). Golla gives the following descriptions from Merriam (79-81):

Dialect Group	Merriam Polities	Description
Sinkyone	Lo-lahn’-kok	Northern Sinkyone
	To-cho’-be	Southern/Shelter Cove Sinkyone
Nongatl	Kit-tel	Van Duzen River
	Nai’ai-chi	Bridgeville area
	Kuskatundun	Blocksburg area
Lassik	Set-ten-bi’-den	Alderpoint area
	To-kub-be	East Bank of South Fork Eel River
Wailaki	Tsen-nah’-ken-nes	Eel River Wailaki
	Bah’-ne-kut	North Fork Wailaki
	Che-teg-ge-kah	Pitch Wailaki

Table 2. Merriam Village Polities

Goddard and Merriam describe a Northern Sinkyone (Lo-lahn’-kok) boundary near Scotia, but Nomland (1935:150) describes a different boundary, with Mattole-Bear River spoken downstream from Dyerville on the Eel River. Golla (2011:79) notes the historic dense redwood forest in this area, and proposes that the area may have been a neutral joint use area with few permanent settlements.

Merriam’s descriptions notably conflict with Goddard regarding land east of South Fork Eel River territory. Merriam’s Sinkyone consultant George Burt attributes land of the east bank of the South Fork to a Lassik group called *To-kub’-be* while Goddard indicated the land to be Sinkyone territory (Baumhoff 1958:179). Here *To-kub’-be* is listed as a group under Lassik as

per Burt's original account. Merriam also identified two Nongatl groups⁵, though Essene (1942:90,92) rather than Merriam listed the name *Kuskatundun*. Merriam did not give a name for this second group. Essene identifies the first as *Nai'ai'chi*, the same as Merriam.

One group name that Merriam (1923) records but uses differently than either Kroeber or Goddard is Nongatl, written by Merriam as <Nung-kah^{hl}> or *Naṅkahl*. First written by Stephen Powers in 1877, who spelled this group as <Noan-kakhl>, Merriam indicated it was a “general or blanket term used by themselves for all the southern Athapaskan tribes, from Iaqua and Yager Creek on the north to the northern border of Round Valley on the south,” excluding Kato and Hupa peoples (276). Merriam holds that *Naṅkahl* “instead of being restricted to a particular tribe or division, it is a super-tribal name...” (277). The term is understood as a larger name for the Dene speaking groups of the Eel River drainage. Heizer (1966:37-47) gives Merriam's classification of Mattole-Bear River and Kato under the *Naṅkahl* term.

Another term used was *kinist'e*, which Li translates as ‘Indian’ or ‘Indians’ (LFKN:19). Kroeber noted “the Wailaki are said to have known themselves as Kenesti” (151). Goddard's translation though is ‘people’ or ‘person,’ (PGT:1.42, 2.7). In this word the stem *-nist'e* is the same as the word *binist'e* ‘his/her flesh (body)’ (LFKN:34). In *kinist'e*, a 3rd person indefinite possessive prefix *ki-* is used instead of a definite 3rd person possessive prefix *bi-*, though *bi-* can be number neutral (see 5.3.2.1). Indefinite pronominal marker referents are often understood and translated as ‘people’ in general (see 4.5.2.3, 4.10.5, 5.3.2.2).

While the language has been discussed in terms of four dialects, it is known more broadly and colloquially as Wailaki language by descendants of consultants from all dialects; moreover, Wailaki is used at times as a unifying ethnic term post-contact by the consultants themselves (Keter 2009; Murphey and Young 1941). The word ‘Wailaki’ itself is not a Wailaki or Dene word in origin. The term Wailaki comes from the Wintu and Nomlaki languages, describing deictically ‘northern people’ or ‘north language,’ from some presumed point of reference that is south or so of the people being described by the term (Merriam 1923). Wailaki has been used by descendants of Eel River Dene speaking groups as an ethnonym, also spelled Wailacki, and is consequently used in the present work.

Throughout this work, while I use the term Wailaki for the language, this use of the term and previous discussion of the term *Naṅkahl* does not imply that language similarities alone determined political and cultural identities of the culturally diverse ancestors of today's contemporary Wailaki descendent peoples. Wailaki polity territory boundaries more or less followed drainages that likely gave influence to isoglosses for linguistic features (Heizer and Elsasser 1980:6). One can expect that the further the distance and contact between polities the greater the linguistic and cultural differences.

Though linguistic and cultural relatives, Eel River Dene speaking groups were reportedly often antagonistic and hostile towards one another in the early to mid-1800s, as reported by people consulted by researchers in the early 20th century. At times groups were friendlier to linguistic non-relatives than to each other, though how much of this is a result of conditions following colonization is unknown. According to Golla (2011:79), Northern Sinkyone groups traded, intermarried, and were in contact with the Wiyot to their north, while

⁵ Merriam and Golla write *Kit-tel* as Nongatl, though a note on the folder in the image reel states “Lassick or Kit-tel.” This was likely a clerical note at the Hearst Museum, as it doesn't appear in the contents. Kroeber (1925) lists *Git-tel* in the Sinkyone section as outside of Sinkyone territory, and refers to it as a place-name for the Bridgeville area on the Van Duzen.

Southern Sinkyone groups were close to Coast Yuki. Golla goes on to say that “each of the Sinkyone groups disliked the other, and both were suspicious of the Mattole and Bear River groups...to the west...both had a strong antipathy to the Lassik and Wailaki” (79). Lassik groups were in contact with Wintun groups to the northeast, and Eel River Wailaki groups were culturally close with Yuki groups to the south (79). However, Lucy Young (Lassik) discussed attacks on her people by the *Nai'ai-chi*, a Nongatl group (Essene 1942:91). Before one attack when Young’s family veered too close to Nongatl country while traveling, she remembered hearing a man shout “A big band of Koskatūnda (Nongatl) is going to come and kill you all” (92). Though a different dialect, the threat was easy for Lucy to understand. Another consultant, Little Charlie, Northern Sinkyone, described the possibilities of stepping outside his home territory in his childhood, indicating that “if Mattole, Eel River Indians, or Garberville Indians come they [*Loh-lahn'-kok*] fight them...Long time ago can't go to Mattole. Can go Bull Creek. Don't go Van Duzen. They kill me right there. Can't go Briceland nor Garberville” (Goddard 1903-1908).

While polities represented distinct peoples, together they shared cultural elements from both northwest California and central California cultural areas (Kroeber 1925:146). People lived along the rivers and smaller waterways in more permanent homes but camped as appropriate to gathering seasons in the spring and fall (151). All groups likely took advantage of low-intensity cultural burns like their neighbors in all directions; moreover, cultivating regional areas through patchwork systems of land tracts that burned in rotation, could provide a steadier and more diverse array of vegetation used for foods and material culture (Lightfoot and Parrish 2009). Foods gathered and tended include acorns, buckeye nuts, grass seeds, and camas bulbs. Hunting larger elk, deer and small game were as important as fishing for salmon and smaller fish, and fire would have been used to maintain lands for these animals. Wild iris twine nets were used for fishing, and Young’s father *Thelyith* ‘ties in knots’ was an especially adept and wealthy net-maker. Sinkyone people in addition had access to the coast for gathering seaweed, mussels, clams, and abalone to trade with inland groups for inland items (Nomland 1935:151).

Following the disruptions in day-to-day life that came with colonization of Northern California by Euro-American settlers and miners during the Gold Rush of 1849, ceremonial life as a whole was less attended to as immediate survival was all encompassing for many Northern California tribes for the decades that followed. Informants such as Lucy Young nonetheless recognized “old time religion” and then newer movements such as the Bole Maru, or Dreamer religion that relied on doctors, healers and prophets who merged newer with older beliefs to sustain people through tumultuous times (Bauer 2016:54).

Language consultants were often children at the time of contact that survived massacres and were separated from their families. Anthropologists’ characterizations of Native people in the region were made following a period of profound loss of life, and forced separation between generations. Lucy Young, estimated to have been born in 1846, relayed that her grandfather dreamt about the coming of white settlers when she was a young child, telling her “You young people are gonta see this” (Murphey and Young 1941:350). Young noted, “Every day he would dream and say this” but that “long time you gonta live, my child, you live long time in this world.” Lucy indeed would come to see the arrival of white settlers to the region, and lived well into her nineties, passing finally in 1944 having survived massacres, kidnapping, servitude, and the genocide of her people. Children after her generation would be subject to harsh English-only Indian boarding school policies on-reservation at a Round Valley Indian boarding school, and

off-reservation at institutions such as Sherman Indian High School in Riverside, California (Bauer 2010; 2016:60).

By 1910, the census estimated that only 300 Wailaki individuals remained. Over 200 individuals resided on the Round Valley Reservation in 1910, 180 miles or so north of San Francisco (Goddard (1906:151). It would be a great disservice to simply term what happened to Wailaki and other California Indian peoples as a population decline without emphasizing the role of conscious actors that engaged in attempted annihilation of California's indigenous peoples. When later asked to share language and cultural information, survival stories were also told by consultants such as Lucy Young, who did not want the history censored or forgotten, and told the following, later printed:

“If you could only know the truth of [how] the Indian has been treated since the first white man came into his part of the country, it would make an ordinary man shake and shudder. I would like to tell you the whole story from 1846 up to the present date. I am afraid it would not be allowed to be put into print” (Murphey and Young 1941).

Wailakis are but one of several groups that the federal government removed to traditional Yuki territory in Round Valley, including also but not limited to Concow, Pit River, Nomlacki, Nisenan and Pomo peoples (Bauer 2009:2). Today, the membership of Round Valley Indian Tribes on the Round Valley Reservation represents the largest population concentration of Wailaki descended peoples. Nongatl were also taken to Smith River, and later Hoopa Valley (Kroeber 1925:143). Among the Hupa speaking people, they were called *Saia*, or ‘(from) far off.’ Some families in Hoopa and likely Smith River share Wailaki heritage from this time.

1.3 Resources and Materials

The vast majority of Wailaki language materials are unpublished. Eel River Wailaki, or *Tsennahkennes* is the most documented dialect and polity recorded by Goddard, Li, and Merriam. The present work consequently relies heavily on documentation of this dialect. Where possible, variation in other dialects is noted and described.

The bulk of my analysis is based on Li Fang-Kuei's notecards, texts, word lists, and work on Wailaki verb stems from fieldwork with John “Wylakke” Tip on the Round Valley reservation in 1927. These materials are currently housed at Humboldt State University in the Anthropology Department's Cultural Resources Facility, and have been digitized (scanned) by Humboldt State students advised by Victor Golla and James Roscoe. I find Li's materials to be far more reliable than Goddard, Essene, or Merriam, since Li transcribes important phonological contrasts that others miss, or do not record reliably. Li's work is also the most extensive in regards to verb paradigm elicitation. Li recorded 24 texts, a verb stem list, and 431 notecards, many of which contain targeted verb paradigms. Stress patterns within words are noted, as well as contrastive glottalized consonants that aren't recorded consistently by other researchers.

Goddard's unpublished material includes Goddard's Nongatl, Sinkyone, and Wailaki notebooks housed at the American Philosophical Society (APS) in Philadelphia. Goddard's Lassik notebooks are currently in the Melville Jacobs collection at the University of Washington. The majority of these handwritten materials have not been consulted in depth for

this study. They require careful retranscription, so only cursory remarks based on them can be made at this time.

The following is a list of unpublished materials according to dialect:

Dialect	Source	Description
Sinkiyone	PG _{SN} , Goddard (1903-1908)	4 notebooks. Wordlists and texts with interlinear translations.
	CHM, Merriam (1920s)	Wordlists from Lo-lahn'-kok with George Burt and To-cho'-be Ke-ah ⁶ with Sally Bell
Nongatl	PG _N , Goddard (1907-1908)	23 notebooks. Wordlists, Mad River place names, 40 texts from Van Duzen Pete.
	CHM, Merriam (1920s)	Wordlists from Kit-tel wordlists from Mrs. George Burt.
Lassik	CHM, Merriam (1920s)	Wordlists from Lucy Young and Albert Smith.
	PG _{LN} , Goddard (1908)	4 Notebooks.
Wailaki	PG _{WN} , Goddard (1908)	10 Notebooks. 36 published texts, along with 9 additional unpublished texts from Captain Jim
	CHM, Merriam (1920s)	Tsen-nah'-ken-nes wordlists from John Tip, Fred Major, Nancy Doty
	LFK _N , LFK _T , LFK _V , Li (1927)	Work with John Tip, resulting in 431 notecards, 24 texts, verb stem/word lists.

Table 3. Unpublished Wailaki Sources

Goddard's Wailaki texts include an abundance of information, providing the context from which to distinguish function and meaning beyond word forms in isolation; however the verb forms in Goddard sometimes miss key phonemic or phonological components such as glottalized consonants, have slightly opaque translations requiring further analysis for literal meaning, or may be misparsed along the lines of which syllables belong to certain words or morphemes. It can be difficult to extract full inflectional paradigms. For example, only a few of the possible subject prefixes are often recorded for any given inflected verb theme, and fewer object prefixes.

C. Hart Merriam was another researcher that conducted fieldwork among various California groups from 1910 until his death in 1942. Data from Merriam includes word lists, notes on aspects of culture, along with ethno-geographical material such as tribal distributions, village names, and village locations. Baumhoff (1958) surveys data collected by Merriam, combined with information from Goddard. Baumhoff used primarily placename lists though, since linguistic analysis beyond villages and names of individuals was not central to his study.

⁶<Ke-ah> is *kíyáh*, 'land, country,' also possibly an ethnonym for a given polity.

Anyone interested in a study of place names should refer to Baumhoff's (1958) analysis of Goddard and Merriam's Wailaki documentation of California Dene groups.

The following is a summary of published sources that include language material, available according to dialect:

Dialect	Source, Pages	Description
Sinkyone	EG, Gifford (1922:22-23)	53 kinship terms
Nongatl	HH, Hoijer (1963:9-13)	27 stems from Goddard manuscripts
	AKPG, Kroeber (1967:270)	125 nouns from 40 Goddard texts
Lassik	EG, Gifford (1922:20-21)	62 kinship terms
	FE, Essene (1942)	57 personal names, 312 word vocabulary with Kato correspondences
Wailaki	PG, Goddard (1923)	36 texts from Captain Jim
	EG, Gifford (1922:23-25)	60 kinship terms
	PGPW, Goddard (1924:225)	29 place names, 3 maps of Pitch Wailaki
	LFKM, Li (1930)	45 words, 64 stems from fieldwork
	EC, Curtis (1924:201-207)	269 noun wordlist
	HH, Hoijer (1963:9-13)	13 stems from Goddard manuscripts
	VKC, Chestnut (1902)	38 plant names from fieldwork in 1892, 1897-98
	WSWT, Seaburg (1977a: 327-332)	Analyzed Text from Li fieldwork – <i>Toad Story</i>
	WSNCT, Seaburg (1977b: 114-120)	Analyzed Text from Li fieldwork – <i>The Man Who Married a Grizzly Girl</i>

Table 4. Published Wailaki Sources

A number of secondary sources also exist from primary sources. Several books by William J. Bauer Jr. (Wailacki, Concow) combine archival material with recent oral history interviews to tell the history of California Indians in the region and of Round Valley Indian Tribes (see Bauer 2005, 2009, 2010, 2016).

Though no strictly linguistic recordings of Wailaki first language speakers exist, there are 80 or more recordings of songs. The majority of these recordings are on wax cylinders at the Phoebe Hearst Museum of Anthropology at the University of California, Berkeley, and have recently been digitized. Relevant recordings are item numbers 24-1704 to 24-1721 and LA 152.001 to LA 152.008 for Wailaki dialect songs, item numbers 24-1732 to 24-1772 for Nongatl songs, and 24-2612 to 24-2614 for Sinkyone songs (Goddard 1901-1908; Nomland and Nomland 1929; Kroeber 1902-1958, Shepherd 1980).

2 PHONOLOGY

2.1 Overview

In this chapter I examine the phonology of Wailaki. This includes examining the phonemes (i.e. distinctive sounds) of Wailaki and how they pattern, interact, and have previously been represented and written.

2.2 The Phoneme Inventory and Orthographies

The following conventions are used to represent these differences between phonemes, phones, and written representations present in the documentation:

Concept	Description	Identification
Phonemes	distinctive units of sound that distinguish meaning	/b/, /a/
Phones	distinguishable units of sound	[b], [a]
Letters	written representations from documentation	, <a>

Table 5. Sound Description Conventions

It is important to note that because there aren't first language speakers of Wailaki today, phonological analysis, and indeed all analysis of Wailaki in this work, is drawn from written representations found in past documentation rather than recent fieldwork or recordings. While a total of 80 original sound recordings exist at the Phoebe A. Hearst Museum of Anthropology in Berkeley, the majority of recordings are of songs rather than spoken language (Goddard 1901-1908; Nomland and Nomland 1929; Kroeber 1902-1958, Shepherd 1980). Three dialect groups have song recordings on wax cylinders with Nongatl, Sinkyone, and Wailaki represented. Goddard recorded most of these and his notebooks contain transcriptions of songs that have words. Though digitized, these recordings aren't linguistic recordings suitable for phonetic analysis, and are primarily of songs rather than spoken language.

The following is a table of symbols used by researchers across orthographies.

This Work	Practical	IPA	Li	Goddard	Essene	Merriam
b	b	p	b	b	b	b
d	d	t	d, D	d	d, ɬ	d, t
t	t	t ^h	t', D	t	t, ɬ	t
t'	t'	t'	t'	t'	t'	
g	g	k	g, G	g	g	g
k	k	k ^h	k', k, G	k	k	k
k'	k'	k'	k'	k'	k'	
gy	gy	g ^j	g̥	ky	k̥	
ky	ky	k ^j	k̥			
ky'	ky'	k ^j '	k̥'			
ts	ts	ts ^h	ts, ts'	ts	ts	ts
ts'	ts'	ts'	ts'	ts'	t's	
j	j	dʒ	dj, dʒ	dj	dj	j
ch	ch	tʃ ^h	tc'	tc	tc	ch, tch
ch'	ch'	tʃ'	tc'	tc'		
s	s	s	s, S	s	s	s
sh	sh	ʃ	c, S	c	c	s, sh
θ	-	θ	-	-	θ	-
ɣ	gh	ɣ	ɣ	ɣ	-	-
l	l	l	l	l	l	l
ɭ	lh	ɭ	ɭ	ɭ	ɭ	hl
n	n	n	n	n	n	n
ŋ	ng	ŋ	ŋ	ñ	ñ	ng
m	m	m	m	m	m	m
y	y	j	y	y	y	y, [-] in V-V
w	w	w	w	w	w	w
h	h	h, ^h	h, '	h	h	h
ʔ	ʔ	ʔ	ʔ	ʔ, ε	ʔ	-

Table 6. Consonant Symbols Used in Wailaki Materials

In Table 6, where one researcher did not discern between aspiration and glottalized segments captured by another researcher, merged rows are given. A dash indicates phones not recognized or transcribed by any particular mark by researchers.

Also in Table 6, some symbols listed are used in comparative work, representing phones in related languages, even if the phone doesn't exist in Wailaki. For example, [ts^h] which was written by Li as <ts'>, may be found in Li's notecards in several examples from Hupa even though the sound isn't found in Wailaki. Proto-Dene *ts became Hupa *ts* and Wailaki *s*, as in Hupa *tse*, Wailaki *see* 'stone.' Li's palatalized <g̥> is also given in superscript though not written superscript by Li, in order to distinguish between <g> and <g̥> within the submission requirements of single-line spacing for this work. Any and all other superscript symbols are original from Li.

Much of the analysis of Merriam's symbols in Table 6 comes from Baumhoff (1958) in which Merriam and Goddard's orthographies are compared. There remain however, some questions about Baumhoff's interpretations of symbols and phones. Baumhoff writes a note under a column for Merriam, "<ky> written <ch>" next to symbols shared by Goddard and Merriam as both <k>. Rather than simply interpret Merriam as mishearing [ky] as [ch], I interpret Baumhoff's use of Merriam's palato-alveolar affricate /ch/ for palatalized velar /ky/ as evidence of a sound change present in variants of words more regularly in some dialects and less so in others, discussed further in section 2.8. Where Merriam writes <ch>, representation of the sound [tʃ] or [tʃ̥] or possibly a palato-alveolar affricate is intended, but not [kʲ] or [kʲ̥] for which Merriam writes <k>. Essene uses a small diacritic <ḱ> for /ky/, /ky'/ and /gy/.

Aside from orthographies from past researchers and the IPA, a practical orthography developed in 2014 is given in the column to the right of the orthography used in this work in Table 6. The practical orthography represents a writing system adopted by Wailaki language learners in classes offered at Round Valley High School. Its conventions are easier to type. I largely rely on this orthography and its conventions in this work; however, I diverge from this orthography with some symbols for ease of analysis, and clarity for intended phones. These are <y> for practical orthography <gh>, <ŋ> for <ng>, and <ł> for <lh>.

Another important divergence in this work from the practical orthography is a lack of syllable breaks. Because they are difficult to posit in a systematic and consistent way, syllable breaks are not usually shown in this work. Careful recording of syllabification requires targeted elicitation with a consultant speaking slowly. While some notion of syllabification may have been documented by Goddard and Merriam with their use of spaces and hyphens, it's unknown if syllabification was a focus in their research. Hyphens in this work are reserved for morpheme breaks. Syllabification is indicated by period (e.g. *bi.si* 'his head'). A small number of forms recorded by Li feature a diacritic symbol <◌̣> that may indicate syllabic consonants.

References to original transcriptions are indicated in < > brackets, with the spaces or hyphens given by the original transcriber if present. If single words in isolation are given in a series of examples, forms in brackets may be to the right of retranscriptions; otherwise they are the first line. If underlying morphology is significantly distinct from surface forms, the underlying morphology of a form may also be to the right of a surface form in parentheses.

Important vowel distinctions, qualities, and lengths are decidedly more difficult to discern across various writing systems. A further consideration may be variation in vowel qualities that correspond in distribution to regional dialects, or other sociolinguistic correlates. Vowels Merriam transcribed are highly variable, but it's unclear whether this is due to Merriam being inconsistent in transcription or due to pronunciation differences in different dialects. Merriam worked with the most speakers, while other researchers may only have worked with a certain group or one to two speakers. The following are vowels used in various orthographies:

Practical/This Work	IPA	Li	Goddard	Essene	Merriam
a	ɑ	ɑ	ɑ, ǔ	ǎ, ǔ	ah, e, u, i, ǎ
aa	ɑ:	ɑː,	a, ɑ	a	ah, a, e ɑ
o	o	o, ow	o, ȯ	ǒ	o, u, aw
oo	o:			o	
e	ɛ	ɛ	ɛ, e	ě	e
ee	ɛ:	ɛː, (ɛː)	e, ā	e	e, ā
i	ɪ	ɪ	ɪ, ǐ	ǐ	i
ii, (iy)	ɪː, (iː)	iː, (iː) (iy)	i, ī	i	ē, ě
ai (ay)	ai	ai, ay, āi	ai ai	ai	ɑ, i, ī i
oi, (oy)	oi	oi, oy	oi	oi	oi

Table 7. Vowel Symbols Used in Wailaki materials

It is important to note that Goddard’s published materials differ from his notebooks in symbols used for vowels. In Table 7, vowels from published materials are on the left, while vowels to used in unpublished notebooks are on the right.

There is also one a minor phonetic difference Li appears to transcribe for low open vowels <ɑ> and <ǎ> that is important to note because it results in three different ways to transcribe the diphthong /ai/. The vowel <ǎ> in Li’s notecards only appears immediately before a front high vowel or /y/, together as <āi> or <āy>. ⁷ Li in notecard 201 writes <āiː ~ ɛiː>, but doesn’t actually write <ɛiː> in any forms in the card. This indicates that when <āiː> is written, the first vowel in the combination [ai] is phonetically more centralized and higher than other first vowels for the diphthong written <ai>, but still is not quite <ɛi>. Where used, I use a phonemic transcription of /ai/ in my examples, though show original transcription <āi>.

For determining which IPA symbols are appropriate for the IPA column, I trust Li’s transcription corroborated by Goddard in part. For example, IPA [ɛ] and [ɛ:] differ in length, but correspond to both Li and Goddard’s use of symbols and Goddard’s vowel quality descriptions. It’s possible that the actual target vowel quality is somewhere between unrounded front close-mid and front open-mid vowels. Diphthong vowels I analyze as adjacent segments rather than vowel phonemes, with either a contributing short /i/ or consonant /y/, the difference in transcription motivated either morphemically or by position in the syllable. A glide analysis may be motivated by presence of either <i> or <y> in the following syllable as an onset.

Vowels /i/ and /i:/ are distinct and phonemic, as are other short and long vowel pairs. I give the IPA symbols for qualities consistent with other California Dene languages. In his

⁷ One notecard 156 has the form <sāyǎdiliŋ> ‘he eats, puts into mouth>; otherwise, the umlaut marking is restricted to diphthongs including a second high front vowel <āi>.

description of Mattole, Li writes that <i> vs. <i·> are “both open as in English *it*, the short *i*-sounds often duller,” and he uses the same symbols for Wailaki, noting vowel quality in Mattole as “fairly representative of the original Athabaskan” (1930:39). Golla (1970:36) notes wide-ranging qualities for phonemic short vowel /ɪ/ in Hupa, for which one allophone is [ɪ], but before or after a glide /y/, the quality is a high front tense vowel [i].

Merriam’s lists contain a key with the following phonetic descriptions for vowels:

ā	as in acorn, date, late, made
ah	as in far, father, what
ǎ	as in fat, bat, hat, have, man
aw	as in awl, awful
ē	(or e unmarked) as in eject, eternal, meat
ě	as in end, met, net, check, peg, pen, her
ī	(or i unmarked) as in ice, iron, pine, file
ĩ	as in it, ill, pin, fin, fit, pick, admit
ō	(or o unmarked) as in note, poke
õ	as in not, pot, odd, frog
oo	as in ooze, spoon
oi	as in oil, boil, join
ow	as in how, plow, out
ū	(or u unmarked) as in mule, mute, acute
ũ	as in tub, mud, us
û	‘neutral vowel’

Table 8. Merriam Orthography Key

Merriam’s notebook key has four symbols that have diacritic options as well as unmarked options for the same sound. The symbol <e> is on the same line as an option for <ē>, <i> for <ī>, <o> for <ō> and <u> for <ū> similarly. Each unmarked option follows the diacritic marked vowel, and in parentheses. For example, the line for ē is given as “ē (or unmarked e) as in eject, eternal, meat.” Built into his transcription system is heterogeneity of symbols used to represent for the same sound; however, there may be some differences in how Merriam actually used the unmarked vowels, versus those with diacritics.

In interpreting Merriam’s vowels, I again relied heavily on Baumhoff’s study supplemented by additional forms. Baumhoff compared 28 forms between Merriam’s Tsennahkennes wordlist and Goddard, while I compared 40. Of the two, Baumhoff thought Goddard’s orthography was more precise and that Merriam’s had limitations, stating that “although the discrepancies seem great, this is because Merriam used Webster’s English orthography where Goddard used a technical one modified from the old Smithsonian system” (Baumhoff 1958:169).

The heterogeneity of short vowel symbols attributed to Merriam by Baumhoff is greatest for Goddard’s symbol <ɑ>. A total of five symbols are used by Merriam that Baumhoff notes as corresponding to Goddard’s short low vowel, which are <ah e u i ǎ >, in order of frequency, demonstrated by 1(a-e) in the following:

(1) Goddard <α> CJ (PG _T)	Merriam <ah e u i ä > JT, FM, ND (CHM)
a. <tcε yang>	<chā yahnk> ‘woman’
b. <ɿs tcαg gε’>	<chě-gǎ> ‘(my) ear’
c. <ɿs nαng>	<shés-nung> ‘my mother’
d. <kε nās t’ε>	<ken-nis’-tě’> ‘people’
e. <tcε gat tcαng>	<chā-gǎ-ching> ‘woman (kind)’

Each of the examples above is from *Tsennahkennes* speaker materials. One can expect some variation in short vowel transcription due to the difficulty of perceiving short vowels or actual dialect differences; however, it is puzzling that English long and short vowels of various qualities, according to Merriam’s key, may be grouped together. Much more likely is that each Merriam ‘unmarked’ vowel may also reflect a short vowel, and their use may be inconsistent with the notebook key. For example, with open or closed syllables, there may be some differences in use. Merriam and Goddard differ as to whether a syllable in a given word is open or closed, as can be seen from (1b), (1d) and (1e), where some of the vowel representations also differ in whether the syllable is open or closed.

Baumhoff’s comparisons also attribute the vowel <e> in Merriam’s materials as corresponding to Goddard’s <α a ε e ī>.

(2) Goddard <α a ε e ī> CJ (PG _T)	Merriam <e> JT, FM, ND (CHM)
a. <kα nās t’ε>	<ken-nis’-tě’> ‘people’
b. <kε nās t’e>	<ken-nis’-tě’> ‘people’ (alternative)
c. <sai tcε>	<se-ah-che> ‘(my) daughter’
d. <tcεs kai tcε>	<ches-kā’-che> ‘little girl, 4-12’
e. <ɿs ta>	<she’-stah> ‘my father’

Without careful attention to vowel length, Merriam uses <e> for non-high front vowels according to Baumhoff, though examples also include Goddard’s short <ɿ>.

Goddard didn’t use any particular symbols to transcribe length, but instead recorded differing qualities corresponding to length. Essene used double vowels to indicate length, as does this work. Li however used vowel symbols without diacritics for short vowels, the diacritics <: > for “overly long” vowels, and <· > to represent “long” segment lengths, including using <·· > to represent geminate consonants such as <l·· > along with <ll>.

Regarding length, Li (1930:40) wrote, “the material on Athabaskan languages has not been consistent in the recording of [vowel] quantity; and in those where we have the record, dialectic peculiarities have evidently obscured the original situation.” Li recognizes that vowel length was not well attended to by previous researchers, but makes a curious claim about Wailaki vowel length. Li writes that long vowels occur “in Wailaki in open syllables, and the short vowel occurs... in Wailaki in closed syllables,” and that overly long vowels were present at times as a result of contraction (40). He appears to state that vowel length can be predicted from syllable structure; however, his own data contradict these statements:

(3) Li Vowel Length and Syllable Types

a.	taak'	<t'ɑ·k'>	'three'	JT (LFK _V :54)(= 2.45j)
b.	yiit	<yí·D'>	'house'	JT (LFK _V :57)(=2.10a, 2.45d)
c.	look'	<lɔ·k'>	'salmon'	JT (LFK _V :48)(=2.18c, 2.45g)
d.	haat	<hɑ·D'>	'there'	JT (LFK _N :01)(=3.83a)
e.	bi.yeh	<biyɛ'>	'below (it)'	JT (LFK _N :46)(=2.32c, 3.70a)
f.	yi.de'	<yidé'>	'downriver'	JT (LFK _V :38)(=2.11a)

Long vowels appear in closed syllables in (3a-d), while examples of short vowels in open syllables are given in (3e-f). Example (3e) gives a rare word-final short vowel. Short vowels do appear in word-final closed syllables. A word-final glottal fricative [h] insertion rule after vowels likely obscures the presence of what would otherwise be underlying word-final short vowels (see 2.5.2.3). Li's statement that "overlong vowels result chiefly from contraction" and appears to be true; however, two rather than three vowel lengths are contrastive (see 2.4).

Other symbols used in the Wailai documentation include diacritics to mark syllable pitch and stress. Merriam marked stressed syllables with a primary accent mark, for example marking the second syllable in Tsennahkennes <Tsen-nah'-ken-nes> (CHM). Li also marks prominent syllables with a diacritic, for example the second syllable vowel nucleus in <disnɨŋ>, or 'I said' (LFK_N:122). Neither Goddard nor Essene marked prominent syllables with any sort of diacritics for pitch, though words are syllabified in both Goddard's published texts and in his notebooks. Whether he specifically targeted syllables in elicitation sessions or offers them impressionistically is unknown.

In this chapter I've primarily utilized the texts, notes, and notecards of Li Fang-Kuei who worked with the Tsennahkennes Wailaki dialect speaker John "Wylakki" Tip. These are the most carefully transcribed materials. Researchers prior to Li do not transcribe key phonemic contrasts carefully, and do not consistently distinguish glottalized plosive segments from aspirated plosive segments. Goddard writes in *Wailaki Texts* for example, that "the glottally affected sounds t' and k' are not in all places properly distinguished in these texts, due in large part to lack of care in properly entering a diacritical symbol when recording them" and that "the texts themselves have not been revised" (1923:77). Merriam also worked with John "Wylakki" Tip, and many speakers of other dialects. Dialect comparisons thus rely more heavily on Merriam word lists. Goddard's notebooks, once retranscribed, could provide more promising data for future study and dialect comparisons than is possible at the present time.

2.3 Consonants

There are five consonant manner types in Wailaki, and five places of articulation. Together, the general characteristics of Wailaki consonant phonemes are listed in Table 9 below, written according to typical Dene language conventions and the practical orthographic considerations discussed in section 2.2., with corresponding IPA symbols in brackets:

	Bilabial	Alveolar	Palato-alveolar	Velar	Glottal	
Stops						
Unaspirated	b [p]	d [t]		gy [g ⁱ]	g [k]	' [ʔ]
Aspirated		t [t ^h]		ky [k ^h]	k[k ^h]	
Glottalized		t'		ky'[k ^ʔ]	k'	
Affricates						
Unaspirated		(dz)[dz]	j [dʒ]			
Aspirated			ch [tʃ ^h]			
Glottalized		ts' [tʃ ^ʔ]	ch' [tʃ ^ʔ]			
Fricatives						
Voiceless		s	sh [ʃ]		h	
Voiced				ɣ		
Lateral		ɬ				
Nasal	(m)	n		ŋ		
Approximant		l	y [j]	(w)		

Table 9. Wailaki Consonant Phonemes

2.3.1 Stops

A three-way contrast exists for oral stops in Wailaki - unaspirated, aspirated, and glottalized. The stops /b d gy g ʔ/ in Wailaki may be interpreted as voiceless and unaspirated, for the reason that these stops correspond exactly to stops in Hupa, which Golla (1970:26) notes as voiceless and unaspirated. This characterization also agrees with Li's (1930:6) description of stops present in Mattole as "intermediate" in stem-initial position, distinguishing between intermediate (i.e. plain), aspirated and glottalized stops. While /gy/ is not present in Mattole, Li writes Hupa and Wailaki cognates and comparisons, and notes Wailaki /gy/ as <ḡ>. Examples include, Mattole <nildji> 'you are afraid,' which Li compares with the Hupa and Wailaki verb stem <-ḡid> (Li 1930:12).

Unaspirated stops /b d gy g ʔ/ can appear word-initially as in (4), and stem-initially as in (5), though word-initial /gy/ in (4e) is rare:

(4) Word-Initial Stops /b d gy g ' /

- a. **bi-náa'** <**biná·'**>
3POSS-eyes
'his (her/its) eyes' JT (LFK_T:48)
- b. **báhaŋ** <**báhaŋ**>
N
'war'⁸ JT (LFK_N:51)
- c. **dii** <**di·**>
DEM
'this' JT (LFK_N:19)
- d. **doo=k'aŋ** <**do·^ok'aŋ**>
NEG=recently
'long time ago' JT (LFK_N:01)
- e. **gyaŋ** <**g^gaŋ**>
ADV
'here' JT (LFK_N:1)(=3.82a)
- f. **goo** <**go·**>
N
'worm' JT (LFK_V:40)
- g. **gat** <**gaD'**>
N
'root' JT (LFK_V:40)(=2.10e)
- h. **'ah** <**'a'**>
N
'cloud' JT (LFK_V:33)

(5) Stem-Initial Stops /b d gy g ' /

- a. **ɬ-baaŋ'-ha'** <**ɬba·ŋ'ha'**>
RECP-opposite-just
'both (sides)' JT (LFK_N:46)
- b. **ch'ó=sh-dai** <**tc'ócdai**>
weak=1SG.S-be.lazy
'I am lazy.' JT (LFK_N:352)(=2.35d, 4.29c)

⁸ In 2.3 and 2.4, I include lexical category glosses for morphologically simplex words.

- | | | |
|----|--|---|
| c. | 'í-n-gyis
EP-2SG.S-scrape.OPT ⁹
'You'll scrape.' | <'íŋ ^h is>

JT (LFK _N :336) |
| d. | sh-gej-e'
1SG.POSS-shoulder-POSS
'my shoulder' | <çg'éjε' >

JT (LFK _V :40) |
| e. | ta='a-shi-l-'a'
in.water=EP-1SG.S-CLS-extend.PFV
'I lie stretched in the water.' | <t'a'acil'a'>

JT (LFK _N :342) |

The voiceless unaspirated stop /gy/ is limited to stem and word-initial environments, and doesn't appear in syllable codas or as an onset of a syllable that isn't a stem. Other voiceless unaspirated stops /b d g ' / however appear as word-internal syllable onsets as in (6):

- (6) Word-Internal Syllable Onsets /b d g ' /
- | | | |
|----|--|--|
| a. | tibił
N
'burden basket' | <t'ibił>

JT (LFK _V :34) |
| b. | dii yídaay
DEM ADV
'upstream (toward speaker)' | <di· yída·y>

JT (LFK _V :38) |
| c. | sh-lóog-e'
1SG.POSS-calf-POSS
'my calf' | <cló·gε'>

JT (LFK _V :48)(=5.20e) |
| d. | né-'e-shoŋ'
THM-INC-good
'It gets ripe, comes to be good.' | <né'εcoŋ'>

JT (LFK _N :372)(=2.65c) |

Aspirated stops /t ky k/ in Wailaki are voiceless and aspirated as noted by Li (1930:9), and appear word-initially in (7), stem-initially in (8), and as word-internal syllable onsets in (9):

⁹ Verb stems encode aspect/mode independent of tense aspect mode clitics/suffixes. See section 4.2 for further discussion of verb stems.

(7) Word-Initial Stops /t ky k/

- | | |
|---------------------------------|--|
| a. tísbil
N
'eagle' | <t'ísbil>
JT (LFK _T :31) |
| b. kyinla'
N
'grass game' | <k'inla'>
JT (LFK _T :60) |
| c. koŋ'
N
'fire' | <k'oŋ'>
JT (LFK _V :45)(=2.39f) |

(8) Stem-Initial Stops /t ky k/

- | | |
|---|---|
| a. na=n-taŋ
around=2SG.S-pack
'You pack it around.' | <nant'aŋ>
JT (LFK _N :344) |
| b. ŋ-kyáh
THM-be.big
'large, big' | <ŋk'á '>
JT (LFK _N :132) |
| c. sh-ke'
1SG.POSS-foot
'my foot' | <ck'ε'>
JT (LFK _V :44) |

(9) Word-Internal Syllable Onset Stops /t ky k/

- | | |
|---|--|
| a. t'o'-tah
grass-among
'open field' | <t'o'-t'a'>
JT (LFK _T :81) |
| b. bi-ya'=kyoh
3POSS-hair=AUG
'blanket' | <biya'k'o'>
JT (LFK _V :42)(=6.29b) |
| c. náka'
NUM
'two' | <nák'a'>
JT (LFK _V :50) |

In word-final position, the contrast between voiceless unaspirated stops and aspirated stops is neutralized. Li writes /d/ as <D'> word-finally in (10a) and (10e), while he writes <D> for the same morphemes suffixed in (10b) and (10f); likewise for /g/ as <G'> word-finally in (10c) and <G> when suffixed in (10d). Importantly, aspirated /t/ and /k/ are not found in word-final position. Golla (1970:26) writes that Hupa unaspirated stops are slightly aspirated “before a pause” and that aspirated stops “are never found before a pause.” In this way, Wailaki and Hupa stops behave similarly. I retranscribed <D> at [t] word-finally but as [d] pre-vocally, and borrow from Hupa practical orthography in this way.

(10) Word-Final Neutralized Stops <d g>

- | | |
|--|---|
| a. yiit
N
'house' | <yi· D' >
JT (LFK _V :57)(=2.3b, 2.45d) |
| b. shi-yíid-e'
1SG.POSS-house-POSS
'my home' | <ciyí· Dè' >
JT (LFK _V :56) |
| c. ch'éek
N
'girl, woman' | <tcé· G' >
JT (LFK _T :56) |
| d. sh-ch'éeg-e'
1SG.POSS-woman-POSS
'my wife (my woman)' | <ctc'é· Gè' >
JT (LFK _T :112)(=5.7a) |
| e. gat
N
'root' | <ga D' >
JT (LFK _V :40)(=2.4g) |
| f. chich gáad-e'
tree root-POSS
'tree root' ¹⁰ | <tc'itc' gá· Dè' >
JT (LFK _V :40) |

Glottal stop /ʔ/ is a common word-final consonant and coda as in (11), and can be part of complex coda following nasals or /l/ in (11d-g):

(11) Word-Final and Coda Glottal Stop / ʔ /

- | | |
|--|---|
| a. yidé'
ADV
'downriver' | <yidé'>
JT (LFK _V :38)(=2.3f) |
| b. k'a'
N
'arrow' | <k'a'>
JT (LFK _V :46)(=5.11a) |
| c. sho'-ha'
belief-just
'never' | <co'ha'>
JT (LFK _V :43) |
| d. ts'al'
N
'baby basket' | <ts'al'>
JT (LFK _V :35)(=2.31b) |

¹⁰ Possibly also a compound, though Li writes with a space between the two stems.

- | | | |
|----|--|---|
| e. | ky'i-t'əŋ'
THM.POSS-leaf
'leaf' | <k'it'əŋ'>
JT (LFK _V :55) |
| f. | daŋ'-hit
spring-when
'springtime, (in the spring)' | <daŋ'hiD'>
JT (LFK _V :38)(=6.37a) |
| g. | sɪŋ'=kyoh
star=AUG
'(big) star' | <sɪŋ'ko'>
JT (LFK _V :52) |

In addition to aspirated and unaspirated stops, glottalized stops /t' ky' k'/ also exist in Wailaki. All three are found word-initially in (12), stem-initially in (13) and as syllable onsets in (14):

(12) Word-Initial Glottalized Stops /t' ky' k'/

- | | | |
|----|-----------------------------------|---|
| a. | t'oh
N
'grass' | <t'o'>
JT (LFK _V :55)(=2.38b) |
| b. | ky'i-k'a
THM.POSS-fat
'fat' | <k'ik'a>
JT (LFK _V :46)(=5.15a) |
| c. | k'ash
N
'alder' | <k'ác>
JT (LFK _V :46) |

(13) Stem-Initial /t' ky' k'/

- | | | |
|----|--|---|
| a. | si-i-t'ats'
PFV-1SG.S-cut.PFV
'I cut it.' | <si-t'ats'>
JT (LFK _N :201) |
| b. | 'i-sh-ky'əŋ'
EP-1SG.S-hit.OPT
'I'll hit him(/her/it).' | <'ick'əŋ'>
JT (LFK _N :291)(=4.29i, 4.61a) |
| c. | bi-k'os
3POSS-neck
'his(/her/its) neck' | <bik'os>
JT (LFK _T :27) |

(14) Word-Internal Syllable Onsets /t' ky' k'/

- | | | |
|----|--|---|
| a. | ki-nist'e'
INDF.POSS-body
'Indian (Indians, person, people)' | <kinist'e'>
JT (LFK _T :3) |
|----|--|---|

- | | |
|-------------------------------------|---|
| b. dinky'in
NUM
'four' | <din k'in>

JT (LFK _V :39)(=3.20d) |
| c. dik'anj
N
'mountain ridge' | <dik'anj>

JT (LFK _V :46) |

While /ky'/ does not appear word-finally or in codas, /t'/ and /k'/ unambiguously appear word-finally and stem-finally in codas (15a-b), and are transcribed the same before vowel-initial clitics (15c-d):

(15) Word-Final or Stem-Final /t' k'/

- | | |
|---|---|
| a. ky'i-shí-bat'
THM.O-1SG.S-pound.flat.IPFV
'I pound it flat.' | <k'icibat'>

JT (LFK _N :227) |
| b. no='-tee-lik'
to.there=INDF.S-DIST-handle.mush.PFV
'They put (mush) down here and there.' | <no't'ε·lik'>

JT (LFK _N :224)(=4.54e) |
| c. yai='-si-l-bát'=inj
PL=INDF.S-PFV-CLS-pound.flat.IPFV=DUR
'They pound it flat.' | <yai'silbát'inj >

JT (LFK _N :227)(=4.44d) |
| d. no=tee-si-i-lik'=inj
to.there=DIST-1SG.S-handle.mush.PFV=DUR
'I put (mush) down here and there.' | <not'ε·si·lik'inj>

JT (LFK _N :224) |

2.3.2 Fricatives

There are five Wailaki fricative consonants /s sh ʎ y h / which occur in all onset and coda positions. Of the five, only /y/ may be interpreted as voiced. The rest are voiceless. Instances of word-final [h] as in (17e) are often the result of partial word-final devoicing of vowels (see 2.5.2.5). Li discusses <y> with other consonants as distinct from aspirated and glottalized consonants, and yet separate from voiceless fricatives (1930:6):

(16) /s/

- | | |
|---|--|
| a. soy=chi'
grandchild=DIM
'(my) grandchild (man speaking)' | <soitci'>

JT (LFK _V :52) |
| b. ky'is
N
'pounding basket' | <k'is>

JT (LFK _V :41) |

- c. **sil**
N
'fever (disease)'
<sil>
JT (LFK_V:52)
- d. **sdoŋ'**
ADV
'almost'
<sdoŋ'>
JT (LFK_V:39)(=3.110a)
- e. **hai bi-si'**
DEM 3POSS-head
'him(/her/it) his (/her/its) head'
<hai bisi'>
JT (LFK_T:89)

(17) /sh/

- a. **láashe'**
N
'buckeye'
<lá·ce'>
JT (LFK_V:47)(=2.31a)
- b. **ni-sh-kyay**
THM-1SG.S-large
'I am large, big.'
<nickay>
JT (LFK_N:132)(=2.77b, 4.57l, 6.6d)
- c. **shash=kyoh**
bear=AUG
'grizzly bear'
<caç k'o'>
JT (LFK_V:43)
- d. **shkaŋ'**
1SG.POSS-husband
'my husband'
<ckaŋ'>
JT (LFK_V:44)
- e. **sh-aa**
1SG.PPO-for
'for me'
<ca·'>
JT (LFK_N:18)(=3.72b)
- f. **k'iyáash**
N
'bird'
<k'iyá·c>
JT (LFK_T:88)

(18) /ʔ/

- a. **lo'**
N
'laugh (laughter)'
<lo'>
JT (LFK_T:24)(=2.38d)
- b. **n-láaŋ**
THM-be.many
'many'
<nlá·ŋ>
JT (LFK_T:31)

- c. **lók'** <ló·k'>
 N
 'salmon'
 JT (LFK_V:48)(=2.3c, 2.45g)
- d. **laiha'** <laiha'>
 NUM
 'one'
 JT (LFK_V:47)
- e. **bi-l** <bil>
 3PPO-with
 'with (him/her/it)'
 JT (LFK_T:65)

(19) /y/

- a. **sh-yée** <cyé·>
 1SG.POSS-brother.in.law
 'my brother-in-law (wife's brother)'
 JT (LFK_V:42)
- b. **ni-yil** <niyil>
 THM-dizzy
 'dizzy, drunk'
 JT (LFK_T:73)
- c. **yí-sh-hil** <yíchlil>
 PROG-1SG.S-burn.PROG
 'I am burning it right along.'
 JT (LFK_N:209)
- d. **tiyaa** <-t'iyɑ·>
 POST
 'among (people)'
 JT (LFK_N:75)(=3.68a)

(20) /h/

- a. **laha'** <laha'>
 PRON
 'nothing'
 JT (LFK_N:12)(=3.13a)
- b. **'aht'inj** <'ɑ't'inj>
 ADV
 'all'
 JT (LFK_T:73)(=3.112a)
- c. **hai** <hai>
 DEM/DEM.PRON
 'he (that, this, the one)'
 JT (LFK_N:9)
- d. **nólleh** <nól·ε'>
 N
 '(water)fall'
 JT (LFK_T:62)

e. ehe EXCL 'yes'	<ɛhɛ> JT (LFK _T :17)
--------------------------------	--

Voiced velar fricative /ɣ/¹¹ has an allophone [ɣw] (i.e. IPA [ɣ^w]) that occurs primarily before [o] as in the verb stems in (21a-d). In a few instances, [ɣw] appears before other vowels.

(21) [ɣw]	
a. ɣwoł V.STEM.IPFV 'to scrape'	<ɣ ^w oł> JT (LFK _V :15)(2.82a)
b. ɣwosh V.STEM.IPFV 'to sleep'	<ɣ ^w oç> JT (LFK _V :15)(=2.82b)
c. ɣw-ohó-l-ky'e' PROG-2PL.S-CLS-set.fire.IPFV 'You all set fire right along (to grass).'	<ɣ ^w ohólk'ɛ'> JT (LFK _N :270)
d. ɲhoh=ɣwánj 1/2PL.PPO-concerning 'against us'	<ɲho'ɣ ^w ánj> JT (LFK _T :60)
e. sh-ɣwós 1SG.POSS-thigh 'my thigh'	<sh-ɣ ^w ós> JT (LFK _V :42)
f. ł-ee-ky'-o='-ɣwiŋ-keet RECP-against-THM.O-DIR=INDF.S-PFV-pay 'They gave each other things after war.'	<łɛ·k'ó'ɣwiŋ-kɛ(·)D'> JT (LFK _N :379)(=2.82c)

The allomorph [ɣw] before /o/ may be attributed to a lip rounding effect on /ɣ/ preceding /o/, while (21e-f) demonstrate a similar effect from /ɣ/ following /o/. This occurs even with intervening consonants /h/ in (21d) and /ʔ/ in (21f) found between /ɣ/ and /o/.

In addition, /s/ has an allophone which is a voiceless unaspirated affricate [dz] (in Dene orthographic convention [ts] in IPA), which Li regards as “a form of *s* after *t* or *l*” (1930:10). I list (dz) in parentheses in Table 9 and below to indicate its status as an allophone of /s/. Though several verb stems are listed by Li as starting with [dz] (Li 1927c:21), *l*- or *l*-classifiers are prefixed to them as in the following:

¹¹ Wailaki /ɣ/ is retained from Proto-Dene *ɣ, which fully merges with /w/ in Hupa (Li 1930:9; Hoijer 1960:966; Golla 2011:81). Here IPA [ɣ^w] is written [ɣw] closer to practical Wailaki orthography, whereby [w] is labialization on the preceding consonant.

- (22) 'i-l-**dzis** (<'i-n-l-**dzis**>¹² <'ildzis>
 EP-(2SG.S)-CLS-find.IPFV
 'You find him(/her/it)!' JT (LFK_N:170)

In Li's texts, notecards, and word list, <s> doesn't appear after <l> or <ł>; however, several verb stems listed as starting with /s/ appear as /dz/ after an *l*- classifier used in causative constructions. For example with 'to cut, to shave' <siD'>, Li writes the stem as <dziD'> following an *l*- classifier in a likely causative construction (23):

- (23) <bisí' bε·nildziD'>
 bi-sí' b-ee=n-í-l-**dzit**
 3POSS-hair 3PPO-against=PFV-2SG.S-CLS-cut.PFV
*His hair I cut.*¹³
 'I cut his hair.' JT (LFK_N:205)(=2.61b)

In Goddard's Wailaki texts, <s> does appear after <l> or <ł>; however, each verb stem for which this occurs is listed by Li either as <dz> or <ts'>, or is a <s>-initial verb stem that changes to /dz/ after classifier *l*- or *ł*- (see 4.4) without exception in Li's documentation. These examples use stems that are written by Li as follows:

- (24) Li Classifiers *l*- and *ł*- and /s/-Initial Verb Stems (IPFV)
- | | | | | |
|----|------------------|-------------------|------------------------------------|---------------------------|
| a. | (ł)- ts'e | < ts'·ε' > | 'to eat soup by dipping (fingers)' | JT (LFK _V :5) |
| b. | (l)- dzai | < dzai > | 'to be dry' | JT (LFK _V :21) |
| c. | (ł)- dzas | < dzas > | 'to tighten (belt)' | JT (LFK _V :21) |
| d. | (ł)- dzis | < dzis > | 'to find' | JT (LFK _V :21) |

A handful of instances in Goddard's texts that are <s> following <l> or <ł> are also <s>-initial prefixes that without exception are given as <dz> for words in the same paradigm as written by Li. In my estimation, the possibility that Goddard made errors in transcriptions is greater than the possibility that he recorded evidence contrary to Li's description of [dz] as an allophone of /s/. 'Proto-Dene *ts is phonemically /s/ in Wailaki, which is realized as [s] ordinarily, but [dz] after the classifiers.

2.3.3 Nasals

Nasals [m], [n] and [ŋ] are present in Wailaki. The bilabial nasal [m] is somewhat rare. It occurs word-initially as in (25b-e), and is written in the documentation in variation with /b/ word-initially as in (25a) depending on the speaker and dialect. It otherwise occurs more regularly as a product of nasal place assimilation before an underlying bilabial stop, in that the nasal may assimilate to the place of the following segment, while bilabial stops

¹² Segments and morphemes in parenthesis represent underlying segments and morphemes that are otherwise deleted, or not present in surface forms (see 2.4).

¹³ For literal translations different from a source English gloss or one I offer (indicated by *), an additional line is given. Words added to a transcriber's English gloss are in parentheses ().

assimilate in manner with the preceding nasal (see 2.5.1.1). Li notes that this also occurs in Mattole (1930:7).

- (25) /m/
- | | | |
|----|--|---|
| a. | baan=cho
ocean=AUG
'ocean' | <bahn'-cho>

JT, MM, ND (CHM:202) |
| b. | maan=cho to
ocean=AUG water
'ocean' | <mahh-cho'-to>

GB (CHM:374) |
| c. | miŋk'
N
'lake' | <miŋk'>

JT (LFK _N :389) |
| d. | moon'=chi'
bites=DIM
'small bites' | <mo-n'tci'>

JT (LFK _T :76) |
| e. | mit'ol'
N
'a chain, string hanging down' | <mit'ol'>

JT (LFK _N :308) |
| f. | ky'é= m-ma ' (< ky'-e-n-ba'
ADV=2SG.S-be.lucky
'You are lucky in gambling.' | <k'emma'>

JT (LFK _N :349)(=4.32g) |

Regarding nasals, Li (1930:21) states that for “Hupa, Mattole, Wailaki, Kato, etc., for Dene in general, we need only recognize one [nasal]...probably *n. Word-initially it always appears as *n-*.” Both nasals [n] and [ŋ] occur word-initially in (26), however the velar nasal [ŋ] only appears word-initially before /h/ in (26c-d) and /k/ (26e) due to nasal place assimilation.

- (26) Word-Initial Nasals
- | | | |
|----|---|--|
| a. | ne'
N
'earth' | <ne'>

JT (LFK _V :50) |
| b. | n=aa
2SG.PPO-for
'for you' | <na·'>

JT (LFK _N :18)(=3.72c) |
| c. | ŋh=aa
1/2PL.PPO-for
'for us, you all' | <ŋha·'>

JT (LFK _N :18)(=3.72d) |

- d. **ŋhoŋ** <**ŋhoŋ**>
 PRON
 ‘you all’ JT (LFK_N:281)(=3.6e)
- e. **ŋ-kyá-k** <**ŋk‘áG‘**>
 THM-big-ADV
 ‘lots, many’ JT (LFK_N:132)(=4.57m, 6.33b)

As for word-final nasals, Li (1930:21) writes in a footnote that in Wailaki they are always [ŋ] unless assimilation takes place; therefore, word-final nasals are not contrastive. Stem-final velar nasal [ŋ] in (27a) becomes alveolar [n] in (27b) when followed by a vowel-initial enclitic:

(27) Stem-Final Nasals

- a. **sí-i-ky‘aŋ** <**sí·k‘aŋ**>
 PFV-1SG.S-shoot.PFV
 ‘I shot.’ JT (LFK_N:292)
- b. **sí-i-ky‘an-inŋ** <**sí·k‘aniŋ**>
 PFV-1SG.S-shoot.PFV=DUR
 ‘I did (shoot).’ JT (LFK_N:292)

Stem-final nasal place assimilation does occur in Li’s texts where words in isolation feature word-final velar nasal [ŋ].

(28) Word-Final Nasals [n ~ ŋ]

- a. <**nŋa·n yisiŋ^gye· kanya‘niŋ**>
 nŋaan yi-si-l-ye=kan=ya‘niŋ
 many OBV-PFV-CLS-kill=EVID?=they.say
 ‘Many he killed (they say).’ JT (LFK_T:47)
- b. <**nŋa·ŋ lo·k‘**>
 nŋaan look‘
 many salmon
 ‘many fish (salmon)’ JT (LFK_T:31)
- c. <**k‘inist‘e‘nŋa·ŋ tc‘ite·ba‘ ya‘niŋ**>
 kinist‘e‘ nŋaan ch‘i-tee-bah=ya‘niŋ
 people many INDF.S-off.along-go.to.war=they.say¹⁴
People many they go to war they say.
 ‘*Many people go to war they say.’ JT (LFK_T:9)(=3.4b)

¹⁴ Enclitic *ya‘niŋ* is frequent at the end of lines in texts (see 6.1.1.11).

- d. <se·liŋ na'alkoi'>
 seeliŋ na='a-l-koí'
 blood ITER=INDF.S-CLS-vomit
Blood they vomit.
 '*They vomit blood.' JT (LFK_T:77)

From examples in (28), word-final [n] and [ŋ] appear to be in free-variation in texts, though [ŋ] still is more prevalent as a word-final nasal than [n]. The word-final nasal in (28a) is alveolar [n] before palatal glide /y/ in a text; even so, word-final nasals in (29b-d) are velar [ŋ] before a number of consonants that could possibly trigger assimilation to [n] as front consonants. Word-final nasal in (28d) is velar [ŋ] before alveolar [n].

There are two cases of word-final /n/ in Li's notecards although they are written as superscript in the following:

(29) Word-Final Superscript Nasals

- a. yi-sh-ky'ish=tel-t'éⁿ <yick'ict'elt'εⁿ>
 PROG-1SG.S-hit.IPFV=FUT-IPFV
 'I'll be hitting him right along.' JT (LFK_N:292)(=6.16b)
- b. nin=s-i-tái'n=t'ehⁿ <ninsit'ái'nt'εⁿ>
 off.ground=1SG.S-handle.stick.PFV=IPFV
 'I pick(ed) it up some time ago.' JT (LFK_N:344)(=4.69j)

Though the exact phonetic interpretation of this transcription is uncertain, Li likely intended to represent some sort of reduced consonant, possibly word-final [n] as nasalization on the vowel instead of word-final [ŋ]. Since these are the only two examples of word-final nasals not found in texts and represent some sort of reduced nasal form, I have written them as [ŋ].

As for word medial nasals, some comparable variation between [n] and [ŋ] may be present, as in (30a-b). However, Li consistently transcribes word-internally [n] before /y/, and there are some examples of Li transcribing [n] before /k/ in (30c-d) where one might expect nasal place assimilation instead:

(30) Word-Internal Nasals

- a. ti-n-yash <t'in^yac>
 off.along-2SG.S-go.IPFV
 'You go (off/along).' JT (LFK_N:313)(=2.40f)
- b. ti-ŋ-yash <tiñ yac>
 off.along-2SG.S-go.IPFV
 'You go off/along.' CJ (PG_T 1.102)
- c. tóo=n-k'ak <tó·nk'aG'>
 water=THM-much
 'much water' (in quantity) JT (LFK_N:16)

- | | |
|---|--|
| d. nin-ky'aŋ
earth-inside.body
'into ground, inside of earth' | <nink'aŋ>

JT (LFK _N :83) |
|---|--|

Li's (1930:21) description of the distribution is that [n] is word-initial and [ŋ] is word-final except where nasal place assimilation. Though counterexamples exist in texts, words in isolation follow this described distribution. Velar nasal is only found in word final position, but it can be found word-internally if it is the result of nasal place assimilation. Li's description doesn't seem to account for [n] when it occurs word-internally – as a syllable onset that doesn't happen to be word-initial or as a non-assimilated coda.

2.3.4 Approximants

Approximants in Wailaki include lateral approximant /l/ and palatal approximant /y/ which can appear following vowels as a diphthong. Approximant [w] is non-phonemic, and appears as a coda on syllables with /o/, and is often written by Li as superscript with /y/, or with /y/ as superscript in proximity to [w] (see 2.3.2).¹⁵

- | | |
|---|---|
| (31) /l/ | |
| a. laashe'
N
'buckeye' | <la·ce' ^y >

JT (LFK _V :47)(=2.17a) |
| b. ts'al'
N
'baby basket' | <ts'al' ^y >

JT (LFK _V :35)(=2.11d) |
| c. ts'ilgel
N
'hummingbird' | <ts'ilgel>

JT (LFK _T :109) |
| d. sahal
N
'needle' | <sahal>

JT (LFK _V :52) |
| e. 'i-l-liŋ' (<'i-n-l-liŋ)
EP-(2SG.S)-CLS-tie.OPT
'You will tie (it) up.' | <'illliŋ>

JT (LFK _N :116)(=2.53c, 2.69a) |

¹⁵ Proto-California Athabaskan *y and *w merge in Hupa as /w/, while Wailaki retains voiced velar fricative /y/ (Golla 2011:81). Wailaki /y/ features liprounding though, written by Li as superscript <^w>, in proximity to /o/.

- (32) /y/
- | | | |
|----|--|--|
| a. | yíse'
ADV
'west' | <yíε'>

JT (LFK _T :31) |
| b. | yibaŋ
ADV
'across, opposite side' | <yibaŋ>

JT (LFK _N :42)(=3.97a) |
| c. | bí-yeh
3PPO-below
'below (it)' | <bíyε'>

JT (LFK _N :46)(=2.3e, 3.70a) |
| d. | ya=y-kí-l-bas
PL=OBV-THM-CLS-roll
'They all roll him.' | <yayk'ílbas>

JT (LFK _N :305) |

- (33) [w]
- | | | |
|----|---|---|
| a. | dow='i-s-t'ás-i'
NEG=EP-1SG.S-cut.IPFV=NEG
'I never cut.' | <dow 'ist'ási'>

JT (LFK _N :48)(=4.31c, 6.45a) |
| b. | yow
ADV
'there (near)' | <yow>

JT (LFK _N :19)(=2.49b) |
| c. | sh-ywó'
1SG-teeth
'my teeth' | <cy ^w ó'>

JT (LFK _N :42) |
| d. | no=ywí-sh-bil
to.there=PROG.1SG.S-throw.several.objects.PROG
'I (am) throw(ing) it down.' | <no ^y wishbil>

JT (LFK _N :330) |

The labialized voiced velar fricatives in (33c-d) demonstrate that the labialized variant of /y/ occurs with /o/ following /y/ as in (33c), but also with /o/ preceding /y/ as in (33d).

2.3.5 Affricates

Palato-alveolar affricate phonemes in Wailaki include unaspirated /j/, aspirated /ch/, and glottalized /ch'/. In word-final position, the aspiration contrast is neutralized. As for alveolar affricates, glottalized /ts'/ exists where Proto-California Dene aspirated *ts merges with the alveolar fricative *s in Wailaki (e.g. Hupa *tse* Wailaki *see* 'stone, stone')(Golla 2011:81). Li comments in his *Mattole Grammar* that [ts] and [s] in *Mattole* are in a "state showing the beginning of the confusion of these two sounds which is achieved in Wailaki" (1930:10). In addition, Proto-Dene *tʰ merges with *t' in onsets in Wailaki for all dialects except Nongatl (Hupa *tʰ'oh*, Wailaki *t'oh* 'grass') but appears as [l'] in codas (Hupa *-de:tʰ* Wailaki *-del'* "perfective two or more go")(Golla 2011:82).

(34) /ch/

- | | | |
|----|---|----------------------------|
| a. | 'i-l- chii (< i-n-l- chii) | <'iltc'i'> |
| | EP-(2SG.S)-CLS-make.IPFV | |
| | 'You make it.' | JT (LFK _N :137) |
| b. | chich | <tc'itc'> |
| | N | |
| | 'wood, tree' | JT (LFK _N :139) |

(35) /ch'/

- | | | |
|----|---------------------------------------|--|
| a. | ch' indij | <tc'indij> |
| | N | |
| | 'dead body, white man' | JT (LFK _V :37) |
| b. | ch' e=shi-l-dil | <tc'ecildil> |
| | out=1SG.S-CLS-throw.IPFV | |
| | 'I throw it out.' | JT (LFK _N :161) |
| c. | yi-i-l- ch' at | <yi'ltc'aD> |
| | PFV-1SG.S-CLS-halloo.PFV | |
| | 'I hallooded.' | JT (LFK _N :183) |
| d. | ch' o=sh-dai | <tc'ocdai> |
| | weak=1SG.S-be.lazy | |
| | 'I am lazy.' | JT (LFK _N :352)(=2.5b, 4.29c) |
| e. | naa=hee-sí-i-dii-yich' | <na·he·sí·di·yitc'> |
| | REV=off.along-PFV-1SG.S-CLS-breath | |
| | 'I got my breath back.' ¹⁶ | JT (LFK _N :235) |

¹⁶ The reversative and adverbial prefix *ti-/tee-* 'off, along' are thematic in this verb theme.

- (36) /j/
- a. **jin** <**djin**>
 N
 ‘day’ JT (LFK_V:43)
- b. **jee=l-doh** <**dje·ldo**>
 apart=CLS-crack.open.PFV
 ‘It cracked open.’ JT (LFK_N:179)(=4.25e)
- (37) /ts’/
- a. **ts’in** <**ts’in**>
 N
 ‘bone’ JT (LFK_V:35)
- b. **ky’i-dee-ts’an** <**k’ide·ts’an**>
 THM.O-THM-hear.PFV
 ‘He heard.’ JT (LFK_N:145)
- c. **’i-shí-l-yits’** <**’icilyits’**>
 EP-1SG.S-CLS-tie.knot.IPFV
 ‘I tie (a knot).’ JT (LFK_N:192)(=4.21f)

2.4 Vowels

Wailaki has four phonemic vowel qualities, and a two-way vowel length contrast, shown in Table 10:

	Front	Back
high	i, ii	
mid	e, ee	o, oo
low		a, aa

Table 10. Vowel Phonemes

The following are minimal pairs or near-minimal pairs that show vowel quality contrasts:

- (38) /a/ ~ /o/
- a. **-tah** <**bit’a**>
 POST
 ‘among’ JT (LFK_N:73)
- b. **t’oh** <**t’o**>
 N
 ‘grass’ JT (LFK_V:55)(=2.12a)

- c. **ła'** <ła'>
ADV
'another' JT (LFK_T:43)
- d. **ło'** <ło'>
N
'laugh (laughter)' JT (LFK_T:24)(=2.18a)
- (39) /o/ ~ /i/
- a. **kósh** <k'óc>
N
'berry' JT (LFK_V:44)
- b. **ki-sh-lo'** <kiclo'>
THM-1SG.S-lie.OPT
'I will lie (i.e.tell a lie).'
- c. **kyit** <k'íD'>
V.STEM.PFV/IPFV/OPT
'to seize' JT (LFK_V:12)
- d. **kyot** <k'óD'>
V.STEM.PFV/IPFV/OPT
'to steal' JT (LFK_V:12)
- e. **k'ij'** <k'ij'>
N
'bow' JT (LFK_V:46)
- f. **koŋ'** <koŋ'>
N
'fire' JT (LFK_V:45)(=2.7c)
- g. **noo=ki-naa** <no·k'ina·'>
to.there=THM-be.safe
'He is saved.' JT (LFK_N:135)(=4.35d)
- h. **noo=k-oo-naa** <no·k'ona·'>
to.there=THM-OPT-be.safe
'Let him be saved.' JT (LFK_N:135)
- i. **k'ee=y-óo-lit** <k'e·yó·hiD'>
ADV=OBV-OPT-burn.it.OPT
'Let somebody burn it.' JT (LFK_N:209)

- j. k'ee=yi-lit <k'e·yiliD'>
 ADV=OBV-burn.it.OPT
 'Let him burn it.' JT (LFK_N:209)
- (40) /a/ ~ /i/
- a. k'as <nk'as>
 V.STEM
 'to throw (e.g. a stone)' JT (LFK_V:18)
- b. bí-k'is <bík'is>
 3PPO-one.side
 'one side of it' JT (LFK_N:35)(=3.50b)
- c. hit <hiD'>
 ADV
 'when, at that time' JT (LFK_T:47)
- d. hata' <hat'a'>
 ADV
 'the same place' JT (LFK_T:41)
- e. 'í-n-yish <'inyic>
 EP-2SG.S-break.stick
 'Break it!' JT (LFK_T:317)
- f. ti-n-yash <t'inyac>
 off.along-2SG.S-go
 'You go (off/along).' JT (LFK_N:313)(=2.30a)

As for length, Li makes a distinction in his transcription between three lengths. Li writes that Wailaki, like Sarcee (a Dene language spoken near Calgary, Alberta, Canada), has three quantities: "long, overlong, and short" but that "overlong vowels result chiefly from contraction" (1930:40). These overlong vowels appear to be synchronically derived environments however rather than frozen in lexicalized items. While short vowels are unmarked by Li, long vowels are marked <·> as in (41a). Overlong vowels are marked <:·>, or marked <·:·> followed by a superscript vowel of the same quality, in (41b-c):

- (41) /aa/ ~ [aaa]
- a. k'aa=di-niŋ <k'a·diniŋ>
 so=1PL.S-say.PFV
 'We said that.' JT (LFK_N:122)
- b. k'aa-a=di-niŋ <k'a·^adiniŋ>
 so-PL=1PL.S-say.PFV
 'We all said that.' JT (LFK_N:122)

- | | |
|---|---|
| c. ch'ee-naa-a=ldi-lat
out-REV-PL=CLS-run.OPT
'They'll run out.' | <tc'ε:na:ldilaD'>

JT (LFK _N :301) |
|---|---|

Over long vowels always occur at morpheme breaks, most commonly with a plural prefix cognate with the Hupa plural prefix *yaa-*. As Li described, contraction of this morpheme in Wailaki appears to produce overlong vowels. Overlong vowels don't appear to be phonemic, as there are no underlying overlong vowels, leaving just two phonemic vowel lengths. Long vowels may be considered underlyingly long in stems (each imperfective) in (42), the result of a lengthening in (43b), or the result of adjacent short vowels across morpheme boundaries in (43b):

(42) Underlying Long Vowel Verb Stems

- | | |
|--|---|
| a. cheet
V.STEM
'to die' | <tc'ε:D'>

JT (LFK _V :7)(=2.62e) |
| b. daa
V.STEM.PFV/IPFV
'to have menstruation (to menstruate)' | <da·' >

JT (LFK _V :8) |
| c. chaa
V.STEM.PFV/IPFV
'to sprinkle water' | <tc'a·' >

JT (LFK _V :8) |

(43) Short Vowel Lengthened in Distributive Prefix¹⁷

- | | |
|--|--|
| a. ti-l-ky'et' (< ti-n-l-ky'et' >)
off.along-(2SG.S)-CLS-set.fire
'You set fire going along.' | <t'ilk'et'>

JT (LFK _N :269) |
| b. tee-sí-l-ky'et' (< ti-si-n-l-ky'et' >)
off.along-PFV-(2SG.S)-CLS-set.fire.PFV
'You did set fire going along.' | <t'ε:sílk'et'>

JT (LFK _N :269) |

(44) Adjacent Short Vowels

- | | |
|--|---|
| a. yá=n-dił
up =ADV-go.PL
'(salmon) jump up.' | <yándił>

JT (LFK _N :161) |
| b. yá-a=n-dił
up -PL=ADV-go.PL
'they jump up.' | <dow k'á·ak'ó·slε'>

JT (LFK _N :161) |

¹⁷ The distributive prefix vowel is lengthened in s- perfective forms, similar to Hupa conjunct prefixes that are lengthened in s- perfective forms (Sapir and Golla 2001:835) (see 4.8, 4.9).

Regarding length, Li also wrote that long vowels occur “in Wailaki in open syllables, and the short vowel occurs... in Wailaki in closed syllables” (1930:40). Contrary to Li’s published statement about vowel length, in Li’s own transcriptions there are mono-morphemic nouns and verb stems with codas and long vowels, demonstrating phonemic long vowels.

- (45) Long and Short Vowel Minimal Pairs
- | | | |
|----|--|---|
| a. | sh- eed
1SG.POSS-cousin
‘my cousin’ (female speaking) | <ʃɛ̃·d>

JT (LFK _V :52) |
| b. | le et
V.STEM.PROG
‘to be singing’ | <lɛ̃·t>

JT (LFK _V :23) |
| c. | le t
V.STEM.PROG
‘to be handling several objects’ | <lɛt>

JT (LFK _V :24) |
| d. | yi it
N
‘house’ | <yi·d>

JT (LFK _V :57)(= 2.3b, 2.10a) |
| e. | si t
V.STEM.IPFV/PFV/OPT
‘to cut’ | <sid‘>

JT (LFK _V :21)(=2.61a) |
| f. | si it
V.STEM.IPFV/PFV/OPT
‘to make humming noise’ | <siid‘>

JT (LFK _V :21) |
| g. | ʔo ok
N
‘salmon’ | <ʔo·k‘>

JT (LFK _V :48)(= 2.3c, 2.18c) |
| h. | t’ ooh
V.STEM.IPFV
‘to make a basket’ | <t’o·‘>

JT (LFK _V :30) |
| i. | t’ oh
V.STEM.IPFV
‘to climb’ | <t’o‘>

JT (LFK _V :30) |

j.	t'aak' NUM 'three'	<t'a·k'> JT (LFK _V :54)(=2.3a)
k.	'aa V.STEM.IPFV 'to handle round object'	<'a·'> JT (LFK _V :1)
l.	'ah V.STEM.IPFV/PFV/OPT 'to fool'	<'a'> JT (LFK _V :54)

Word-final open syllables often show evidence of some devoicing, and Li transcribes many verb stems such as (45h-i) and (45k-l) ending in /h/; however, both long and short vowels can otherwise be found in open and closed syllables in (45). Noun examples (45g) and (45j) are also cognate with forms in related languages that also feature long vowels, i.e. Mattole *lo:k'eh*, Hupa *lo:q'* 'salmon'; Mattole *da:k'eh*, Hupa *ta:q'* 'three.'

Other vowels with diphthong-like quality occur. Analytically, diphthongs are two adjacent vowels or vowels followed by glides, though phonetically they would sound identical. Li writes diphthongs variably as <ai>, <ei>, and <oi>, or as <ay>, <ey> and <oy>. The second vowel <y> or <i> in diphthongs is often an underlying obviative /yi-/ or /y-/ , or a perfective 1st person subject prefix /i-/.¹⁸ Li is somewhat inconsistent in use of either <i> or <y> in transcription however, and it is not easy to determine whether his use of these symbols is morphologically or phonetically principled.

(46)	/e/, /ee/ ~ /ey/, /ei/	
a.	b-ée=ł-k'ee (< b-ée=(n)-ł-k'ee 3PPO-against=(2SG.S)-CLS-overtake.IPFV 'You overtake him.'	<bé·łk'ε·'> JT (LFK _N :172)
b.	b-e=y-ł-k'ee 3PPO-against=OBV-CLS-overtake.IPFV 'He overtakes him.'	<beyłk'ε·'> JT (LFK _N :172)
c.	be-yáash=ch'i' (unanalyzable)-young=DIM 'little boy'	<beyá·ctc'i'> JT (LFK _N :50)
d.	kí-sh-bei THM-1SG.S-be.stout.IPFV 'I am stout.'	<k'ícbei> JT (LFK _N :50)

¹⁸ For retranscription, I write the obviative prefix *yi-* or *y-*, and 1st person subject prefix in perfective forms *i-* to distinguish either prefix morphologically.

- (47) /a/, /aa/ ~ /ay/, /ai/
- a. ky'i-naa=n-soy' <k'ina·nsoy'>
 THM.POSS-eye=2SG.S-be.blind.PFV
 'You are blind.' JT (LFK_N:293)
- b. ky'i-na=i-soi' <k'inaysoy'>
 THM.POSS-eye=1SG.S-be.blind.PFV
 'I am blind.' JT (LFK_N:293)
- c. ta=i-l-ch'ai' <t'áyltc'ai'>
 into.water=1SG.S-CLS-hop
 'I did hop into the water like a frog.' JT (LFK_N:158)(=4.69o)
- (48) /o/, /oo/ ~ /oy/, /oi/
- a. no=n-leh <nónlɛ'>
 to.there=2SG.S-handle.mush¹⁹
 'You put (buckeye pounded fine) down.' JT (LFK_N:224)
- b. no=y-leh <nóylɛ'>
 to.there=OBV-handle.mush
 'He put (buckeye pounded fine) down.' JT (LFK_N:224)
- c. 'i-di-cheh <'ídite'ɛ'>
 EP-1PL.S-cry
 'We cry.' JT (LFK_N:190)
- d. '-oh-cheh (<'i-oh-cheh) <'ó'tc'ɛ'>
 EP-2PL.S-cry
 'You all cry.' JT (LFK_N:190)

In addition, word-final /o/ may end with [w] emphasizing the inherent labialization of the /o/. Li transcribes it word-finally, as in (49a-b), or sometimes in cases of /o/ that would otherwise be word-final or clitic final. A handful of word-medial tokens of /o/ also feature a superscript <^w> as in (49c), again emphasizing the inherent roundedness of /o/; however, I reserve the use of <w> in my retranscriptions of Li where morphologically significant, or word-finally after /o/.

- (49) Labialized Final /o/
- a. dow <dow>
 NEG
 'not' JT (LFK_V:39)(=6.44a)

¹⁹ Cognate with Hupa verb stem *-liw/-liq'*, *-leh* 'to handle doughy or fine substances' (Sapir and Golla 2001:766).

- | | | |
|----|---|---|
| b. | yow
ADV
'there (near)' | <yow>

JT (LFK _N :19)(=2.33b) |
| c. | noo=w-łık'=iŋ
to.there=PASS-handle.mush.PFV=DUR
'It is put down for soaking.' | <no· ^w łık' iŋ>

JT (LFK _N :224)(5.51e) |

2.5 Phonological Processes

In this section, I discuss phonological rules that apply to all strings of phonological elements unless otherwise noted as being conditioned morphologically. Processes that apply to consonants include nasal assimilation, devoicing of word-final obstruents, rounded consonants, and palatalization. Vowel processes include vowel deletion and assimilation.

2.5.1 Consonant Processes

2.5.1.1 Nasal Assimilation

Nasal assimilation occurs when an underlying nasal becomes [m] before a bilabial consonant, or [ŋ] before a velar consonant or glottal stop [ʔ]. In addition, /b/ becomes nasal [m] following a nasal. This is evident with 2nd person subject prefix *n-* adjacent to any verb stem with word-initial /b/, transcribed as geminate [mm] by Li:

- | | | |
|------|---|---|
| (50) | Bilabial Nasal Place Assimilation | |
| a. | no=sh-bił
to.there=1SG.S-throw.OPT
'I will throw it down.' | <nócbił>

JT (LFK _N :330) |
| b. | no= m -mił (< nó-n-bił)
to.there= 2SG.S -throw.OPT
'You will throw it down.' | <nóm·ił>

JT (LFK _N :330)(=2.68b) |
| c. | noo=ni-i-bil'
to.there=ADV-1SG.S-throw.PFV
'I did throw it down.' | <no·ní·bil'>

JT (LFK _N :330) |
| d. | noo=ni- m -mil' (< nó=ni-n-bil'
to.there=ADV- 2SG.S -throw.PFV
'You did throw it down.' | <no·nímmil'>

JT (LFK _N :330)(=2.66b, 2.69b) |
| e. | ya=sh-bah
up=1SG.S-fight
'I will jump up to fight.' | <yácba'>

JT (LFK _N :166) |

- f. ya=**m**-mah (< ya=**n**-bah) <yamma‘>
 up=2SG.S-fight
 ‘You will jump up to fight.’ JT (LFK_N:166)

In (50a) and (50e), a verb stem preceded by /sh/ does not trigger nasal assimilation. However, in (50b), (50d), and (50f), nasals before /b/ assimilate to /m/. In addition, Li transcribes *mm*, with /b/ becoming nasal. In contrast, /n/ before /m/ is typically deleted in Hupa (Golla 1970:55).

Nasal place assimilation also occurs with nasals before a velar consonant or [ʔ], though optionally a nasal can remain [n] before [ʔ] if followed by an alveolar consonant:

- (51) Velar Nasal Place Assimilation
- a. ta-sh-got <t‘áçgoD‘>
 THM-1SG.S-punch
 ‘I punch.’ JT (LFK_N:176)
- b. ta-**ŋ**-got <t‘aŋgoD‘>
 THM-2SG.S-punch
 ‘You punch.’ JT (LFK_N:176)
- c. ná=sh-yee <nácye‘>
 around=1SG.S-pack.IPFV
 ‘I pack.’ JT (LFK_N:151)
- d. ná=**ŋ**-yee náŋye‘>
 around=2SG.S-pack.IPFV
 ‘You pack.’ JT (LFK_N:151)
- e. nin=shi-l-t‘ish <nincilt‘ic>
 off.ground=1SG.O-CLS-handle.living.being.IPFV
 ‘Take me up!’ JT (LFK_N:177)
- f. ni**ŋ**=’i-l-t‘ish <niŋ’ilt‘ic>
 off.ground=EP-CLS-handle.living.being.IPFV
 ‘Take him up!’ JT (LFK_N:177)

In Li’s notecards, [n] does not become [ŋ] before [ʔ] in 64 examples. The majority, 50 of the 64, have an alveolar consonant that follows [ʔ]. In 169 examples [ŋ] immediately precedes [ʔ] and is not followed by alveolar consonants. Many of the 169 are also word-final [ŋʔ].

2.5.1.2 Nasal Deletion

Nasal /n/ typically is deleted before /l/, best demonstrated by the 2nd singular subject prefix *n-* before classifier *l-* and before verb stems that start with /l/ as in (52):

- (52) Nasal Deletion before /l/
- | | | |
|----|--|---|
| a. | ya=l-tonʔ (< ya=(n)-l-tonʔ)
up=(2SG.S)-CLS-jump.IPFV
'You jump.' | <yaltʔonʔ>

JT (LFK _N :170)(=4.69p) |
| b. | kyʔi-dí-l-bił (< kyʔi-dí-n-l-bił)
THM.O-THM-(2SG.S)-CLS-play.IPFV
'You play an instrument (the flute).' | <kʔidilbił>

JT (LFK _N :214)(=4.57a) |
| c. | kyʔi-l-dił (< kyʔi-n-l-dił)
THM.O-(2SG.S)-CLS-eat.bits.IPFV
'You eat (little things, berries, etc).' | <kʔildil>

JT (LFK _N :155) |
| d. | kyʔi-liŋʔ (< kyʔi-n-liŋʔ)
THM.O-(2SG.S)-tie.OPT
'You'll get caught (with rope).' | <kʔiliŋʔ>

JT (LFK _N :118)(=4.32e) |

This parallels nasal deletion before /l/ in Hupa (Golla 1970:55). However, while the vast majority of nasals before /l/ delete in Wailaki, a small number assimilate to the following /l/ rather than delete, listed exhaustively from Li's notecards in the following:

- (53) Nasal Assimilation to /l/
- | | | |
|----|---|---|
| a. | ʔ-oo=ní-l-laŋ (< ʔ-oo=ní-n-laŋ)
EP-DIR=THM-2SG.S-get.IPFV
'You get it.' | <ʔo·nillaŋ>

JT (LFK _N :115) |
| b. | kyʔee=dí-l-leeʔ (< kyʔee-dí-n-leeʔ)
ADV=THM-2SG.S-sing.IPFV
'You will sing.' | <kʔε·dil·εʔ>

JT (LFK _N :115) |
| c. | ʔi-l-liŋʔ (< i-n-liŋʔ)
EP-2SG.S-tie.OPT
'You will tie (it) up.' | <ʔillaŋ>

JT (LFK _N :116)(=2.31e, 2.69a) |
| d. | kyʔi-l-lah (< kyʔi-n-lah)
THM.O-2SG.S-catch.many
'You will catch lots.' | <kʔillaʔ>

JT (LFK _N :119) |
| e. | kʔa=l-leh (< kʔa=n-leh)
so=2SG.S-do
'You'll do that.' | <kʔalleʔ>

JT (LFK _N :207) |

- f. 'í-l-leh (< í-n-leh) <'ille<
 EP-2SG.S-become.IPFV
 'You (become it)!'²⁰ JT (LFKN:154)
- g. ky'í-ná=l-lał (< ky'í-ná=n-lał) <k'ínállal>
 THM-ADV=2SG.S-dream
 'You dream!'
 JT (LFKN:236)(=4.16a)

Examples in (53) behave irregularly with respect to the nasal deletion rule, and do not feature *l*-classifier prefixes to produce geminate <ll>. It's uncertain if there is a phonetic difference between Li's transcription of <ll> or <l>; however, I assume that <ll> is a boundary for both syllables and morphemes, with the geminate split as coda and onset.

The 2nd singular subject prefix *n-* also deletes before some lateral fricatives /ʎ/; however, counterexamples exist and the triggering environment does not appear to be phonological, but rather makes reference to morphology. For allomorphs of the 2nd singular subject marker *n-* see section 4.4.

2.5.1.3 Fricative Assimilation

In Wailaki, the voiceless alveolar fricative /s/ does not occur immediately before either voiceless lateral fricative /ʎ/ or palato-alveolar affricates /j/, /ch'/ or /ch/. Classifier *l-* typically deletes after /s/, and consequently, /s/ is realized as [sh] before a palato-alveolar stem. Golla (1970:62) notes a similar deletion in Hupa but with differing outcomes according to verb theme categories, describing that "in active bases (i.e. verb themes) the combination *s*-[perfective] [classifier] *l-* or *s*-[perfective] [classifier] *l-* results in /s/. In neuter bases, the combination *s*- [perfective] [classifier] *l-* results in /ʎ/." In Wailaki, only classifier *l-* deletes (see 4.4). Examples (54a) and (54c) demonstrate the presence of classifiers before their deletion, while examples (54b), (54d) and (54e) demonstrate the change of /s/ to /sh/ with or without classifier deletion.

- (54) Fricative Deletion and/or Assimilation
- a. <siltc'ín'niŋ>
 s-i-l-chín'=iŋ
 PFV-1SG.S-CLS-make.PFV=DUR
 'I am making it.' JT (LFKN:137)
- b. <yiŋtc'í'niŋ>
 yi-sh-chí'n=iŋ (< yi-s-l-chí'n=iŋ)
 OBV-PFV-(CLS)-make=DUR
 'He made it.' JT (LFKN:137)(=4.22c)

²⁰ The gloss Li gives is 'turned to be' while the verb stem matches imperfective 'to become.'

- c. <ts'iya·din yilte'i·'>
 ts'i-yaa=din yi-l-chii'
 INDF.S-go=LOC OBV-CLS-make.IPFV
People in place he gathers.
 'He gathers people in place.' JT (LFK_N:186)
- d. <ts'iya·din yictc'in'niŋ>
 ts'i-yaa=din yi-sh-chín'n=iŋ (< yi-s-l-chín'=iŋ)
 INDF.S-go=LOC OBV-PFV-(CLS)-make.PFV=DUR
People in place he has gathered.
 'He has gathered people in place.' JT (LFK_N:186)
- e. <t'ε·ctc'i·'>
 tee-sh-ch'ii (< tee-s-ch'ii)
 off.along-PFV-wind.blows²¹
 '(The) wind is blowing.' JT (LFK_N:325)(=4.35g)

As mentioned, throughout Li's notecards there isn't a single instance of the sequence <stc'>, <stc'>, <sdj> or <sdz>. One possible example in Li's texts is given as <ndow yistc'in'> 'he does not make' on page 57, but this example is difficult to read and the same word is otherwise consistently transcribed <yictc'in'> in several other more clearly written examples.

2.5.1.4 Word-Initial Glottal Stop Insertion

In Wailaki, a glottal is inserted at the beginning of a word if the word would otherwise begin in a vowel. Glottal stop otherwise doesn't occur before the same vowel when the vowel isn't word-initial as evidenced by the lack of glottal stop in (55b) below:

- (55) Word-Initial Glottal Stop Insertion
- a. 'oo-ŋ-'is=iŋ (< 'oo-(yi)n-'is=iŋ) <'ɔ·ŋ'is=iŋ>
 EP-DIR-PFV-shoot=DUR
 'You did shoot at him.' JT (LFK_N:173)(=4.47b)
- b. y-oo-ŋ-'is=iŋ (< y-oo-(yi)n-'is=iŋ) <yo·ŋ'is=iŋ>
 OBV-DIR-PFV-shoot=DUR
 'He did shoot at him.' JT (LFK_N:173)

²¹ An s- perfective is thematic in (54e), as it is in Hupa as well (Sapir and Golla 2001:841)

2.5.1.5 Glottal Metathesis and Laryngeal Timing

In Wailaki, a stem-final glottal stop metathesizes with a preceding sonorant (/l/, /n/, /ŋ/ or /y/) when a stem-final glottal precedes an /i/:

- (56) Glottal Metathesis
- | | | |
|----|---|---|
| a. | '-oo=ni-sh-laŋ' (< '-oo=ni-sh-l-laŋ'>
EP-DIR=THM-1SG.S-(CLS)-get.OPT
'I'll get it.' | <'o·niclaŋ'>
JT (LFK _N :298) |
| b. | '-oo=ni-yi-i-la'n=iŋ
EP-DIR=THM-PFV-1SG.S-get.PFV=DUR
'I did get it.' | <'o·niyi·lá'niŋ>
JT (LFK _N :298) |
| c. | chin'-da-aa=n-del'
ruin-down-PL=PFV-go.PL.PFV
'They all are spoiled.' | <tc'in'da·andel'>
JT (LFK _N :15)(=4.47a, 4.69d) |
| d. | chin'-da=yw-oh-de'l=iŋ
ruin-down=PFV-2PL.S-go.PL.PFV=DUR
'You all are spoiled.' | <tc'in'day ^w o'de'liŋ>
JT (LFK _N :15)(=4.48) |
| e. | na=y-neé-l-yal'
down=OBV-PFV-CLS-club.PFV
'He clubbed it down.' | <nayne'ɫ ^g yal'>
JT (LFK _N :240) |
| f. | na=y-'-ne-l-ya'l=iŋ
down=OBV-THM.O-PFV-CLS-club.PFV=DUR
'He has knocked acorns down.' | <nai'neɫya'liŋ>
JT (LFK _N :240) |

While common between closed stems ending in a sonorant and vowel-initial suffixes/clitics, it is unknown if this is a process that is also found in prefixes. Determining this would likely require targeted elicitation with a speaker which unfortunately is not possible.

A very similar rule exist in Hupa in which word-final glottal stop metathesizes with sonorants before /i/, even when the Hupa word-final short vowel relative enclitic *i* is deleted (Golla 1970:54) (Sapir and Golla 2001:871). Gordon (2001:1) explores this process as a part of a larger set of laryngeal feature spreading processes that in Hupa are acoustically realized as devoicing or changes in glottal timing. Laryngeal features are realized on the right side of sonorants in preconsonantal positions, while they are realized on the left side in other environments (Gordon 2001:1-2). It is the opposite for obstruents. Laryngeal features are realized on the left side of obstruents in preconsonantal positons, and on the right in other environments.

Rules such as these produce the alternations in Hupa between “heavy and light” stems, (Sapir and Golla 2001:872). Gordon (2001) observed the following:

- e. <ná·t'á·'>
 náa-t'aa (< naa=di-'aa)
 linear=THM-stand
 'It'll stand.' JT (LFK_N:139)(=4.18a)
- f. <na·díł'á·'>
 naa=di-ł-'aa (< naa=di-n-ł-'aa)
 linear=THM-(2SG.S)-CLS-stand
 'You stand it up.' JT (LFK_N:140)(=4.18b)

Examples (57d-e) demonstrate that thematic *d-* immediately preceding a glottal stop-initial stem produces the same effect as classifier *d-*, while the thematic prefix *d-* in (57f) does not. The classifier *ł-* instead immediately follows thematic *d-* and immediately precedes the stem with no effect on the stem. The D-effect however does have some limitations. First person plural subject prefix *di-* does not produce the same effects on the stem.

(58) First Person Plural *di-* before Stem-Initial /' /

- a. <k̄inla' ya·há'da'á' k'i·tc'iq̄'>
 kyinla' yaa=há-da-'a' (< yaa=ti-'i-di-'a') kii-ch'iq̄'
 grass.game PL=off.along-1PL.S-handle.round INDF.POSS-toward
Grass game we'll start to play against them.
 '*We'll start to play grass game against them.' JT (LFK_T:60)(=3.39b)
- b. <na·sda'á'>
 náa=s-da-'a' (náa=s-di-'a')
 around=PFV-1PL.S-handle.round
 'We played.' JT (LFK_T:60)

Similar stem-initial consonant alternations exist in many other Dene languages, whereby classifiers (namely *d-*) and other prefixes immediately preceding stems cause alternations with the initial segment of the stem. These alternations are referred to collectively as the D-Effect (Howren 1971, Rice 1989, McDonough 1990, Lamontagne and Rice 1994). According to Howren (1971:96), in one of the first studies of the D-Effect across the language family of the D-Effect, “the phenomenon assumes a variety of surface phonetic manifestations in the Northern and Southern Athabaskan languages, and seems to be lacking altogether in Pacific Coast Athabaskan.”

While other similar alternations exist in other, non-Pacific Coast Dene languages involving sequences of first /d/ or /l/ followed by /n/, /y/ or /y/, Wailaki appears to have fewer environments where the D-Effect applies, and with exceptions. Classifier *d-* also combines with an immediately following stem-initial /y/ to produce /d/ as in (59b-c), but with exceptions in (59d-e):

- (59) D-Effect: Classifier *d-* before /ʔ/
- a. <yac̣>
yash
V.STEM.IPFV.SG
'go' JT (LFK_V:31)
- b. <nandac >
na=n-dash (< na=n-d-yash)
REV=ADV-(CLS)-go.IPFV.SG
'He'll come back.' JT (LFK_N:117)
- c. <naníndac >
na=ni-n-dash (< na=ni-n-d-yash)
REV=ADV-2SG.S-(CLS)-go.IPFV.SG
'You come back(!)' JT (LFK_N:117)
- d. <na·ni·diyá·ŋ>
naa=ni-i-di-yáa=ŋ
REV=ADV-1SG.S-CLS-go=DUR
'I came back.' JT (LFK_N:117)(=4.68a)
- e. <na·ndiyái>
naa=n-di-yái (< naa=n-di-yáa=i)
REV=ADV-CLS-go=(REL)
'He came back.' JT (LFK_N:117)

In (59d-e) an epenthetic vowel instead intercedes between the classifier and the stem, a process identified with Hupa classifier *d-* and stems, as well as other Pacific Coast Dene languages that lack a D-Effect or feature it very limitedly.²³

Lamontagne and Rice (1994:340) examine D-effects within Dene languages, and call languages in the family that feature epenthesis exclusively between /d/ and stems as Hupa-type languages where other languages feature either a D-Effect or epenthesis in particular environments. In Koyokon-type languages, epenthesis occurs except where /d/ fuses with stem-initial /ʔ/ to form /tʔ/. In Ahtna and Navajo-type languages, fusion occurs wherever possible, but with Ahtna /d/ syllabifies as a rhyme when the stem begins with other stops, and in Navajo /d/ is lost. Wailaki appears to behave mainly like a Koyokon type, but also deletes stem-initial /y/ when the stem features a short vowel or light stems (see 4.3.3).

Fusion of phonological segments similar to the D-Effect can be found with some other consonants that precede stem-initial consonants. Golla and Sapir (2001:825) note that in Hupa, subject markers fuse with classifiers or stem-initial consonants, and preceding conjunct prefixes “in numerous irregular ways.” In Wailaki, first person singular subject /sh/ combines with an immediately following stem-initial /y/ to produce /sh/, but only for particular stems. Example (60b) features the fusion, while (60d) does not, with the stems of

²³ Tututni features /d/ and stem-initial /y/ becoming an affricate /j/ (Golla 1976:226).

either given in (60a) and (60c). This effect and similar effects are likely lexically specified as a part of the theme, and would need to be analyzed in the creation of a Wailaki dictionary.

- (60) D-Effect: /sh/ before /y/
- a. <yáŋʔ>
yáŋʔ
V.STEM
'to eat' JT (LFK_V:31)
- b. <'é'εcáŋʔ>
'e-'e-**sh**áŋʔ ('e-'e-**sh**-yáŋʔ)
EP-INC-(**1SG.S**)-eat.INC
'I commence eating.' JT (LFK_N:427)
- c. <yic̣>
yish
V.STEM.IPFV
'to call for someone' JT (LFK_V:32)
- d. <bik'a· k'inicyic >
bi-kaa ki-ní-**sh**-yish
3PPO-for THM-ADV-**1SG.S**-call
'I'll call for him.' JT (LFK_N:248)

The classifiers *t-* and *l-* also causes an immediately following stem-initial /s/ to become /dz/ while retaining *t-* and *l-*. This is noted by Li in his recording of several /s/-initial stems in his verb stem list on page 31. The stem in (61a) is homophonous with verb stems 'to shave,' and 'to become,' and is noted by Li to produces similar effects as in (61b-c).

- (61) D-Effect: Classifier *t-* and *l-* before /s/
- a. <siD'>
sit
V.STEM.IPFV/PFV/OPT
'to cut' JT (LFK_V:31)(=2.45e)
- b. <bisí' bε·níldziD'>
bi-si' b-ee=ní-**l**-dzit (< b-ee=ní-**l**-sit)
3POSS-hair 3PPO-against=THM-CLS-cut
His hair I cut.
'I cut his hair.' JT (LFK_N:205)(=2.23)
- c. <bisí' bε·ldziD'>
bi-si' b-ee=**l**-dzit (< b-ee=**l**-sit)
3POSS-hair 3PPO-against=CLS-cut
'His hair got cut.' JT (LFK_N:205)(=4.25d)

2.5.2 Vowel Processes

2.5.2.1 Desyllabification of Short Vowel /i/

A short vowel /i/ preceded by a long vowel desyllabifies and forms a diphthong on the long vowel, essentially shortening the vowel nucleus.

- (62) Desyllabification of Short Vowel /i/
- a. <da·' >
 daa
 V.STEM
 'to sit' JT (LFK_V:8)
- b. <yidé' sdai >
 yidé' s-da=i (< s-daa=i)
 downriver PFV-sit=(REL)
 'Downstream He Sits'
 'The One Who Sits North (Downstream)' JT (LFK_T:62)(=3.92c)
- c. <yε·' >
 yee
 V.STEM.IPFV
 'to whip' JT (LFK_V:14)
- d. <yεi >
 ye=i (< yee=i)
 V.STEM.IPFV=(REL)
 'to whip' JT (LFK_V:14)

Li records many stem alternations in his verb stem list within the same mode that alternate between long vowel and diphthong as in (62c-d) that are likely the result of this process, and may be considered heavy vs. light stem alternations (see 4.3.3).

2.5.2.2 Hiatus Vowel Deletion

Two processes involve vowels in hiatus, or vowels in adjacent syllables without intervening consonants. First, a short vowel /i/ before another vowel will be deleted. One can see this in relation to verbs that feature the epenthetic prefix 'i-. The thematic prefix 'i- is inserted under a morphological condition (for more on thematic prefix 'i- insertion, see section 4.5) but is deleted in 2nd plural subject forms featuring morpheme initial /o/ in (63b). In addition, short /o/ may be deleted following /a e ii/ as in (63c-e):

- (63) Hiatus Vowel Deletion
- | | |
|--|---|
| <p>a. 'i-n-yaŋ'e'
 EP-2SG.S-eat.OPT=IMP
 'You'll eat it later on!'</p> | <p><'inyaŋ'ε'>
 JT (LFK_N:47)(=4.32f, 6.5a)</p> |
| <p>b. 'oh-yaŋ'e' (<(i)-oh-yaŋ'e'>
 EP-2PL.S-eat.OPT=IMP
 'You all will eat it later on!'</p> | <p><'o'yaŋ'ε'>
 JT (LFK_N:47)(=4.34b, 6.5b)</p> |
| <p>c. ch'e=h-yaŋ (<ch'e=oh-yaŋ)
 out=2PL.S-kill.several.IPFV
 'You all kill all off.'</p> | <p><tc'ε'ε'yaŋ>
 JT (LFK_N:198)(=4.34f)</p> |
| <p>d. ch'ee=kii-h-yaŋ (<ch'ee=kii-oh-yaŋ)
 out=INDF.O-2PL.S-kill.several.IPFV
 'You all kill them all off.'</p> | <p><tc'ε·k'i'yaŋ>
 JT (LFK_N:199)(=4.34g)</p> |
| <p>e. na=h-taŋ (<na=oh-taŋ)
 around=2PL.S-handle.stick
 'You all take/paddle (a canoe) around.'</p> | <p><na't'aŋ>
 JT (LFK_N:343)(=4.34h)</p> |

One note that indicates Li was aware of this effect is a comment on a notecard. Li analyzes *k'ee=* in verbs about singing as adjacent thematic *ky'i-* and adverbial *ee-* prefixes (Notecard 96). This also mirrors a rule found in Hupa, described by Golla as a series of rules in which short /i/ is deleted adjacent to other vowels (Golla 1970:53).

2.5.2.3 Word-final Short Vowel Deletion

Word-final short vowel /i/ is also regularly deleted, mirroring a process found in Hupa (Golla 1970:53). Examples (64a) are examples of words that etymologically contain a word-final short relative enclitic *i* retain the short vowel. Otherwise, it is most often deleted, as in (64b) and (64e):

- (64) Vowel Deletion
- | | |
|---|---|
| <p>a. <haiyowⁱk'inist'ε'>
 hai-yow=i kinist'e'
 the-there=REL Indian
 'that Indian'</p> | <p>JT (LFK_N:19)(=5.38d)</p> |
| <p>b. <haiyow yi·k'inist'ε'>
 hai-yow=(i) yii-kinist'e'
 the-there=(REL) PL-Indian
 'those Indians'</p> | <p>JT (LFK_N:19)(=3.16b, 5.38c)</p> |

- c. <hai yo·i 'ilts'αD'>
 hai-yoow=i 'i-l-ts'ad'
 the-there=REL EP-CLS-haloo
 'He (that one) will halloo.' JT (LFK_N:184)(=3.19b)
- d. <haiɛ·^ε bina·si·láɫ·'>
 haiyee (< hai=i) bi-naa=si-i-lá-ɫ'
 the=REL 3PPO-ADV=PFV-1SG.S-dream.PFV
 'That is the one I dreamt about.'²⁴ JT (LFK_T:31)(=3.19a)

2.5.2.4 Vowel Assimilation

Wailaki vowel assimilation parallels Hupa vowel assimilation. A short vowel /i/ before /ʔ/ immediately followed by a vowel will assimilate in quality to that following vowel; however, if both vowels are underlyingly /i/ in the sequence, and are neither is part of a diphthong, both vowels become /e/ (Golla 1970:53):

- (65) Vowel Assimilation
- a. ki-s-tiŋ <k'ist'iq>
 AREAL-PFV-cold
 'It is cold (weather).' JT (LFK_N:426)(=4.39b, 4.57s)
- b. ke-'e-tiŋ (< ki-'i-tiŋ)
 AREAL-INC-cold
 'It gets cold (weather).' JT (LFK_N:426)
- c. né-'e-shoŋ (< ni-'i-shoŋ)
 THM-INC-good
 'It gets ripe, comes to be good.' JT (LFK_N:372)(=2.6d)

Long vowels that precede palatalized consonants also may assimilate by becoming a diphthong ending in /i/. This occurs even if underlying palatal consonant /ky'/ in the thematic object prefix *ky'(i)-* only surfaces as its glottal stop /ʔ/ allomorph in (66a):

- (66) Long Vowel Diphthongization
- a. noi'=ʔ-sh-got (< noo=(ky)'-sh-got) <noi'cGoD'>
 to.there=THM.O-1SG.S-poke
 'I stick it in down (i.e. arrows).' JT (LFK_N:175)(=2.71f)

²⁴ Li writes a hyphen and the form is split between two lines. An obscure mark follows /i/ and precedes /ʔ/, unlikely to be a vowel or indicate length mark. I leave it out of retranscription.

- | | | |
|----|--|---|
| b. | noo=ni-m-bil' (< noo=ni-n-bil')
to.there=ADV-2SG.S-throw.OPT
'You did throw it down.' | <no·nímmil'>

JT (LFK _N :330)(=2.50d, 2.69b) |
|----|--|---|

2.5.2.5 Partial Word-Final Vowel Devoicing

Word-final vowels are partially devoiced in Wailaki. In a more phonetic retranscription, (67a) shows a verb stems that Li transcribes with a word-final aspiration mark <'> or [h]. All verb stems that end in vowels are transcribed similarly. In (67c), the aspiration in (67b) isn't present when followed by an enclitic. Li does not appear to transcribe word-final diphthongs with aspiration however, as in (67e).

- | | | |
|---|--|---|
| (67) Partial Word-Final Vowel Devoicing | | |
| a. | niih
V.STEM.IPFV/PFV
'to give birth to a child' | <ni·'>

JT (LFK _V :20) |
| b. | nai='-no-sh-níih
ADV=THM.O-THM-1SG.S-give.birth.IPFV
'I give birth to a child.' | <nai'nocní·'>

JT (LFK _N :211) |
| c. | nai='-no-sh-níi=tel-ij
ADV=THM.O-THM-1SG.S-give.birth.IPFV=IMM-DUR
'I'll give birth to a child.' | <nai'nocní·telij>

JT (LFK _N :211) |
| d. | nah
V.STEM
'to save one's life' | <na'>

JT (LFK _V :19) |
| e. | noo=kí-sh-na=i
to.there=THM-1SG.S-save.life=REL
'I am saved.' | <no·k'ícnai >

JT (LFK _N :135)(=4.13a) |

Golla (1970:35) also notes for Hupa that vowels before pause (i.e. a word boundary) may be “half-long” and “voiceless at the end.” The same appears in Wailaki. For the purposes of this work, a more phonemic transcription is given where possible. Word-final /h/ that results from this word-final devoicing is not retranscribed so as to be distinguished from word-final /h/ that is not the result of word-final vowel devoicing.

2.6 Syllabification

Syllabification is a difficult topic to examine in Wailaki without recordings to work with. Careful transcription of syllabification requires targeted elicitation with an intuitive consultant speaking slowly. Li, the most careful transcriber, did not divide words into syllables, and did not focus on syllabification. Given other transcription issues in Goddard's and Merriam's materials, their syllabifications may be impressionistic and at times faulty; furthermore, phonemes important to syllabification are obscured in forms transcribed by Goddard and Merriam and can at best be inferred.

Even so, Goddard's published and unpublished materials record syllabified words in a style he shares with other California Dene languages. In *Kato Elements*, he writes that "the phonetic division of words into syllables is indicated by a slight space (1912:70). Merriam's papers also mark syllables with hyphens, along with primary stress patterns. An approximation of syllabification of Li's transcriptions can be made by first by assigning nuclei (typically vowels in any language), then consonant onsets, and finally codas. Syllable boundaries in this work are marked <.> and not a hyphen which is reserved for morpheme boundaries. Following this process, some consonants are ambiguous as to syllable position. The practical orthography used by students at Round Valley High School uses hyphens to mark syllables; various ambiguities are discussed in this section are not intended to reflect how learners may be currently resolving ambiguities.

2.6.1 Consonant Length and Transcription Geminates

It is unclear what Li intends by marking length on consonants with <l·> as in (68) or by writing geminates as <ll> <mm>, etc. as in (69), and how to treat them in syllabification. A working assumption of this work is that most examples of this kind may be parsed into different morphemes and syllables. Examples in (68) and in (69) contain both verbs and nouns:

- (68) Segments Transcribed with Length
- | | | |
|----|---|--|
| a. | 'il.lash
'i-l-lash (<'i-n-lash)
EP-2SG.S-pick.small.things
'You pick (acorns) one by one!' | <'il·aḡ >

JT (LFK _N :174) |
| b. | nóm.mił
nó=m-mił (<nó-n-bił)
to.there=2SG.S-throw.OPT
'You will throw it down.' | <nóm·ił>

JT (LFK _N :330)(=2.50b) |
| c. | taan.naŋ'
ta-a=n-naŋ'
water-PL=THM-drink
'They all drink.' | <ta·n·aŋ'>

JT (LFK _N :380) |

- d. **s.síts'** <**s·íts'**>
s-síts'
 1SG.POSS-skin
 'my skin' JT (LFKV:52)
- e. **s.sé'** <**s·é'**>
s-sé'
 1SG.POSS-penis
 'my penis' JT (LFKV:47)
- f. **bél(.)l.tɔŋ'** <**bél·t'ɔŋ'**>
bé-l-l-tɔŋ' (< **bé-n-l-tɔŋ'**)
 up.along=2SG.S-CLS-jump
 'You jump up the tree(!)' JT (LFKN:244)
- (69) Segments Transcribed as Geminate
- a. **'il.liŋ'** <'íllliŋ'>
'i-l-liŋ' (< 'i-n-liŋ')
 EP-2SG.S-CLS-tie.OPT
 'You will tie (it) up.' JT (LFKN:116)(=2.31e, 2.53c)
- b. **noo.ním.mil'** <**no·nímmil'**>
 noo=ni-**m-mil'** (< noo-ni-**n-bil'**)
 to.there=PFV-2SG.S-throw.OPT
 'You did throw it down.' JT (LFKN:330)(=2.50d)(2.66b)
- c. **n.naa'** <**nnnɑ·'**>
n-naa'
 2SG.POSS-eye
 'your eye' JT (LFKV:50)(=2.70d)
- d. **s.sé'** <**ssé'**>
s-sé'
 1SG.POSS-penis
 'my penis' JT (LFKV:52)

Motivations for writing one with a mark for length <·> versus geminate consonants do not appear to be based on whether the sequence is or isn't the result of a morpheme boundary. Both of Li's transcription conventions are used to mark morpheme boundaries. The form *ssé* 'my penis' is transcribed both with length in (68e) and geminate /s/ (69d) by Li with accent marks over the stem. Because Li generally doesn't mark stress on monosyllabic words, this may indicate that the prefix is also syllabic.

It is also unclear whether the second part of the length of <l> in (68g), written as <bél·t'ɔŋ'>, is a syllabic consonant or geminate coda. It is more likely a syllabic consonant, as there are no phonemic geminates in Wailaki or geminates that aren't the result of a

morphological boundary. The following section will discuss consonants that are similarly ambiguous and may be analyzed as syllabic or consonant clusters.

2.6.2 Syllabically Ambiguous Consonants

This section discusses consonants that are ambiguous with regard to their syllable position, and considers evidence for their analysis as consonant clusters or syllabic consonants. Goddard seems to indicate that /n s sh ʎ/ can be syllabic by the way he separates these consonants from other syllables with spaces, but not /l/. Merriam also writes Wailaki word-initial fricatives as he does /n/, with an apostrophe, but in at least a few examples, gives a hyphen as in the first of two variants for maternal grandmother that he writes <s-cho'> and <s'chaw'> in Tsennahkennes (CHM:169). This suggests Merriam may have considered /s/ to be syllabic in some cases.

In Li's materials, syllabically ambiguous consonants are the sonorants /n m ŋ l/ and fricatives /s sh ʎ/. This occurs in both noun and verb prefixes. For nouns, possessive prefixes and postpositional object prefixes (identical in form) that are single consonants often appear before noun stems that begin with consonants as in (70). Possible syllable boundaries are shown in parentheses:

- (70) Noun Prefixes with Syllabically Ambiguous Consonants
- | | | |
|----|--|--|
| a. | s (.)ts'ii.le'
s -ts'ii-e'
1SG.POSS-forearm-POSS
'my forearm' | <sts'í·le'>

JT (LFK _v :35)(=5.21c) |
| b. | n (.)ts'ín.t'a'
n -ts'ínt'a'
2SG.POSS-forehead
'your forehead' | <n ^{ts'} ínt'a'>

JT (LFK _v :35) |
| c. | sh (.)naa'
sh -naa'
1SG.POSS-eye
'my eye' | <ena·'>

JT (LFK _v :50)(=3.5a, 5.20d) |
| d. | n (.)naa'
n -naa'
2SG.POSS-eye
'your eye' | <nna·'>

JT (LFK _v :50)(=2.69c) |
| e. | ʎ (.)ch'ij'
ʎ -ch'ij'
RECP-towards
'toward, against each other' | <ʎtc'ij'>

JT (LFK _v :37)(=3.39a, 5.36b) |

- f. **n(.)ch'iq'** <n tc'in'>
n-ch'iq'
 2SG.PPO-towards
 'towards you' JT (LFK_N:364)
- g. **sh(.)ch'iq'** <c tc'in'>
sh-ch'iq'
 1SG.PPO-towards
 'towards me'²⁵ JT (LFK_N:364)

In (70), each example features a word-initial consonant and morpheme that may be syllabic or part of a complex onset. The same may be said of verbal prefixes involving the same consonants, which may be word-initial or word-medial, shown in (71):

- (71) Syllabically Ambiguous Consonants
- a. **n(.)tish.chit** <nt'ictc'iD'>
n-tí-sh-chit
 2SG.O-DIST-1SG.S-guess
 'I'll guess you.' JT (LFK_N:348)
- b. **sh(.)tín.chit** <ct'intc'iD'>
sh-tí-n-chit
 1SG.O-DIST-2SG.S-guess
 'You'll guess me(!)' JT (LFK_N:348)
- c. **l(.)k'ál.lish** <lk'állic>
l(.)k'á-l-lish
 RECP-apart-2SG.S-handle.several
 'You open (your legs) apart.' JT (LFK_N:180)
- d. **gyan(.) s(.)dí.yaŋ'** <^gansdíyaŋ'>
 gyan s-dí-yaŋ'
 here THM-1PL.S-to.stay
 'We live here.' JT (LFK_N:149)
- e. **noí'(.).ŋ.got** <noí'ŋGoD'>
 noí='-ŋ-got
 to.there=THM.O-2SG.S-poke.in
 'You stick it in down (i.e. arrows).' JT (LFK_N:175)
- f. **noí'(.).sh(.)got** <noí'cGoD'>
 noí='-sh-got
 to.there=THM.O-1SG.S-poke.in
 'I stick it in down (i.e. arrows).' JT (LFK_N:175)(=2.66a)

²⁵ In examples (70e-g), codas /n'/ and /ŋ'/ are in free variation.

- | | | |
|----|--|---|
| g. | ya'(.)l(.)ch'á.din
ya='-l-ch'ád=iŋ
PL=INDF.S-CLS-haloo=DUR
'They did halloo.' |
<ya'ltc'áDin>

JT (LFK _N :183) |
| h. | ya'(.)s(.)tí'
ya='-s-tí'
PL=INDF.S-THM-handle.stick.OPT
'They (sticks) always lie (there).' |
<ya'st'í'>

JT (LFK _N :49) |

For the fricatives in (71f-h), each form has two periods indicating potential syllable boundaries in parentheses. In each example there are three syllabifications possible: one where the ambiguous consonant syllabifies with a preceding glottal stop to form a complex coda, another where the ambiguous consonant syllabifies with the following consonant to form a complex onset, and one where the ambiguous consonant syllabifies with neither and is itself syllabic.

2.6.3 Transcription of Syllabic and Stressed <ṇ>

One of the strongest pieces of evidence for the existence of syllabic consonants in Wailaki involves transcription by Li of a stressed syllabic <ṇ> in a few related forms. Li writes <ṇ> in three examples, and has remarked that in regards to his own transcriptions, an “accent mark in Hupa, Wailaki and Mattole denotes stress; in Sarcee and Navajo, pitch” (Li 1930:5). Each form featuring stressed and syllabic <ṇ> involves the same /n/-initial disyllabic noun stem meaning ‘nose’ in (72):

- | | | |
|------|--|---|
| (72) | Stressed /n/ | |
| a. | ń.chish
ńchish
V.STEM
'nose' |
<ńtc'ic>

JT (LFK _T :91) |
| b. | ŋhin.ń.chish
ŋhin-ńchish
1PL.POSS-nose
'our nose' |
<ŋhiń'tc'ic>

JT (LFK _T :91) |
| c. | shi.ń.chish
shi-ńchish
1SG.POSS-nose
'my nose' |
<cińtc'ic>

JT (LFK _T :91)(=5.19d) |

A prominent syllabic <ṇ> appears both in the bare noun stem for ‘nose’ in (72a), and in forms with possessive prefixes in (72b-c). The consistency of Li transcribing <ṇ> across these examples suggest the accent mark is intentional, and not an error in transcription. The

form in (72c) also suggests that a stressed syllabic /n/ may occur after open syllables when it otherwise may be coda to a preceding syllable.

Of the syllabically ambiguous sonorants and fricatives, /n/ is the only potential syllabic consonant to receive an accent mark by Li in his notecards and wordlists. The absence of accent marks over other potentially syllabic consonants or even other examples of syllabic /n/ may or may not be a consequence of the data collected, or evidence that these consonants are not syllabic. Other potentially syllabic consonants may be evaluated by other criteria and supporting evidence.

Syllabic /n/ is also indicated prolifically through the use of spaces by Goddard. Reconstructed forms with corrected glottalized consonants of vowel length featuring syllabic /n/ are given in (73):

- (73) Goddard Syllabic Nasals
- | | | |
|----|--|--|
| a. | n.doŋ
n-doŋ
THM-be.gone.PFV
'none' | < n doñ >

CJ (PG _T :1.1) |
| b. | n.k'eh
n=k'eh
2SG.PPO-follow
'behind you' | < n kε >

CJ (PG _T :11.100) |
| c. | n.ky'ag
n-ky'ag
THM-much
'much' | < n kyαk >

CJ (PG _T :12.53) |
| d. | n.t'esh
n-t'e=sh
THM-be=DUB
'I guess it is.' | < n tεc >

CJ (PG _T :12.72)(=6.10a) |
| e. | n.sił.chii
n-s-i-t-chii
2SG.O-PFV-1SG.S-CLS-make
'I made you.' | < n sił tci >

CJ (PG _T :12.113) |
| f. | n.dow n.t'eeŋ
n-dow n-t'eeŋ
THM-be.gone THM-be
'There is no one.' | < n do n tεñ >

CJ (PG _T :1.44)(=3.13b, 6.17b) |

- b. **nish.kyáy** <**nickáy**>
ni-sh-kyáy (**ni-sh-kyáy=i**)
 THM-1SG.S-be.big=(REL)
 ‘I am large, big.’ JT (LFK_N:132)(=2.17b, 4.57l, 6.6d)
- c. **niŋ.ʼi.shíl.yaʔ** <**niŋʼicílyat**>
niŋ=ʼi-shí-l-yaʔ
 strike=EP-1SG.S-CLS-hit
 ‘I’ll hit it.’ JT (LFK_N:223)
- d. **n.nee.siʔ.yáʼ.liŋ** <**ŋŋε·siʔyáʼliŋ**>
nn-ee=s-i-t-yáʼl=iŋ (< **n(i)ŋ-ee=s-i-t-yáʼl=iŋ**)
 strike-against=PFV-1SG.S-CLS-hit.PFV=DUR
 ‘I did hit it.’ JT (LFK_N:223)

2.6.5 Syllable Types

To summarize the discussion in sections 2.6.1-2.6.4, Goddard and Merriam syllabified their transcriptions, but unreliably since other aspects of their transcriptions are inaccurate. Li did not syllabify his transcriptions, but was more careful in other aspects. Syllabifying his transcriptions can proceed by first assigning nuclei (typically vowels in any language), then consonant onsets, and finally codas, resulting in the approximate syllable types shown in (78):

- (78) Wailaki syllable types
- No Consonant Clusters: CVVC, CVV, CVC, CV
 - With Consonant Clusters: CCVC, CVCC, CCVV
 - Syllabic sonorants: /n ŋ/ occurring word-initially or word-medially; /l/ occurring word-medially only

It is unknown at present whether fricative consonants /sh s ʃ/ can be syllabic. Transcriptions by Goddard and Merriam imply they can be syllabic when word-initial. From Li’s materials, /l/ is also syllabically ambiguous in one instance: <bél·tʼoŋʼ> ‘you jump up the tree(!)’ (LFK_N:244) otherwise is syllabically ambiguous. However, most examples of syllabically ambiguous /l/ in Li’s transcriptions can be syllabified as consonant clusters with glottal stop. Coda geminates and syllabic /l/ are otherwise unattested.

Instances of Wailaki /n/ may more confidently be considered syllabic. Syllabic /n/ is marked with an accent in at least three examples in Li’s materials. Consonant clusters that do not involve glottals may be avoided with syllabic /n/. Syllabic /n/ is also attested in Tolowa (Bright 1964) providing comparative evidence that syllabic /n/ in Wailaki is not aberrant among the Pacific Coast Dene languages. Overlong vowels resulting from an allomorph of the plural *a-* following a long vowel in the iterative/reversative prefix *naa-* are treated as VV, but may need further analysis as to their behavior.

In total, 38 out of 1363 forms in Li’s notecards are syllabically ambiguous with word-initial /n ŋ sh s ʃ/ and word medial examples that don’t easily form consonant clusters. This work assumes that /n/ and /ŋ/ definitively can be syllabic. Subtracting those 15 examples, and

the form ‘you jump up the tree!’ previously discussed, 23 forms remain. For the purposes of analyzing stress in the following section, these 23 (1.7% of Li notecard examples) were treated as syllabic although their status remains to be resolved.

2.7 Stress

In order to understand patterns of stress in Wailaki, it is useful to consider related Dene languages, both in California and in other parts of the family. It is also useful to understand the history of study of stress patterns in Dene languages, as this may have motivated researchers such as Li and Sapir to study PCD languages in search of lexical tone characteristic of the Northern and Southern parts of the family.

Apart from Gordon and Luna’s (2004) study of Hupa stress and Tuttle’s (1990) study of Tolowa stress and vowel length, stress has been relatively understudied in Pacific Coast Dene languages (PCD). Bright (1964) also touched on Tolowa stress and perceived pitch accent. Brief descriptions have been given for Hupa by Goddard (1928), Woodward (1964), and Golla (1970). Li’s *Mattole* grammar lacks a description of stress, while Goddard (1912) did not comment at length about stress in his work on Kato. The fact that PCD languages do not feature lexical tone however, has been crucial as evidence for theories of independent tonogenesis in languages representing different parts of the language family, since tone found in Northern and Southern groups can’t be reconstructed to Proto-Dene (Krauss 1964).

Correlates of stress in Dene languages can be difficult to discern, especially in the languages that have lexical tone (e.g. Sarcee, Kutchin, Navajo, Chipewyan, Hare, etc.) Sapir (1914) remarked that weak stress may be a characteristic of Dene languages in general. Sapir’s (1914:276) description of Chasta Costa remarks that some syllables have “relatively strong accent” but that in general “stress accent cannot be said to be particularly well marked... Each syllable is a fairly well-defined phonetic unit tending to hold its own against others, so that an approximately level accentual flow with but few peaks results” (276). Gordon and Luna (2004:116) assert that Hupa correlates of stress are more robust compared to many Northern languages, as “duration, fundamental frequency, and intensity are all used to mark stress.” While Wailaki correlates of stress are unknown without recordings, they may be compared to Hupa.

Li (1930:22) briefly considers Wailaki stress in his *Mattole* grammar. Li considered Wailaki to have a stress system rather than lexical tone, and wrote that an “accent mark in Hupa, Wailaki and *Mattole* denote stress” (Li 1930: 5). Li also noted a correlation with heavy and light stem forms, writing that “in Wailaki the distinction of heavy and light forms in this case lies in the accent, on the stem if heavy and on the syllable preceding the stem if light...” In the present analysis of syllables and stress patterns, I focus on Li’s transcriptions for stress patterns, while taking into account nuances in his transcriptions and Merriam and Goddard’s impressions of syllabification.

Analyzing accent marks in Li’s materials reveals a preference for penultimate stress in Wailaki. Li’s description of Wailaki stress is consistent with an analysis whereby penultimate stress is preferred if one assumes heavy stems still have penultimate stress, even if word-final on the surface, due to the presence of an underlying relative enclitic, or another enclitic, which may often be deleted. Li also writes an accent mark over syllables in other positions on occasion, but the predominant pattern is penultimate stress. The location of stress in each word was analyzed according to two factors: 1) the morpheme type that stress

falls on (i.e. a prefix, suffix or stem morpheme in the word), 2) the number of syllables from the left edge/beginning of the word along with the number of syllables per word.

From the words on Li's 431 notecards, words that are unmarked for stress, monosyllabic, or repeated without different stress marking are not considered. This results in 1363 tokens that marked with stress. The distribution of accent marks according to morpheme type and position in word are given in Tables 11 and 12; Table 13 shows the relative proportions of the number of syllables of the words in the database.

Prefixes	938	68.8%
Stems	400	29.3%
Suffixes/Enclitics	4	.3%
Double Marked, Prefixes	8	.6%
Double Marked, Prefix and Stem	13	1%

Table 11: Stress on Wailaki Morpheme Types

First	321	23.6%
Second	553	40.6%
Third	315	23.1%
Fourth	112	8.2%
Fifth	36	2.6%
Sixth	5	.4%
Other (Double Marked)	21	1.5%

Table 12: Stress by Syllable Number (from Left)

Two	322	23.6%
Three	533	39.1%
Four	329	24.1%
Five	136	10%
Six	37	2.7%
Seven	6	.4%

Table 13: Total Syllables in Word

Gordon and Luna (2004:106-107) analyzed Hupa word stress from speakers of the 1920s as transcribed by Edward Sapir (Sapir and Golla 2001), demonstrating that Hupa at that time had a preference for stress placement within a two-syllable window at the left-edge

of the word. If Wailaki word stress were similar, a preference for a two-syllable window at the left-edge of the word would emerge. The following table tracks the number of total syllables in a word, and stress placement by syllable. Instead of a two-syllable window, a preference for penultimate stress is shown in Table 14.

# of Syllables	Stress Placement						
	First	Second	Third	Fourth	Fifth	Sixth	Double-Marked
Two	272, 84.5%	47, 14.6%	--	--	--	--	3, .9%
Three	46 8.6%	440, 82.6%	40, 7.5%	--	--	--	7, 1.3%
Four	2, .6%	59, 17.9%	245, 74.5%	16, 4.9%	--	--	7, 2.1%
Five	1, .7%	6, 4.4%	29, 21.3%	93, 68.4%	4, 2.9%	--	3 2.2%
Six	--	--	1, 2.7%	3, 8.1%	32, 86.5%	1, 2.7%	--
Seven	--	1, 16.7%	--	--	1, 16.7%	4, 66.7%	--

Table 14. Stress Placement by Number of Syllables in a Word

For each length, the proportion that has penultimate stress is at least 65%. For words that are two syllables long, overwhelmingly 272 tokens of 322 (84.5%) have stress exclusively on the first syllable. For words that are three syllables long, 440 of 533 (82.6%) have stress on the second syllable. For words that are four syllable long, 245 of 329 (74.5%) on the third syllable. For words that are five syllables long, 93 of 136 (68.4%) the fourth syllable. Finally, for the 43 examples that are six and seven syllables long, though examples are scarce, the majority still fall on penultimate syllables – the fifth for six syllable words, and sixth for seven syllable words, respectively. Considered overall, however, the figure is higher: 79.6%

The factors that motivate stress placement outside of the penultimate syllable, including forms that are doubly marked are unknown, and require further examination. Areas for further exploration include syllable weight, possible syllable weight hierarchy interactions, as well as word class preferences, namely whether there are any differences in stress placement according to syllable weight, or between word classes such as nouns and verbs. Despite these outstanding questions, the preference for penultimate stress is clear in the data.

2.8 Variation and Dialects

Variation in dialects can be a challenging topic to explore among the four regional varieties of the Wailaki language. It is unclear what linguistic criteria were used in defining these groups. Removal to reservations, namely Round Valley, meant a number of languages and dialect groups were brought together, which may have created situations of dialect leveling or convergence in many PCD languages (Spence 2013). A variety of orthographic systems were also used or devised by researchers with questionable accuracy or inconsistent use. Lack of consistency in eliciting particular forms can also complicate analysis. For example, when Merriam asked for ‘eye,’ he received a range of possessive forms that vary by person, and one bare stem in (79) from different informants:

- (79) Merriam Forms Elicited for ‘Eye’
- | | | |
|----|---------------------------------------|---|
| a. | s-naa’
1SG.POSS-eye
‘my eye’ | <Snah’, S’Nah’>

<i>Lohlahnkok</i> , GB (CHM:344) |
| b. | bi-naa’
3POSS-eye
‘his/her eye’ | <Bun-nah’>

<i>Tochobekeah</i> , SB (CHM:426) |
| c. | ni-naa’
2SG.POSS-eye
‘your eye’ | <No nah’>

<i>Kittel</i> , MGB (CHM:506) |
| d. | bi-naa’
3POSS-eye
‘his/her eye’ | <Bũ-ni’, Bũ-nah’>

<i>Tokubbekeah</i> , AS (CHM:93) |
| e. | naa’
eye
‘eye’ | <Nah’>

<i>Tsennahkennes</i> , JT, FM, ND(CHM:172) |

Whether the forms on paper accurately represent the speech of larger groups or are more idiosyncratic to an individual’s language use is indeterminable. These kinds of details recorded by Goddard and Merriam however, can be helpful to study of variation across speakers. Merriam worked with the most speakers, and kept track of their corresponding villages and polities. Merriam’s transcriptions can be challenging to interpret however, as the orthography he used was based in English orthographic conventions, missing many key contrasts in Wailaki.

The patterns of consonant variation in the following sections are some of the more recognizable differences in how words are pronounced between speakers, or at times, within the speech of a single speaker. A single speaker may vary in how they pronounce particular words. In a more vibrant language community, a sociolinguist might examine the rates of particular variants, and motivations behind use within or across speakers and communities. Given Wailaki’s status for many years as a sleeping language, such nuanced explanations for

variation may be beyond reach. Nonetheless, the following section indentifies some of the key patterns of variation in consonants. Tables included reproduce original transcriptions. Keneste material is largely not included in what follows, though nearly identical with Tsennahkennes in regards to the variation examined. Areas for future study would include more forms from Goddard’s material, and examine patterns of variation in vowels.

2.8.1 [ky, ky'] ~ [ch, ch']

In Merriam’s, Goddard’s, and Li’s transcriptions, there is variation involving velar stops with palatalized affricates in different tokens of the particular words as in (80):

- (80) [ky, ky'] ~ [ch, ch']
- | | | | | |
|----|--------------------|----------------------|-------------|---|
| a. | ky' int'aŋ | < k' in-t'aŋ> | ‘acorn’ | JT (LFK _V :55)(=5.33c) |
| b. | ch' int'aŋ | < tc' int'aŋ> | ‘acorn’ | JT (LFK _T :101, 109)(=5.33d) |
| c. | ta'=n- kyoh | <ta'n k' o'> | ‘Eel River’ | JT (LFK _V :54)(=6.29e) |
| d. | ta'=n- choh | <ta'n tc o'> | ‘Eel River’ | CJ (PG _T 3:30,47)(=6.29f) |

Though Merriam and Goddard were imprecise in some aspects of their transcriptions, the difference between /k/ and /ch/ isn’t something either would have likely misheard. Additional examples of this variation are given in Table 15, with the consonants in variation in bold.

	SPEAKERS		
	JT	LY	AS
‘four’	<tin- ching >	<tin'- chim >	<tin'- chāk >
‘nails’	<Lah'se >	<bul-lah- chis' >	<bū-lah- chis' >
‘fat’	< chik' kah>	< kě -kah>	<bū sū-tuk>
‘ringtail civet’	< che -til-kahs'> < ke' -til-kahs'>	< che -til'-kahs>	-
‘elk’	< kis' -tcho> < chis' -cho>	< kis' -cho> < kes' -chaw>	< chis' -chaw>
‘gray squirrel’	< che' -cho> <'ke-cho>	< che' -chaw> < ke' -cho>	< che' -chaw>
‘bird’	< chā -ahs>	<yah'-se>	< chā' -os>
‘rattlesnake’	< ken' -ni> chen -ni'>	< chen -ni'>	< chen -ni'>
‘elderberry’	< chin' -sō, chen' -so>	< ken -so>	-

Table 15a. Merriam <ch> ~ <k>

	SPEAKERS		
	SB	GB	MGB
‘four’	<tin’-chuk>	<tin’-che>	<tin’-ke-ah>
‘nails’	<Lah’-chis>	<slah-ke’-is>	<slah-ke’-is> <s-lah-kēs>
‘fat’	<buk-kah’>	<kě-kah’-gah> <k’-kah’-gah>	<hl-kah’>
‘ringtail civet’	<che’-til-kahs’>	<ke’-til-kahns’>	<ke’-til-kahs’>
‘elk’	<Yis’-chaw>	<Yés-cho’>	<kis’-chaw>
‘gray squirrel’	<chōn-chong>	<che’-cho> <chōn’-cho>	<Ske’-cho> <che’-cho>
‘bird’	<chā’-os>	<ke’-ahs> <che-ahs’>	<kā’-ahs>
‘rattlesnake’	<chen-nah’>	<kin-nah’> <ken-nah>	<kin-nah’>
‘elderberry’	<chen-sō>	<kin-so’> <chin-so’>	-

Table 15b. Merriam <ch> ~ <k>

In Table 15a-b, the speaker’s regions represented are from southeast to northwest, left to right and down. In general, the southernmost polity tend to feature the affricate often alongside the velar, while more northerly polities tend to feature a velar. In several examples, individual speakers give either variant, recognizing two possible pronunciations for a given word. What isn’t recorded unfortunately, is whether speakers preferred one pronunciation over the other, and linguistic attitudes towards variants.

The source of variation shown in Table 15a and 15b may be palatalization *ky > ch, and an incomplete sound change in progress. The front/palatalized velar stop /ky/ and the non-palatalized back velar stop /k/ both appear to be in variation with the post-alveolar affricate /ch/.

In Goddard’s Wailaki Texts (1923), free variation of <ky> <k> and <ch> is found with a single Wailaki speaker Captain Jim in (81):

- (81) <tc> ~ <k>, <ky>
- | | | | |
|----|----------------------|---------------|--------------------|
| a. | <da is kyañ> | <da is tcañ> | ‘gopher’ |
| b. | <tan kyo> | <tan cho> | ‘eel river’ |
| c. | <kyañ> | <tcañ> | ‘spruce’ |
| d. | <is kai tce> | <is tcai tce> | ‘baby’, ‘grandson’ |
| e. | <tce sits> | <ke sits> | ‘deerhead’ |
| f. | <tei kac, tei kaash> | <kikac> | ‘net’ CJ (PGT) |

Captain Jim came from a southern, Wailaki dialect-speaking group prior to living in Round Valley. Although Goddard doesn't write /ky/ in (e) and (f), the prefix in both cases may be a thematic possessor *ky'i-*, and likely glottalized, not aspirated, as well as palatalized, not regular/back velar, despite the lack of <y> transcribed.

In addition, example (81d) is probably cognate with Hupa *-kya:y* 'woman's daughter's child' (Sapir and Golla 2001:870). The form *whikya:y* 'my daughter (woman speaking)' is non-diminutive, and has diminutive counterpart *'ishkya:y*. Normally diminutive consonant symbolism produces a change of /ky/ to /k/ in Hupa. Although the /ky/ in Hupa doesn't change to mid-velar or back-velar /k/, this makes it more likely that the Wailaki word is related to the Hupa word, which has a front velar /ky/. The fact that Goddard transcribed /k/ rather than /ky/ in (d) may be a mis-transcription, or it might be related to the same kind of shift to back velar in diminutives as sometimes found in Hupa (e.g. diminutive *xok'a:ŋ'ay* 'his pitiful little arms,' non-diminutive *xok'y'a:ŋ'ay* 'his arms.' Its not clear that any of the examples in (81) illustrate the regular (back) velar stop in variation with the post-alveolar affricate, and all may be /ky'/ when velar.

In other California Dene languages, the front velar Proto-Dene series (IPA [kⁱ, k^j^h, kⁱ^j]) are retained in Hupa as /gy, ky, ky'/, are realized in Mattole-Bear River as palatalized dental-alveolar affricates (IPA [tsⁱ, ts^h, tsⁱ^j]), and are realized in Kato as a palatal affricate series (Golla 2011:81-82). The process involved and direction of change is likely palatalization in Mattole-Bear River and Kato with Hupa retaining the Proto-Dene phones, and the same or similar process(es) as found in Mattole and Kato underway in Wailaki.

2.8.2 [ch'] ~ [ts']

Aspirated velars aren't the only consonants in variation with aspirated palato-alveolar affricates. In Merriam transcribes some words variably with a palato-alveolar affricate <ch> and alveolar-dental affricate <ts>. Wailaki <tin'-chaht'> 'pain' is cognate with Hupa *dinch'a:t* 'it is sore,' in which the Hupa features a glottalized palato-alveolar /ch'/ retained from Proto-Dene (Golla 2011:81-82). Because aspirated /ts/ is not found in Wailaki while /ts'/ is, it's likely that the variation described below involves glottalized segments.

In Table 16a-b, the regions are again represented from southeast to northwest, left to right and down. Directionality, or environments of any partial or full sound changes involved here are hard to determine without more data. From the limited data, northern speakers seem to feature more [ts'] variants and the southern speakers more [ch'], with considerable variation shown single speakers as well.

	SPEAKERS		
	JT	LY	AS
‘pain’	<tin'- chaht' >	<tin'- chaht' >	-
‘ashes’	< tsus' >	< ches >	<ně>
‘firewood’	<kō>	< chus >	< tsus' > < chus' >
‘deer’	<in'- chě >	<in'- che' > <in'- tse >	<in'- che >
‘duck hawk’	< chin-ně' -tě> < tsen-ne' -tě>	-	-
‘crested jay’	< ches' -si> < chi-che >	< chi-ki >	-
‘California jay’	< ches' -si> < chin'-cho > < chi-cho >	< tsi'-chun > < ches' -si>	< tsi'-tsun >
‘meadowlark’	< cho-lah' -ke> < tso-lah' -ke>	< cho-lah' - chahn >	-
‘sword fern’	-	-	-

Table 16a. Merriam <ch> ~ <ts>

	SPEAKERS		
	SB	GB	MGB
‘pain’	<ten- tsaht' >	-	<ten- tsaht' >
‘ashes’	<tel'-bi'>	-	< tsis' > <hl' tsis' >
‘firewood’	< chis' >	< chis' >	< chis' >
‘deer’	<in'- tsě >	<in'- tsě > <in'- chě' >	<en- tsă' >
‘duck hawk’	-	-	-
‘crested jay’	< tsi^{hl}-ki' >	< tsi'-h'^lki' > < tsi-chel-ki' >	-
‘California jay’	< tsi-chun' -so>	< tsi'-tsun' >	< tsi'-chah >
‘meadowlark’	< cho-laht' chah >	< tso-lah'-tsah >	< chă^{hl}-ne >
‘sword fern’	<tah'- tsun-kah >	tah'- chin-kah	-

Table 16b. Merriam <ch> ~ <ts>

2.8.3 [b] ~ [m] Variation

Variation exists between word-initial bilabial stop [b] and nasal [m]. In the Table 17a-b, examples of [m] are distinct from [m] produced by phonological processes whereby bilabial stops assimilate in manner to an adjacent nasal segment (see 2.5.1.1).

	SPEAKERS		
	JT	LY	AS
‘ocean’	<bahn'-cho'>	<bahn'-cho'>	-
‘nose’	<nin-chis'>	<mun-chis'> <bin'-chis'>	<bun-chis'>
‘belly’	<mut'> <but'>	<bul'>	<bũ-chahng'>
‘brain’	<bus-gah>	<mus-gah'>	-
‘mountain lion’	<ben'-tā-che>	<men'-te-cho> <ben'-tā-cho>	<men'-te-cho>
‘flicker (bird)’	<min-chēs bil'-cho> <bin'-chis-bil'-cho>	<mun-chis' -bul>	-
‘fishhawk’	<bahn-che' -ahs>	<mahn che' -ahs>	-
‘fly’	-	-	<bahn' -tse>

Table 17a. Merriam [b] ~ [m]

	SPEAKERS		
	SB	GB	MGB
‘ocean’	<bah'-gah>	-	<mahn-cho' -to> <mun-cho' -to>
‘nose’	<bun-chis'>	<sin-chis'>	<sin-chis'>
‘belly’	<s'chang'>	<s'bũ', bũ'>	-
‘brain’	<bũ-se-'klō-gah>	-	-
‘mountain lion’	<men-tā'-cho>	-	-
‘flicker (bird)’	-	<mun' -chis-bũl>	-
‘fishhawk’	-	-	-
‘fly’	<bahn' -tse>	<bahn' -tse>	<mahn' -tse>

Table 17b. Merriam [b] ~ [m]

The segments above are words in isolation, and with the segments being word-initial, it's not likely that assimilation is responsible for presence of [m].

In Table 17a-b, both variants are often found in examples from Tsennahkennes and Settenbiden give both variants often, while Nongatl consistently pronounces words with nasal [m]. This mirrors the fact that Proto-California Dene bilabial obstruent (IPA /p/) is realized as mainly /m/ in Hupa to the north except in a few rare words and borrowings (Golla 2011:82). Golla seems to reconstruct the variation between /b~m/ to Proto-California Dene (81).

In Goddard's *Wailaki Texts* (1923) [m] and [b] appear in free variation but primarily as [b]. For instance, in text 22, titled "Basoi Goes Fishing," the word appears as *basoi* of uncertain meaning with [b], except in one token, where it appears as *masoi* with [m]. A look at the word prior to *Masoi* shows that place assimilation of [b] to a nasal across a word boundary isn't responsible for this pronunciation, nor is it likely in the title of the text. The word is likely a personal name of some sort, though presently of unknown morphological composition.

2.8.4 [ɣ] ~ [w] Variation

In forms recorded by Goddard, Li, and Merriam, variation exists between a voiced velar fricative [ɣ] and a labio-velar approximant [w]. In Hupa, the Proto-Dene voiced velar fricative merges with the labio-velar approximant. In Wailaki, variation between the two segments appears conditioned by the vowel /o/. The approximant [w] is non-phonemic in Li's transcription, and occurs only rarely; it appears mostly preceding or following /o/, and is often written by Li as superscript with <ɣ^w> or with the velar fricative as superscript with <^yw> (see 2.3.2).

- (82) Li <ɣ^w>
- | | |
|---------------------------------------|------------------------------------|
| a. ywoł | <ɣ ^w oł> |
| V.STEM.IPFV | |
| ‘to scrape’ | JT (LFK _V :15)(=2.21a) |
| b. ywosh | <ɣ ^w oç> |
| V.STEM.IPFV | |
| ‘to sleep’ | JT (LFK _V :15)(=2.21b) |
| c. ł-ee-ky’-o=’-ywiŋ-keet | <łɛ·k’o’ywiŋ-kε(·)D’> |
| RECP-against-THM.O-DIR=INDF.S-PFV-pay | |
| ‘They gave each other things in war.’ | JT (LFK _N :379)(=2.21f) |

The same sounds represented by Li's transcription of <ɣ^w> and <^yw> are likely recorded by Goddard in (83):

- (83) Goddard [ɣ] ~ [w]:
- | | | | |
|----|-------------|-------------|----------------------------|
| a. | <yo gɛɭ ɛ > | ‘you carry’ | CJ (PG _T :6.39) |
| b. | <wo gɛɭ ɛ > | ‘you carry’ | CJ (PG _T :6.21) |

Merriam records the following words with the symbol <w> in environments that likely aren’t preceding or following /o/ though it is important to keep in mind his transcription of vowels is imprecise.

- (84) Merriam [w]:
- | | | | |
|----|-----------------------|------------------|--------------|
| a. | <wah’-so> | ‘bluebird’ | JT (CHM:144) |
| b. | <wah’-tsung><wo-nes> | ‘canine tooth’ | JT (CHM:175) |
| c. | <wō-ken’-ne> | ‘milk-teeth’ | JT (CHM:175) |
| d. | <chet’-wos><chi-wahs> | ‘asleep’ | JT (CHM:176) |
| e. | <Het-lā-wahs’> | ‘asleep’ | LY (CHM:10) |
| f. | <wit-sā’-kě> | ‘umbilical cord’ | GB (CHM:348) |
| g. | <Hi-e wahn’-sě> | ‘his mother’ | GB (CHM:392) |
| h. | <Nā-he’-nah hahn’-sě> | ‘our mother’ | GB (CHM:393) |

Whether the forms in (84) record a true phonetic [w] or Li’s <^yw> may be impossible to determine. In the forms for ‘his mother’ and ‘our mother’ from speaker George Burt in (84g-h), there is apparently variation between a fricative <h> and approximant <w> in the penultimate syllable. It’s possible that the alternation Li recorded between <^yw> and <^yw> exists in the other dialects, but is obscured by Merriam’s transcription conventions.

2.8.5 <θ> Variation

In Essene’s (1942:1) documentation of Lassik with speaker Lucy Young, 18 words contain a sound marked with the symbol [θ], described “<θ> as th in [English] thin.” While vocabulary items are not listed according to speaker, Essene writes that the “Lassik supplementary material is also primarily derived from material obtained from Lucy Young,” while Mary Major “provided some of the information in the Lassik supplementary material” (2). It therefore is very likely that the majority of the words listed came from Lucy Young.

(85)	Essene <θ>:	
a.	θělyθ	‘Tie In Knots,’ (Lucy Young’s father’s name)
b.	da’θūs	‘Sack,’ (Chief Lassik’s name)
c.	θětibinta	‘Rock Sharp,’ (Lucy Young’s uncle)
d.	θed’ūsliñ	‘Water Run Over Rocks’
e.	θ’iltcik	‘Hair Red’
f.	θuně’ił	‘Bones Bad,’
g.	<gěstcoθūs>	‘elkhide armor’
h.	<tuθbül>	‘eagle’
i.	<θěłbatchin>	‘crane’
j.	<θădi’itci>	‘killdeer’
k.	<θ’na>	‘yellowjacket’
l.	<θ’na’atco>	‘bumblebee’
m.	<tcaaloθ>	‘wasp’
n.	<kanŭθ>	‘dugout boat’
o.	<ta’θeθ>	‘cased hide bags’
p.	<θütėnagă>	‘quiver’
q.	<jěθūs>	‘bucksin’
r.	<θŭtoł>	‘sling’
s.	<θiislě>	‘woodpecker-scalp bands’
t.	<θiit’yo>	‘tobacco pipe’
u.	<θoltci>	‘angelica’
v.	<θeantsüntalsul>	‘June’
w.	<θüntcaĩitci>	‘Ursus Major’
x.	<θěga>	‘scalp’

LY (FE:85-88)

Comparing Essene’s forms with the same words definitely recorded from speaker Lucy Young, Merriam records <s> or <S> where Essene transcribes <θ>.

(86)	Essene	Merriam	Translation
a.	<θütėnagă>	<Kut-ten-nah’-ke>	‘quiver’
b.	<jěθūs>	<in-chă sahs>	‘bucksin,’ ‘deerskin’
c.	<θŭtoł>	<sut-tos ^{hl} >	‘sling’
d.	<θiit’yo>	<Set-yo>	‘tobacco pipe,’ ‘tobacco’
e.	<θ’na>	<Snah ^l >	‘yellowjacket’

Merriam’s use of capital <S> does not appear indicative of a sound distinct from sounds he transcribes as <s> in words from Lucy Young and other speakers. It would seem that Essene recorded either Lucy Young and/or Mary Major as having a particular way of pronouncing /s/ that Merriam did not find with Lucy Young. Comparisons with Goddard’s Lassik notebooks might yield further insights, as both Lucy Young and Mary Major are recorded as Lassik speakers that he worked with. Goddard’s field notebooks are archived with the American Philosophical Society (Na20c.1). Future research would continue to examine and account for more information regarding all Wailaki dialects.

3 WORD CLASSES

3.1 Overview

This chapter describes parts of speech, or word classes in Wailaki, considering semantic, morphological, and syntactic properties used as criteria to define them. The following word classes are found in Wailaki: nouns, pronouns, demonstratives, numerals, postpositions, verbs, adverbs, and interjections. Nouns and verbs are the most complex word classes morphologically will receive additional treatment in separate chapters following this one. Some information about phrase and sentence types is included where relevant to word class distinctions, but a separate chapter on clitics and syntax can be found in chapter 6.

Semantic properties are related to meaning, though they are the least reliable criteria for distinguishing word classes. For example, defining nouns as relating to ‘persons, places, things or ideas’ as traditional students of English learn may not be enough to distinguish the class if there is semantic overlap with others. The fact that many Wailaki nouns are derived from verbs, or that Wailaki verbs may resemble whole sentences in English for instance, may also complicate the use of semantic criteria. Overall, other criteria are preferred.

Morphological properties tend to be much more reliable, and may be defined as those properties related to components of words, or morphemes that are restricted to a particular class of words. Derivational morphology, for instance, that derives one class for words from another can be used. Otherwise, inflectional morphology that is limited to a particular class may also be helpful. This proves much more reliable when coupled with syntactic behavior, which refers to the way that classes of words interact with each other: which ones may be grouped together to form phrases, and sometimes their linear order in phrases and sentences.

3.2 Nouns

Wailaki nouns may be defined on the basis of their distribution. Wailaki nouns function syntactically as subjects, and objects of verbs as in (1a), and objects of postpositions as in (1b):

(1) Subjects and Objects

a. <**k’isäi ca** k’áynt’ε’>

ky’isai sha ká=y-n-te
coyote sun up.out=OBV-THM-looks
S O V

Coyote sun he looks for it.

‘*Coyote looks for (the) sun.’

JT (LFK_T:6)(=6.54b)

b. <**bisi’k’iD’**>

bi-si’-k’it
3POSS-head=on.it
O=POST

His head on it.

‘on his head’

JT (LFK_T:11)

Nouns and demonstratives form noun phrases in which the noun is the head. The entire noun phrase then serves functionally as a subject or object. In these noun phrases, nouns follow demonstratives, which may be simple, as in (2a), or complex, as in (2b), with deictic adverbials expressing distance or proximity.

(2) Noun Phrases with Demonstratives

- a. <**hai** tc'ε·g tcin>
hai ch'eeg-chi
 DEM N
 'that woman' JT (LFK_T:29)
- b. <**haidi**·k iníst'e'>
hai-dii kiníst'e'
the-here man
 DEM-ADV N
 'this Indian' JT (LFK_N:19)
- c. <**di**·sέ·bil 'insiDe'>
dii see=b-ıl 'i-n-sid=e'
here stone=3PPO-with EP-2SG.S-pound.OPT=IMP
 ADV N-POST V
This stone with you'll pound.
 'You'll pound with (this) stone.' JT (LFK_T:51)(=3.17a, 3.31c)

Example (2c) also shows that the deictic element *dii* doesn't necessarily need a separate demonstrative word in order to combine with a noun to form a noun phrase. While the label ADV is consistent with (b), it obscures the fact that the deictic element is essentially functioning as a demonstrative in its own right. I retain the gloss ADV for consistency.

The demonstrative *hai* can also function as a demonstrative pronoun, standing in for nouns or noun phrases as in (3). Pronouns are a type of noun; however, they aren't inflected for possession (see 3.3).

- (3) <**hai** nconiq>
hai n-con=iq
 DEM THM-good=DUR
 'He is good.' JT (LFK_T:65)(=3.15c)

Noun phrases may also be modified with numerals as in (4a). Neuter verbs may often appear alongside noun phrases and verbs, functioning somewhat like quantifiers, but are verbal constructions as in (4b) with the word *nláay* meaning 'be many.'

(4) Neuter Verb Modifiers of Nouns

- a. <k^ˈiníst'ε' nak'á' **no·k'inǎí**>
kiníst'e' naká' **noo=ki-nai**
people two **to.there=THM-be.safe**
People two were saved.
'Two (people) were saved.' JT (LFK_T:3)
- b. <k^ˈiníst'ε' **nlá·ŋ** tc'it'ε·ba' ya'niŋ>
kiníst'e' **n-láaŋ** ch'i-tee-bah=ya'niŋ
people **THM-many** THM-off.along-fight=they.say
People many they go to war they say.
'*Many people go to war they say.' JT (LFK_T:9)(=2.28c)

Nouns may also be defined partly on the basis of inflection. Wailaki nouns may be inflected for possession, as in (5a), and sometimes number, as in (5b).

(5) Inflected Nouns

- a. <cná·'>
sh-naa'
1SG.POSS-eye
'my eye' JT (LFK_V:50)(=2.70c, 5.20d)
- b. <**hai di·** yi·k^ˈiníst'ε'>
hai-dii yii-kiníst'e'
the-here PL.N-person
DEM-ADV N
'these Indians' JT (LFK_N:19) (= 3.16a, 5.38b)

Two formal classes of nouns exist in Wailaki based on possessive inflection. Alienable nouns can appear with or without possessive prefixes, while inalienable nouns always are inflected for possession (see 5.2.4). Inalienable nouns are generally kinship and body part terms. Morphologically, nouns minimally consist of a stem, which may be further affixed. Compound nouns consisting of two stems also exist, as well as nouns derived from verbs. Nominal morphology is otherwise discussed in detail in Chapter 5.

3.3 Pronouns

Pronouns have two uses. The first is deictic or exophoric use, where the pronoun refers to discourse participants (i.e. 1st and 2nd person pronouns) or a third party in the non-linguistic context (3rd person pronoun). The second is anaphoric use, in that they can replace noun phrases; however, unlike other types of nouns, they do not occur with determiners and cannot be inflected for possession. Wailaki pronouns include independent pronouns, demonstrative pronouns (see 3.4.1), as well as interrogative pronouns.

The most common independent pronouns in texts are the 1st person singular (6a) and 2nd person singular (6b), while (6c-e) are also attested:

(6) Independent Pronouns

a.	shii	<ci·>	‘I, me’	1 singular	JT (LFK _V :43)
b.	niŋ	<niŋ>	‘you’	2 singular	JT (LFK _V :50)
c.	kin	<kin>	‘they, she, he, it’	3	JT (LFK _N :281)
d.	ŋhiŋ	<ŋhiŋ>	‘us, we’	1 plural	JT (LFK _N :281)
e.	ŋhón	<ŋhón>	‘you all’	2 plural	JT (LFK _N :281)(=2.26d)

Though (6c) is attested, it is more common in texts for references to 3rd persons to be made through the use of demonstratives (see 3.41). Independent pronouns in general are often used emphatically, since verbs encode person and number already. Examples in (7) show exophoric and emphatic uses of independent pronouns, and for contrast as in (7c).

(7) Emphatic and Contrast Independent Pronoun Sentences

- a. <t‘isbiŋ **niŋ** mént’a‘>
 tisbil **niŋ** m-e=n-t’ah (< be-n-t’ah)
 eagle **you** 3PPO-against=2SG.S-fly
 ‘Eagle, you fly up.’ JT (LFK_T:20)
- b. <’ε·he’ **ci**· k’aclé‘Djε’>
 ’eehe’ **shii** k’a=sh-léh=je’
 alright **I** so=1SG.S-do=DES
 ‘Alright I will do that.’ JT (LFK_T:12)(=6.8a)
- c. <**nuñ** yit də tuñ yac.>
niŋ yide’ ti-ŋ-yash
you downstream off.along-2SG.S-go.SG.IPFV

 <**ci** yi nok tε-ca>
shii yinak ti-sha’ (< ti-sh-yaa)
I upstream off.along-(1SG.S)-go.OPT
You downstream go, I upstream go.
 ‘You go downstream, I go upstream.’ CJ (PG_T:1.102)
- d. <**kin** ck’andow k’áo·t’iŋ’>
kin shk’andow k’a=óo-t’iŋ’ (< k’a=óo-d-’iŋ’)
they same so=OPT-(CLS)-to.do.OPT
 ‘They would do the same.’ JT (LFK_N:281)

Subjects and objects are more commonly marked only on the verb as a part of verbal agreement morphology and not expressed as independent pronouns (see 4.5, and 4.10).

The following are interrogative pronouns in Wailaki that act as noun substitutes:

(8) Interrogative Pronouns

a.	dan-dóŋʹ	<dan Dó(·)ŋʹ>	‘who’	JT (LFK _N :19)
b.	dai-dóŋʹ	<dai Dó(·)ŋʹ>	‘what’	JT (LFK _N :19)
c.	dah-dóŋʹ	<da‘ Dóŋʹ>	‘where, where to’	JT (LFK _N :19)
d.	nah-dóŋʹ	<na‘ Dó(·)ŋʹ>	‘how’	JT (LFK _N :19)
e.	dai-dóŋ ɣaŋ	<dai-Dó(·)ŋ ɣaŋ >	‘why’	JT (LFK _N :19)

The long vowel on the interrogative suffix *dóŋʹ* appears to be conditioned by the phonological or syntactic context in which it occurs. The long vowel does not appear in (8c), the only interrogative/indefinite pronoun that appears as a word in isolation on Li’s notecard 19, but the vowel is optionally long in (8a-b) and (8d-e), all of which precede a verb in a fuller sentence on the same notecard.

There is also an interrogative pronoun form for ‘when’ in Merriam’s Tsennahkennes wordlist that is similar to an example found in Li’s texts that is ambiguous and hard to read, either ‘when’ or ‘where,’ but nonetheless helps in reconstructing²⁷ the form shown in (9):

(9) Interrogative ‘when’

a.	*dan’-dón’-de	<tan-tōn-tā>	‘when’ (in the future?)	JT, FM, ND (CHM:217)
b.	*dan’-dó	<tan’-to>	‘when’ ?	JT, FM, ND (CHM:217)
c.	dan’-doŋʹ	<dan’doŋʹ>	‘when/where’ ?	JT (LFK _T :33)

Variation in the transcription of interrogative pronouns in texts and in Merriam’s Tsennahkennes wordlists otherwise include forms with *do*, an allomorph of *dóŋʹ* whereby the word-final /ŋʹ/ is deleted in the interrogative suffix. The following Goddard and Merriam forms are written with *-do*:

(10) Interrogative Pronouns with Interrogative Allomorph *do*

a.	dan-dó	<dan do>	‘who’	C J(PG _T :22.32)
b.	dai-dó	<dai do>	‘who’	JT (LFK _T :14)
c.	*dai-dó	<ti’-do, Nah’-to>	‘what’	JT, FM, ND (CHM:217)
d.	*dah-do	<ta’-do>	‘where’	JT, FM, ND (CHM:217)
e.	*nah-dó	<na tó>	‘why’ (how?)	JT, FM, ND (CHM:217)

The indefinite pronoun set (i.e. someone, something, somewhere, somehow, someday) is difficult to discern from the data available. In forms for ‘someone,’ the root morpheme meaning ‘who’ appears with an indefinite suffix *-sho*, cognate with an indefinite suffix *-who*’ in Hupa (Sapir and Golla 2001:866) and related to the dubitative modal enclitic *sh* that expresses doubt, uncertainty, or unfamiliarity (see 6.1.1.6) as in (11):

²⁷ Asterisks * on retranscription lines indicate reconstruction.

(11) Indefinite Pronouns ‘Someone’

- a. <dan<
dan=**sh**
who=**DUB**
‘who, someone’ JT (LFK_T:41)
- b. <dan **coc** >
*dan-**sho=sh**
who-**INDF=DUB**
‘someone’ CJ (PG_T:4.6)

Semantically, interrogative pronouns correspond in translation to wh-words in English, and are used in questions as interrogatives as in (12a). Indefinite pronouns occur in declarative sentences as in (12b):

(12) Interrogative and Indefinite Pronouns in Sentences

- a. <dai doŋ k’ant’ei cɛnile’-ts’ɛ’>
dai-doŋ k’a=n-t’e=i sh-ee=ni-leh=ts’eh
what-INT so=THM-be=REL 1SG.PPO-against=THM-touch.IPFV=EVID
‘What kind of thing is it (that) touches me?’ JT (LFK_T:14)
- b. <dañ coc a tiñ>
dan-sho=sh ’aa=t’iŋ’ (<’aa=di-’iŋ’)
who-INDF=DUB so=(CLS)-do. PFV
‘Someone did it.’ CJ (PG_T:4.06)

Separate negative pronouns are difficult to discern, and may be lacking in Wailaki. Semantic equivalents are given in (13). The form in (13a) means ‘nothing,’ while most words that are translated with English negative pronouns (i.e. no one/no body, nothing, nowhere, etc.) are verbal predicates using the negative element *do* as in (13c-d).

(13) Interrogative and Indefinite Pronouns in Sentences

- a. <ɬaha’>
ɬaha’
PRON
‘nothing’ JT (LFK_N:12)(=2.20a)
- b. <n do n teñ>
n-**do**=n-t’eeŋ
THM-NEG=THM-be
‘There is no one.’ CJ (PG_T:1.44)(=2.73f, 6.17b)
- c. <n doñ a le teɬ >
n-**do**=ŋ ’aa=le-teɬ (<’a=(n)-le=teɬ)
THM-NEG=DUR REFL=(2SG.S)-do.OPT?-IMM
‘(There) is nothing you can do.’ CJ (PG_T:1.44)

3.4 Modifiers of Nouns

3.4.1 Demonstratives

Wailaki demonstratives can be defined by their function and distribution. They can precede nouns to form noun phrases, have exophoric uses, and can also appear independently to form anaphoric phrases as demonstrative pronouns. They do not however, modify independent pronouns. Below is a list of attested demonstratives in Wailaki:

(14) Wailaki Demonstratives

- | | | | | |
|----|---------|-----------------|-----------------|-------------------------------|
| a. | hai(ye) | ‘the one (who)’ | <hai>, <hai yε> | JT (LFK _T :44, 31) |
| b. | hai-dii | ‘the one here’ | <haidi·> | JT (LFK _N :19) |
| c. | hai-yow | ‘the one there’ | <haiyow> | JT (LFK _N :19) |

Except for (14a), each of the above has an adverbial particle following the demonstrative element *hai*. Each of the above can serve as demonstrative pronouns and function as noun phrases as in (15a-b), and are not marked for number.

(15) Demonstrative Pronoun Noun Phrases

- | | | | | |
|----|---------------------------------------|-------------------------------|--|---------------------------------|
| a. | <hai tiyilos> | | | |
| | hai | ti-yi-los | | |
| | the | off.along-PASS-lead.away | | |
| | | ‘The One Who Was Stolen’ | | JT (LFK _T :11) |
| b. | <hai di· k‘onj’ yił’áŋ’> | | | |
| | hai-dii | konj’ yi-l-’áŋ’ | | |
| | the-here | fire OBV-CLS-handle.round.PFV | | |
| | | ‘He Who Keeps the Fire’ | | JT (LFK _T :24) |
| c. | <hai nconiŋ> | | | |
| | hai | n-con=iŋ | | |
| | DEM | THM-good=DUR | | |
| | | ‘He is good.’ | | JT (LFK _T :65)(=3.3) |
| d. | <haidi· siyidyŋ> | | | |
| | hai | si-yi-d-yiŋ | | |
| | DEM | THM-PFV-CLS-kill.PFV | | |
| | | ‘That one who was killed.’ | | JT (LFK _T :42) |

Adverbial elements that follow *hai* in Wailaki are deictic and indicate different spatial distances. In (16a) the referent is closer to the deictic center, while (16b) the referent is farther.

- (19) Demonstrative Pronoun
- a. <haiyε·^ε bina·si·láł·ʔ>
haiyee (< hai=i) bi-naa=si-i-lálʔ
the=REL 3PPO-ADV=PFV-1SG.S-dream.PFV
 ‘That is the one I dreamt about.’ JT (LFK_T:31)(=2.64d)
- b. <hai yo·i ʔiltsʔaDʔ>
hai-yoow=i ʔi-l-tsʔatʔ
the-there=REL EP-CLS-halloo
 ‘He (that one) will halloo.’ JT (LFK_N:184)(=2.64c)

3.4.2 Numerals

The Wailaki numeral system is quinary, or based on patterns of five. After numerals one through five, a new cycle of numerals begins after six based on the previous numbers:

- (20) Numerals 1-12
- | | | | | |
|----|----------------------|------------------------|----------|---------------------------|
| a. | láihaʔ | <láí haʔ> | ‘one’ | JT (LFK _V :47) |
| b. | nákaʔ | <nákʔ aʔ> | ‘two’ | JT (LFK _V :50) |
| c. | taakʔ | <tʔ a·kʔ> | ‘three’ | JT (LFK _V :54) |
| d. | dinkyʔin | <din kʔin> | ‘four’ | JT (LFK _V :39) |
| e. | dishkilaʔ | <dickilaʔ> | ‘five’ | JT (LFK _V :47) |
| f. | kʔislaʔ | <kʔis laʔ> | ‘six’ | JT (LFK _V :46) |
| g. | kʔisnág | <kʔisnág> | ‘seven’ | JT (LFK _V :50) |
| h. | kʔistaak | <kʔis tʔ a·kʔ> | ‘eight’ | JT (LFK _V :46) |
| i. | kʔisdinkyʔin | <kʔis dínkʔin> | ‘nine’ | JT (LFK _V :39) |
| j. | ɫbaŋ ʔin-tʔee | <ɫbaŋ ʔin-te·> | ‘ten’ | JT (LFK _V :34) |
| k. | ɫbaŋ ʔintʔee kʔiláʔ | <ɫbaŋ ʔin-te· kʔiláʔ> | ‘eleven’ | JT (LFK _V :34) |
| l. | ɫbaŋ ʔintʔee kʔináag | <ɫbaŋ ʔin-te· kʔiná·g> | ‘twelve’ | JT (LFK _V :34) |

Both analyzable and unanalyzable words are given for numbers one through four. Wailaki numerals six through nine are formed by adding a morpheme *kʔis* ‘one side’ (see 3.5.1.9) indicating a number that is one complete hand plus what follows.

Ten is a different construction. The first morpheme is reciprocal *ɫ-* followed by *baŋ* ‘across, opposite’ followed by a morpheme that resembles imperfective stem *tʔee* ‘to be, act.’ Eleven and twelve build on the number for ten, followed by a morpheme *kʔi-* and numbers one and two repeated. Subsequent numbers until twenty may follow this pattern, but aren’t attested in the available data.

In forms for the number twenty, both begin with a *naa-* related to ‘two’ followed by an enclitic *-diŋ* which in this case means ‘times’ and performs a multiplicative function.

- (21) Numerals 20-21
- | | | | | |
|----|---------------------|------------------------------------|----------|----------------------------|
| a. | naadin ɫbaŋ ʔintʔee | <na·diŋ ɫbaŋ ʔinte> | ‘twenty’ | JT (LFK _T :100) |
| b. | naadiŋ kinéesyahn | <na·diŋ kʔiné·sya·ʔ _n > | ‘twenty’ | JT (LFK _T :100) |

In (21a), the word for twenty is ‘two times ten.’ The second form for twenty in (21b) is multimorphemic. The first CVC sequence may be *kin* or *kiŋ* ‘stick’ or possibly ‘base,’ followed by a form from *neesyaan*, related to a Hupa word of the same form meaning ‘it has grown’ (Sapir and Golla 2001:805).

Higher numbers can be constructed from similar patterns until one hundred (e.g. *taak’din* or *taadin* ‘thirty’). No specific number is recorded for one hundred or higher. Kato *lalbahun-tun-lalbahun* ‘ten times ten’ was recorded by Curtis (1924) while in Hupa *dikin* ‘hundred’ may be related semantically to either *kin* ‘stick’ or the same form meaning ‘base’ (Sapir and Golla 2001:758). Conceivably a word for one hundred may yet be found for a dialect of Wailaki in unanalyzed Goddard texts and notebooks.

Some variation in numeral pronunciation and construction exists across dialects in Merriam’s wordlists, including between speakers considered the same dialect, as in (22):

- (22) Tsennahkennes (Wailaki Dialect) Numerals
- | | | | |
|----|-----------------------|---------|----------------------|
| a. | <’Hli’-hah > | ‘one’ | |
| b. | <Nah’-kah> | ‘two’ | |
| c. | <Tahk’> | ‘three’ | |
| d. | <Tin-ching> | ‘four’ | |
| e. | <Tis’-kah-lah> | ‘five’ | |
| f. | <Kus’-lah> | ‘six’ | |
| g. | <Kus-nahk> | ‘seven’ | |
| h. | <Kus-tahk’> | ‘eight’ | |
| i. | <Kus-tin-ching> | ‘nine’ | |
| j. | <’Hleb’-bah-ning’-të> | ‘ten’ | JT, FM, ND (CHM:168) |

The number ‘four’ in (22) features a palato-alveolar affricate /ch/ or possibly glottalized /ch’/, whereas ‘four’ in (20) features /ky’/. This is a common variation in all dialects (see 2.8.1).

Attested numerals for other dialects are given in (23-27), each with a quinary system:

- (23) Kit-tel (Nongatl) Numerals
- | | | | |
|----|-------------------------|---------|---------------|
| a. | <Klah’-hah> | ‘one’ | |
| b. | <Nah-kuk> | ‘two’ | |
| c. | <Tah’-kũ ^h > | ‘three’ | |
| d. | <Tin’-ke-ah> | ‘four’ | |
| e. | <Skul-lah’> | ‘five’ | |
| f. | <Buk-kes’-klah’> | ‘six’ | |
| g. | <Muk’-kes-nah-kah’> | ‘seven’ | |
| h. | <Bũ-kes-tah’-kah> | ‘eight’ | |
| i. | <Bũ-kes-tin’-ke-ah> | ‘nine’ | |
| j. | <’Hleb’-bah-lin-tā’> | ‘ten’ | MGB (CHM:502) |

(24)	Lolahnkok (Northern Sinkyone) Numerals		
a.	<Kli'-hah>	'one'	
b.	<Nah-kü'>	'two'	
c.	<Tah'-kü'>	'three'	
d.	<Tin'-chě>	'four'	
e.	<Skil-lah'>	'five'	
f.	<Kes-tahng'>	'six'	
g.	<Muk'-kes-nah-kook'>	'seven'	
h.	<Bü-kes-tah'-kuk>	'eight'	
i.	<Bü-kes-tin'-chek>	'nine'	
j.	<'Hleb'-bah-lin-tā'>	'ten'	
k.	<'Hleb'-bah-lin-tā' bü-kes klah'-hah>	'eleven'	
l.	<'Hleb'-bah-lin-tā' bü-kük nah-kuk'>	'twelve'	
m.	<Tö -les'-kel'-lah>	'fifteen'	
n.	<Nah-too'-nes-yah>	'twenty'	GB (CHM:340)

(25)	Tokubbekeah (Lassik) Numerals		
a.	<I'-yah-hah>	'one'	
b.	<Nah'-kü'>	'two'	
c.	<Tah'-kuk>	'three'	
d.	<Tin-chäk>	'four'	
e.	<Tis-kel'-lah>	'five'	
f.	<Mon-kes'-lah>, <Buk-kes'-lah>	'six'	
g.	<Sik-sla'-nah>	'seven'	SB (CHM:89)

(26)	Settenbiden (Lassik) Numerals		
a.	<'I'-hah >, <Li'-hah>	'one'	
b.	<Nah'-kah>	'two'	
c.	<Tah'-kah>	'three'	
d.	<Tin-chim>, <Tin'-che>	'four'	
e.	<Tis'-kah-lah>	'five'	
f.	<Kus'-lah>	'six'	
g.	<Kus-nahk>	'seven'	
h.	<Kus-tah'-kah>	'eight'	
i.	<Kus-tin-chim>	'nine'	
j.	<'Hleb'-bah-ning'-tě>	'ten'	
k.	<'Hleb'-bah li'-hah>	'eleven'	
l.	<'Hleb'-bah nah'-kah>	'twelve'	
m.	<'Hleb'-bah tah'-kah>	'thirteen'	
n.	<'Hleb'-bah tin'-chim>	'fourteen'	
o.	<'Hleb'-bah tis'-kah-lah>	'fifteen'	
p.	<Nut-til'-lā mahng-ing-te >	'twenty'	LY (CHM:4)

- (27) Tochokeah (Southern Sinkyone) Numerals
- | | | | |
|----|-----------------------|---------|--------------|
| a. | <I'-hah >, <Tli'-hah> | 'one' | |
| b. | <Nah'-kah> | 'two' | |
| c. | <Tah'-kah> | 'three' | |
| d. | <Tin-chuk> | 'four' | |
| e. | <Tis-kel'-lah> | 'five' | SB (CHM:422) |

In expressions of repetition, the morpheme *la* 'one' is also used in texts translated as 'another' as in 'one more' in (28a). The locative enclitic *diŋ* in (21a-b) for twenty is used for expressions of multiplication, or repetition more generally, as in (28b-c):

- (28) Expressions of Repetition
- | | | | | |
|----|------------------|--------------------|---------------|-----------------------------------|
| a. | la' ka't'innchiŋ | <la' ka't'inntciŋ> | 'another man' | JT (LFK _T :43) |
| b. | nágdiŋ | <náGdiŋ> | 'twice' | JT (LFK _T :80)(=6.25a) |
| c. | táakdiŋ | <t'á·kdiŋ> | 'three times' | JT (LFK _T :72)(=6.25b) |

The element *la* 'another' in (28a) also appears in a temporal construction in which it is translated as however many days or nights 'after' specified by the construction, as in (29):

- (29) <dæc kəl la yis kañ bał la ta nañ təl teñ>
 dishkila' yiskaŋ bi-la ta-naŋ=tel-t'eeŋ
 five days 3PPO-another water-drink=FUT-IPFV
 Five days after they will drink. CJ (PG_T:18.9-10)

A suffix *-in* which attaches to numerals also appears to carry a collective plural meaning referring to people. Wailaki collective plural *-in* is cognate with Hupa *-ni*, which often appears as *-in* word-finally (Sapir and Golla 2001:776). An example is given in (30):

- (30) <nai dəl iñ ti dəl tak k'ən ke>
 na-y=di-l-'iŋ ti-dił taak' -in-k'eh
 ITER-PL=1PL.S-CLS-look off.along-go.PL three-COLL.PL-manner
 'We all look, we go (as) three (people).' CJ (PG_T:7.60-61)

3.5 Postpositions

Wailaki postpositions are a large class of enclitics that appear with nominal objects as hosts. They may take nouns or noun phrases as objects, but without, a pronominal object prefix is required (see 5.3). Attested postpositions are given in Table 18a and Table 18b:

	Li	Goddard	English
-baa	<ba·>	--	'in front of, ahead of'
-baŋ	<baŋ>	<bañ>	'on the edge, across'
-ch'ij'	<tc'ij'>	<tcañ>, <tcĩñ>	'toward, at'
-i'	<i'>	<i>	'in'
-(jii)yaan	<ji·ya·n>	<tcañ gan>	'in front of'
-kaa	<k'a·>	<ka>	'after, following, for'
-ke'diŋ	<kε'diŋ>	<kε diñ>	'behind'
-dik'aane'	<dik'a·nε>	--	'alongside'
-k'eh	<k'ε'>	<kε>	'after, follow, in the manner of'
-k'is	<k'is>	--	'one side'
-k'it	<k'iD'>	<kat>	'on, on top'
-ky'aŋ	<ḵ'a ŋ>	--	'inside body'
-yaa	<ya·>	<ga>, <gai>	'through'
-yaŋ	<yaŋ>	<kan>, <kan>	'close, for, about'
-yaŋ	<-yaŋ>	--	'for (cause, purpose)'
-lai	<lai>	<lai>	'on top of a point'
-naa	<na·>	<na>	'around'
-ŋ	<ŋ>	<ñ>	'parallel side'
-tah	<t'a'>	<t>, <i>	'among, at'
-tak	<t'ak>	<tak>	'between'
-tay	<t'aŋ>	<tay>	'along, against'
-tis	<t'is>	<tas>	'over'
-tiyaa	<t'iyā·>	<tiga>	'among (people)'
-t'ah	<t'a'>	--	'apart, away (?)'
-yeh	<yε'>	<yε>	'under, below'
-aa	<a·>	<a>	'for (the benefit of)'
-ɬ	<ɬ>	<ɬ>	'with'
-nshan	<ncan>	<ncañ>	'for (...)’s part'

Table 18 Wailaki Spatial Postpositions

Semantically, postpositions are comparable to English prepositions, expressing spatial relationships but also often more abstract and temporal relationships as well. Rather than appearing before a noun, postpositions follow nouns or noun phrases (31) and demonstratives (32) as enclitics to form postpositional phrases. Other enclitics (e.g. *dij* ‘at that place, time’) are not inflected with a pronominal object prefix. Postpositions often occur as enclitics attached directly to their nominal objects. When a prefix agreeing with the postpositional object is attached, the postposition still follows the noun, and may interact phonologically at times: in (31b), for example, an epenthetic vowel is inserted between the postposition and its object. Two of the most common postpositions *-l*, ‘with’ and *-i* ‘in,’ often appear with a 3rd person postpositional object *bi-*. The distribution of these postpositions is illustrated in the following:

(31) Postposition Following a Noun or Noun Phrase

- a. <si**l**bi diŋyŋ’ε’>
 síl **bi-l** di-ŋ-yŋ’=e’
 heat **3PPO-with** THM-2SG.S-doctor=OPT
 N POST V
Heat with you’ll doctor.
 ‘You’ll doctor with heat.’ JT (LFK_T:77)
- b. <’o·^w’is yá’niŋ k’a’**abil**>
 ’-oo-w-’ís=yá’niŋ, k’a’-a-**bi-l**
 EP-DIR-PASS-shoot=they.say arrow-EP-**3PPO-with**
 V N-POST
He was shot arrow with.
 ‘He was shot with an arrow.’ JT (LFK_T:7)
- c. <di·sε·**bil**’insiDe’>
 dii séε **bi-l** ’i-n-sid=e’
 here stone **3PPO-with** EP-2SG.S-pound.OPT=IMP
 ADV N POST V
This stone with you’ll pound.
 ‘You’ll pound with (this) stone.’ JT (LFK_T:51)(=3.2c, 3.17a)
- d. <di·k’is **bi**’insiDe’>
 dii ky’is **bi-i** ’i-n-sid=e’
 here pounding.basket **3PPO-in** EP-2SG.S-pound.OPT=IMP
 ADV N POST V
This pounding basket in it you’ll pound.
 ‘In this pounding basket you’ll pound.’ JT (LFK_T:51)(=3.17b)

(32) Postposition Following a Demonstrative or Demonstrative Pronoun

- a. <hai**bi**'>
 hai **b-i**
 the 3PPO-in
 DEM POST
 'in it' JT (LFK_T:64)
- b. <di·**bi** 'iŋgódε'>
 dii **bi-l** 'i-ŋ-gód-ε'
 here 3PPO-with EP-2SG.S-spear=IMP
 ADV POST V
This with it you will spear.
 'With this you (will) spear' JT (LFK_T:52)

Postpositions also appear in sentence-initial position before verbs, and may be anaphoric to nouns previously discussed as in (33). In (33), the referent of the object of the postposition is referred to as a baby, identified in the story title and much later as River Duck.

- (33) <**bi** no·na·na·ya'niŋ>
bi-l noo-naa=naa=ya'niŋ
 3PPO-with to.there-around=be.alive=they.say
 POST V
With him she lived they say.
 'She lived with him (they say).' JT (LFK_T:56)

Postpositions also appear sentence-initially, preceding a verb and without a preceding noun as in (34). Examples such as this may analytically be examples of postpositions incorporated into verbs. In Hupa, some verb themes incorporate postpositions as disjunct prefixes or proclitics, with inflection for the indirect objects of these postpositions (Sapir and Golla 2001:856). Some transcriptions by Li appear to suggest this analysis with a postposition written within a verb form and following the verb phrase in translation as in (34).

- (34) -l as a Disjunct-Zone Prefixes
- a. <**bi**niŋt'ε'>
bi-l=n-í-s-t'e'
 3PPO-with=THM-1SG.S-CLS=lie.down
 POST=V
 'I'll lie down with her' JT (LFK_N:228)
- b. <kal lo a di nañ **ca**l nai>
 kilo' 'aa=di-ni-ŋ **shi-l**=ne'
 lie REFL=THM-PFV-say.PFV 1SG.PPO-with=say.PFV
 N V V
 'He told me (the) lie you told yourself.' CJ (PG_T:20.21)

Many postpositions are largely monosyllabic; however, several are disyllabic, as in (35):

(35)	Disyllabic Postpositions			
a.	-dibaa	<-diba· >	‘ahead of’	JT (LFK _N :26)
b.	-jiyan	<-ji·yan>	‘in front of’	JT (LFK _N :30)(=3.57a)
c.	-ke’-diŋ	<-keʔdin>	‘behind’	JT (LFK _N :32)(=3.47a)

Some disyllabic postpositions may be multimorphemic. Example (35c) for instance is analyzable as the locative enclitic *-diŋ* preceded by another unknown morpheme.

Semantically, postpositions may be discussed using terminology from Talmy (1983), whereby a ‘figure’ is a thing to be located, and the ‘ground’ is that with respect to which it may be located. In addition, cross-linguistic typological considerations from Pederson et. al. (1998:584) draw on frames of reference in regards to figure and ground relationships. Frames of reference may be absolute, relative, or intrinsic. Absolute frames of reference are those with fixed bearings such as north, south or “other geo-cardinal notions.” Relative frames of reference are often based on projections from the human body, and rely on relative perspective such as ‘behind me’ or ‘in front of you.’ Intrinsic relations however are those that are constant, regardless of moving a viewer or rotation of a scene as a unit (575). Horizontal or vertical planes may also be considered.

From these considerations and the semantic categories from Rice’s (1989:275) analysis of Slave postpositions, attested Wailaki postpositions in Li and Goddard texts express familiar concepts such as place, time, instrument, cause, accompaniment, goal, recipient, and others. These are also found in postpositions elsewhere in the Dene language family and cross-linguistically. These concepts may otherwise be expressed within verbs as incorporated postpositions, or adverbial disjunct prefixes that historically may have been postpositions (see 4.13). Below is description of Wailaki postpositions according to spatial, temporal and/or other relationships they indicate.

3.5.1 Spatial Postpositions and Extensions

The majority of postpositions attested in Wailaki indicate spatial relationships, and could serve as answers to questions of ‘where?’ Spatial postpositions may express static location in space, position relative to an object, as well as destination, and/or movement. Listed in this section are attested postpositions that express one or more of these concepts. Destination may be defined in terms of “movement with respect to some intended location,” while those that express movement describe directional movement and/or passage without any necessary endpoint (Rice 1989:285,288).

Many postpositions that express spatial relationships (i.e. places in physical space) also express temporal relationships (i.e. places in time). The metaphor “time is space” (Radden 2003:226) is reflected in some postpositional semantics in Wailaki with their extension from expressing spatial relationships to temporal ones. Those that are found in texts to have extended temporal uses are noted in this section.

3.5.1.2 *-baŋ* ‘on the edge’

The postposition *-baŋ* indicates the location of an object on an edge, and an intrinsic feature of the ground’s physical space, often where land meets a body of water’s edge.

- (38) *-baŋ* ‘edge, side’
- a. <ts’i· t’**aban** né’ diŋ tɛ‘-no=y-t’ɑŋ>
 ts’ii ta-**ban**-né’=diŋ teh-no=y-taŋ
 stick water-**edge**-dirt=LOC into.water-to.there=OBV-handle.stick
A stick on the water edge in the water he put down.
 ‘*He put down a stick on the edge of the water in the water.’
 JT (LFK_T:57)
- b. <**bañ** bəl lai ya l̩tca de yab bañ
baŋ=bi-lai’ ya=l̩-ch’ad-I yibaŋ
edge=3PPO-on.point PL=CLS-halloo-EP across
Island Mountain they called to each other across.
 ‘*They called to each other across Island Mountain. CJ (PG_T:5.7)
- c. <l̩ **bañ** ha koñ>
 l̩-**baŋ**-ha koŋ’
 RECP-**edge**-just fire
Both sides fire is.
 ‘*There is fire on both sides.’
 CJ (PG_T:25.8)

In (38a), postposition *-baŋ* indicates the edge of a body of water. In (38b), the placename for Island Mountain includes *-baŋ*, and in (38c), *l̩baŋha* indicates fire on both sides of a creek.

3.5.1.3 *-ch’iŋ* ‘toward, against’

The postposition *-ch’iŋ* ‘toward’ indicates relative movement or action of a figure towards an object or person as the ground. Wailaki *-ch’iŋ* is cognate with Hupa *-ch’iŋ* ‘to, toward’ (Sapir and Golla 2001:744), Kato <-tc’ũñ^ε> ‘toward’ (Goddard 1912:24), and Mattole <-tc’iŋ> ‘toward, against.’

- (39) *-ch’iŋ* ‘toward, against’
- a. <l̩tc’iŋ>
 l̩-**ch’iŋ**
 RECP-**toward**
 ‘toward, against each other’
 JT (LFK_V:37)(=2.70e, 5.36b)
- b. <kiŋl̩a’ ya·há’da’ a’ k’i·**tc’iŋ**>
 kyinl̩a’ yaa=há-da-’a’ kii-**ch’iŋ**
 grass.game PL=off.along-1PL.S-handle.round INDF.POSS-**toward**
 ‘*We’ll start to play grass game against them.’
 JT (LFK_T:60)(=2.58a)

- c. <bič'iq' yε'bi' yε'yinyai tc'εg tc'iq' nε·sdá·ya'nin>
 bi-**ch'iq'** yehbi' yeh=yin-yai (< yeh=yin-yaa=REL) ch'eg-chin
 3PPO-**toward** inside into=PFV-GO=(REL) woman-kind
 nee-s-dáa=ya'nin
 ADV-PFV-sit=they.say
Toward him inside she came in the woman sat down they say.
 'The woman, having come in toward him [who had come in toward him], sat
 down.'²⁸ JT (LFK_T:32)
- d. <'ick'ei'ilaŋ bič'iq' yilk'aŋ... la'ε'laŋ bič'iq' t^hε'εtc'i'>
 'ishkai 'i-laŋ bi-**ch'iq'** yí-lkyaŋ
 baby EP-born 3PPO-**towards** PFV-rain
 la' 'i-laŋ bi-**ch'iq'** te-'e-ch'i'
 another EP-born 3PPO-**towards** THM-INC-wind.blows
A baby is born for it it rained... Another is born, for it wind (starts to) blow.
 'It rained for a baby born, the wind starts blowing for another born.'
 JT (LFK_T:83)

In (39a), Li lists one postpositional phrase in isolation with reciprocal *t-* that expresses the ground and figure reciprocally, and may be translated as 'toward/against each other.' In (39b) a woman comes into the house towards a man, and *-ch'iq'* expresses motion of the figure (the woman) towards the man as the ground. Not all uses of *-ch'iq'* are clearly spatial. In (39c), the translation 'against' is again used by Li in the context of a gambling game whereby opponents play against one another, in a more abstract sense of 'toward/against.' In (39d), the rain is said to fall towards and 'for' a baby the day they are born in another more abstract use of *-ch'iq'*.

From spatial meanings *-ch'iq'* also has extended temporal meanings, in that it is used to express a point such as 'toward' or 'at' evening in (40):

- (40) Temporal *-ch'iq'* 'toward, at (P)'
 <kəł **tcəñ** na ni dai yañ>
 kił-**ch'iq'** na=n-i-di-ya=ŋ
 darkness-**toward** REV=ADV-1SG.S-CLS-go.SG=DUR
 'At evening I get back.' CJ (PG_T:7.81)

3.5.1.4 *-i'* 'in'

The postposition *-i'* indicates a location in an enclosure, basin, or object large or small. Wailaki *-i'* is cognate with Kato <-i^ε> 'in' (Goddard 1912:39), Hupa *-e'* (Sapir and Golla 2001:728), Mattole <-bi'> 'in' (Li 1930:135).

²⁸ Li (1930:19-20) offered this English gloss in his Mattole Grammar (see 4.3.3).

- (41) -i' 'in, inside'
- a. <t'o·'á'bi' sí·yiq̄ >
 to-'áh b-i' síi-y-yiq̄
 water-cloud 3PPO-in THM-1SG.S-stand.IPFV
Water-cloud in it I stand.
 'I stand in the cloud.' JT (LFK_N:168)
- b. <k'ái hiD' ya'lyí·D' bi' k'int'áy >
 kái-hit ya='-l-yíit b-i' ki-n-táy=(i) >
 winter-time PL=INDF.S-CLS-build 3PPO-in THM-ADV-to.live=(REL)
In the winter they build a house inside to live.
 '*In the winter they build a house to live inside.' JT (LFK_T:68)
- c. <miŋk'ibi' >
 miŋk'-i=b-i' >
 lake-EP=3PPO-in
 'in (a) lake' JT (LFK_T:74)
- d. <di· bi' naŋyε·' sdis >
 dii=b-i' na=ŋ-yee' sdis
 here=3PPO-in around=2SG.S-pack rope
 'In this you pack rope.' JT (LFK_T:54)
- e. <n da bi se səl noc a >
 n-da' b-i' see sal no=sh-'aa
 2SG.POSS-mouth 3PPO-in stone hot to.there=1SG.S-handle.round
Your mouth in it stone hot I put.
 '*I put (a/the) hot stone in your mouth.' CJ (PG_T:2.68)
- f. <hai n kyak yeñ teatc tab bał bi o həl tei >
 hai n-kya-k-yeŋ chich tibił b-i'
 this THM-big-ADV-there wood burden.basket 3PPO-in
 'o-ho-l-chii
 EP-2PL.S-CLS-make
That is much wood in the burden basket you make it.
 '*That is a lot of wood in the burden basket you gather.'
 CJ (PG_T:5.4-5)
- g. yał dai bi ye gai yañ >
 yildai=b-i' yeh=y-(y)ai=aŋ
 door=3PPO-in in=PFV-go=DUR
In the doorway he came in.
 '*He came in the doorway.' CJ (PG_T:5.16)

- h. <n lañ bi noñ kac ske>
 n-laañ-b-i' no=η-kash ske
 THM-many-3PPO-in to.there=2SG.S-handle.container mush
Many in put it mush.
 ‘*Put (mush) in many (baskets),’ CJ (PG_T:6.43)

Examples in (41) indicate figures with respect to location inside objects big and small as the ground. In (41a), the postposition *-bi'* indicates the speaker as the figure and their location standing in a cloud. In (41b) the figure is located with respect to a larger enclosure that is a house, and in (41g), involves movement into a house through the doorway. Most examples in (41) are of static locations indicated by *-i'* whereby ‘in’ can be understood intrinsically with respect to the ground. In example (41g) however, *-i'* ‘in’ indicates movement into a doorway, and most likely passage through it.

In (41c), the figure is located with respect to a lake, which can be conceived of as a large basin. In (41d-f) however, the figures are located with respect to smaller objects as ground, namely a bag to pack rope, a person’s mouth and a burden basket. Lastly, (41h) is interesting insofar as *-bi'* ‘in’ is attached to adverbial quantifier which serves as a pronominal phrase. Because mush is served in basin or bowl-shaped baskets, it is likely that the quantifier refers to ‘many baskets.’

Apart from spatial relationships expressed by *-i'*, temporal relationships may also be expressed, always with a 3rd person postpositional object prefix *b-* as illustrated in (42):

- (42) Temporal *-i'*
- a. <kəɫ bi tce na si laɫ nən tɛ ca ge >
 kiɫ-b-i' ch'i-naa=si-laɫ-
 darkness-3PPO-in THM-ADV=PFV-dream

 nin=ti-sha=ge (< nin=ti-sh-yaa=ge)
 off.ground=off.along-(1SG.S)-go=FUT
 ‘In the night I dreamed I will go.’ CJ (PG_T:11.23-24) (=6.1e)
- b. <ka kəɫ ε bi do kañ tɛ cac tɛl tɛñ>
 ka' kiɫ-i-b-i' dow=k'aŋ
 well darkness-EP-3PPO-in not=now

 ti-shash=tɛl-t'eeŋ (< ti-sh-yash=tɛl-t'eeŋ)
 off.along-(1SG.S)-go=FUT-be
 ‘Well, at dawn, early I will set out.’ CJ (PG_T:1.4)
- c. <k'il bi' nandiyá· ya'niŋ>
 kiɫ-b-i' na=n-di-yaa=ya'niŋ
 darkness-3PPO-in REV=THM-CLS-go=they.say
 ‘In the morning he came back (they say).’ JT (LFK_T:32)

Both Goddard and Li texts feature temporal relationships expressed by *-i'* whereby the postposition indicates an event as the figure against a temporal ground. In (42), a stem *kił* 'darkness' is either understood as night or early morning before the sky lightens.

Village place names recorded by Goddard also feature *-i'*, as shown in (43):

- (43) Examples of Villages with *-i'* 'in'
- a. <ł tɔg tɕɛ bi>
 ł-tag=chi-b-**i'**
 RECP-between=DIM?-3PPO-**in**
Black-Oaks-In
 '*Place in Black Oaks²⁹' CJ (PG_{WN})
- b. <slɔs yan bi>
 slas-yan-b-**i'**
 squirrels-eat-3PPO-**in**
Squirrels-Eat-In
 '*Place-In-Which-Squirrels-Eat-In' CJ (PG_{WN})

Examples in (43) are from the Tsennahkennes dialect; however, *-i'* is featured in place names in all dialects with the same form with 3rd person postpositional object prefix *b-* usually written as in <bi> indicated by Goddard and Merriam (Baumhoff 1958).

The postposition *-i'* may also occur in <ya bik> as suggested by Goddard's translation as 'sky-in' in (44a). It's possible Goddard misheard glottal stop as <k> in (44a), or it's a fossilized postposition cognate with Kato <bɪ^hk> 'inside' (Goddard 1912:25) and Hupa *me:q* 'inside it' with postposition *-e:q* (Sapir and Golla 2001:729). Li records a similar form in (44b), translated as 'high up' but without a word-final /k/.

- (44) Sky-Related Postpositions
- a. <ya bik>
 yaa-b-**ik(?)**
 up-3PPO-**inside?**
 'up(sky)-in.' CJ (PG_T:11.38)
- b. <ya·bi'>
 yaa-b-**i'**
 up-3PPO-**in**
 'high up' JT (LFK_T:87)

²⁹ Wailaki *itagche* 'black oaks' is also listed in Merriam as <Hltuk-tse> and <'Tuk-tse> in Tsennahkennes dialect. All forms' stems appear cognate with that in Hupa *nil-taq* glossed by Sapir and Golla (2001:785) as 'reciprocal-between' probably because they grow together.

3.5.1.5 *-kaa* ‘after, for (goal, target)’

The postposition *-kaa* indicates movement of a figure ‘after’ or following an object. Wailaki *-kaa* is cognate with Hupa postposition *-xa*: ‘off in search of P’ (Sapir and Golla 2001:797). Kato postposition <-kwa/kwa^ε> ‘for’ may also be cognate (Goddard 1912:41). Postposition *-kaa* may also indicate a goal or target of an action (for postpositions meaning ‘for’ as in recipient or beneficiary, see 3.5.2.1 *-aa*, or ‘for’ as in cause or purpose, see 3.5.1.20). Movement of a figure following or after an object, or person as ground is illustrated by examples in (45):

- (45) *-kaa* ‘after it, for’
- a. <bik‘a·‘>
 bi-**kaa**
 3PPO-**after**
 ‘after it, for’ JT (LFK_N:46)(=3.109a)
- b. <kε nus tε bək ka tεs yai tε kəs ka tin tεñ>
 kinist’e’ bi-**kaa** tε-s-yai-tε (<tε-s-yaa=i-tε) k’is-k’aa=t’in-t’een
 people 3PPO-**after** off.along-PFV-go=REL-FUT one.side-so=do-be
People after he goes, he always does that.
 ‘*He goes after people, he always does that.’ CJ (PG_T:4.30-31)
- c. <diŋk‘iyántc‘i’ bik‘a· tε·sya·ya’niŋ>
 diŋkiyan=chi’ bi-**kaa** tee-s-yaa=ya’niŋ
 old.man=DIM 3PPO-**after** off.along-PFV-go=they.say
The old man he went after him they say.
 ‘*He went after the old man (they say).’ JT (LFK_T:18)

Postposition *-kaa* also indicates the goal or target of an action is shown in (46):

- (46) *-kaa* ‘for (goal, target)’
- a. <sil bik‘a·‘ st‘immił bildiŋyiq’ε’>
 sil bi-**kaa** s-timmił (<s-tin-bi-ł)
 fever 3PPO-**for** THM-cold=3PPO-with
 bi-l=di-ŋ-yiq’=e’
 3PPO-with=THM-2SG.S-suck=IMP
Fever for it with cold you’ll doctor.
 ‘For fever you’ll doctor with cold.’ JT (LFK_T:77)
- b. <nai gat t’oñ’ ε in tε bək ka>
 nai=’-yi-t’oŋ’-e inch’e’ bi-**kaa**
 ADV=THM.O-PFV-set.snare=IMP deer 3PPO-**for**
We will set snares deer for them.
 ‘*We (must) set snares for deer.’ CJ (PG_T:1.83-84)

3.5.1.6 *-ke'diŋ* 'behind'

Postposition *-ke'diŋ* indicates a relative position of a figure 'behind' an object with a front and a back, as the ground, and always occurs with the locative *diŋ*. This is illustrated by examples in (47a-c), whereby a person is the ground. This postposition may be related to *-k'eh* 'follow' (see 3.5.1.8).

- (47) *-ke'diŋ* 'behind'
- a. <-**keʔdin**>
ke'=diŋ
behind=LOC
 'behind' JT (LFK_N:32)(=3.35c)
- b. <**škeʔdin**>
 sh-**ke'=diŋ**
 1SG.PPO-**behind=LOC**
 'behind me' JT (LFK_N:32)
- c. <**ck'ε'diŋ**>
 sh-**ke'=diŋ**
 1SG.PPO-**behind=LOC**
 'behind me' JT (LFK_N:46)

3.5.1.7 *-dik'ane* 'alongside, side of body'

The postposition *-dik'ane* indicates a figure located 'alongside' a body as ground, with reference to a horizontal plane, and positions relative to a body. As indicated by (48), the stem can also be used for a body part, or 'side' of a body.

- (48) *-dik'ane* 'alongside'
- a. <**cdik'áne**>
 sh-**di-k'áne**
 1SG.PPO-THM-**alongside**
 'alongside of me' JT (LFK_V:38)
- b. <**cidik'á(·)ne**>
 sh-**di-k'á(a)ne**
 1SG.PPO-THM-**alongside**
 'side of my body, alongside of me' JT (LFK_V:46)

3.5.1.8 *-k'eh* ‘after, follow, in the manner of’

The postposition *-k'eh* indicates a figure that in motion follows an object, either physically or with extended metaphorical meanings. It may be translated as ‘following,’ (in glosses ‘follow’), ‘after,’ and ‘in the manner of,’ or ‘like.’ In non-spatial extended meaning, it is also used in a construction meaning ‘to mind someone,’ or to follow and do what another person says to do. Wailaki *-k'eh* appears cognate with Hupa *-q'eh* ‘following along’ and ‘in the manner of’ (Sapir and Golla 2001:781), and Mattole *<-k'eh>* ‘follow, after’ (Li 1930:136).

- (49) *-k'eh* ‘follow’
- a. *<n ho k'eh>*
nho-k'eh
 2PL.PPO-**follow**
 ‘after you all’ CJ (PG_T:6.65)
- b. *<lk'ε'>*
l-k'eh
 RECP-**follow**
 ‘side by side (together following/after?)’ JT (LFK_T:23)
- c. *<k'aydiłne hiD' dow bik'ε' nay'á'ya'niŋ>*
k'a=y-di-l-ne=hit *dow=bi-k'eh*
so=OBV-1PL.S-CLS-marry=when *NEG=3PPO-follow*

na=y-á'=ya'niŋ
ADV=OBV-mind=they.say
 ‘When she wed him he never minded her (they say).’ JT (LFK_T:47)
- d. *<dow ck'ε' na·soh'á· k'ido'γwilt'εl>*
dow=sh-k'eh *naa=s-oh-'áa'* *ki-d-oh-γwilt=tel*
NEG=1SG.S-follow *ADV=PFV-2PL.S-mind* *THM-ADV-2PL.S-die=FUT*
 ‘If you don’t mind me you’ll die.’ JT (LFK_T:78)
- e. *<cac n kε ye gən ya yeŋ>*
shash n-k'eh *yeh=γin-yaa=yeŋ*
bear *2SG.PPO-follow* *into=PFV-go=EMP*
 ‘Bear behind you is coming in.’ CJ (PG_T:11.58-59)(=6.34b)

3.5.1.9 *-k'is* 'one side'

Postposition *-k'is* indicates a figure that is one side of an object as ground that has two sides. Wailaki *-k'is* is cognate with Hupa *-q'is* 'one half, one of a pair' (Sapir and Golla 2001: 781). Examples are limited, but Li writes Wailaki <*-k'is*> in a notecard marked with other postpositions and in a separate note in a word list in (50):

- (50) *-k'is* 'one side'
- a. <**bi-k'is**>
bi-k'is
 3PPO-**one.side**
 'one side of it' JT (LFK_N:35)(=2.40b)
- b. <**bi-k'is**>
bi-k'is
 3PPO-**one.side**
 'one side of it' JT (LFK_V:46)
- c. <**k'isla**>
k'is-la
one.side-one
 'six' JT (LFK_V:46)

In (50c), Li notes on the same notecard as (50b) that the postposition is the same as the first syllable in the word for six. In numbers six through nine the morpheme *k'is* 'one side' is used, assuming counting on one's fingers on one hand has already been completed, and numbers beyond five are 'one side' plus other digits (see 3.4.3).

3.5.1.10 *-k'it* 'on, on top'

The postposition *-k'it* indicates a figure's location on top of a surface with respect to a vertical plane. Wailaki *-k'it* is cognate with Kato <*-k'wû*> 'on' (Goddard 1912:41), and Hupa *-q'it* 'on a surface' (Sapir and Golla 2001:781).

- (51) *-k'it*, 'on'
- a. <**bik'iD'**>
bi-k'it
 3PPO-**on**
 'on top of it' JT (LFK_N:46)
- b. <**hai-k'iD' ts'i-k'iD' t'a-nna-yidiyá· ya'niŋ**>
hai-k'it ts'ii-k'it taa-naa=yi-di-yáa=ya'niŋ
the-on stick-on into.water-REV=PFV-CLS-go=they.say
On it on sticks he walked back into the water
 '*He walked back into the water on sticks.' JT (LFK_T:57)

transcribes <kat>, while Merriam writes English orthography-oriented <kut>. The form *-k'it* may be considered a standardized form used in (51). Goddard writes <α> where Li writes <i> and his transcription may be phonetic.

In (51a), Li translates a form listed in his notecards with a 3rd singular postpositional object prefix *bi-* as ‘on top of it.’ Forms that follow in (51b-g) feature locations on physical surfaces indicated by *-k'it* that include: in (51b) sticks (possibly larger logs) on water for walking; a person’s head that tree pitch is spread on in (51c); hot stones in a cooking fire for roasting buckeye (51d); buckeye grounded fine for leaching (51e); a stone in a body of water (51f); and a mountain named for geese that land on it in (51g).

Most examples in (51) indicate locations on a surface, while (51b) describes movement on top of a surface. Each surface however, involves the location of a figure on a surface as ground with respect to an intrinsic vertical plane, contributing to the translation ‘on top’ in some examples. No examples can be found of *-k'it* whereby adhesion is made and ‘on’ is with respect to a horizontal plane.

The postposition *-k'it* is common to place names recorded in Merriam and Goddard materials, many of which are listed in Baumhoff (1958:171). A few are listed in the following:

- (52) Examples of Place Names with *-k'it*
- a. <kən təl tɛ k'ət>
 kinteel=chi'-**k'it**
 valley=DIM-**on**
Valley-Small-On
 ‘Place On a Small Valley’ CJ (PG_{WN})
- b. <sɛ ɪ so kyo k'ət>
 see=l-sow=kyoh-**k'it**
 stone=THM-blue=AUG-**on**
Stone-Blue-Large-On
 ‘Place On a Large Blue Stone’ CJ (PG_{WN})
- c. <bahng-**kut**>
 baŋ-**k'it**
 edge/across-**on**
 ‘Edge/Across-On (Island Mountain)’ JT, FM, ND (CHM:240)

In addition, *-k'it* has other, more metaphorical uses. For example, in (53), *-k'it* is used in regards to singing, demonstrating that a singer may ‘sing on’ or ‘sing over’ someone.

- (53) <dan coc yɪtdək **kət** kɛ lɛ ɛ>
 dan-sho=sh yidi-**k'it** ky'ee=leeh=e'
 who-INDF=DUB OBV.PPO-**on** ADV=sing.IPFV=OPT
 ‘Who will sing over her?’ CJ (PG_T:3.51)

From subsequent lines, the context for (53) appears to be a young woman's first menses, and puberty ceremony where others may 'sing on/over' the young woman. In this context, the postposition *-k'it* appears to be preferred over others such as <ba·> 'for him, her' (LFKN:18).

3.5.1.11 *-ky'ay* 'inside'

The postposition *-ky'ay* 'inside', cognate with Hupa *-ky'ay* (Sapir and Golla 2001:757) indicates a location of a figure inside something dense, such as the earth, or the human body. Examples are limited; however, *-ky'ay* appears to pattern as other postpositions as in (54):

- (54) *-ky'ay* 'inside body'
- a. <k'ídik'ic hai ca·nt'é·y da·dá·sinj bik'áŋ>
 ky'i-di-ky'ish hai shaan-t'ée-y daadáa-sinj
 THM.O-THM-shoot.arrow the concerning-be-ADV easy-cure
- bi-ky'áŋ**
 3PPO-**inside**
 'Sudden pain, this sort is easy to cure in(side the) body.'
 JT (LFKT:77)
- b. <nink'áŋ>
 nin-ky'áŋ
 earth-**inside**
 'into ground, inside the earth' JT (LFKN:83)

3.5.1.12 *-yaa* 'through'

The postposition *-yaa* indicates a figure's movement, passage, or breakage through either a surface or open space as the ground, as examples in (55) illustrate:

- (55) *-yaa* 'through'
- a. <yá·>
 yaa
 POST
 'through' JT (LFKN:57)
- b. <yo·ŋ' yá·ltón' ya'niŋ>
 yoow-ŋ' yaa=l-tón'=ya'niŋ
 there-edge **through**=CLS-jump=they.say
 'To the other side he jumps through.'
 JT (LFKT:8)

- c. <kɛl ɡac la 107at ɛ tɛ səl kats de an tañ ɛ>
 kilgash laasi' **yaa**=te-si-ł-kits'-de
 post fingernails **through**=off.along-PFV-CLS-spear. PFV-FUT

'i-n-taŋ

EP-2SG.S-handle.stick

Post fingernails you stick through when, hold on.

'*When you stick fingernails through (a) post, hold on.'

CJ (PG_T:16.33)

- d. <s la **gai** tɛ san sai nan>

s-la-**yaa**

te-si-n-tsai'n=in

1SG.POSS-hand-**through**

off.along-PFV-2SG.S-scratch=DUR

My hand through you scratch.

'*You scratch through my hand.'

CJ (PG_T:27.9)

In (55a), Li lists <ɣɑ·> as a postposition, while in (55b) the figure in previous lines cracks open a previously solid boulder and is able to jump through the boulder. In examples (55c-d) from Goddard texts, examples feature actions whereby a figure breaks through an object such as a post in (55d), or a surface such as scratching through what is presumably skin on someone's hand in (55e). Example (55b-c) also demonstrate related disjunct prefixes forms, related to Hupa disjunct prefix *P-wa*= 'give to P, move through P' (Sapir and Golla 2001:839)

3.5.1.13 -*yaŋ* 'close, about, for (cause, purpose)'

The postposition -*yaŋ* 'close' indicates the location of a figure that is close or nearby relative to another object, or person. Li translates Wailaki -*yan* as 'at' in (56a); however, 'close' is apt due to example in (56b):

(56) -*yaŋ* 'close'

- a. <-ɣaŋ>

-*yaŋ*

close

'at, (close)'

JT (LFK_V:42)

- b. <di· k'on' yiyannándac>

dii k'on' yi-**yan**-ná=n-dac

here fire OBV-**close**-around=CLS-run

'The fire came right close (to it).'

JT (LFK_T:48)

Another postposition construction -(*jii*)-*yaŋ* 'in front of' is used to indicate the relative position of a figure in front of a ground that is an object. The first morpheme is a stem meaning 'mind' or 'chest.'

- b. <ne̤ bən a na gat da ce̤ be̤ ge̤>
 ne' bi-**naa** na=yi-dash-i=bege
 earth 3PPO-**around** around=PFV-come-EP=FUT.HAB
 'Earth around it will always go.' CJ (PG_T:7.88)(=6.1d)
- c. <ne' binányaç>
 ne' bi-**naa**=n-yash
 earth 3PPO-**around**=2SG.S-go.SG
 'You will go around (the earth).' JT (LFK_N:131)

3.5.1.16 -ŋ' 'side'

Postposition -ŋ' 'side' indicates a figure with respect to a ground that is the side of an aspect of physical space or side of an object. Wailaki -ŋ' is cognate with Hupa -e:n' 'parallel, side' (Sapir and Golla 2001:729). Postposition -ŋ' appears most with deictic adverbial element *di*. An alternative analysis is that the postposition form -eeŋ' given the cognate form in Hupa, however other deictic adverbials can appear with the postposition and without the vowels. The form *yowŋ'* in (61a-b) references the other side of the river from the speaker as a deictic center.

- (61) -ŋ' 'side'
- a. <yowŋ' dε·ŋ'>
 yow-ŋ' d-eeŋ'
 there-**side** this-**side**
 'to this side, to the other side (here)' JT (LFK_N:45)
- b. <yowŋ'>
 yow-ŋ'
 there-**side**
 'the other side (the far side)' JT (LFK_V:57)
- (62) -ŋ' 'one side'
- a. <dε·ŋ' na·k inε·sdilyaŋ>
 dee-ŋ' naa=ki-nee-s-dí-l-yaŋ
 this-**side** REV=THM-ADV-PFV-1PL.S-CLS-win.PFV
 'This side we won back our suit.' JT (LFK_T:72)
- b. <dε·ŋ' ca·k'á·nac>
 dee-ŋ' shaa kaa=nash
 this-**side** sun up=move
 'This side (way) towards me (the) sun come(s) up.' JT (LFK_T:6)
- c. <dεŋ' kon' ndow'^woŋ>
 dee-ŋ' kon' n-dow'=oŋ
 this-**side** fire THM-NEG=DUR
 'This way (i.e. side) there is no fire.' JT (LFK_T:49)(=6.46c)

- f. <kin nai nlañ tẽñ t'õ ta>
 kinai n-laañ-t'eeñ t'oh-tah
 snakes THM-many-be grass-**among**
Snakes many are prairies.
 ‘*There are many snakes in the grass/prairies.’ CJ (PG_T:1.97-98)

- g. <ne' k'it'a'>
 ne' ky'i-tah
 earth THM.PPO-**among**
Earth among it.
 ‘On/among the earth’ JT (LFK_N:266)

Examples of ground in (63) include: ‘a good place’ in (63a); people the figure is in the middle of in (63b); mountain ridges in (63c); ground or dirt in (63d); the land as a large area or country in (63e) and (63g); finally, grass, presumably tall that snakes can hide in in (63f).

Postposition *-tah* ‘among, at’ covers a lot of semantic ground spatially. The ground for uses of *-tah* in (63) are not enclosures, basins, nor does *-tah* indicate location inside an object. The ground for uses of *-tah* are not so much surfaces, but is generalizable as ‘surroundings,’ and that which can surround the figure the figure such as grass in (63d), and the land, earth or world itself (63g).

Apart from spatial semantics, postposition *-tah* also has use in a temporal construction within a temporal adverb meaning ‘sometimes’ in (64):

- (64) Temporal *-tah*
 a. <la'k'o't'a' t'a·ne'ect'õ·t'>
 lah=kyoh-tah taa=ne-'e-sh-t'oot'
 another=AUG-at into.water=THM-INC-1SG.S-be.weak
 ‘Sometimes I (start to) get weak.’ JT (LFK_N:391)
- b. <la'k'o't'a' 'õ·nácdiyic >
 lah=kyoh-tah '-oo-ná=sh-di-yish
 another=AUG-at EP-DIR-linear=1SG.S-CLS-take.look.
 ‘Sometimes I look at him.’ JT (LFK_N:412)

In (64) *-tah* is preceded by a stem morpheme that appears related to *la'* ‘one, another’ and the augmentative suffix *-kyoh*. Enclitic postposition *-tah* follows the augmentative suffix in (64). Hupa postposition *-tah* also has temporal meanings translated as ‘at times’ which seems to be similar to the use of Wailaki *-tah* in (64)(Sapir and Golla 2001:865). Temporal use of Wailaki *-tah* in appears to be more limited in distribution than Hupa *-tah*, appearing only in this construction.

3.5.1.18 *-tak* ‘between’

The postposition *-tak* indicates a figure between the object(s) of the postposition. Wailaki *-tak* is cognate with Kato postposition <tûk gût> ‘between’ (Goddard 1912:40), Hupa *-taq* (Sapir and Golla 2001:785), Mattole <tʰag> (Li 1930:39). In (65a), the area between the shoulders is described spatially with respect to the human body. In (65b-c) though the figure and ground are more abstract, the meaning ‘between’ is again transcribed by Li for *-tak*.

- (65) *-tak* ‘between’
- a. <cga·nt‘aG‘>
 sh-gaan-**tak**
 1SG.POSS-arms?-**between**
 ‘middle of my shoulders’ JT (LFK_N:40)
- b. <bahaŋ bɛ·lk‘ɛ’ bit‘aG‘>
 bahaŋ b-ee=l-ke’ **bi-tak**
 war 3PPO-against=CLS-finish.PFV 3PPO-**between**
 ‘War is finished between them.’ JT (LFK_T:71)
- c. <di yɛ dak tɔc gɛ bat **tak** gai yɛ nak tɔc gɛ>
 di yiduk ti-sh-yee **bi-tak-i** yinuk
 here uphill off.along-1SG.S-carry 3PPO-**between-EP** south
 ta-sh-yee
 off.along-1SG.S-carry
 ‘Here east (uphill) I carry it, between south (upriver) I carry it.’
 CJ (PG_T:9.27-28)

In (65b), war is understood to be between two groups of people, and *-tak* is used. In (65c), the figure is a person journeying to and from natural salt deposits in the north and in the east to bring back salt. Geographically, a return to the starting point might be between these two referent points, similar to “I go between A and B” in English.

3.5.1.19 *-tay* ‘along’

The postposition *-tay* indicates a figure located ‘along’ an object or aspect of physical space as ground, with reference to a horizontal plane. The form suggests it may be cognate with Hupa *-taw* ‘among’ (Sapir and Golla 2001:786) Examples in (66), exclusive to Goddard texts, feature the ocean and rocks as the ground:

- (66) *-tay* ‘along, against’
- a. <ban kyo bat **tay** yin nak nas de geɬ>
 ban=kyoh bi-**tay** yinak na=s-di-yet
 edge=AUG 3PPO-**along** downstream REV=1SG.S-CLS-pack.things
Ocean along it downstream I carry it back.
 ‘*I carry it back along the ocean downstream.’ CJ (PG_T:9.16)
- b. <se ɬ bang kin neɬ ɬa bat **tay** si ting>
 see ɬ-baŋ ky’i=ni-i-ɬ-’aa
 stone RECP-side THM.O=THM-1SG.S-CLS-handle.round

 bi-**tay** si-i-tiŋ
 3PPO-**along** THM-1SG.S-lie
Stones each side I placed on edge in the middle I lay.
 ‘*I lay in the middle of stones I placed on each side.’
 CJ (PG_T:10.18)
- c. <se bat **tay** ga yeñ>
 see bi-**tay**=i=yen
 rock 3PPO-**along**=REL=EMP
Rock along it they are
 ‘They are against the rock.’ CJ (PG_T:2.79)(=6.34a)

Each example of postposition *-tay* does not include the human body as the ground.

3.5.1.20 *-tis* ‘over’

The postposition *-tis* indicates movement over an object as the ground, large or small, using a vertical plane. Each example in (67) is of movement, rather than static location. Wailaki *-tis* is cognate with Kato <-tûs> ‘over, beyond’ (Goddard 1912:40), Hupa *-tis* ‘over’ (Sapir and Golla 2001:788), Mattole <-tɣe·s> ‘over, across’ (Li 1930:136).

- (67) *-tis* ‘over’
- a. <hai nól·e‘ bit’**is** t’indil>
 hai nólleh bi-**tis** ti-n-diɬ
 the water.fall 3PPO-**over** along-PFV-go.IPFV.PL
This fall over it they go.
 ‘*Over this waterfall they (fish) jumped.’ JT (LFK_T:62)
- b. <kit **as** no dɔc taɬ>
 ki-**tis** noo=di-sh-taɬ
 INDF.PPO-**over** to.there=THM-1SG.S-move.feet.IPFV
 ‘Over them I will step.’ CJ (PG_T:7.43)

- c. <yis sɛ ban kyo bat **tas** k'ɛ na ɛɛ bɛ gɛ>
 yise' baŋ-kyoh **bi-tis**
 west across-big(ocean) 3PPO-**over**

k'-ee=nash-i=bege

THM-against=move-EP=FUT.HAB

West ocean over it (the sun) will always go down.

'West over the ocean (the sun) will always go down.'

CJ (PG_T:7.87-88)(=6.1c)

In (67a), the postposition *-tis* indicates movement of a group of fish, the figure, over a waterfall as the ground. In (67b) the figure Coyote is the main character in the story who steps over others to steal the sun. In (67c), the sun as the figure is discussed with respect to the ocean as the ground. Each example in (67) makes use of an absolute vertical plane.

3.5.1.21 *-tiyaa* 'among'

The postposition *-tiyaa* also indicates a figure 'among people' as ground according to notation on Li's notecard 75, cognate with Hupa *-tiwa*: 'among' (Sapir and Golla 2001:788). Since some instances of *-tah* also involve people, it is unclear how different the semantics of the two postpositions may be. In general, *-tiyaa* is more rare compared to *-tah* within the texts.

- (68) *-tiyaa* 'among'

- a. <t'iyɑ·>

tiyaa

among

'among (people)'

JT (LFK_N:75)(=2.19d)

- b. <bit'iyɑ·>

bi-**tiyaa**

3PPO-**among**

'among it (/him/her/them)'

JT (LFK_N:46)

- c. <hai di· tc'ɛ·k tc'in bit'iyai'dil'in>

hai-dii cheek-chin bi-**tiyai**'-di-l-'in

the-here woman-kind 3PPO-**among**=THM.O-THM-CLS-look

'She looked among the people.'

JT (LFK_T:31)

Though few examples exist of *-tiyaa*, the source of plurality in (68c) isn't clear otherwise. Without further examples, it is difficult to determine whether *-tiyaa* always refers to people as ground. If so, *-tiyaa* represents a more specific notion of proximity and non-contiguity as compared to *-tah*.

3.5.1.22 *-t'ah* ‘apart, away (?)’

A postposition *-t'ah* appears in a few lines in Li texts with uncertain meaning and limited examples. Wailaki *-t'ah* may be cognate with Hupa postposition *-t'ah* ‘moving apart, away from P, escaping’ (Sapir and Golla 2001:789). Examples are shown in (69)

- (69) *-t'a* ‘apart, away?’
- a. <yowyit'**a**'>
 yow yi-**t'ah**
 there OBV.PPO-**away**
 ‘way off (away?)’ JT (LFK_T:64)
- b. <sos 'a-**t'a** yil'tán ya'niŋ>
 sos 'aa=**t'ah** yi-l-tán=ya'niŋ
 sharp.stick REFL.PPO-**away** OBV-CLS-handle.stick=they.say
 ‘Sharp stick in front (away from herself?) she put it’
 JT (LFK_T:65)
- c. <'a-**t'a** yil'tán ya'niŋ>
 'aa-**t'ah** yi-l-'an=ya'niŋ
 REFL.PPO-**away** OBV-CLS-handle.round.PFV=they.say
 ‘In front (away from herself?) she put it (they say).’
 JT (LFK_T:65)
- d. <ka'tciŋ' ŋkay yitc'ic ya'niŋ, 'a-**t'a** no-nayltín ya'niŋ >
 ka'chin' ŋkyay yi-ch'ish ya'niŋ, 'aa=**t'ah**
 blanket THM-big OBV-wear=they.say, REFL=**away**
 noo-na=y-l-tín=ya'niŋ
 to.there-linear=OBV-CLS-handle.living.being.PFV=they.say
Buckskin blanket large he wear. Inside he put him in.
 ‘*He wears a large buckskin blanket. He put him inside.’
 JT (LFK_T:21)

None of the examples in (69) are translated by Li as ‘away’ or ‘apart’ specifically, and translations range from ‘off,’ ‘in front,’ or ‘inside.’ Of the four examples, (69d) is the most problematic for *-t'ah* as ‘away, apart.’ In (69d), Worm climbs a rope to the sky wearing a deerhide, and puts a person in it to bring them down. The translation Li gives for <'a-**t'a**> is ‘inside,’ which may be contradictory to an ‘away’ gloss though reflexive forms often require thematic *di-* and the form may mean something closer to ‘away from self.’

3.5.1.23 *-yeh* ‘under, below’

The postposition *-ye* indicates a location under or below an object with respect to a vertical plane. Wailaki *-ye* is cognate with Kato <-ye'> *-yeh* ‘under’ (Goddard 1912:39), Hupa *-yiw/-yeh* (Sapir and Golla 2001:809), Mattole “<-bayε'> *-(ba)yeh* (Li 1930:135).

- (70) -*yeh* ‘under, below’
- a. <biyε‘>
 bi-**yeh**
 3PPO-**under**
 ‘below (it)’ JT (LFK_N:46)(=2.3e, 2.32c)
- b. <bit biyε‘ binoy’dit’as>
 bit’=bi-**yeh** bi-noi=’-di-t’as>
 stomach=3PPO-**under** 3PPO-ADV=THM.O-1PL.S-cut
 ‘Under the stomach we cut in.’ JT (LFK_T:12)
- c. <bidó·y^wile’ yidiyε‘ sdá· ya’niŋ>
 bi-dóoywile’ yidi-**yeh** s-dáa=ya’niŋ
 3POSS-sister³¹ OBV.PPO-**under** THM-sit=they.say
His sister under him she sits they say.
 ‘*His sister sits under him (they say).’ JT (LFK_T:18)(=6.54c)
- d. <n yε yeñ>
 n-**yeh**=yeŋ
 2SG.PPO-**under**=EMP
 ‘They are under you.’ CJ (PG:2.80)(=6.34c)
- e. <se yε gañ la nañ>
 see-**yeh** yiŋ-la=niŋ
 rock-**under** PFV-run=DUR
 ‘Under (a) rock he ran.’ CJ (PG:31.17)
- f. <sε n tco yε>
 see=n-cho-**yeh**
 rock=THM-AUG-**under**
 ‘Rock-large-under (Place Under a Large Rock).’ CJ (PG_{WN})

In (70a), Li translates a form listed in his notecards with a 3rd singular postpositional object prefix *bi-* as ‘below.’ Forms that follow in (70b-f) feature locations under or below objects indicated by *-yeh*. In (70b), the figure, a cut made for a caesarean birth, is indicated to be in relation to a woman’s stomach as the ground. In (70c), the figure, a sister, is located in relation to her brother as the ground, who is above her in an acorn tree. In (70d), the figure is a group of bears swimming under a person as the ground, who is presumably higher up, on a platform. In (70e), the figure is a boy who is indicated to have run under a rock. Lastly, *-yeh* is featured in a village placename in (70f). Less common than *-k’it*, other place names Goddard and Merriam record feature *-yeh*.

Like *-k’it* ‘on, on top,’ examples of *-yeh* ‘under, below’ make use of an intrinsic vertical plane. Example (70b) in demonstrates a figure, a cut, whose position is below the stomach. This can only be understood if the body includes a vertical plane frame of reference

³¹ The form is cognate with Hupa *do:k’iwile* ‘old woman’ literally ‘one who is poor, weak.’

- d. <ɲhɑ·‘>
 ɲh-**aa**
 1/2PL.PPO-**for**
 ‘for us, you all’ JT (LFKN:18)(=2.26c)

In (73), the postposition *-aa* indicates a recipient of an action in example sentences:

- (73) *-aa* ‘for (recipient)’
- a. <biɕ‘ow bɑ· ɣɑŋk‘áñ ya’niŋ sa‘diŋ>
 bi-chow b-**aa**=ɣɑŋ=kán=ya’niŋ sah=diŋ
 3POSS-grandmother 3PPO-**for**=to.stay=EVID?-they.say alone=LOC
 ‘His grandmother he made a home for her alone.’ JT (LFKT:5)(=6.9b)
- b. <bɑ· sí·ɣɑŋ>
 b-**aa** sí-i-ɣɑŋ
 3PPO-**for** THM-1SG.S-to.stay
 ‘I made a home for her.’ JT (LFKN:149)
- c. <cɑ· sínyɑŋ>
 c-**aa** sí-n-ɣɑŋ
 1SG.PPO-**for** THM-2SG.S-to.stay
 ‘You made a home for me.’ JT (LFKN:149)
- d. <na· na’icilgiDj‘>
 n-**aa** na=’i-shi-l-gij
 2SG.PPO-**for** ITER=EP-1SG.S-CLS-cook
 ‘I cooked it again for you.’ JT (LFKN:332)

3.5.2.2 *-l* ‘with (means, instrument, accompaniment)’

The postposition *-l* ‘with, by means of’ indicates means, instrument, and accompaniment. Wailaki *-l* ‘with,’ is cognate with Hupa *-l* ‘with’ (Sapir and Golla 2001:781), Mattole <-l> (Li 1930:136), and Kato <-l> ‘with, by means of’ (Goddard 1912:26).

- (74) *-l* ‘with’
- a. <k’ilnɛ·stɪŋtɛl>
 k’i-**l**=nee-s-tiŋ=tɛl
 THM.PPO-**with**=THM-PFV-lie.down-FUT
 ‘He’ll lie with them.’ JT (LFKT:14)
- b. <to yil tsag gal la>
 to-**yil** ts’i-yi-la
 water-**with** THM-PFV-play
 ‘With water she plays.’ CJ (PGT:4.25)

- c. <bił no·na·na·ya'niŋ>
 bi-ł noo-naa=naa=ya'niŋ
 3PPO-**with** to.there-around=be.alive=they.say
 'She lived with him (they say).' JT (LFK_T:56)
- d. <bił siłgε:'>
 bi-ł si-n-ł-gee'
 3PPO-**with** THM-2SG.S-CLS-kill
 'With this (arrow) you kill.' JT (LFK_T:51)

3.5.2.3 -*nshaŋ* 'for (...)’s part, concerning’

Postposition *-nshaŋ* expresses when a person and their role in an action is the subject matter at hand, and may be translated as “for (...)’s part’ or ‘concerning (...)’ In (75a-b) postposition *-shaŋ* appears following a thematic prefix *n-*.

- (75) *-nshan* ‘for (...)’s part’
- a. <bi-**nshan** tc’ahal slín’ ya’niŋ>
 bi-**nshan** ch’ahal s-lín’=ya’niŋ
 3PPO-**concerning** frog THM-become.PFV=they.say
 ‘She, on her part, a frog she became (they say)’ JT (LFK_T:5)
- b. <bi-**nshaŋ** sε bino’ yehyinyá· ya’niŋ>
 bi-**nshan** see bi-no’-yeh=yin-yáa=ya’niŋ
 3PPO-**concerning** stone 3PPO-hidden-under=PFV-go=they.say
 ‘He, however behind a rock he went.’ JT (LFK_T:14)

3.6 Verbs

Wailaki verbs may be defined on the basis of inflection, and distribution. Wailaki verbs are may be inflected for tense/mode, person and number. The basic lexical unit is the verb theme which may minimally be stem, but may also include any other obligatory prefixes before inflection. Verbs are the only lexical category to show inflection for tense/mode, aand demonstrate a preference for sentence-final position as in (76), though other word orders may nonetheless be observed.

- (76) Subject-Object-Verb word order.
 <cact’εG’ k’α’t’iŋŋtc’iŋ **yit’ε·l’ós ya’niŋ**>
 shash-t’ek kat’inn-chiŋ **yi-tee-l-lós=ya’niŋ**
 grizzly.bear-girl man-kind **OBV-off.along-CLS-drag=they.say**
 S O V
 ‘*Grizzly-Bear-Girl took away a man (they say).’ JT (LFK_T:64)(=6.54a)

Otherwise, a sentence itself can consist minimally of a Wailaki verb as in (77):

- (77) Minimal Sentence
 <nincohólt‘εc>
 nin=sh-ohó-l-tesh
 off.ground=1SG.O-2PL.S-CLS-handle.living.being.IPFV
 V
 ‘(You all) take me up!’ JT (LFK_N:177)(=4.58b)

Wailaki verbs are complex in structure, in that they consist minimally of a stem, and additional prefixes. Prefixes that are inflectional specify subject(s), object(s), number, mode, while derivational prefixes are usually adverbial prefixes. In language family literature, a discontinuous unit consisting of the stem, classifier, and any other prefixes that are obligatorily part of the word prior to inflection and derivation are referred to as the theme, and together express the basic meaning of the verb. The usual types of verb prefixes are found in Wailaki, and in order with Hoijer’s (1971:125) nine prefix positions as the structure for Dene verbs. Golla (1970:56) later re-analyzed Hupa verbs and found eleven positions for Hupa that were used as a guiding model for analysis verbs as the most attested California Dene language.

The order of Wailaki verb prefixes can be observed through local interactions in examples. Prefixes appear in a fixed order before the verb stem which is often verb-final unless followed by an enclitic. The only area in which the template is unattested as to a particular order is between positions 7 and 8, which Golla provides two positions and Hoijer one. Unsure if lack of attestation of order is a consequence of the data or a fact of Wailaki grammar, I’ve left that portion of the template unordered, but conceptualized as two positions – one for 3rd person subjects and another for objects. In addition, one area in which templatic reordering is attested is in the same area between an object prefix and plural prefix *yaa-* in the disjunct zone.

The following is the Wailaki verb template. For more detailed discussion, see 4.2.

(78) Wailaki Verb Template

Position 11	Adverbial or Thematic	DISJUNCT PREFIXES
Position 10	Iterative or Reversative	
Position 9	Plural	
Position 8	3 Subject	CONJUNCT PREFIXES
Position 7	Object	
Position 6	Thematic	
Position 5	Adverbial	
Position 4	Distributive	
Position 3	Mode	
Position 2	Subject	
Position 1	Classifier	
Position 0	Stem	

The templatic categories and order of prefixes for Wailaki verbs are nearly identical to that in Hupa verb, though forms for prefixes differ and interact according to Wailaki phonology and allomorphic variation. Verb stems without prefixes appear before what is otherwise a verb that is the main predicate of the sentence in serial verb constructions as in (79):

- (79) Bare Verb Stems in Serial Verb Constructions
- a. <ya·l ninya· ya'niŋ>
yaal ni-n-yaa=ya'niŋ
go.PROG ADV-PFV-go.SG=they.say
Walking she came they say.
 'She came walking (they say).' JT (LFK_T:31)
- b. <tc'ε' kisín ya'niŋ>
cheeh ki-sín=ya'niŋ
crying THM-do=they.say
Crying they do they say.
 'People cry (they say).' JT (LFK_T:67)
- c. <tcε ko sañ>
cheeh k-oh-siŋ
crying THM-2PL.S-do
Crying you all do.
 'You all cry.' CJ (PG_T:12.19)

The particulars of Wailaki verbal morphology, and some discussion of verb themes is otherwise discussed in detail in Chapter 4.

3.7 Modifiers of Verbs

Independent verb modifiers such as intensifiers and various types of adverbs are not easily defined, as many do not strictly modify verbs or verb phrases, but may modify other word classes and phrases. Modifiers of verbs may vary in function and form, and are diverse in meaning. Adverbial verb prefixes (see 4.8 and 4.14) also have adverbial functions. Some adverbs may be derived from postpositional phrases, and are included if meaning if morphological forms differ greatly from other postpositions, or meaning is unpredictable from morphological makeup alone. Many are descriptive neuter verbs (see 4.2.1).

Independent adverbs feature relatively free word order with respect to other word classes in sentences. Examples in (80) show adverbs in positions that are sentence-initial, sentence-final, and sentence medially following the subject:

- (80) Adverb Distribution
- a. Sentence-Initial
 <k'ándəŋ' k'ina'dε:silyé'in>
kán-dəŋ' ky'i-na='-dee-si-l-yéh=inŋ
now-when.PST THM-ADV=INDF.S-THM-PFV-CLS-hunt=DUR
ADV V
 'Yesterday they hunt(ed).' JT (LFK_T:2)(=6.7b)

b. Sentence-Final

<dow k̄'islin' ya'niŋ k'an-daŋ'>
 dow=ky'i-s-lin'=ya'niŋ **k'an-daŋ**
 NEG=THM.O-PFV-catch.with.rope=they.say **now-when.PST**
 V **ADV**
 'Nothing (was) caught they say yesterday.' JT (LFK_T:2)

c. Following the Subject

<c gan da ni di djiñ yit dai kan ta ya tco de do læc hæ<
 sh-yandaanii **di-jin** yidai' kinta-yaa=choh
 1SG.POSS-son.in.law **this-day** outside camp-through?=AUG
 N **ADV** ADV POST

dee=di-lish=hit

into.fire=THM-handle.several=when

V

My son-in-law today outside back of the camp build a fire when...

'*When my son-in-law today built a fire outside at the back of camp...'

CJ (PG_T:4.57)

Those that are limited in distribution include intensifiers that appear adjacent or preceding what they are intensifying.

(81) Intensifier Distribution

a. <koñ nkyak tɛ læt dɛŋ yɛ næk>
 koŋ **n-ky'ak** te-lid=iŋ yinuk
 fire **THM-much** off.along-burn=DUR upstream
 N **ADV** V **ADV**
Fire much it burns upstream.
 '*Much fire burns upstream (south).' CJ (PG_T:25.10)

b. <dow nk'aG' tɛ'ɛ'k'isiŋ nandac t'ɛ·lt'ɛ·ŋ >
dow=n-ky'ak cheh=kisiŋ na=n-dash=teel-t'eeŋ
 NEG=THM-much cry=THM-do.PL REV=ADV-come=FUT-be
ADV V V
 'Don't cry too much, he (the dead) will come back.'
 JT (LFK_T:67)

c. <ntc'aG' tɛ'inindac ya'niŋ yá bił>
n-ch'ak ch'i-ni-n-dash=ya'niŋ yá bi-ł
THM-much INDF.S-ADV-PFV-dance=they.say scalp 3PPO-with
ADV V N POST
 'Lots they dance with the scalp.'
 JT (LFK_T:11)

Adverbs express location, time, manner, and intensity. Some adverbs may function or express more than one category. The following are common independent adverbs and other verb modifiers listed according to semantic categories.

3.7.1 Adverbs of Location

Several common adverbs express location, and are used deictically with reference to the speaker or some other expressed deictic center. The following are common adverbs of location in Table 19, followed by examples and further description.

Form	Li	Goddard	English
gyaŋ	<gaŋ>	<kyañ> <kyañ>	'here'
haat	<ha·D'> <haD'>	--	'there, that place'
hata'	<hat'a>	<hat ta>	'the same place'
kandiŋ	--	<kaŋ dañ>	'near place, a close ways'
neediŋ	<ne·sdiŋ>	<nes dañ>	'far place, a long ways'
yidai'	<yidai'>	<yit dai>	'outside'

Table 19. Common Adverbs of Location

3.7.1.1 gyaŋ 'here'

Wailaki *gyaŋ* 'here' is a proximal deictic adverb, cognate with Hupa *digyaŋ* 'here' (Sapir and Golla 2001:37). It may generally be used to indicate a location nearby.

- (82) *gyaŋ* 'here'
- a. <ᵑgaŋ>
gyaŋ
 ADV
 'here' JT (LFKN:1)(=2.4e)
- b. <ᵑgaŋ sí·yaŋ'>
gyaŋ sí-i-yaŋ'
here THM-1SG.S-to.stay.PFV
Here I live.
 'I live here.' JT (LFKN:149)
- c. <kyañ k'añ n do tse >
gyaŋ k'aŋ n-dow=tse
here recently THM-NEG=EVID
Here before I heard nothing.
 '*I heard nothing here before.' CJ (PGT:1.13)

- d. <**kyañ** no sut >
gyaŋ n-oo-sat
here ADV-OPT-sit
 ‘Here (let him) sit (down).’ CJ (PG_T:1.59)

3.7.1.2 *haat* ‘there’

Wailaki *haat* ‘there’ is a distal deictic adverb, some times translated as ‘that place.’ In examples below, it generally indicates a distant location. Li writes <ha·D’> with a long vowel in his notecards, and indicating aspiration on the word-final alveolar stop. In texts however, a short vowel is often recorded. I use a long vowel in retranscription of all forms in (83):

- (83) *haat* ‘there’
- a. <ha·D’>
haat
 ADV
 ‘there’ JT (LFK_N:1)(=2.3d)
- b. <**haD’** k’ict’a’>
haat ki-sh-tah
there AREAL-1SG.S-live
 ‘I’ll live there.’ JT (LFK_N:359)
- c. <**haD’** sí·laŋ>
haat sí-i-laŋ
there THM-1SG.S-born
 ‘There I was born.’ JT (LFK_T:82)

Wailaki *haat* ‘there’ is limited to Li texts and notecards. Goddard does not give any similar monosyllabic forms translated ‘there.’

3.7.1.3 *hata* ‘the same place’

Wailaki *hata* ‘the same place’ indicates a place previously referenced, shown in (84):

- (84) *hata* ‘same place’
- a. <Is kai tce tse nañ **hat ta**>
 iskai-cheh=ts’eeɣ=iŋ **hata’**
 Baby-cry=EVID=DUR **same.place**
 ‘Baby I hear (at the) same place.’ CJ (PG_T:3.13)

- b. <hat‘a’ t‘anáye·diya·kan t‘o·nilin ya’niŋ>
hata’ ta-ná=yee-di-yaa=kan
same.place out.water-REV-PFV-REV-go=EVID?

too=ni-lin=ya’niŋ
 water=ADV-flows=they.say

‘The same place where she came out of water, water flows.’

JT (LFK_T:41)(=6.9c)

In (84b), the form of the adverb is given by Li, which I extend to the Goddard form in (84a), where the same translation is given by Li and Goddard. Goddard does not consistently translate <hat ta> as ‘the same place’ however. A different translation of ‘right here’ and ‘right there’ is given in (85):

(85) *hata’* Goddard Translation Variation

- a. <hat ta kən ta səy>

hata’ kintah=siy
same.place camp=EVID

‘Right here I hear a camp’

CJ (PG_T:1.46)

- b. <hai ye hat ta nən sat>

hai=ye **hata’** ni-n-sat
 the=REL **same.place** ADV-2SG.S-one.sits.down

‘There right there you sit.’

CJ (PG_T:19.12)

It’s possible that the lines above still reference a location previously referenced, or Goddard records a variation of *haat* ‘there’ that may be disyllabic, as Goddard does not record a monosyllabic form otherwise for *haat*.

3.7.1.4 *kandiŋ* ‘near place, a close ways’

Goddard’s Wailaki texts record forms <kən dən> ‘near’ and <kən dən tce> ‘a little ways.’ Unfortunately no particular Li forms match this exact form with an word-initial /k/ or /g/; however, Li records postposition <yən> as ‘close,’ (with example (86a) below repeated from section 3.5.1.20). Examples from Goddard’s texts are shown in (86b-e):

(86) -yən ‘close’

- a. <-yən>

-yən
 close

‘at (close)’

JT (LFK_V:42)

- b. <kən dən sal lin nəñ cał ən ki yac>

kan=diŋ si-lin[’]=iŋ shi-ł-in kiyaash
close=LOC PFV-become=DUR 1SG.PPO-with-say bird

‘Near you are, he told me, bird.’

CJ (PG_T:1.46)

- c. <**kan** dañ tɛ gal tɛat dən nɑ>
kan=diŋ=chi' yi-ɬ-ch'at=di-neh
close=LOC=DIM PFV-CLS-shout=CLS-say³²
 'Close(by) he is shouting.' CJ (PG_T:24.12-13)
- d. <di yɛ dək **kan** dañ tɛñ yai hɛ dɛ a>
 di yidak **kan**=diŋ-t'eeŋ yai=he-di-yaa
 this uphill **close**=LOC-be PL=off.along-1PL.S-go
This uphill near it is, let us go.
 '*It's uphill near here, let us go.' CJ (PG_T:28.5)
- e. <**kan** dañ tɛɛ>
kan=diŋ=chi'
close=LOC=DIM
 'Little ways.' CJ (PG_T:1.37)

Goddard forms require significant reconstruction as to phonemic constrasts. Since Li does not record a closer approximation to Goddard's <**kan** dañ> with similar translation, potential cognates in other languages are of use. Wailaki *kandiŋ* is cognate with Kato <kûn dûn ne> 'close' and <kûn dûntc> 'nearby,' though forms from Goddard such as this would bear similar ambiguity as to the word-initial consonant (Goddard 1912:38). Hupa cognate *xandiŋ* 'close,' however, features an /x/ (Sapir and Golla 2001:798). Proto-Dene *ɣ reflexes in California Dene are Wailaki /y/, Hupa /w/. Since the form in Hupa is /x/ instead of /w/, the source of the form's word-initial velar consonant is likely Proto-Dene *x, whose reflex in Wailaki is /k/. This would give the form *kandiŋ* rather than *yandiŋ*, despite the existence of Wailaki postposition *-yan* that possesses wide-ranging semantics.

3.7.1.5 *neesdiŋ* 'far place, a long ways'

Wailaki *neesdiŋ* 'far place, a long ways' indicates a location that is a long ways away, illustrated by examples in (87):

- (87) *neesdiŋ*
 a. <yo·gnɛ·sdiŋ>
 yoog-nees=diŋ
 there-long=LOC
 'far place' JT (LFK_T:44)
- b. <nɛs daŋ>
 nees=diŋ
 long=LOC
 'It is far.' CJ (PG_T:7.12)

³² The verb form in (86c) appears to be a compound verb with the first verb stem being <tc'aD'> 'halloo' (LFK_V:7), the second being <nɛ'> 'say' (LFK_V:19), both with classifiers.

- c. <nes daŋ daŋ gi ne>
 nees=din ti-i-kan=i
 long=LOC off.along-1SG.S-handle.container.PFV=IMP
 ‘Far I carry it.’ CJ (PG_T:9.21)

Wailaki *neesdin* ‘far place, long ways away’ is cognate with Kato <nes dûñ> ‘far’ (1912:38), and the word-initial morpheme *nees* is cognate with Hupa *ne:s* ‘long, tall’ (Sapir and Golla 2001:776).

3.7.1.6 *yidai* ‘outside’

Wailaki *yidai* ‘outside’ indicates a location outside of a structure, most often the home of a character or the speaker, illustrated by examples in (88):

- (88) *yidai* ‘outside’
- a. <**yidai** tc’enká‘ ya’niŋ>
yidai ch’e=n-láh=ya’niŋ
outside out=PFV-run=they.say
 ‘Outside he ran out (they say).’ JT (LFK_T:64)
- b. <daŋ’ hiD’ tc’ε·ná·niç **yidai**>
 daŋ’-hit ch’ee-náa=nish **yidai**
 spring-when out-ADV=move.camp **outside**
 ‘In spring they move out outside.’ JT (LFK_T:68)
- c. <**yæt dai** si yiñ>
yidai si-i-yiŋ
outside PFV-1SG.S-stand
 ‘Outside I will stand.’ CJ (PG_T:1.11)
- d. <dε dεc lε **yit dai**>
 dee=di-sh-le **yidai**
 into.fire=THM-1SG.S-handle.several **outside**
 ‘I will build a fire outside.’ CJ (PG_T:2.64)

Wailaki *yidai* is cognate with Kato <-dai^ε> ‘outside of’ (1912:40), Hupa *min’dai* ‘outside (the house)’ where *min* means ‘house’ (Sapir and Golla 2001:771).

3.7.2 Directional Adverbs

Independent directional adverbs in Wailaki define movement with respect to the flow of a river or stream, and mountain slopes. Movement therefore may be defined as going toward, or coming from upstream, downstream, uphill (i.e. away from the stream), downhill (toward the stream), toward a hill while on a flat, and across a waterway. Secondly, they may be used to describe cardinal directions, though their primary references remain waterways as evidenced from related language cognates, and uses in texts

In form, independent directional adverbs in Wailaki contain an unanalyzable prefix *yi-*, along with an adverbial stem. A secondary stem, indicated by parentheses, is used when the adverb is suffixed with *-aŋ* ‘coming from.’ An irregular form *kinah* is also used to refer to uphill. The following directional adverbs based on Goddard and Li materials are listed below in table 20.

Towards (From)	English
yide’ (yidá-)	‘downstream, north’
yinak (yinah-)	‘upstream, south’
yise’ (yisi-)	‘downhill, west’
yidák (yidah-)	‘uphill, east’
yibaŋ	‘across (the stream)’
kinah	‘up, uphill’

Table 20. Wailaki Directinal Adverbs (Tsennahkennes)

JT (LFK_V:38), JT (LFK_T:31,45)

Variation in the primary stem forms may also be present between various speakers. Essene (1942:88) recorded the following forms for Settenbiden, and from the speaker Lucy Young, with some vowel differences from Tsennahkennes forms approximated:

Form	Essene	English
yide’	<yĩ’tě>	‘downstream, (north)’
yinika	<yĩñka>	‘upstream, (south)’
kenah	<kěna>	‘uphill, away from stream (east)’
yise’	<yĩssě>	‘down the hill (from me)’ (west)

Table 21. Wailaki Directional Adverbs (Settenbiden)

LY (FE:88)

Though translations at times reference cardinal directions (i.e. north, south, east, west) for both Tsennahkennes and Settenbiden forms, Wailaki directional adverbs share in the riverine directional systems characteristic to other Northern California languages described by Kroeber, quoted at length in the following:

“The Yurok, and with them their neighbors, know no cardinal directions, but think in terms of the flow of water... If a Yurok says ‘east’ he regards this as an English word for upstream, or whatever may be the run of the water where he is... A house has its door not at its ‘western’ but its ‘downstream’ corner. A man is told to pick up a thing that lies upstream from him, not on his ‘left’... This plan of orientation is characteristic of all Northwestern tribes and is followed in some degree in central California... Only in southern California, where water runs far apart and intermittently, and the ceremonializing symbolism of the southwestern tribes is a near influence, is it certain we encounter true terms of solar orientation.” (Kroeber 1925:15-16)

As Kroeber notes, Northern California languages make use of geospatial frames of reference involving waterways in every day activities, and suggests that relational frames of reference involving the human body are less preferred. This preference is also observed in Wailaki. Waterway-based directional adverbs are common throughout Wailaki texts, whether translated as cardinal directions or not, while terms for ‘left’ or ‘right’ are notably absent. Only Merriam records forms with Tsennahkennes speakers for ‘left’ and ‘right’ shown in (89):

- (89) Relational Adverbs (Tsennahkennes)
- | | | | |
|----|--------------|---------|----------------------|
| a. | <n’Sung’-ah> | ‘right’ | |
| b. | <Të’-hen> | ‘left’ | JT, FM, ND (CHM:168) |

While terms for ‘left’ or ‘right’ may exist in Wailaki, their absence in Goddard or Li texts not makes difficult their reconstruction, since Merriam did not recognize all phonemic contrasts, as well as their pragmatic uses.

Directional adverbs based in waterways may also be relational however, as Sean O’Neill (2008:71-72) notes that Hupa, Yurok and Karuk directions depend on “where the speaker fixes the ‘floating’ point of origin” and that “depending on where one is standing, ‘upstream’ could also briefly correspond to nearly any other point on the compass.” The relational nature of directional adverbs produce translations such as ‘east’ in Goddard texts for several forms, as shown in (90):

- (90) Directional Adverbs Translated as ‘east’ by Goddard
- | | | | |
|----|-------------|-------------|----------------------------|
| a. | <yε da hañ> | ‘east’ | CJ (PG _T :7.85) |
| b. | <yit dək> | ‘east’ | CJ (PG _T :7.85) |
| c. | <yε dañ> | ‘from east’ | CJ (PG _T :7.85) |

In (90), words translated as ‘east’ actually depend on where one is standing with respect to hills and rivers, although there are riverine directions that tend to correspond to cardinal directions more than others. Wailaki *yide* ‘downstream’ for instance is often translated north as that is the general direction of riverflow in Wailaki territory.

In addition to the distinction between movement towards, and movement from, a speaker may emphasize proximity or distance through the use of adverbial heads which are proximal *dii* ‘here’ and distal *yow* ‘there,’ shown in (91):

- d. <niñ **yit dɛ** tiñ yac>
 niñ **yide'** ti-ŋ-yash
 you **north** off.along-2SG.S-go
 'You, north you go.' CJ (PG_T:1.102)
- e. <tey **yit dɛ** tcɛ ca gɛ>
 tay **yide'** ch'e=shaa=ge (< ch'e=sh-yaa=ge)
 along **downstream** out=(1SG.S)-go=FUT
 'Along the bank downstream I will come out.' CJ (PG_T:3.2)

In (92), and throughout texts, the direction downstream is associated with the north. This is to be expected since Dene-speaking people lived along local waterways that generally flow north. For some, the forms may stand for 'north' generally.

Wailaki *yide'* also appears with locative enclitic *din* in (93a), which does not trigger stem allomorphy; however the stem itself may also be affixed to prefixes other than unanalyzable *yi-*, as shown by (93b).

- (93) *yide'* 'downstream (north)'
- a. <**yidɛ'**din hai dii tc'ɛ·G'tc'in yildál ya'niŋ>
yide'=din hai dii ch'eek-chin yi-l-dál=ya'niŋ
downstream=LOC the here woman-kind PROG-CLS-run.PROG=they.say
 'Down the river this woman was running.' JT (LFK:58)
- b. <yow·**dɛ'**>
 yoow-**dɛ'**
 there-**downstream**
 'way downriver' JT (LFK_T:58)

3.7.2.2 *yinak (yinah-)* 'upstream, south'

Wailaki *yinak'* 'upstream' is a directional adverb, cognate with Mattole <yiná'gi> 'south' (Li 1930:128), Kato <yinûk'> 'upstream, south' and Hupa *yinaq, yinah-* 'upstream' (Sapir and Golla 2001:808). When suffixed with *-aŋ* 'from' the adverbial stem becomes *yinah-*, a stem alternation shared with Hupa (e.g. *yinach'in* 'coming down from upstream') (868). In (94b), stem alternation *nah* appears without unanalyzable prefix *yi-*. Wailaki *yinak* also appears with a locative enclitic in (94c), which does not trigger stem allomorphy.

- (94) *yinak (yinah-)* 'upstream, south'
- a. <yináG'>
 yinák
 ADV
 'up the river (south)' JT (LFK_N:45)

- b. <di·na‘aŋ’>
 dii-**nah**-aŋ’
 here-**upstream**-from
 ‘from nearby upstream’ JT (LFK_V:50)
- c. <yináG‘ ninyá: ya’niŋ>
yinák ni-n-yaa=ya’niŋ
upstream ADV-PFV-go=they.say
 ‘Up the river (south) he come(s) (they say).’ JT (LFK_T:53)
- d. <k‘inist’ε’ nlá·ŋ lo·k’ ḳ’it‘ibił ya’niŋ **yinak**‘diŋ >
 kinist’e’ n-láaŋ look’ ky’i-ti-bił=ya’niŋ
 people THM-many fish THM.O-off.along-throw.several=they.say
yinak=diŋ
upstream=LOC
People many fish they’re packing upstream.
 ‘People (are) packing many fish to the south (upstream).’
 JT (LFK_T:31)
- e. <yin **nak** bak kε kain tε tε ca>
yinak bi-ke kaa=n-tee ti-shaa (< ti-sh-yaa)
upstream 3POSS-tracks up.out=THM-look off.along-(1SG.S)-go
Upstream their tracks look for I go.
 ‘*I go looking for their tracks upstream.’ CJ (PG_T:3.90)

3.7.2.3 *yise*’ (*yisi-*) ‘down the hill, west’

Wailaki *yise*’ ‘down the hill, west’ is a directional adverb, cognate with Mattole <yitse’> ‘west’ (Li 1930:138), Kato <se^ε> ‘down the hill, west’ (Goddard 1912:37) and Hupa *yitsin*’i, *yisin-* (Sapir and Golla 2001:868). When suffixed with *-aŋ*’ ‘from’ the stem becomes *yisi-* and the suffix matches the vowel as in 97b). This stem alternation occurs somewhat similar to that which occurs in Hupa (e.g. *yisin-ch’iŋ* ‘coming from the lower country’)(868).

- (95) *yisiŋ*’ (*yisi-*) ‘down the hill, west’
- a. <yow **yise**’>
 yow-**yise**’
 there-**downhill**
 ‘there downhill’ JT (LFK_N:45)
- b. <yisí·ŋ’>
yisí-iŋ’
downhill-from
 ‘from downhill’³⁴ JT (LFK_V:52)

³⁴ Li translates <yisí·ŋ’> ‘up to the hill’ presumably from flatter ground downhill.

- c. <di **yi si** iñ >
 dii **yisí-iñ**
 here-**downhill**-from
 ‘here from the west (downhill)’ CJ (PG_T:6.102)

3.7.2.4 *yidák* (*yidah-*) ‘uphill, east’

Wailaki *yidák* ‘uphill’ is a directional adverb, cognate with Hupa *yidaq*, *yidah-* ‘uphill, away from the stream’ (Sapir and Golla 2001:807,868), and Kato <yidûk> ‘uphill’ (Goddard 1912:37). When suffixed with *-añ* ‘from’ the stem becomes *yidah-* cognate with the stem alternation that occurs in Hupa (e.g. *yidah-ch’iy* ‘coming from the lower country’)(868).

- (96) *yidák* (*yidah-*) ‘uphill, east’
- a. <yow **yidáG**>
 yow-**yidák**
 there-**uphill**
 ‘(away) up the hill’ JT (LFK_N:45)
- b. <**yidahañ**>
yidah-añ
uphill-from
 ‘down (from uphill)’ JT (LFK_T:21)
- c. <di **yit dák** ta ca >
 di **yidák** ti-shaa (< ti-sh-yaa)
 here **uphill** off.along-(1SG.S)-go
 ‘Here uphill I go.’ CJ (PG_T:14.52)

3.7.2.5 *yiban* (*ya’-*) ‘across’

Wailaki *yiban* ‘across’ is a directional adverb indicating movement across a body of water, cognate with Hupa *yima:ni*, *yi’an-* ‘across the stream’ (Sapir and Golla 2001:868), and Kato <yi bañ> ‘the opposite side, particularly streams’ (Goddard 1912:38). Though uncertain, a form *ya’an* is likely the form for ‘from across.’ No particular form with suffix *-añ* ‘from’ is otherwise given with a stem alternation by Li for *yiban*, or translated with an approximation of ‘from across;’ however, forms in (97c) are possible candidates:

- (97) *yiban* (*ya’-*) ‘across’
- a. <yiban>
yiban
 ADV
 ‘across, opposite side.’ JT (LFK_N:42)(=2.32b)

- b. <yibaŋ té·sín'inq>
yibaŋ té-sí-n-'inq'
across off.along-PFV-2SG.S-look.PFV
 'Across you looked.'
 JT (LFK_N:283)
- c. <ya'añ ya·naltón' ya'nin>
ya'-añ(') yaa-na=l-tón=ya'nin
across-from? Up-linear=CLS-jump=they.say
 'over there (across?) he jumps up'
 JT (LFK_T:7)

3.7.2.6 *kina* 'uphill, up'

Wailaki *kina* is a directional adverb that is translated as 'uphill' by both Goddard and Li, as well as 'east.' It also appears to be translated as a general 'up' in at least one example. The following are examples of Wailaki *kina*:

- (98) *kinah* 'uphill, up'
- a. <yo·(G')-k'ina' 'ε·t' o' yictcín' ya'nin ya·bite'inq>
 yoo-**kinah** 'eet'oh yi-sh-chín'=ya'nin yaa-b-i=ch'inq'
 there-**uphill nest** OBV-CLS-make=they.say up-3PPO-in=towards
Way up nest he makes they say close to the sky.
 '*He makes a nest way up they say, close to the sky.'
 JT (LFK_T:18)
- b. <k'ina'din>
kinah=din
uphill=LOC
 'up the hill, east'
 JT (LFK_N:45)
- c. <kən na bək ke kain tɛ tɛ ca >
kinah bi-ke =kaa=n-te ti-shaa (< ti-sh-yaa)
uphill 3POSS-track =up.out=THM-look off.along-(1SG.S)-go
 'East (uphill) their tracks I look for, I go.'
 CJ (PG_T:3.91)
- d. <di n tɛñ hai kən na do lan tɛ sił sañ tɛñ >
 di n-teŋ hai **kinah** do-łaan=che
 these THM-be the **uphill** NEG-lots=DIM
 s-i-l-dzaŋ' -t'eeŋ
 PFV-1SG.S-CLS-find.PFV-be
 'These are a few uphill I found'
 CJ (PG_T:33.12-13)
- e. <k'ina'din yiD' yildzín ya'nin>
kinah=din yit yi-l-dzín=ya'nin
uphill=LOC house PASS-CLS-see=they.say
 'Up the hill a house is seen.'
 JT (LFK_T:41)(=4.51a)

3.7.3 Temporal Adverbs

Temporal adverbs express concepts of time such as duration, frequency, and time spans in relation to other time spans termed positional temporal adverbs by Klein (1994:149), as well as other temporal properties of situations. Temporal adverbs of duration specify the duration of time spans, and/or situations that occur during those time spans. Temporal adverbs of frequency, a form of quantification of events, are identical to other quantifiers (see 3.4.2), and other temporal adverbs are of focus in this section. The following are a sample of temporal adverbs in Wailaki, listed in Table 22:

Form	Li	Goddard	English
k'anŋ	<k'anŋ>	<kañ><kañ>	'recently, now, a short time'
k'andaŋ'	<k'ándaŋ'>	<kañ dañ>	'yesterday'
k'andaŋ'daŋ'	<k'ándaŋ'daŋ'>	--	'day before yesterday'
k'ande'	<k'ande'>	<kaŋ de><kaŋ de>	'tomorrow'
k'anŋha	<k'anŋha>	<kañ ha><	'now, right then'
dowk'anŋ	<dowk'anŋ>	<do kañ>	'not recently (long ago)'
ndaŋ'	<ndaŋ'>	<n dañ>	'already, little while ago'
ndaŋ'daŋ'	<ndaŋ'daŋ'>	<n dañ>	'long ago'
k'as'aa	<k'as'a'a'>	--	'after a while'
k'ayee	<k'a ^g ye'>	<ka ge>	'for a long time'
choot'e'hah	<tç'o't'ε'ha'>	<co t'ε ha>	'the next time'
hak-daŋ'	<haG' daŋ'> <haGDaŋ'>	<hak gat dañ>	'at that time'
dow=(...)=ka'	<dow...ka'>	<do...ka>	'before, not after'

Table 22. Common Temporal Adverbs

Temporal adverbs formed with the morpheme *k'anŋ* are subsumed in the section 3.7.3.2, as is *ndaŋ'daŋ'* 'long ago' under *ndaŋ'* 'already.'

3.7.3.1 *k'anŋ* 'recently, now'

Wailaki temporal adverb morpheme *k'anŋ* 'recently, now' is cognate with Hupa *q'an/q'anŋ* 'recently, new, just now' (Sapir and Golla 2001:780). Wailaki *k'anŋ* co-occurs with a number of tense enclitics to produce temporal adverbs *k'anŋha*, 'just now,' *k'ande'* 'tomorrow' or 'soon,' *k'andaŋ'* 'yesterday,' *k'andaŋ'daŋ'* 'day before yesterday,' as well as *dook'anŋ* and *k'anyéedaŋ'* both glossed by Li as 'long ago.' Each of these temporal adverbs are positional temporal adverbs, or those that specify time spans in relation to other time spans.

- (99) Temporal Adverbs with *k'an* 'recently, now'
- | | | |
|----|---|---|
| a. | k'an -ha
now -just
'now (right then)' | < k'an ha>

JT (LFK _T :33) |
| b. | k'an '-de'
now -FUT
'tomorrow' | < k'an 'de'>

JT (LFK _T :2) |
| c. | k'an -dan'
now -when.PST
'yesterday' | < k'and an'>

JT (LFK _T :2) |
| d. | k'an -dan'-dan'
now -when.PST-when.PST
'day before yesterday' | < k'and an'dan'>

JT (LFK _T :2) |
| e. | dow= k'an
NEG= now
'long ago (not now, recently)' | <do· k'an >

JT (LFK _T :61) |
| f. | k'an -yéé-dan'
now -REM-when.PST
'long long ago' | < k'anyé ·dan'>

JT (LFK _T :25) |

Temporal adverbs with *k'an* 'recently, now' as a stem range in meaning from *k'anha* 'now' as in the time of utterance of the speaker, to *k'an-yéé-dan* 'long long ago' in the remote past, often creation times. With a future enclitic in (100a), the form means 'tomorrow.'

The following are some phrases with temporal adverb *k'an*.

- (100) Temporal Adverbs with *k'an* 'recently, now'
- | | | |
|----|---|-----------------------------------|
| a. | < kañ ha na gat da tse hañ >
k'an -ha naa=yi-dash=ts'eh=añ
now -just REV=PROG-run=EVID=DUR
'Right now I hear him coming.' | CJ (PG _T :11.54) |
| b. | <k'on' ndó·ya'nin k'anyé ·dan'>
kon' n-dóo=ya'nin k'an -yéé-dan'
fire THM-none=they.say now -long.ago-when.PST
'There was no fire long long ago.' | JT (LFK _T :25)(=6.20d) |

At least one form, *k'anha* also appears to be used discursively in texts, meaning 'and then right then' as in the following:

- (101) Temporal Adverbs with *k'ay* 'dawn'
 <**k'ayha** ckaŋ'k' ó'tc'í' k'inai nist'ei>
k'ay-ha sh-kan'=kyóh=chi' ki-nai
now-just 1SG.POSS-husband=AUG=DIM THM-be.safe
 ni-n-t'ei'
 ADV-PFV-be.PFV
 'Then my dear husband he was saved.' JT (LFK_T:50)

3.7.3.2 *ndaŋ* 'already'

Wailaki *ndaŋ* 'already' is morphologically a thematic prefix and an enclitic indicating 'past' that is cognate with Kato <dañ^e> 'already, long ago' (Goddard 1912:39), Hupa *daŋ*/'*dan*' 'when (in the past)' (Sapir and Golla 2001:746), and Mattole <daŋ> 'when' (Li 1930:134). Examples in (102) illustrate various constructions with Wailaki *ndaŋ*:

- (102) *ndaŋ* 'already'
- a. <**ndaŋ**>
 n-daŋ'
 THM-when.PST
 'already' JT (LFK_N:153)
 - b. <**n dañ** ci tɛ sol dai
n-daŋ'=shi tee-s-oh-l-dai'
THM-PST=INT off.along-PFV-2PL.S-CLS-dance
 'Have you already danced?' CJ (PG_T:29.35-36)
 - c. <ho **dañ** tɛs dəl dai añ
 ho=**daŋ**' tee-s-di-l-dai'=iŋ
 yes=**PST** off.along-PFV-1PL.S-CLS-dance=DUR
 'Yes already we have danced.' CJ (PG_T:29.36)
 - d. <**ndaŋ**' na·siłdzániŋ>
n-daŋ' naa=s-i-l-dzán=iŋ
THM-PST ITER=PFV-1SG.S-CLS-find=DUR
 'I've found her again (already?).' JT (LFK_N:170)

For examples in (102), *ndaŋ* is in sentence-initial or near sentence-initial position. In (102b), it is followed by a question particle *shi* in which one questions whether someone already did an action. In (102c), the thematic prefix is absent, and *daŋ*' is possibly enclitic to *ho* an affirmative expression for 'yes.' Example (102d) demonstrates its translation as 'again.'

The form *ndaŋ*' translated as 'long ago' essentially is *ndaŋ*' with an additional past enclitic *daŋ*' shown in (103):

- (103) *n-dán'-daŋ'*
 <yiné· ya'niŋ **ndán'daŋ'** nə' noyŋ'á·ŋ>
 yi-n-ée=ya'niŋ **n-dán'-daŋ'** nə'
 OBV-say-long.ago=they.say THM-PST-PST ground

 no=y-ŋ-'áaŋ
 to.there=OBV-ADV-handle.round
 'That is what he said long ago he put the ground down.'
 JT (LFK_T:3)

The line (103) is the first line and beginning of a story, and appears to be a short creation story. In this type of story, this form *n-dán'-daŋ'* 'long ago' is in ancient creation time, and differs from other forms for 'long ago' including *dowk'aŋ* 'not recently' also translated as 'long ago.' This contrasts with (104) in which *ndaŋ'* appears to be a temporal adverb for 'a little while ago,' as in (104).

- (104) <**ndaŋ'** k'aiya·yó·ni·>
n-daŋ' k'ai-yaa=y-óo-nii
 THM-PST SO-PL=OBV-DIR-3.think.
 'They thought a little while ago.'
 JT (LFK_N:191)

3.7.3.3 *k'as'aa* 'after a while'

Wailaki *k'as'aa* 'after a while' is a positional temporal adverb as shown in (107a) and also co-occurs with future *-de* as in (105b):

- (105) *k'as'aa* 'after a while'
 a. <k'as'a·>
 k'as'aa
 ADV
 'after a while'
 JT (LFK_T:49)

 b. <**k'as'a·de'** ncont'ε·ⁿ>
k'as'aa=de' n-shon=t'eeŋ
 ADV=COND THM-good=IPFV
 'After a while (it will be) alright.'
 JT (LFK_T:66)

3.7.3.4 *k'ayee* 'for a long time'

Wailaki *k'ayee* 'for a long time' is a temporal adverb expressing duration, cognate with Kato <ha gī> 'long time' (Goddard 1912:38).

- (106) *k'ayéeh* 'a long while'
- a. <k'ayε·' >
k'ayéeh
 ADV
 'a long while' JT (LFK_N:233)
- b. <no'cónt'ε·l haG'daŋ' k'α·yε·' >
 n-oh-shón=t'ε·l hak-daŋ' k'aayee
 THM-2PLS-good=FUT then-PST long.time
 'You'll be good (at that time) a long time' JT (LFK_N:233)

3.7.3.5 *hak daŋ* 'at that time'

Wailaki *hak daŋ* 'for a long time' is a positional temporal adverb cognate with Kato <hakw dûñ^ε> 'then' (Goddard 1912:38) and is in the past with past tense enclitic *daŋ* '.

- (107) *hak daŋ* 'at that time'
- a. <haG' daŋ' >
hak-daŋ
 then-PST
 'at that time' JT (LFK_T:69)
- b. <haG' daŋ' k'εcbá'ai >
hak-daŋ' k'e=sh-bá'-ai
then-PST ADV=1SG.S-be.lucky-REL
 'At that time I was lucky.' JT (LFK_T:61)

3.7.3.6 *choot'e'ha* 'the next time'

Wailaki *choot'e'ha* 'the next time' of uncertain morphological composition is a positional temporal adverb. A related frequency temporal adverb *koot'e'ha* is translated as stone in (108c).

- (108) *choot'e'ha* 'the next time, again'
- a. <tç^ho·t'ε'ha' >
choot'e'ha
 ADV
 'the next time' JT (LFK_T:41)
- b. <tç^ho·t'ε'ha' na·hayidiyá· ya'niŋ >
choot'e'ha naa=ha-yi-di-yáa=ya'niŋ
 ADV REV=off.along-PROG-REV-go=they.say
 'The next time he went back.' JT (LFK_T:41)

- c. <yo·G **k'ot'e'ha** k'onj' ya·hal̩k'et' ya'nin̩>
 yook **k'oot'e'ha** konj' yaa=ha-l-ky'et'=ya'nin̩
 there **ADV** fire PL=off.along-CLS-set.fire=they.say
 'Over there again fire they set.'
 JT (LFK_T:49)

3.7.3.7 *dow*=(...)=*ka* 'before, not after'

A proclitic and enclitic construction *dow*=(...)=*ka* indicates a positional temporal adverbial meaning using negative proclitic *dow*= and an enclitic =*ka* which may be related to postposition -*kaa* 'after' shown in (109a).

- (109) -*kaa* 'before'
 a. <bi**k'a**'>
 bi-**kaa**
 3PPO-**after**
 'after it, for'
 JT (LFK_N:46)(=3.45a)
- b. <'idil̩k'iD' ne' **dow**no=I-ch'it=**ka**'>
 'i-di-l-kyit ne' **dow**=no=l-ch'it=**ka**'
 EP-1PL.S-CLS-fall ground NEG=to.there=CLS-fall=**after**
 'We catch it on the ground before (not after) it falls'
 JT (LFK_T:60)

3.7.4 Manner Adverbs

Manner adverbs express the ways or manner in which actions occur. Many adverbial expressions of manner involve an adverbial phrase enclitic (see 3.7.5), though many others are structurally descriptive neuter verbs (see 4.2) with adverbial meanings. The following are a few common manner adverbs.

3.7.4.1 *sdoŋ* 'almost'

Wailaki *sdoŋ* expresses 'almost.' Its composition is unknown, but may be a thematic prefix and a morpheme that appears related to the question particle *dóŋ* (see 3.3 or 6.4.1).

- (110) *sdoŋ* 'almost'
 a. <sdóŋ'>
 s-dóŋ'
 ADV
 'almost'
 JT (LFK_V:39)(=2.16d)

- b. k'idiyil **sdónj** nandac ya'niŋ>
 kidiyil **sdónj** na=n-dash=ya'niŋ
 dead.man **almost** REV=THM-come=they.say
 'The dead man almost came back' JT (LFK_T:67)

3.7.4.2 *ka* 'quickly'

Wailaki *ka* 'expresses an action is done 'quickly.' A temporal adverb may also be formed when followed by the future enclitic *de*, expressing that an action will occur very soon. Wailaki *ka* is cognate with Kato <kakw> (Goddard 1912:39) and Hupa *xa* 'all right! okay!; quickly; that's it, goodbye (informal expression).'

- (111) *ka* 'quickly'
- a. <ho· **ka**' s·étyε·>
 hoo **ka**' s-sé-ł-yee
 yes **quick** 1SG.O-THM-CLS-kill
 'Yes, quick kill me.' JT (LFK_T:7)
- b. <**ka**' 'ant'ii' >
ka' 'a=n-t'ii'
quick so=2SG.S-be
 'Hurry up!' JT (LFK_N:249)
- c. <**ka** kən nɑñ ε dɑg gε>
ka' ka-n-na=ŋ-di-ge'
quick so-rise-linear=2SG.S-CLS-get.up
 'Quickly get up.' CJ (PG_T:28.30)

3.7.5 Quantificational Adverbs

A small number of elements appear to be quantificational adverbs cognate with Hupa adverbs. The form 'aht'ij in (112) is cognate with Hupa 'aht'in/'aht'ij 'all, completely' (Sapir and Golla 2001:731).

- (112) 'aht'ij 'all (everyone, everything)'
- a. <'a't'ij>
 'aht'ij
 ADV
 'all' JT (LFK_T:73)(=2.20b)
- b. <niyil 'a't'ij nina·he·diqe>
 niyil 'aht'ij ni-naa=hee-di-qe'
 drunk **all** rise-linear=DIST-CLS-get.up
Drunk all got up again.
 'Drunk all (everyone) got up again.' JT (LFK_T:74)

- c. <'a't'iŋ nɛ'k'it'a' t'ɛ·liD ya'niŋ>
 'aht'iŋ ne'=ky'i-ta tee-lit=ya'niŋ
 all earth=THM.O-among DIST-burn=they.say
All the earth all over here and there it burns they say.
 'All (everything) all over the earth here and there it burns (they say).'
- JT (LFK_T:25)
- d. <'a't'iŋ nintc'isdildɛi>
 'aht'iŋ nin=ch'i-si-l-dei
 all off.ground=INDF.S-PFV-CLS-dance
 'All (everyone) they dance.'
- JT (LFK_T:25)

The adverb in (113) has two forms *shaan* or *shaanii* which are cognate with two Hupa forms *whan* 'only, alone, just' and *wha:ne:* 'only, simply' (Sapir and Golla 2001:796).

- (113) *shaan*, *shaanii* 'only'
- a. <cañ>
shaan
 ADV
 'only, nothing but'
- CJ (PG_T:5.94)
- b. <kaił iñ cañ>
 k'a=y-t-'iŋ **shaan**
 so=OBV-CLS-do.IPFV **only**
 'He does that only.'
- CJ (PG_T:2.15)
- c. <t'o· ca·ni·t'á·naŋ>
 too **shaanii** tá-a=naŋ
 Water **only** ADV-PL=drink
 'Nothing but water they drink.'
- JT (LFK_T:75)

3.8 Clitics

A number of elements occur in a fixed position in relation to varied word classes and appear cognate to many elements known as clitics in Hupa (Sapir and Golla 2001). Proclitics occur in a fixed position before an element (e.g. negative proclitic Wailaki *do* 'no, not'), and enclitics occur in a fixed position after an element (e.g. Wailaki *diŋ* 'at that place, at that time'). Wailaki enclitics express tense, aspect and mode categories, or perform syntactic functions such as forming phrases. Enclitics resemble postpositions, but are not inflected with postpositional object prefixes.

Cross-linguistically, clitics are relatively short and phonologically light elements that occur in a fixed position in relation to other word classes and each other (Schachter and Shopen 2007:52-54). They often do not carry stress and are phonologically attached to another form, though syntactically they are independent (Van Valin 2001:120). While not distinguished from suffixes in my survey of stress, the combined category does not appear to

carry stress often (see 2.7). For those that co-occur (i.e. *tél-ij* and *teel-t'eeŋ*) they are in fixed relation to one another (see 6.1.1). For further description of clitics, see 6.1.

3.9 Interjections

Interjections are expressions whose meanings could constitute whole utterances, though short in form; moreover, they do not appear to have syntactic connections to words they occur near (Schachter and Shopen 2007:57). They often convey emotions. Attested Wailaki interjections are shown in (87), a few which are cognate with interjections in other California Dene languages.

(87)	Interjections			
a.	'abi	<a bi>	'beware (stop?)'	CJ (PG _T :1.25)
b.	eee	<e-e-e>	'oh!'	JT (LFK _T :9)
c.	'eehe'	<'ε·hε'>	'alright'	JT (LFK _T :12)
d.	hoo	<ho·'>	'yes'	JT (LFK _T :7)
e.	'ibiiyee	<'ibi· yε·'>	'oh! (fear)'	JT (LFK _T :14)
f.	'igaa	<'iga·>	'ouch!'	JT (LFK _T :14)
g.	ka'	<ka>	'well, ok! quickly!'	CJ (PG _T :1.7)

The form in (87a) is cognate with Kato <a bɪ> 'stop', (87c) with Kato <ē he> 'that is so', and (87g) with Kato <ka^ε> 'well' (Goddard 1912:41). Examples (87e-f) are cognate with Hupa 'ugeh or 'aygeh 'ouch!' (Sapir and Golla 2001:275) and xa 'ok! yes! right!' and also 'quickly' (797) (see 3.7.4.2). Because Hupa /x/ corresponds to Wailaki /k/ in many words, I interpret Goddard's form <ka> as ending in a glottal similarly.

4 VERBAL MORPHOLOGY

4.1 Overview

This chapter discusses the complex structure of verbs and verbal morphology. An underlying assumption made within the chapter is that models of Hupa verbs as described by Golla (1970) and Sapir and Golla (2001) are useful for understanding Wailaki verb structure.

The basic unit of any Dene verb is the verb theme which consists minimally of a stem, but may also include a classifier prefix, and any other prefixes that are obligatory but are not inflectional or adverbial (Hoijer 1945, Sapir and Hoijer 1967, Golla 1970, Young, Morgan and Midgette 1992). Basic word meanings change between themes before inflection such that different themes would require different lexical entries in a dictionary. Prefixes that are inflectional specify subject(s), object(s), number, and mode, while derivational prefixes are usually adverbial. The structure of verbs, verb themes, and the order of all verb prefixes relative to each other and the stem are discussed in section 4.2, with each template position's possible prefixes discussed in sections 4.3-4.13.

4.2 Verb Structure

The most basic verbal unit in Wailaki is that of the verb theme, which consists of a verb stem, and any prefixes that obligatorily occur with it prior to inflection and further derivation. The basic meaning of a verb may be composed of these discontinuous elements, each required to achieve certain basic verb meanings. Verbs may be classified according to what inflectional categories are required by themes, using the classification of Golla (1970:157), and Sapir and Golla (2001:817):

- 1) Active vs. Neuter themes: Active themes are inflected for aspect and mode, while Neuter themes are not.
- 2) Transitive vs. Intransitive themes: Transitive themes are inflected for direct objects, while Intransitive themes are not.
- 3) Personal vs. Impersonal themes: Personal themes are inflected for subjects, while impersonal themes are not.

Detailed analysis of particular verb theme semantics is beyond the scope of this work. Broadly speaking, verb themes fall into two major classes: active and neuter themes that may be defined according to their propensity for inflection. Active themes are inflected for mode, while neuter themes are not. Semantically, active themes 'describe events in motion' (Hoijer 1964:143) while neuter themes describe qualities, and states of being. Two other dimensions of contrast further distinguish themes within the categories of active and neuter themes based in propensity for direct object and subject inflection. Transitive verb themes are inflected for direct object (indicated by O), while intransitive verb themes are not. Personal themes are the majority of verbs, while impersonal themes are fewer (Sapir and Golla 2001:817).

This work uses a template model to discuss the various verb prefixes, their positions, order and function. The first position class analysis published for a Dene language was Goddard's (1911:111-121) analysis of Hupa verbs with seven prefix positions described.

Sapir (1914) later used seven prefix positions in describing Chasta Costa verbs, and Li Fang-Kuei (1930) described six prefix positions in Mattole. The most influential analysis was of Navajo by Hoijer who posited nine positions to the left of the stem (Sapir and Hoijer 1967:85-86). Hoijer (1971:125) gave these nine prefix positions as the structure for verbs in Dene languages, stating, “the order of the prefixes is much the same in all the Athapaskan language,” which I replicate in Table 23.

1.	[9] Zero, one or more adverbial prefixes.
2.	[8] The prefix for the iterative paradigm
3.	[7] Pluralizing Prefix.
4.	[6] Object Pronoun Prefix.
5.	[5] A deictic subject prefix.
6.	[4] Zero, one or two adverbial prefixes.
7.	[3] A prefix marking mode, tense or aspect.
8.	[2] A subject pronoun prefix.
9.	[1] A classifier prefix.
	[0] A stem.

Table 23. Hoijer Dene Verb Template

Hoijer numbered prefixes 1-9 from the beginning word edge towards the stem. Analogous positions with numbers 1-9 away from the stem towards the beginning word are shown in [] brackets. Other models have been proposed for verbs in Dene languages (e.g. Kari 1989, McDonough 1990, 1999) but the templatic model retains descriptive value nonetheless.

Golla (1970:56) later re-analyzed Hupa verbs and found eleven positions for Hupa, also introducing the right-to-left numbering from the stem that is used in this analysis. A fully inflected Wailaki verb consists of a verb stem and prefixes – minimally one prefix, but often two or more. Verb prefixes occur in a fixed order before the stem shown in Table 24 as a template, listed from the left word edge position 11 to the stem at position 0.

Position 11	Adverbial or Thematic	DISJUNCT PREFIXES
Position 10	Iterative or Reversative	
Position 9	Plural	
Position 8	3 Subject	CONJUNCT PREFIXES
Position 7	Object	
Position 6	Thematic	
Position 5	Adverbial	
Position 4	Distributive	
Position 3	Mode	
Position 2	Subject	
Position 1	Classifier	
Position 0	Stem	

Table 24. Wailaki Verb Template by Position

Wailaki verb structure can also be schematized into prefix zone types as in Table 25:

Disjunct Prefixes =	Conjunct Prefixes -	Classifier -	Stem	= Clitics
---------------------	---------------------	--------------	------	-----------

Table 25. Wailaki Verb Template by Zone

Wailaki verb prefixes may be divided into conjunct (inner, closer to the stem), and disjunct (outer, away from the verb) types. This work uses conventions in Golla and Sapir (2001) in which conjunct prefixes are always marked (-). Disjunct prefixes in citation form and at the disjunct/conjunct boundary are marked by an equal sign (=) to the right of a prefix (=). Clitics at the clitic/stem boundary are marked by an equal sign (=) to the left of a clitic, and are unmarked in citation form. Any further disjunct prefixes or clitics beyond these boundaries towards either edge of the word are marked with a hyphen (-), to the left of a clitic, and to the right of a disjunct prefix.

The order of Wailaki verb prefixes can be observed through local interactions in examples in (1).

(1) Templatic Sequence

Positions 1, 2, 3

- a. γi -shi-l- $\gamma \acute{e}l$ =i η < γi cily $\acute{e}l$ i η >
 PROG-1SG.S-CLS-whip.PROG=DUR
 3-2-1-0=1
 ‘I am whipping him.’ JT (LFK_N:274)

Positions 2, 3, 4

- b. noo=tee-si-i- $\acute{h}ik$ ’=i η <no·t’ $\acute{\epsilon}$ ·si· $\acute{h}ik$ ’i η >
 to.there=DIST-PFV-1SG.S-handle.mush.PFV=DUR
 11=4-3-2-0=1
 ‘I put it down here and there.’ JT (LFK_N:224)(=4.54f)

Positions 5, 6

- c. $k\acute{i}$ -ne- $sh\acute{i}$ -l-ya’ <k’ $\acute{i}n\acute{e}c\acute{i}l\gamma a$ ’>
 THM-ADV-1SG.S-CLS-win.OPT
 6-5-2-1-0
 ‘I’ll win the game.’ JT (LFK_N:164)

Positions 6, 7

- d. na=n-ni- $\gamma\acute{i}$ -i-lai’ <nanniy\acute{i}-lai’>
 ADV=2SG.O-THM-PFV-1SG.S-touch.PFV
 10=7-6-3-2-0
 ‘I touched you.’ JT (LFK_N:219)(=4.59b)

Positions 7, 8, 9

- e. ya=⁹ŋhoh-tí-chit <ya⁹ŋho⁸t⁷ítc⁶iD⁵>
PL=INDF.S-2PL.O-DIST-guess
9=8-7-4-0
'They (indefinite) guess us.'
JT (LFK_T:60)(=4.60b)

Positions 8, 9

- f. ya=⁹kí-ni-l-yii <ya⁹k⁸íni⁷l⁶yii⁵>
PL=INDF.S-THM-ADV-CLS-win.IPFV
9=8-6-5-1-0
'Anyone wins (the game).'

Positions 8, 9, 10

- g. naa-a=y-yee <na¹⁰a⁹y⁸yee⁷>
ITER-PL=OBV-pack.IPFV
10-9=8-0
'They all pack (it).'

Positions 9, 10

- h. naa-a=n-di-yáa=ŋ <na¹⁰a⁹ndiyá⁸ŋ⁷>
REV-PL=PFV-CLS-go=DUR
10-9=3-1-0=2
'They all came home.'

Positions 9, 11

- i. no-aa=y-ki-y-i-l-ná'=aŋ <noa¹¹yk⁹íyilná⁸aŋ⁷>
to.there-PL=OBV-THM-PFV-1SG.S-CLS-save=DUR
11-9=8-6-3-2-1-0=2
'They have saved him.'

There are points of ordering and distinction in the proposed Wailaki template that are difficult to determine. The first is between positions 4 and 5, which are difficult to define with respect to one another. Golla posits separate positions in Hupa based on a form *te:te:seleh* 'I have drawn marks here and there' (Golla 1970:116). Since both the distributive and a thematic prefix meaning 'off, along' exist in Wailaki, presumably they could co-occur as they do in Hupa, though this isn't attested in the Wailaki corpus. A gap in the documentation is more likely than Wailaki differing from Hupa in this part of the template.

Some limited templatic reordering occurs in some positions in Wailaki as in other Dene languages. Spencer (1991:209-210) notes that languages with templatic morphology may exhibit templatic reordering whereby morphemes may be displaced from their otherwise regular position. In Hupa, Golla (1970:104) analyzes templatic reordering as occurring between positions 7 and 8, whereby some object prefixes (i.e. the second person singular, and first/second person plural object prefixes) in position 7 metathesize with a 3rd person subject marker *ch'i-* in position 8.

An example of possible templatic reordering in Wailaki is given in (2b). In (2a), a form with a first person subject and unmarked object is given, while in (2b), the same verb features an indefinite 3rd object prefix *ki-* that reorders with plural prefix (*y*)*a-*.

(2) Morpheme Templatic Reordering between Position 8 and 9

- a. naa=ni-γ-i-l-géd=iŋ <na·niyiłGéDiŋ>
 REV=ADV-PFV-1SG.S-CLS-poke=DUR
 11=5-3-2-1-0=2
 ‘*I poked one.’³⁵ JT (LFK_N:218)
- b. naa=**k-ai**-ni-γ-i-l-géd=iŋ <na·k‘ainiyiłGéDiŋ>
 REV=**INDF.O-PL**-ADV-PFV-1SG.S-CLS-poke=DUR
 10=8-9-6-3-2-1-0=2
 ‘*I poked people/anyone.’
 JT (LFK_N:218)

Example (2b) from notecard 218 records very clearly a vowel <a> after <k‘> while the <i> is somewhat questionable. An alternative analysis is the form <na·k‘acniyiłGéDiŋ> with a <c> that follows which can only come from a 1st person object marker. This would be morphologically out of place in a different way however, with two object markers in the verb.

4.3 Verb Stems

All verbs have a verb stem, which is the rightmost morpheme in the word before any enclitics (see 6.1). Stems are inflected for mode and often have different stem variants according to different modes. If there are distinctions in stems according to aspect/mode, this distinction is most often between imperfective vs. perfective modes, while other modes may share in the shape of either of these forms, though other stem variants exist. These variants are often phonologically related, and to some extent, share patterns in phonological shape according to mode.

4.3.1 Stem Structure

Most Wailaki verb stems are monosyllabic, and may be closed syllables as in (3a-c), or open syllables as in (3d-f), each given in the imperfective form:

³⁵ Li’s original transcription on notecard 218 of forms with verb stem *get* <geD‘> are translated as ‘punch with penis.’ The verb stem appears cognate with Hupa *qe:d* ‘shove stick,’ i.e. poke (Sapir and Golla 2001:781). I offer ‘poke’ as an alternative translation, with some question as to whether the meaning ‘with penis’ is specific to the verb theme.

(3) Monosyllabic Verb Stems

a.	kid	<k'id>	'to swallow'	JT (LFK _V :17)
b.	'is	<'is>	'to shoot'	JT (LFK _V :2)
c.	naŋ	<naŋ>	'to drink'	JT (LFK _V :19)
d.	yaa	<ya·'>	'to go'	JT (LFK _V :31)
e.	cha	<tc'ɑ'>	'to cover with dirt'	JT (LFK _V :6)
f.	naa	<na·'>	'to be alive'	JT (LFK _V :19)

Open syllable stems appear in Li's stem list with his mark <'> for [h] or aspiration as the result of a regular phonological process (see 2.5.2.3).

Li recorded 352 verb stems, and only one disyllabic verb stem paradigm in the list is recorded in (4a):

(4) Disyllabic Verb Stems

a.	<djac, djadjin> jash, jajin 'to sow seeds' (IPFV)	JT (LFK _V :26)
b.	<t'ɑ·i> t'aa[y]i' 'to be thin' (IPFV)	JT (LFK _V :29)

The verb stem in (4b) 'to be thin' may be another example of a disyllabic verb stem, given the long low vowel and high front vowel sequence. The stem's cognate in Hupa is considered disyllabic, *t'an'ye:*, 'be thin' (Sapir and Golla 2001:818).

Though exceptions exist, active verb stems in Wailaki usually exhibit particular shapes according to their inflection. Nasals and other sonorants plus glottal combinations in Wailaki are common in stem-final position, similar to Hupa (Gordon 2001:5). When an imperfective stem ends in a nasal, the perfective form of that stem often adds a glottal after the nasal as in (5a-j), though not exclusively:

(5) Imperfective and Perfective Verb Stems

a.	'iŋ	'iŋ'	'to take a look'	JT (LFK _V :2)
b.	biŋ	biŋ'	'to fill'	JT (LFK _V :4)
c.	chiŋ	chiŋ'	'to smell'	JT (LFK _V :6)
d.	diŋ	diŋ'	'to light up'	JT (LFK _V :9)
e.	yiŋ	yiŋ'	'to melt'	JT (LFK _V :15)
f.	koŋ	koŋ'	'to have pimples'	JT (LFK _V :18)
g.	naŋ	naŋ'	'to drink'	JT (LFK _V :19)
h.	siŋ	siŋ'	'to know'	JT (LFK _V :21)
i.	laŋ	laŋ'	'to do'	JT (LFK _V :23)
j.	yaŋ	yaŋ'	'to eat'	JT (LFK _V :31)
k.	'al	'al'	'to chew'	JT (LFK _V :1)
l.	bił	bił'	'to throw several objects'	JT (LFK _V :4)
m.	dił	dił'	'to go (plural)'	JT (LFK _V :9)

The same pattern occurs with lateral fricative /ɬ/ becomes an approximant /l/ followed by /ʔ/ as in (5k-m).

Glottals before sonorants are also found in stem-final position as in (6), discussed further in section 2.5.1.5 Glottal Metathesis and Laryngeal Timing:

(6) Glottals Before Sonorants in Perfective Stems

- | | | |
|----|---|---|
| a. | nai='i-s-t' o'n=iŋ
ADV=THM.O-PFV-set.snare.PFV=DUR
'He set a snare.' | <na.'ist'o'nɪŋ>
JT (LFK _N :115)(=4.67g) |
| b. | ɣ-i-l-dé'l=iŋ
PFV-1SG.S-CLS-eat.bits.PFV=DUR
'I did eat (little things, berries, etc.)' | <ɣildé'liŋ>
JT (LFK _N :155) |

4.3.2 Stem Variants

As compared to many Dene languages, Wailaki stem variants are fewer, and less complex in the number of aspect/mode categories expressed. Li in his verb stem list regularly records three to four aspectual and modal variants per stem, as well as an occasional fifth category that he lists as 'inceptive.' Where forms do not differ between aspect/mode categories, Li writes a hyphen for each subsequent column. Li otherwise records forms where there is are stem variants that differ in form.

(7) Wailaki Stem Variation Types

Imperfective	IPFV
Perfective	PFV
Optative	OPT
Progressive	PROG
Inceptive	INC

Li organizes verb stem variants by columns organized according to aspect/mode for each stem paradigm given in rows. It is fairly clear from the lists themselves that the first two columns represent imperfective and perfective mode. To some extent, progressive stems can also be analyzed as a stem suffixed by *-l*, and are easy to determine. The inceptive column, however rarely noted, is marked 'inceptive' by Li in his verb stem list.

The least clear column is the optative column, whose stems are often given in examples in Li's notecards with future semantics. Li (1930:16) however makes note of Wailaki optative stems in his Mattole grammar with an example in a footnote, writing "Wailaki has actually *'idanŋ'* 'let us eat' (opt.)" where he clearly writes that this form is optative though it lacks an optative mode prefix. The stem and translation also lend themselves to this interpretation.

Comparatively, some Dene languages have a full future mode paradigm (e.g. Ahtna, Babine-Witsuwit'en, Carrier, Koyukon, Navajo) while others subsume a future under an optative mode (e.g. Chipewyen, Dogrib, Slave) (Rice 2000:22). Rice also notes in that in the Hare dialect of Slave, that an optative inflection has been generalized to a future tense, while other dialects express future with an enclitic (Rice 1989:8). Though notecard data give future

oriented semantics for stems that appear to be optative variant stems, forms translated as future tense in both Goddard and Li texts feature enclitics rather than optative stems alone.

Wailaki also appears to pattern with Mattole in not having customary mode inflection where Hupa has a stem variant and mode/aspect prefix (Li 1930:17)(Golla 1970:67, 152). Customary aspect in Hupa has been innovated by grammaticalization of heavy stems, and differs from other California Dene languages. It is unknown if Kato has a customary aspect in my opinion, as Goddard records two Kato forms <kwac^ɛ ɪ ne> ‘I always do that’ and <kwaL ɪñ^ɛ> ‘You (plural) do that,’ but fails to comment on what contributes the meaning of ‘always’ to the first form, though it appears to be a stem change (Goddard 1912:60).

Some examples of stem variants are given in examples (8) through (12).

(8) Verb Stems ‘to make, teach’

a.	chii	<tc ^ɛ i [·] >	IPFV	
b.	chiŋ’	<tc ^ɛ iŋ’>	PFV	
c.	chi’	<tc ^ɛ i’>	OPT	
d.	ch’iɫ	<tc ^ɛ iɫ>	PROG	JT (LFK _V :6)

(9) Verb Stems ‘drink’

a.	naŋ	<naŋ>	IPFV	
b.	naŋ’	<naŋ’>	PFV	
c.	naŋ’	<naŋ’>	OPT	
d.	naɫ	<naɫ>	PROG	
e.	naŋ’	<naŋ’>	INC	JT (LFK _V :19)

(10) Verb Stems ‘to chew’

a.	’aɫ	<’aɫ>	IPFV	
b.	’aɫ’	<’aɫ’>	PFV	
c.	’aɫ	<’aɫ>	OPT	
d.	’aɫ	<’aɫ>	PROG	JT (LFK _V :1)

(11) Verb Stems ‘to work’

a.	’aa	<’a [·] >	IPFV	
b.	’a’	<’a’>	PFV	
c.	’a’	<’a’>	OPT	JT (LFK _V :1)

(12) Verb Stems ‘to roll’

a.	bas	<bas>	IPFV	
b.	bas	<bas>	PFV	
c.	bas	<bas>	OPT	
d.	bas	<bas>	PROG	JT (LFK _V :3)

The amount of differentiation between stem variants varies. In (8), stem variants are maximally differentiated across four modes. In (9), stem variants are given for five modes but two of the variants (9b) and (9e) are identical in form. In (10), only the perfective variant

is differentiated, and in (11), three variants modes are documented with perfective and optative variants sharing their form. Forms in (12) are identical for each mode.

4.3.3 Heavy and Light Forms

In Wailaki, stems alternate depending on the presence or absence of a relative enclitic vowel *i* similar to two other California Dene languages, Hupa and Mattole (Li 1930:16,18; Sapir and Golla 2001:823). Stem shapes conditioned by the presence of this enclitic are termed ‘heavy’ while the stem shape that appears when the stem is word-final or followed by a consonant-initial enclitic is called ‘light.’ In Hupa and Mattole-Bear River, the distinction between heavy and light stems is what mark modal or aspectual distinctions in verb stem alternations (Golla 2011:82). In Wailaki, their alternation is mainly syntactic.

According to Li Fang-Kuei, light stems in Wailaki are used for verbs in all aspects, with subordinate clauses conditioning heavy forms. Li (1930:19-20) is quoted at length in the following regarding his observations of heavy-light stem distinction in Wailaki:

In Wailaki the light stem is used for verbs in all aspects; the heavy form only in certain syntactic conditions, for instance, in the subordinate clauses. I shall give a few examples from my material:

ye’bi’ ninyá·ya’niḡ bitc’iḡ ye’bi’ ye’ḡinyái
 inside she came(they say) to him inside she came in

tcégtciḡ ne·sdá·ya’niḡ
 woman sat down (they say)
 (“She came in. The woman, having come in toward him [or who had come in toward him], sat down.”)

haidi bitc’iḡ niḡiyái tc’inyá·ya’niḡ
 this one to him she came he went out (they say)
 (“This one to whom she had come went out.”)

ka’t’inntciḡ tc’e·na·ldiláy yiyinkánya’niḡ
 the man he ran out she caught with a net
 “The man, who ran out, she caught [with a net].”

I have therefore not obtained the heavy form corresponding to every light form; but from what has been gathered, similar alternations exist also in Wailaki.

In the above examples given by Li, heavy subordinated forms have diphthongized vowels on open stems which include “ye’ḡinyái, niḡiyái” and the closed stem with stem-final aspiration featuring stem-final /ɣ/ in <*tc’e·na·ldiláy*>. Otherwise, verbs preceding the enclitic <ya’niḡ> may be considered a light form.

In this description, Li describes heavy stem as only occurring under certain syntactic conditions, namely in subordinate clauses. This is different than heavy and light stem

alternations in Hupa and Mattole. In Hupa, grammaticalization of the alternation is described as follows by Sapir and Golla (2001:823):

- 1) Customary aspect verb stem forms are always heavy.
- 2) Optative mode verb forms are always light.
- 3) Second person imperfective forms used as an imperative are always light forms.
- 4) Other imperfective forms and forms inflected for perfective, or progressive aspect can have either the heavy or light stem form.

Sapir and Golla say further that selection of a heavy or light stem shape is largely determined by the morphological status of the verb in Hupa, not its syntactic position. As for Mattole, Li (1930:18) writes “light and heavy forms exist also in Mattole but are more or less restricted in use and less flexible...the heavy form being more or less specialized in the perfective and the light form in the imperfective.”

In comparing Wailaki with these observations of Hupa and Mattole and confirming Li’s description, it’s important to first note that no customary aspect is recorded for Wailaki, which isn’t that unusual considering Li (1930:17) explicitly comments that Mattole does not have a customary aspect. According to Golla (2011:82), customary aspect in Hupa has been innovated. Second, to understand and compare Wailaki against the other observations, it’s important to understand what light and heavy stem alternation looks like in Wailaki as compared to Hupa. Though Li did not record exhaustively, heavy stems for all light stems, some patterns from Hupa can help understand what may be possible in Wailaki.

Wailaki heavy and light stem alternations of open stems resemble both Hupa and Mattole open stem alternations. The relative enclitic after long vowels makes the long vowel stem into a diphthong, which corresponds to a heavy form (Golla and Sapir 2001:824, Li 1930:19). The Wailaki forms in (13a-c) are heavy stems, and the forms in (13d-f) are corresponding light forms.

(13) Wailaki Heavy and Light Stem Forms in Open Stems

Heavy Stems

- a. <no·k‘ícnaí>
 noo=kí-sh-**naí** (< noo=kí-sh-**na=i**
 to.there=THM-1SG.S-**save.life**=(REL)
 ‘I am saved.’ JT (LFK_N:135)(=2.67e)

- b. <ceDzillai>
 sh-e=jí-l-lai (< sh-e=jí-n-**la=i**)
 1SG.O-against=THM-2SG.S-CLS-hate=(REL)
 ‘You don’t like me.’³⁶ JT (LFK_N:287)

³⁶ Cognate with Hupa verb theme *P-e·=ʒ i-(s)-la/la’* ‘hate P’ (imperfective/perfective) (Sapir and Golla 2001:761).

- c. <k‘ináɫɫɔi>
 kina=ɫ-**da=i** (< kina=n-ɫ-**da=i**)
 ADV=(2SG.S)-CLS-menstruate=**REL**
 ‘You !’ / ‘You’ll have menstruation!’ JT (LFK_N:147)

Light Stems

- d. <no·k‘ícna‘>
 noo=kí-sh-**na**
 to.there=THM-1SG.S-**save.life**.OPT
 ‘Let me be saved.’ JT (LFK_N:135)
- e. <cɛDzɪlla·‘>
 sh-e=jí-l-laa (< sh-e=jí-n-laa)
 1SG.O-against=THM-2SG.S-CLS-hate
 ‘You don’t like me!’ JT (LFK_N:287)
- f. <k‘ináɫɫɔa·‘>
 kiná=ɫ-**daa** (< kina=n-ɫ-**daa**)
 ADV=(2SG.S)-CLS-menstruate=**REL**
 ‘You !’ / ‘You’ll have menstruation!’ JT (LFK_N:147)
- g. <k‘inaháɫɫɔa·‘>
 kina=há-l-**daa** (< kina=há-ɫ-**daa**)
 ADV=2PL.S-CLS-menstruate=**REL**
 ‘You all will have menstruation!’ JT (LFK_N:147)

As shown, heavy forms in (13a-b) differ in aspect/mode from their light counterparts in (13c-d) similarly to distinctions in Hupa and Mattole. In (13a-b) heavy forms, neither is optative or imperative, while in (13c-d), the light forms are optative and imperative.

All but two examples in all of the notecards pattern like alternations in (13a-b) and (13c-d). Those examples are given in (13c) and (13f). Li’s notation of (13c) and (13f) clearly record a light/heavy distinction, and he offers one line of translation for two lines <you !> with an exclamation mark. Normally I take such notation as shorthand for following the translation of the form above in regards to tense and aspect. In this case, the last form would yield ‘you’ll have menstruation!’ Example (13g) is much more clearly marked with an exclamation mark, and is a light stem. This is the only counterexample to Wailaki open light stems patterning with Hupa open light stems as imperfective imperatives. In looking at Li’s notecards and optative column in his verb stem list, no obvious heavy optative stems are found.

As for closed stems, Hupa heavy stems differ from light stem variants in predictable ways schematized in (14)(Golla and Sapir 2001:823). Not all Hupa phonemes in (14) are found in Wailaki. Any patterns in Wailaki that resemble Hupa patterns would need to account for any cognate phonemes.

(14) Hupa Closed Stem Shapes

	Heavy	Light
a.	<i>CVl</i>	<i>CV̥l</i>
b.	<i>CVw</i>	<i>CVh</i>
c.	<i>CVn</i>	<i>CV̥ŋ</i>
d.	<i>CV·s</i>	<i>CVhs</i>
e.	<i>CV·wh</i>	<i>CVhwh</i>
f.	<i>CV·w</i>	<i>CVh</i>
g.	<i>CV·d</i>	<i>CVh</i>
h.	<i>CV·l</i>	<i>CVhl</i>
i.	<i>CV·n</i>	<i>CV̥ŋ</i>
j.	<i>CV·t'</i>	<i>CV't'</i>
k.	<i>CV·t̥'</i>	<i>CV't̥'</i>
l.	<i>CV·q'</i>	<i>CV'q'</i>
m.	<i>CV'n</i>	<i>CV̥ŋ'</i>

In (15), the alternation between Wailaki /ɣ/ and /h/ (where /h/ is underlying and not the product of partial word final vowel devoicing, see 2.5.2.4) resembles the alternation with cognate phonemes as in Hupa in (14b).

(15) Wailaki Light vs. Heavy Alternation Closed Stem

Light Forms

- a. <na·k'icil·yε'>
 naa=ki-shí-l-yeh
 ADV=THM-1SG.S-CLS-gather.seeds.OPT
 'I'll gather grass.' JT (LFK_N:418)
- b. <na·k'il·yε'>
 naa=ki-l-l-yeh (< náa=ki-n-l-yéh=i)
 ADV=THM-2SG.S-CLS-gather.seeds
 'You gather grass(!)' JT (LFK_N:418)

Heavy Forms

- c. <na·k'icil·yεy>
 naa=ki-shí-l-yey (< náa=ki-shí-l-yéh=i)
 ADV=THM-1SG.S-CLS-gather.grass=REL
 'I gather grass.' JT (LFK_N:140)
- d. <na·k'il·yεy>
 naa=ki-l-l-yéy (< náa=ki-n-l-yéh=i)
 ADV=THM-(2SG.S)-CLS-gather.grass=REL
 '(You gather grass!).' JT (LFK_N:140)

As for aspect, (15a) appears to be optative given the future semantics, clearly contrasting with (15c) that lacks any optative or future semantics. (15b) is also an imperative from an imperfective. Each of these pattern with the Hupa observations. (15d) however, is written

directly under the form in (15b) and has a comma <,> as a translation by Li, presumably identical in translation with (15b). Imperatives should not be heavy stem forms if Wailaki patterns with Hupa, though it's the only closed heavy imperative stem example of its type.

Imperfective light forms are otherwise often interpreted as imperative forms, as in (16), with light stems resembling Hupa light stem patterns, namely /ʔ/ instead of /l/, and /Vh/ instead of a number of possible alternations.

- (16) Wailaki Imperatives from Imperfective Light Stems
- a. <k'inállaʔ>
 ky'i-ná-ʔ-laʔ (<ki-ná=(n)-ʔ-laʔ)
 THM.O-ADV=(2SG.S)-CLS-dream.IPFV
 'You dream(!)' JT (LFK_N:236)(=2.53g)
- b. <t'alloʔ>
 ta=l-lo (<ta=n-lo)
 ADV=2SG.S-dive.IPFV
 'You dive into the water(!)' JT (LFK_N:153)
- c. <dín̄yilʔ>
 dí-ŋ-yilʔ
 THM-2SG.S-stop.IPFV
 'You stop (talking), shut up(!).' JT (LFK_N:154)
- e. <bɛ·k'ólyaʔ>
 b-ee=kó-ʔ-ya (<b-ee=kó-n-ʔ-ya)
 3PPO-?=THM-(2SG.S)-CLS-go
 'You inquire about him!' JT (LFK_N:312)

In summary, Wailaki light stem patterns often resemble Hupa in both open and closed stems; however, it is Li's assertion about Wailaki heavy stems and their distribution that is a big difference from Hupa distribution of heavy stems. No customary aspect exists in Wailaki, and a handful of Wailaki heavy stem examples may be counterexamples to Wailaki light stems patterning with Hupa.

4.4 Classifiers – Position 1

The prefixes in the position immediately preceding the verb stem in position 1 are called classifiers according to Dene linguistic convention. Classifiers commonly have two roles, in that they are thematic and idiosyncratic, listed with particular verb themes, and/or they serve to indicate derivational processes involving transitivity, or voice and valency (Kibrik 1993, Rice 2000:128). Non-thematic instances of Wailaki classifiers indicate derivational processes that include the formation of transitives, causatives, possessive verb themes, passives, gerunds, and reflexive verb themes.

The following are attested classifiers in Wailaki:

<i>Basic</i>
ɬ-
d-
l-
<i>Compound</i>
ɬ-di-
l-di

Table 27. Wailaki Classifiers, Prefix Position 1³⁷

There are three basic classifiers in Wailaki, which are *ɬ-*, *di-* and *l-*, along with two compound classifiers *ɬdi-*, *ldi-*. Classifiers that are thematic are part of the verb theme before inflection and are lexically specified.

Classifiers as named do not classify verbs or verb arguments in the most common sense of the term, and have alternatively been called transitivity indicators by Kibrik (1993). Rice (2000:126) examines classifiers and their functions when non-thematic, and characterizes classifier *l-* as indicating valence as a causativizer. According to Golla (1970:76), classifier *l-* has a function of forming transitive themes from intransitives, including forming causatives. Classifier *d-* according to Rice (2000:126) indicates voice by specifying middle voice, adding no valence, but provide a particular interpretation of complements already involved, resulting in derivative reflexive and passive themes. Classifier *d-* acts as a detransitivizer in this way, but not entirely. Classifier *l-* functions much like classifier *d-*, but also occurs in primary themes more frequently than classifier *d-* in Hupa (Golla 1970:82). Rice (2000:126) considers classifier *l-* a portmanteau, both causativizing and indicating middle voice. Examples from Golla (1970) that Rice uses include passives such as *O-l-tsay* ‘has been dried’ contrasting with causative *O-l-tsay* ‘to dry,’ or Navajo (Kibrik 1996) *yi-l-tin* ‘it is being frozen’ contrasting with causative *yi-l-tin* ‘she is freezing it’ and intransitive *yitin* ‘it is freezing.’

Wailaki classifiers may also interact phonologically with stem-initial consonants and preceding prefixes in what are called D-Effects (see 2.5.1.6). The phonetic form of classifiers may also be changed or lost in some morphological rather than regular phonological environments.

4.4.1.1 *l-* Classifier

Classifier *l-* when not thematic forms transitive themes from intransitive themes. This is recorded limitedly by Li with transitive (TR) and intransitive (INTR) notations that correlated with whether Classifier *l-* is present:

³⁷ Two other thematic classifiers exist in Wailaki that appear to be cognate with thematic classifiers in Hupa of the same form identified by Golla (1970:88). Classifiers *n-*, *s-* in forms <dintc’aD’>JT (LFK_T:80), and <k’isGoD’> JT (LFK_N:175).

(17) Transitivity Verb Themes (IPFV) with Classifier *l-*

	Theme	Translation	CLS	Source
a.	biŋ	'to fill' (INTR)	zero	JT (LFK _V :4)
b.	l-biŋ	'to fill' (TR)	<i>l-</i>	JT (LFK _V :4)
c.	l-baŋ'	'to hang down' (INTR)	<i>l-</i>	JT (LFK _V :3)
d.	l-baŋ'	'to hang down' (TR)	<i>l-</i>	JT (LFK _V :3)
e.	l-dzai	'to be dry' (INTR)	<i>l-</i>	JT (LFK _V :21)
f.	l-dzai'	'to dry' (TR)	<i>l-</i>	JT (LFK _V :21)
g.	l-'aa	'to stretch, extend' (INTR)	<i>l-</i>	JT (LFK _V :1)
h.	'aa	'to stand' (INTR)	zero	JT (LFK _N :139)
i.	l-'aa	'to stand up' (TR)	<i>l-</i>	JT (LFK _V :1)

The stems in (17g-i) for extension and standing are related; however, (18b) is clearly transitive with classifier *l-* where (18a) without it is not.

(18) Transitive Classifier *l-*

- a. <ná·t'á·>
 náa-t'aa (< naa=di-'aa)
 linear=THM-stand
 'It'll stand.' JT (LFK_N:139)(=2.57e)
- b. <na·díł'á·>
 naa=di-l-'aa (< naa=di-n-l-'aa)
 linear=THM-(2SG.S)-CLS-stand
 'You stand it up.' JT (LFK_N:140)(=2.57f)

Classifier *l-* may be described as a causativizer, as is the case in other Dene languages (e.g. Ahtna, Hupa) (Kari 1990, Golla 1970:76). Example (18b) could be thought of as 'you cause it to stand up,' while (19b) could be thought of as 'cause to be dry.'

(19) Causative Classifier *l-*

- a. <hai dji·'ldzai>
 hai=djii' l-dzai
 DEM=heart CLS-dry
 'His heart is dry.' JT (LFK_T:71)
- b. <t'é'te'iq bi' ya'ísbil' ldzai t'ε·l>
 t'e'-chiŋ b-i' ya='í-s-bil' l-dzai=teel
 blanket-kind 3PPO-in PL=THM.O-CLS-handle.several CLS-dry=FUT
 'They put it in to be dry.' JT (LFK_T:68)

Classifier *l-* is also used to form possessives from classificatory and/or stative motion themes in Hupa and other Dene languages. (Golla:1970:76). One example of this is found in Li's notecards, given in (20a-b), whereby a possessive is formed in (20b) with the inclusion of classifier *l-* from a stative motion theme without a classifier, as in (20a).

- (20) Possessive from a Primary Stative Motion Theme
- a. <k'õñ'is'aŋ>
 koŋ' 'i-s-'aŋ
 fire EP-THM-handle.round.PFV
 'Fire is, lies there' JT (LFK_N:260)
- b. <k'õñ'siŋ'aŋ>
 koŋ' s-i-ŋ'aŋ
 fire THM-1SG.S-CLS-handle.round.PFV
 'I keep (have, handle) fire.' JT (LFK_N:260)

Other derivational functions are likely with classifier *l-*, though examples are limited.

Classifier *l-* is replaced by classifier *l-* in several morphological environments. The first is after 1st person subject prefixes, singular *sh-* and plural *di-* in position 2. In (21), the verb theme 'to halloo' (i.e 'to shout') has an underlying classifier *l-* as in (21a) and (21d). In (21b-c), classifier *l-* is replaced by classifier *l-* after 1st person subjects. While the verb 'to tie (a knot)' isn't recorded by Li as having a classifier in (21e), classifier *l-* is present in (21g) and replaced by classifier *l-* in (21f) after 1st person singular subject *shi-* as well.

(21) Classifier *l-* Replaced by Classifier *l-* After 1st Person Subjects

- a. <(ŋ-tc'aD'>
 ŋ-ch'at
 CLS-halloo
 'to halloo (i.e. halloo)' JT (LFK_V:7)
- b. <'icilts'aD'>
 'i-shi-ŋ-ts'at
 EP-1SG.S-CLS-halloo
 'I'll halloo.' JT (LFK_N:184)(=2.37b)
- c. <'idilts'aD'>
 'i-dí-ŋ-ts'at
 EP-1PL.S-CLS-halloo
 'We halloo.' JT (LFK_N:184)(=4.33b)
- d. <'ilts'aD'>
 'i-ŋ-ts'at (< 'i-n-ŋ-ts'at)
 EP-(2SG.S)-CLS-halloo
 'You halloo(!)' JT (LFK_N:184)
- e. <yits'>
 yits'
 V.STEM
 'to tie (a knot)' JT (LFK_V:32)

- f. <'icilyits'>
 'i-shí-**l**-yits'
 EP-1SG.S-CLS-tie.knot
 'I tie (a knot).' JT (LFK_N:192)(=2.37c)
- g. <'ilyits'>
 'i-**l**-yits' (< 'i-n-**l**-yits')
 EP-(2SG.S)-CLS-tie.knot
 'You tie (a knot)!' JT (LFK_N:192)

Classifier *l*- is also lost immediately following *s*- perfective in impersonal active forms. The classifier *l*- is lost in (22a) and (22c) but not (22b) which features a classifier *l*-. Its unknown if the classifier *l*- in (22b) is derived, or an alternative repair to a sequence of *s*- perfective and classifier *l*-; however, there are no forms in Li's notecards by which *s*- perfective immediately precedes *l*-.

(22) Classifier *l*- lost after *s*- Perfective

- a. <naýctc'ín'>
 nay**sh**.chiñ'
 na=y-**sh**-chiñ' (< na=yi-**s**-**l**-chiñ')
 ITER=OBV-**PFV**-(CLS)-make.PFV
 'He made it again.' JT (LFK_N:137)(=4.44h)
- b. <naysilc'í'niñ>
 nay.**sil**.chi'.niñ
 na=y-**si**-**l**-chi'n=iñ
 ITER=OBV-**PFV**-CLS-make.PFV=DUR
 'He made it again.' JT (LFK_N:137)(=4.45f)
- c. <yic'c'í'niñ>
 y**ish**.chi'.niñ
 yi-**sh**-chí'n=iñ (< yi-**s**-**l**-chí'n=iñ)
 OBV-**PFV**-(CLS)-make=DUR
 'He made it.' JT (LFK_N:137)(=2.54b)

4.4.1.2 *d*- Classifier

Classifier *d*- when not thematic forms passives and is used in reflexives, gerunds, and reciprocal objects. Other derivations are possible, but examples are limited. It is most commonly found when required by reversative *naa*=...*di*- as in (23a):

- (23) Classifier *d-*
Reversative
- a. <nandiyá·ŋ>
na=n-**di**-yáaŋ
REV=PFV-REV-go
‘He came back.’ JT (LFK_N:200)
- Reflexive*
- b. <ʔá·t’añ>
’áa-t’añ (<’aa=**di**-’añ)
REFL=(CLS)-handle.round³⁸
‘the place one previously occupied’ JT (LFK_N:22)(2.57a)
- c. <k’á·sí·t’iŋ’>
k’áa=sí-i-t’iŋ’ (<k’áa=sí-i-**di**-’iŋ’)
SO=PFV-1SG.S-(CLS)-to.do.PFV
‘I did so.’ JT (LFK_N:157)(=2.57c)
- Passive/Gerund*
- d. <los>
los
V.STEM
‘to drag away, lead away’ (zero classifier) JT (LFK_V:24)
- e. <nayyidilós>
na=y-yi-**di**-lós
linear=OBV-PASS-CLS-lead
‘She was lead.’ JT (LFK_T:11)
- Reciprocal Object*
- f. <cyánhídilo’>
sh-yan=hí-**di**-lo’
1SG.PPO-about=RECP-CLS-laugh
‘They laugh at me.’ JT (LFK_N:263)

Morphophonological effects occur when the *d*-classifier prefix interacts with a stem-initial glottal stop (see 2.5.1.6).

³⁸ Verb stem *’añ* ‘to handle round object’ is used for keeping fire, perhaps related to keeping coals, and to living in a particular place as a place a person has kept a fire.

4.4.1.3 *l*-Classifier

Li notes several verb stems as intransitive with classifier *l*- as in (24):

(24)	Intransitive Verb Themes (IPFV) with Classifier <i>l</i>			
	Theme	Translation	CLS	Source
a.	<i>l</i> -yij	‘to melt’ (INTR)	<i>l</i> -	JT (LFK _V :15)
b.	<i>l</i> -kaŋ	‘to taste’ (INTR)	<i>l</i> -	JT (LFK _V :16)
c.	<i>l</i> -neh	‘to choke in ones throat’ (INTR)	<i>l</i> -	JT (LFK _V :19)

Classifier *l*- forms passives from active transitive verbs with a basic *l*- classifier.

(25)	Classifier <i>l</i> -			
a.	<nayne·IGÉDij> naa=y-nee- l -géd=iŋ linear=OBV-ADV-CLS-poke=DUR ‘*He pokes one (with his penis).’			JT (LFK _N :218)
b.	<ná·niyilgÉDij> náa=ni-yi- l -ged=iŋ linear=ADV-PFV-CLS-poke=DUR ‘*She is poked (by a penis).’			JT (LFK _N :218)
c.	<k‘is·i’ beyIDziD‘iŋ> ki-si’ ³⁹ b-e=y- l -jid=iŋ 3PL.O-head 3PPO-against=OBV-CLS-cut.hair=DUR ‘He did cut their hair.’			JT (LFK _N :205)
d.	<bisi’ bε·IDziD‘> bi-si’ b-ee= l -jíd=iŋ 3PL.O-head 3PPO-against=CLS-cut.hair=DUR ‘His hair got cut.’			JT (LFK _N :205)(=2.61c)
e.	<dje·ldo‘> jee= l -doh apart=CLS-crack.open.PFV ‘It cracked open.’			JT (LFK _N :179)(=2.36b)
f.	<t‘á·lk‘ats’> táa- l -kats’ into.bits=CLS-bite ‘a biting’			JT (LFK _N :280)

³⁹ The first word <k‘is·i’> appears to have been written over an earlier transcription, with an <a> under the first <i>, and <k> written over oddly, possibly accounting for the length of s written <s>.

- g. <t'á·lk'ats'>
 tá=l-kats' (< tá-n-l-kats'>
 into.bits=(2SG.S)-CLS-bite
 'You bite.'
 JT (LFK_N:280)(=4.69n)

In some cases where a classifier *l-* is underlying in the theme, classifier *l-* may be replaced by classifier *l-* after the perfective 1st person singular subject prefix *i-*. This is often the only indicator of the subject, as in (26a), (26d) and (26g).

(26) Classifier *l-* Replaced by Classifier *l-*

After Perfective 1st Person Singular Subject Prefix *i-*

- a. <t'ε·síldäi'>
 tee-s-í-l-dai'
 DIST-PFV-1SG.S-CLS-dance
 'I danced.'
 JT (LFK_N:201)(=4.45b, 4.54b)
- b. <tc'it'íldäi'>
 ch'i-tí-l-dai'
 INDF.S-DIST-CLS-dance
 'They (people) dance.'
 JT (LFK_N:203)
- c. <t'oholdäi'>
 to-ho-l-dai'
 DIST-2PL.S-CLS-dance
 'You all dance.'
 JT (LFK_N:201)(=4.34d)
- d. <k'ina·dε·sílyé'in>
 ky'i-naa=dee-si-l-yéh=in
 THM-ADV=THM-PFV-1SG.S-CLS-hunt=DUR
 'I did hunt.'
 JT (LFK_N:113)
- e. <k'ina·dílyé'>
 ky'i-naa=d-í-l-yéh
 THM-ADV=THM-PFV-CLS-hunt=DUR
 'He hunts.'
 JT (LFK_N:113)(=4.35b)
- f. <k'idílbil>
 ky'i-dí-l-bil
 THM.O-THM-CLS-play.flute
 'He plays an instrument (the flute).'
- g. <k'idíyilbilin>
 ky'i=dí-y-i-l-bil=in
 THM.O-THM-PFV-1SG.S-CLS-play.flute=DUR
 'I have played an instrument (the flute).'

- h. <k'idiyilbilij>
 ky'i-dí-yi-l-bil=iŋ
 THM.O-THM-PFV-CLS-play.flute=DUR
 'He has played an instrument (the flute).' JT (LFK_N:214)

4.4.1.4 Compound Classifiers

Compound classifiers result from two sources. The first is derivation of themes with thematic classifiers, while the second is themes that have been derived from already derived themes, or in other words, started from a theme without a classifier but has twice undergone derivation. An example could be a classifier *l-* that forms a causative from a passive with classifier *d-* yielding a compound classifier *l-di*. Li records four verb themes in his verb stem list with compound classifiers, and also writes 'causative' in his notation:

- | (27) | Theme (IPFV) | Translation | CLS | Source |
|------|--------------|------------------------------------|-------------|---------------------------|
| a. | łdi-si' | 'to whirl one to make dizzy' | <i>łdi-</i> | JT (LFK _V :21) |
| b. | łdi-sa | 'to spring back (a branch)' (INTR) | <i>łdi-</i> | JT (LFK _V :21) |
| c. | łdi-sa | 'to spring back (a branch)' (CAUS) | <i>łdi-</i> | JT (LFK _V :21) |
| d. | łdi-łat | 'to run' | <i>łdi-</i> | JT (LFK _V :23) |
| e. | łdi-łat | 'to jump' | <i>łdi-</i> | JT (LFK _V :23) |
- (28) Compound Classifier Examples
- a. <tc'eyłdisi'>
 ch'e=y-łdī.si'
 ADV=OBV-CLS-make.dizzy
 'He turns him around to make him dizzy.' JT (LFK_N:386)
- b. <yo-g ninyai k'ina' bił k'i-nai'łdik'is icte'in' ya'niŋ>
 yoog ni-n-yai kinah bi-ł ky'ii-nai='-łdi-kis
 DIST ADV-PFV-go uphill 3PPO-with stick-REV=THM.O-CLS-REV-spring
 'i-sh-chin'=ya'niŋ
 EP-CLS-make.PFV=they.say
Way he came to the top really when he makes a branch spring back to hit him.
 '*He came way uphill when he made a branch spring back to hit him.'
 JT (LFK_T:45)(=6.42)
- c. <na·hacılłidäi'>
 naa=ha-shi-łdi-dai'
 REV=off.along-1SG.S-CLS-dance.OPT
 'I'll dance away.' JT (LFK_N:201)
- d. <tc'ε·náłłiłatD'>
 ch'ee-ná=łdi-łat
 OUT-around=CLS-run
 'He runs out.' JT (LFK_N:301)

4.5 Subject Prefixes – Positions 2, 8

Personal themes are inflected for subject categories, whose prefixes occur in two positions in Wailaki verbs. 1st and 2nd person subjects are indicated by prefixes in position 2 that immediately precede the classifier, or stem if the theme has no classifier. 3rd person subjects are indicated by prefixes in position 8, the furthest left of the conjunct prefixes before any disjunct prefixes, or when unmarked and the form intransitive, are interpreted as inflected for general 3rd person. Impersonal themes are also either unmarked, or have a thematic indefinite subject prefix. The following are attested subject prefixes:

Forms	Function/Gloss	Position
sh-, (shi-, s-), i-	1SG.S	2
di-	1PL.S	2
n- (ŋ-, m-)	2SG.S	2
oh- (h-)	2PL.S	2
(unmarked)	3 (INTR)	-
yi-	OBV	8
ch'i, '-	INDF.S	8
ki-	AREAL	8

Table 28. Subject Prefixes

The 3rd person subjects in position 8 are also called deictic subjects in that they express deictic (e.g. they point out) categories beyond person, number and subject. They do not express gender, so translations given as ‘he’ may equally be translated ‘she’ and vice versa. These categories are cognate with other Dene languages, including thematic (i.e. specific), indefinite, and areal.

4.5.1 1st and 2nd Person Subjects

4.5.1.1 *sh-, i-* 1st Person Singular Subject

1st person singular subject prefixes occur in position 2, and immediately follow any mode prefixes in position 3 while immediately preceding any classifiers, or if the theme has no classifier, immediately precedes the verb stem. Morphologically conditioned allomorph *i-* occurs in perfective forms (with classifier *l-*). The 1st person singular subject prefix *sh-* occurs in all other modes. In (29), non-perfective examples with prefix *shi-* are given every other example starting with (29a), followed by perfective examples of the same verb theme with prefix *i-*. Where prefix *i-* is a coda, it may be written /y/; however, for morphological consistency and transparency, I’ve chosen to retain *i-* in this work.

- (29) 1st Person Singular Subjects Prefixes
- a. <k'icil'a'>
 ky'i-**sh**i-l-'a'
 THM.O-**1SG.S**-CLS-work.OPT
 'I'll work.' JT (LFK_N:370)
- b. <k'isil'a'>
 ky'i-s-**i**-l-'a'
 THM.O-PFV-**1SG.S**-CLS-work.PFV
 'I worked.' JT (LFK_N:371)
- c. <tc'ócdaí>
 ch'o=**sh**-dai
 weak=**1SG.S**-be.lazy
 'I am lazy.' JT (LFK_N:352)(=2.5b, 2.35d)
- d. <tc'oydá'an>
 ch'o=**i**-dá'=an
 weak=**1SG.S**-be.lazy.PFV=DUR
 'I was lazy.' JT (LFK_N:352)
- e. <k'εcliD'>
 k'e=**sh**-lit
 off=**1SG.S**-burn
 'I'll burn it.' JT (LFK_N:208)
- f. <k'ε·yliD'>
 k'ee=**i**-lit
 off=**1SG.S**-burn
 'I did burn it.' JT (LFK_N:208)
- g. <'o·cilyoł>
 '-oo=**shi**-l-yoł
 EP-DIR=**1SG.S**-CLS-want
 'I want it.' JT (LFK_N:243)
- h. <'o·ytyó'liŋ'>
 '-oo=**i**-ł-yo'l=iŋ'
 EP-DIR=**1SG.S**-CLS-want=DUR
 'I did want it.' JT (LFK_N:243)
- i. <'ick'an>
 'i-**sh**-ky'an'
 EP-**1SG.S**-hit.OPT
 'I'll hit him(/her/it).' JT (LFK_N:291)(=2.13b, 4.61a)

- j. <si·k'ániŋ>
 si-i-ky'án=iŋ
 PFV-1SG.S-hit=DUR
 'I hit her/him.' JT (LFK_N:291)
- k. <'ictc'ε'>
 'i-sh-cheh
 EP-1SG.S-cry
 'I cry.' JT (LFK_N:190)
- l. <ɣi·tc'ε'iŋ>
 ɣi-i-cheh=iŋ
 PFV-1SG.S-cry=DUR
 'I cried.' JT (LFK_N:190)A

In a few examples, perfective 1st person subject prefix *i-* appears as palatalization of perfective prefix *ɣwin-* (see 4.6.2.2) written as <ɣ> by Li. This perfective prefix allomorph immediately follows a long vowel as in (30a-c), but not (30d), which features a short vowel before the perfective prefix:

- (30) 1st Person Singular Subject Prefix *i-* as palatalization
- a. <ndiŋ' t'ɑ·nɛ·ɣt'ót'iŋ>
 n-diŋ' taa=nɛe-ɣ-y-t'ót'=iŋ (< taa=nɛe-ɣ-i-t'ót'=iŋ >)
 THM-PST ADV=THM-PFV-1SG.S-soft=DUR
 'I was soft.' JT (LFK_N:392)
- b. <k'idé·ɣts'aŋ'>
 ky'i-dée-ɣ-y-ts'aŋ' (< ky'i-dée-ɣ-i-ts'aŋ' >)
 THM.O-THM-PFV-1SG.S-hear
 'I heard.' JT (LFK_N:145)
- c. <tc'in'da·ɣyá'>
 chin'-daa=ɣ-y-yá (< chin'-daa=ɣ-i-yá >)
 ruin-down=PFV-1SG.S-go
 'I am spoiled.' JT (LFK_N:15)
- d. <diyí·t'ats'>
 di-yí-i-t'ats'
 THM-PFV-1SG.S-cut
 'I slice a piece.' JT (LFK_N:301)

A phonologically conditioned allomorph of *sh-* also occurs in non-perfective forms. Allomorph *s-* occurs in non-perfective forms when immediately followed by verb stems that begin in alveolar consonants as in (31).

- (31) 1st Person Singular Subjects Prefixe *s-*
- a. <bitc'ε'íst'i'>
 bi-ch'e='i-s-ti'
 3PPO-out=INC?-1SG.S-handle.stick
 'I (start to?) take it (bone, stick) out of it.' JT (LFK_N:215)
- b. <disníŋ>
 di-s-n=íŋ
 THM-1SG.S-say=DUR
 'I said.' JT (LFK_N:122)(=4.56b)
- c. <dow 'íst'ási'>
 dow='i-s-t'ási-i'
 NEG=EP-1SG.S-cut.IPFV=NEG
 'I never cut.' JT (LFK_N:48) (=2.33a, 6.45a)

4.5.1.2 *n-* 2nd Person Singular Subject

Subject prefix *n-* in position 2 indicates a 2nd person singular subject. An allomorph *m-* occurs as the result of a regular phonological process of nasal place assimilation (see 2.5.1.1), appearing as *m-* before /b/ as in (32g). Prefix *n-* is also deleted as part of regular nasal deletion (see 2.5.1.2), deleting before classifier *l-*, but assimilating in manner to *l-* before /l/ in perfective forms. The form in (32e) is not perfective, and *n-* is deleted without Li transcribing geminate <ll>. This analysis take's Li's transcription of geminates as somewhat meaningful. An alternative analysis is that *n-* is deleted before /l/, with geminate /ll/ transcribed at times by Li for other, unknown reasons.

- (32) *n-* 2nd Person Singular Subject
- a. <tc'óndai>
 ch'o=**n**-dai
 weak=2SG.S-be.lazy
 'You are lazy.' JT (LFK_N:352)
- b. <k'énliD'>
 k'e=**n**-lit
 ADV=2SG.S-burn
 '(You) burn it.' JT (LFK_N:209)
- c. <k'íl'α'>
 ky'i-l-'aa (<ky'i-**n**-l-'aa)
 THM.O-(2SG.S)-CLS-work
 'You work.' JT (LFK_N:370)

- d. <ḳ'isilla'>
 ky'i-sí-l-la (< ky'i-sí-**n**-la)
 THM.O-PFV-**2SG.S**-catch.lots
 'You caught lots.' JT (LFK_N:119)
- e. <ḳ'ilin'>
 ky'i-lin' (< ky'i-**n**-lin')
 THM.O-(**2SG.S**)-catch.with.rope
 'You'll get caught (with rope).' JT (LFK_N:118)(=2.52d)
- f. <'inyán'ε'>
 'i-**n**-yán'-e'
 EP-**2SG.S**-eat-IMP
 'You'll eat it later on!' JT (LFK_N:47)(=2.63a, 6.5a)
- g. <ḳ'émma' >
 ky'é=**m**-ma' (< ky'é-**n**-ba')
 ADV=**2SG.S**-be.lucky
 'You are lucky in gambling' JT (LFK_N:349)(=2.25f)

4.5.1.3 *di*- 1st Person Plural Subject

1st person plural subjects are indicated by a prefix *di*- in position 2. In themes with classifier *l*-, classifier *l*- is replaced by classifier *l*- in 1st person plural subject forms.

- (33) *di*- 1st Person Plural Subject
- a. <ḳ'idila'>
 ky'i-**di**-lah
 THM.O-**1PL.S**-catch.lots
 'We will catch lots.' JT (LFK_N:119)
- b. <'idilts'αD' >
 'i-**di**-l-ts'at'
 EP-**1PL.S**-CLS-haloo
 'We halloo.' JT (LFK_N:184)(=4.21c)
- c. <t'ε·sdíldäi'>
 tee-s-**di**-l-dai'
 off.along-PFV-**1PL.S**-CLS-dance
 'We danced.' JT (LFK_N:201)

4.5.1.4 *oh-* 2nd Person Plural Subject

2nd person plural subjects are indicated by a prefix *oh-* in position 2. A couple phonological processes produce various surface forms. Forms in (34a-c) without classifiers are marked with the prefix *oh-*, while forms in (34d-e) with classifier *l-* are followed by an additional epenthetic vowel. The prefix is otherwise subject to regular phonological rules whereby vowel assimilation occurs across laryngeal consonants as in (34d-f)(see 2.5.2.4). Hiatus vowel deletion in (34d) deletes the short vowel /i/ of the prefix *ti-* ‘off, along’ (see 2.5.2.2), while another vowel deletion of /o/ after /e/, /a/, or /ii/ produces forms in (34e-h).

- (34) *oh-* 2nd Person Plural Subject
- a. <k'ó'la'>
ky'-**oh**-lah
THM.O-**2PL.S**-catch.lots
'You all will catch lots.' JT (LFKN:119)
- b. <'o'yaŋ'ε'>
'-**oh**-yaŋ'-e' (<'i-**oh**-yaŋ'-e')
EP-**2PL.S**-eat
'You all will eat it later on!' JT (LFKN:47)(=2.63b, 6.5b)
- c. <nai'iy^wo't'ol'>
nai='i-y^w-**oh**-t'ol'
ADV=THM.O-PROG-**2PL.S**-set.snare.PROG
'You all set a snare right along.' JT (LFKN:115)
- d. <t'**oh**oldäi'>
t-**oh**-o-l-dai' (<ti-oh-i-l-dai')
off.along-**2PL.S**-EP-CLS-dance
'You all dance.' JT (LFKN:201)(=4.26c)
- e. <yahalt'oŋ'>
ya=**h**-a-l-toŋ' (<ya=**oh**-i-l-toŋ')
up=**2PL.S**-EP-CLS-catch.lots
'All of you jump.' JT (LFKN:182)
- f. <tc'ε'ε'yaŋ'>
ch'e=**h**-yaŋ' (<ch'e=**oh**-yaŋ')
out=**2PL.S**-kill.several.IPFV
'You all kill all off.' JT (LFKN:198)(=2.63c)
- g. <tc'ε·k'í'yaŋ'>
ch'ee=kii-**h**-yaŋ'
out=INDF.O-**2PL.S**-kill.several.IPFV
'You all kill them all off.' JT (LFKN:199)(=2.63d)

- h. <na't'ɑŋ>
 naa=h-taŋ
 around=2PL.S-handle.stick
 'You all take/paddle (a canoe) around.' JT (LFK_N:343)(=2.63e)

4.5.2 3rd Subjects

4.5.2.1 Unmarked General 3rd Person Subject

Verbs that are unmarked for subject in intransitive themes are considered general 3rd person subject and may be translated 'he, she, it' and at times 'they.' In those cases where a 3rd person subject is acting on an object in a transitive theme, the obviative is otherwise used (see 4.5.2.2). A natural force like the wind in (35g) may also serve as an unmarked, impersonal subject. Because subject is not overtly marked, unmarked 3rd person subjects often pattern with impersonal themes.

- (35) Unmarked Subject
- a. <'ítc'ε'>
 'i-cheh
 EP-cry
 'He cries.' JT (LFK_N:190)
- b. <k'ina·dílyε'>
 ky'i-naa=dí-l-yeh
 THM-ADV=THM-CLS-hunt
 'He hunts.' JT (LFK_N:113)(=4.26e)
- c. <k'ina·de·syε'iq>
 ky'i-naa=dee-s-yeh=iq
 THM-ADV=THM-PFV-hunt=DUR
 'They went to hunt.' JT (LFK_N:113)
- d. <no·k'inäi
 noo=ki-nai
 to.there=THM-save
 'He is saved.' JT (LFK_N:135)(=2.39g)
- e. <tc'ε·G'tc'iq sda·ya'niŋ>
 ch'EEK-chiŋ s-daa=ya'niŋ
 woman-kind PFV-sit=they.say
 '(A) woman she stays there (they say)' JT (LFK_T:32)

- f. <k'íyilo'>
 ki-yi-lo'
 THM-PFV-lie
 'He lied.'
 JT (LFK_N:169)
- g. <t'ε·ctc'i·'>
 tee-sh-ch'iih
 off.along-PFV-wind.blows⁴⁰
 '(The) wind is blowing.'
 JT (LFK_N:325)(=2.54e)

4.5.2.2 *yi-* Obviative

Obviative *yi-* expresses a 3rd person subject acting on a 3rd person object, otherwise unmarked for subject or object in a transitive verb. An allomorph *y-* occurs when preceded by a disjunct prefix as in (36a), (36d-e). It can also appear to the left of a directive disjunct prefix as in (37a) and (37c), but only with this construction involving the directive (see 4.13). Its use precludes other subject/object prefixes.

- (36) Obviative *yi-*
- a. <tc'in'dáylt'ic̣>
 ch'in'-dá=y-l-tish
 ruin-down=**OBV**-CLS-handle.living.being.IPFV
 'He spoils him.'
 JT (LFK_N:128)
- b. <yísḷiŋ'>
 yí-s-liŋ'
OBV-PFV-tie
 'He has tied (it/him/her?) up.'
 JT (LFK_N:116)
- c. <yidε·ts'aṇ'>
 yi-dee-ts'aṇ'
OBV-THM-hear.PFV
 'He heard that song.'
 JT (LFK_N:145)
- d. <naɣdił'a·'>
 na=y-di-l-'aa
 linear=**OBV**-THM-CLS-stand.up.IPFV
 'He will stand it up.'
 JT (LFK_N:140)
- e. <naɣsiḷ^εya'liŋ'>
 na=y-si-l-ya'l=iŋ'
 ADV=**OBV**-PFV-CLS-dance.puberty.PFV
 '*She has danced a puberty dance.'
 JT (LFK_N:148)(=4.44e)

⁴⁰ The s- perfective is thematic in this example as it is in Hupa (Sapir and Golla 2001: 841)

- (37) Obviative *yi-* as a Disjunct Prefix
- a. <yo·ná·dic>
 y-oo-náa=dish
 OBV-DIR-linear=open.eyes.IPFV
 ‘He goes to look at him.’ JT (LFK_N:412)
- b. yo·na·ndi^syite’>
 y-oo-naa=n-di-yich’
 OBV-DIR-linear=THM-CLS-open.eyes.PFV
 ‘He has gone to look at him’ JT (LFK_N:412)

4.5.2.3 *ch’i-*, ’- 3rd Person Indefinite Subject

3rd person indefinite subject is indicated by *ch’i-* and has a glottal stop allomorph ’- after disjunct prefixes. Li translates this prefix as ‘people’ and ‘anyone/any person.’ It is cognate in form with Hupa *ch’i-* though according to Golla (1970, 2011) has been reanalyzed from Proto-Dene to mark animate or proximate 3rd persons, contrasting with less animate, obviative persons with *yi-* (also reanalyzed from the obviative). Wailaki retains indefinite pronominal subject semantics with the form *ch’i-*. The form is also related to Navajo 4th person subject *ji-*, used to discuss someone present without using their name, and politely with indefinite impersonal semantics, among other syntactic and discourse related uses (Sapir and Hoijer 1967:86, Young, Morgan and Midgette 1987:76-77, Willie 1991:102-131).

In (38a-c), word-initial *ch’i-* is used either word-initially or following a consonant. The form in (38d) features the glottal allomorph has an indefinite subject translation that can be compared with (38e) with an otherwise unmarked but definite 3rd person subject. In (38f) the glottal stop allomorph is again used, followed by a thematic object. Though the thematic object prefix also has a glottal stop allomorph, the thematic object prefix when a glottal stop makes preceding vowels a diphthong in (38g) while the indefinite 3rd person subject does not.

- (38) Indefinite 3rd Person Subject
- a. <tc’it’ildäi’>
 ch’i-ti-l-dai’
 INDF.S-off.along-CLS-dance
 ‘People (anyone) dance.’ JT (LFK_N:201)
- b. <tc’indac>
 ch’i-n-dash
 INDF.S-ADV-dance
 ‘People (anyone) dance.’ JT (LFK_N:204)
- c. <ninte’isildec’>
 nin=ch’i-si-l-desh’
 off.ground=INDF.S-PFV-CLS-dance.PFV
 ‘They (indefinite) danced.’ JT (LFK_N:385)

- d. <ya'k'inilyi·'>
ya='-ki-ni-t-yii
PL=INDF.S-THM-ADV-CLS-win
'Anyone wins (the game).' JT (LFK_N:164)(=4.1f)
- e. <ya·k'inilyi·'>
yaa=ki-ni-t-yii
PL=ADV-THM-CLS-win
'They win (the game).' JT (LFK_N:164)
- f. <ya'k'it'a'>
ya='-ky'i-t-'a
PL=INDF.S-THM.O-CLS-work
'People work.' JT (LFK_N:370)(=4.66b)
- g. <yai'p'a·'>
yai='-t-'aa
PL=THM.O-CLS-work
'They work.' JT (LFK_N:370)(=4.66c)

4.5.2.4 *ki-* Areal Prefix

Areal subject prefix *ki-* in position 8 indicates a subject that is thematic, often referring to the weather, landscape, or some observed natural phenomenon, and is cognate with Hupa areal-situational prefix *xo-* (Sapir and Golla 2001:828).

- (39) Areal Subject Prefix *ki-*
- a. <k'iltc'itij>
ki-t-chit=ij
AREAL-CLS-wet=DUR
'It is damp (weather).' JT (LFK_N:121)
- b. <k'ist'ij>
ki-s-tij
AREAL-CLS-cold
'It is cold (weather).' JT (LFK_N:426)(=2.65a, 4.57s)
- c. <k'ót'é·hiD'>
k-óo-t'ée=hit
AREAL-OPT-warm=when
'Let it be warm (time) (fine weather).' JT (LFK_N:423)

4.6 Mode Prefixes – Position 3

Apart from verb stem variants (see 4.3.2), prefixes in position 3 within Wailaki verbs express categories such as imperfective (unmarked), perfective, progressive, inceptive, and optative modes. The following are attested mode prefixes in Wailaki:

<i>Imperfective</i>	Gloss
unmarked ('i-)	--
<i>Perfective</i>	
si-, s- (sh-)	PFV
ɣin- (n-), ɣwin-,	PFV
ɣees-, ɣwees-	PFV
nin-, n-	PFV
<i>Progressive</i>	
ɣi-	PROG
ɣi-	PASS
<i>Inceptive</i>	
'e-	INC
<i>Optative</i>	
oo-	OPT

Table 29. Wailaki Mode Prefixes

The majority of verbs in the documentation of Wailaki are either inflected for imperfective or perfective mode. Imperfective is unmarked in position 3, and when no other prefixes occur to the left of a subject prefix in an imperfective form, an epenthetic or peg syllable 'i- is required in position 3. For the perfect mode, there are four variants in position 3, three of which are lexically specified either by an adverbial modifier or verb theme. A fourth, *ɣees-*, is only found in

Wailaki verbs occur with up to five inflectional forms called modes, a term used within Dene language family literature differently than most typical literature on typical tense, aspect and mode. This work uses the term mode in this tradition, and the inflectional prefixes for aspect/mode in position 3. Reichenbach 1947 uses the following terms to discuss temporal forms – point of speech, point of reference, and point of event, adopted by others (Comrie 1976, Smith 1997). Klein (1994:4) uses similar terms – time of utterance, topic time, and situation time. These terms may be defined as the following:

- (40) Klein Temporal Points
- a. Time of Utterance (TU) - Time at which a speaker makes an utterance.
 - b. Time of Topic (TT) - Time talked about, to which “a speakers claim is confined.”
 - c. Time of Situation (TSit) - Time “spanned by the eventuality itself.”

Importantly, tense refers to a temporal relationship between TT and TU, and the following may be understood about tense (Klein 1994:124):

- (41) Klein Temporal Points - Tense
- a. Past tense: TU after TT [---]-----TU-----
TT
 - b. Present tense: TU includes TT -----[TU]-----
TT
 - c. Future tense: TU before TT -----TU-----[---]
TT

Aspect on the other hand refers to a temporal relationship between TT and TSit, and can occur regardless of its location in the past, present, or future. This means that aspectual markers can co-occur with tense markers. Tense markers, if they are truly relations between TT and TU, cannot co-occur with each other, and cannot be both past and present.

In regards to aspect, Smith (1997) discusses two types of aspectual meaning, which are situation type aspect, and viewpoint aspect. Situation type aspect pertains to situations being either a state or an event, and viewpoint aspect includes categories such as imperfective and perfective that allow focus on the temporal qualities of states or events. It is viewpoint aspect that is most often indicated in Wailaki verbs as imperfective and perfective aspect/mode in position 3 in the verb. Importantly, while translations of forms that are imperfective or perfective give past, present and future semantic readings, these relationships are inferred, since imperfective and perfective aspect are not tense relationships.

Even so, imperfective and perfective categories are often interpreted for tense when forms are not marked directly for temporal location, or tense (Smith, Perkins, and Fernald 2007:68). Imperfective may be interpreted as present, since its focus is not on endpoints of events, and can include TU by looking at an event as unbounded. Perfective on the other hand focuses on endpoints from a perspective outside, looking at events as bounded and cannot include TU. Any understanding of relationship of TT to TU is inferred from the boundedness of viewpoint aspect being indicated, but this understanding does not preclude the use of actual tense markers across various aspects. The following schema helps demonstrate these aspect relationships irrespective of TU (Klein 1994:108):

- (42) Klein Temporal Points – Aspect
- a. Perfective aspect: TSit-----[----]
TT at TSit TT
[----]-----TSit
TT
 - b. Imperfective aspect: TSit-----[-----]----
TT includes TSit TT

Progressive aspect is similar to imperfective, but its use refers to motion in Dene languages (Smith, Perkins, and Fernald 2007:42). The inceptive as an aspect is like perfective, and focuses on an endpoint, but only the initiation of an event. Optative mode is used to express wishes, desires, and has futurity readings coming from irrealis force as an event unrealized at TU (Axelrod 1993:33, Rice 2001:249). From this understanding of tense, aspect, and mode, and the complex inflectional category termed mode in Dene languages, the following is a description of mode prefixes that occur in position 3.

4.6.1 Unmarked Imperfective Mode

Imperfective aspect is unmarked on the verb, save for the stem variant used in the verb. This aspect refers to events without reference to their endpoints. In Klein's terms, this means that TT (the time of a speaker's claim) is within TSit (the time of the eventuality itself), without reference to TU, or relations such as past, present or future. When position 3 is unmarked and no other prefixes occur to the left of a subject prefix, an epenthetic or peg syllable 'i- is required in position 3, as shown in (43a). Other examples in (43) show unmarked imperfective aspect without the epenthetic or peg syllable.

- (43) Imperfective (unmarked)
- a. <'icláç>
 'i-sh-lásh
 EP-1SG.S-pick.small.things
 'I'll pick (acorns) one by one.' JT (LFKN:174)
- b. <yá·tc'ε'>
 yáa=ch'eh
 PL=cry
 'They cry.' JT (LFKN:190)(=4.66a)
- c. <neyyí]̥>
 ne-i-yíl
 THM-1SG.S-drunk
 'I am drunk.' JT (LFKN:381)
- d. <k'idílbil>
 ky'i-di-l-bil
 THM.O-THM-CLS-play.flute
 'He plays an instrument (the flute).' JT (LFKN:214)(=4.26f)

4.6.2 Perfective Mode

Perfective aspect refers to events with definite endpoints (Smith, Perkins, and is marked in position 3 by prefixes *s-*, *nin-*, *yin-*, and *yees-* with various allomorphs discussed further in subsequent sections. Perfective mode in Wailaki is not mutually exclusive with future tense enclitics, a characteristic of aspect rather than tense. Many translations of perfective aspect forms appear to be past tense; however, since perfective mode can refer to completion of actions, the perfective in many Dene languages is often interpreted as past tense (Smith, Perkins and Fernald 2007:68, Rice 2001:247).

4.6.2.1 *s*- Perfective

The *s*- perfective is cognate with Hupa *s*- perfective (Sapir and Golla 2001:835), and has two forms *s*- and *si*-. In addition, *s*- assimilates in place to become /sh/ before voiceless palato-alveolar affricate /ch/ (see 2.5.1.3). A classifier *l*- immediately following an *s*- perfective is also lost and can contribute to the assimilation environment (see 4.4.1.1).

For 1st and 2nd person forms without classifiers and 3rd person forms with classifiers, *si*- occurs as in (44a-e), while *s*- occurs with 3rd person forms without classifiers and 1st person forms with classifiers as in (44f-i). *S*- perfective is also always *si*- word-initially in personal forms (e.g. 1st and 2nd person subject) as in (44a), but in impersonal forms (e.g. unmarked 3rd person) word-initially may be *s*- as in (44g).

(44) *s*- Perfective

si-

- a. <si·k'ániŋ>
 si-i-ky'án=iŋ
 PFV-1SG.S-hit.PFV=DUR
 'I hit him(/her/it).' JT (LFK_N:291)
- b. <siŋk'ániŋ>
 si-n-ky'án=iŋ
 PFV-2SG.S-hit.PFV=DUR
 'You hit him(/her/it).' JT (LFK_N:291)
- c. <t'asínya·'>
 ta=si-n-yáa
 out.water=PFV-2SG.S-go
 'You came out of the water.' JT (LFK_N:221)
- d. <yai'silbat'iŋ>
 yai='-si-l-bat'=iŋ
 PL=THM.O-PFV-CLS-bite.off.PFV
 'They pound it flat.' JT (LFK_N:227)(=2.15c)
- e. <naysil^gya'liŋ>
 na=y-si-l-ya'l=iŋ
 ADV=OBV-PFV-CLS-dance.puberty=DUR
 '*She has danced a puberty dance.' JT (LFK_N:148)(=4.36e)
- f. <naysiltc'í'niŋ>
 na=y-si-l-chi'n=iŋ (<na=yi-s-l-chiŋ'=iŋ)
 ITER=OBV-PFV-CLS-make.PFV=DUR
 'He made it again.' JT (LFK_N:137)(=4.22b)

s-

- g. <tc'ahal slín'ya'niŋ>
ch'ahal s-lín'=ya'niŋ
frog PFV-become.PFV=they.say
'A frog she became (they say)'
JT (LFK_T:5)
- h. <naýetc'iq'>
na=y-sh-chiŋ' (< na=yi-s-l-chiŋ')
ITER=OBV-PFV-make.PFV
'He made it again.'
JT (LFK_N:137)(=4.22a)
- i. <nna·sdigé'iq'>
n-naa=s-di-gé'=iq'
off.ground-REV=PFV-CLS-get.up.PFV=DUR
'He did get up.'
JT (LFK_N:257)
- j. <ts'iyɑ·din síl'tc'iq'>
ts'i-yaa-din s-i-l-chiŋ'
INDF.S(?)-go=LOC PFV-1SG.S-CLS-make.PFV
'I gather people in place.'
JT (LFK_N:186)

The s- Perfective also conditions lengthening of conjunct distributive, adverbial and thematic prefix short vowels in positions 4, 5, and 6, except when the form is marked by the obviative prefix as in (45h). The perfective is also unmarked in 3rd person forms with the distributive *ti-* or adverbial *ti-* 'off along' as in (45c) and (45f) with a few exceptions (see 4.8).

(45) s- Perfective Lengthening

Distributive – Position 4

- a. <t'icíldäi'>
ti-shí-l-dai'
DIST-1SG.S-CLS-dance
'I dance.'
JT (LFK_N:201)
- b. <t'ε·síldäi'>
tee-s-i-l-dai'
DIST-PFV-1SG.S-CLS-dance
'I danced.'
JT (LFK_N:201) (=4.26a, 4.54b)
- c. <t'ε·ldäi'>
tee-l-dai'
DIST-CLS-dance
'He danced.'
JT (LFK_N:201)

Adverbial – Position 5

- d. <t'ílk'et'>
ti-l-ky'et'
off.along-CLS-set.fire
'You set fire going along (start setting).' JT (LFK_N:269)
- e. <t'ε:sílk'et'>
tee-s-i-l-ky'et'
off.along-PFV-1SG.S-CLS-set.fire
'You did set fire going along (start setting).' JT (LFK_N:269)
- f. <yit'ε:lk'et'>
yi-tee-l-ky'et'
OBV-**off.along**-CLS-set.fire
'He did set fire going along (start setting).' JT (LFK_N:269)

Thematic – Position 6

- g. <k'a·níct'ε'>
kaa=ní-sh-te'
so=THM-1SG.S-look.for
'I hunt (search) for it.' JT (LFK_N:159)
- h. <k'a·nε·sí·t'ε'>
kaa=nee-sí-i-te'
up.out=THM-PFV-1SG.S-look.for.PFV
'I have hunted (searched) for it.' JT (LFK_N:159)(=4.57q)
- i. <k'ayníst'ε'>
ka=y-ni-s-te'
up.out=OBV-THM-PFV-look.for.PFV
'He has hunted (searched) for it.' JT (LFK_N:159)

4.6.2.2 yin-Perfective

Perfective *yin-* is a common perfective prefix shown in (46-49). In 1st and 2nd person forms and 3rd person forms with a classifier, the form is *yi-* as in (46c-d).

- (46) *yin-* Perfective
- a. <yíyín⁸its'>
yi-yín-gyits'
OBV-PFV-scrape.PFV
'He scraped (plants) to make string.' JT (LFK_N:336)

- b. <nai'yínsi'>
 nai='-yín-si'
 ITER=THM.O-PFV-pay.PFV
 'He paid again.' JT (LFK_N:378)
- c. <niyi-dáciŋ>
 ni-yi-i-dásh=iŋ
 THM-PFV-1SG.S-dance=DUR
 'I did dance.' JT (LFK_N:204)
- d. <k'idáyilbásin>
 k'idá=y-yi-l-bás=iŋ
 down.hill=OBV-PFV-CLS-roll=DUR
 'He has rolled it down hill.' JT (LFK_N:229)
- e. <yí-yiç>
 yí-i-yish
 PFV-1SG.S-break
 'I broke it.' JT (LFK_N:317)

When preceded by a long vowel or over long vowel, perfective *yin-* takes the form *n-* or *ŋ-* with nasal place assimilation (see 2.5.1.1) as in (47). Intervocalic perfective *yin-* takes the form *y-*. If either vowel is /o/, the form is *yw-* as in (48).

- (47) Perfective *yin-* as *n-*
 a. <tc'in'da·andel'>
 chin'-da-aa=**n**-del'
 ruin-down-PL=PFV-go.PL.PFV
 'They all are spoiled.' JT (LFK_N:15)(=2.56c, 4.69d)
- b. <'o·ŋ'isiŋ>
 '-oo-**ŋ**-is=iŋ
 EP-DIR-PFV-shoot=DUR
 'You did shoot at him.' JT (LFK_N:173)(=2.55a)
- (48) Perfective *yin-* as *yw-*
 <tc'in'day^wo'de'liŋ>
 chin'-da=**yw**-oh-de'l=iŋ
 ruin-down=PFV-2PL.S-go.PL.PFV=DUR
 'You all are spoiled.' JT (LFK_N:15)(=2.56d)

4.6.2.3 *yees-* Perfective

The *yees-* perfective is cognate with Hupa *we:s* perfective. The examples from Li are few; however, it is clear that it has a number of forms according to the presence or absence of classifiers and whether the form is personal or impersonal. The forms are *yeesi-*, *yees-* and *yee-*. In personal forms marked with subject and no classifier, and impersonal forms with a classifier, the form *yeesi-* appears as in (49a-b). The form *yees-* appears without an /i/ as in (49d-g) in personal forms with first person singular subjects and classifiers. The form *yee-* is given with both personal and impersonal forms without classifiers, notably with second person singular subjects. The /s/ is lost, and syllables are formed either with a subject prefix as coda or classifier in an impersonal form.

(49) *yees-* perfective

yeesi-

a. <tc'itc' k'ε' na·diyε·si·'á'ɑŋ>
 chich=k'eh naa=di-**yeesi**-i-'á'=iŋ
 tree=follow linear=THM-PFV-1SG.S-stand=DUR
 'I have been standing like a tree.' JT (LFKN:139)

b. <tc'itc' k'ε' na·diyε·siŋ'á'ɑŋ>
 chich=k'eh naa=di-**yeesi**-ŋ-'á'=iŋ
 tree-follow linear=THM-PFV-2SG.S-stand=DUR
 'You have been standing like a tree.' JT (LFKN:139)

c. <biŋk'iε·sil'iŋ'>
 bi-n=ky'i-**yeesi**-l-'iŋ'
 3PPO-ADV=THM.O-PFV-CLS-conceive.PFV
 'She has got(ten pregnant, conceived a child).' JT (LFKN:213)

yees-

d. <biŋk'iε·sil'iŋ'>
 bi-n=ky'i-**yees**-i-l-'iŋ'
 3PPO-ADV=THM.O-PFV-1SG.S-CLS-conceive.PFV
 'I have gotten pregnant, conceived a child.' JT (LFKN:213)

e. <t'áε·sil'a'>
 tá=**yees**-í-l-'a'
 water=PFV-1SG.S-CLS-extend.PFV
 'I reached to water.' JT (LFKN:342)

f. <k'itc'o·y"ε·s-í-l-t'ε'>
 ky'i-ch'oo=**ywees**-i-l-te'
 THM.O-mad=PFV-1SG.S-CLS-be.PFV
 'I am mad.' JT (LFKN:165)

- g. <tc'εyε·s-í-l-'a'>
 ch'e=yees-i-l-'a'
 out=PFV-1.SGS-CLS-extend.PFV
 '*I stuck out (of a hole).' JT (LFK_N:265)
- ye-
- h. <tc'εyε·l-'a'>
 ch'e=yee-l-'a'
 out=PFV-CLS-extend.PFV
 'It stuck out.' JT (LFK_N:265)
- i. <bił yεyt'innij>
 bi-l=yε-i-tin=iη
 3PPO-with=PFV-1SG.S-handle.living.being.PFV=DUR
 'I have been laying with him(/her).' JT (LFK_N:339)
- j. <bił yε·nt'ij>
 3PPO-with=PFV-2SG.S-handle.living.being.PFV
 'You have been laying with him(/her).' JT (LFK_N:339)
- k. <bił yε·nt'in'nij>
 bi-l=yee-n-tin'n=iη
 3PPO-with=PFV-2SG.S-handle.living.being.PFV=DUR
 'You have been laying with him(/her).' JT (LFK_N:339)

Example (49i) demonstrates a form of disyllabification of short vowel /i/ (see 2.5.2.1) whereby /i/ is made the coda of diphthong to what was otherwise a long vowel form.

4.6.3 yi- Progressive

Besides a potential stem variant that usually has a stem-final /h/, progressive aspect is marked by progressive prefix *yi-* in position 3. The progressive aspect is similar to imperfective aspect in that it is unbounded, but is associated with motion and often is translated as motion 'along.' Progressive stem variants exist, but not all progressive forms have distinct stem variants. If immediately preceded by a vowel /o/, the progressive prefix is *ywi-* as in (50b). Passives may form using the progressive in part as well.

- (50) yi-Progressive
- a. <yictc'ε'ij>
 yi-sh-chéh=iη
 PROG-1SG.S-cry=DUR
 'I am crying along.' JT (LFK_N:190)

- b. <noy^wʼicbil>
 no=y^wi-sh-bit
 to.there=PROG-1SG.S-throw.several
 ‘I am throwing it down (along).’ JT (LFK_N:330)
- c. <tcʼiyíbaʼ>
 chʼi-yí-bah
 INDF.S-PROG-go.to.war
 ‘A war party is passing (along).’ JT (LFK_N:166)
- d. <kʼa=yístʼil>
 kʼaa=yí-s-tʼil
 so=PROG-1SG.S-do.PROG
 ‘I am doing that right along.’ JT (LFK_N:157)

4.6.4 yi- Passive

The progressive prefix (or a homophonous prefix in the same position) also appears to play a role in passivization, with or without object prefixes, glossed PASS. Li identified passivization through the use of a mode prefix in notecards 59-60, though identified with the perfective rather than progressive prefix. When preceded by a long vowel [oo], the passive appears as [w] as in (51d).

- (51) yi-Passives
- a. <kʼinaʼdiŋ yiDʼ yildzín yaʼniŋ>
 kinah=diŋ yit yí-l-dzín=yaʼniŋ
 uphill=LOC house PASS-CLS-see=they.say
 ‘Up the hill a house is seen.’ JT (LFK_T:41)(=3.98e)
- b. <kʼiyən kʼiyiliDʼ>
 kyʼi-yən=ki-yí-lit
 THM.O-about=THM-PASS-tell
 ‘story (that which is told)’ JT (LFK_V:48)(=5.9d)
- c. <ɛ·diyiley>
 ɛ-ee=di-yí-leɣ (ɛ-ee=di-yí-leh=i)
 RECP-against=THM-PASS-fight=(REL)
 ‘a fight’ JT (LFK_T:72)
- d. <kʼinlaʼ niyiʼantʼɛyaʼniŋ>
 kyinlaʼ ni-yí-an=teɣ=yaʼniŋ
 grass.game THM-PASS-handle.round=FUT=they.say
 ‘Grass game is going to be played they say.’ JT (LFK_T:61)(=6.14b)

- e. <no·^whík'ín>
 noo=^w-hík'=ín
 to.there=**PASS**-handle.mush.PFV=**DUR**
 'It is put down for soaking.' JT (LFK_N:224)(=2.49c)

4.6.5 'e- Inceptive

A prefix 'e- with an inceptive meaning is recording in the data. The surface form is a sequence <ɛ'ɛ> in forms, likely the result of a vowel process (see 2.5.2.3). This prefix 'e- in position 3 is used to indicate the beginning or initiation of an action or state. Li translated forms with this prefix as 'gets __,' 'commence __-ing,' or 'starts to __,' whereby if preceded by /i/ both vowels become /e/. In Hupa, a similar sequence /i'i/ becomes /e'i/ (Golla 1970:53), and in Wailaki, it may have carried across both vowels except in those forms in which the first vowel is not *i*- as in (52a). If the first prefix in the word, the inceptive requires an epenthetic peg syllable much like an imperfective form unmarked for mode as in (52d) and (52f).

- (52) 'e- Inceptive
- a. <k'ɛ'icba'ái>
 k'e=ⁱ-sh-ba'=ái
 ADV=**INC**-1SG.S-be.lucky.OPT=**OPT**
 'I'll (start to) get lucky.' JT (LFK_N:349)
- b. <k'ɛ'ɛsil>
 ke-'e-sil (<ki-'i-sil))
 AREAL-**INC**-warm
 'It gets warm.' JT (LFK_N:424)
- c. <t'ɛ'ɛtc'i'>
 te-'e-ch'i' (<ti-'i-ch'i'>
 off.along-**INC**-wind.blow.PFV
 'The wind gets blowing.' JT (LFK_N:425)
- d. <'ɛ'ɛnyáŋ>
 'e-'e-n-yáŋ' (<'i-'i-n-yáŋ'>
 EP-**INC**-2SG.S-eat.PFV
 'You commence eating.' JT (LFK_N:427)
- e. <yɛ'ɛyáŋ>
 ye-'e-yáŋ' (<yi-'i-yáŋ'>
 OBV-**INC**-eat.PFV
 'He commences eating.' JT (LFK_N:427)

- f. <k'ɑŋ'ε'εcilyé'>
 ky'ɑŋ 'e-'e-shí-l-yé' (<'i-'i-shí-l-yé')
 now EP-INC-1SG.S-CLS-like.PFV
 'I start to like him.' JT (LFK_N:428)

4.6.6 oo- Optative

Optative mode inflection indicates a wish or intention made by the speaker, and that the speaker desires the subject of the verb to carry out an action or process. An optative prefix *oo-* appears only in the various impersonal and 3rd person subject forms.

- (53) *oo-* Optative
- a. <t'ε'ó·tc'i'>
 te-'óo-ch'i' (<te-'i-oo-ch'i'
 off.along-INC-OPT-wind.blow
 'Let the wind blow.' JT (LFK_N:425)
- b. <yó·liŋ'>
 y-óo-liŋ' (<yi-oo-liŋ')
 OBV-OPT-tie
 'Let him tie (it) up.' JT (LFK_N:116)
- c. <k'a·k'o·lde'>
 k'aa=ky'-óo-l-deh (<k'aa=ky'i-óo-l-deh)
 so=THM.O-OPT-CLS-gamble
 'Let him gamble.' JT (LFK_N:163)
- d. <k'inó·t'o'>
 ky'i-n-óo-to'
 THM.O-THM-OPT-water.flow
 'Let it (water) come.' JT (LFK_N:129)

4.7 Distributive Prefix – Position 4

The distributive prefix *ti-*, *tee-* indicates that the verb stem's action is distributed across different locations, or possibly different subjects and/or objects, and is often translated as 'here and there.' It occurs to the left of modal prefixes and to the right of other conjunct adverbial prefixes, and is cognate with Hupa distributive. Golla (1970:115) considers the distributive to be semantically and historically related to a number of /t/-initial morphemes, including future enclitics *te* and *tel* and the adverbial prefix *ti-* 'off, along' in Hupa. The distributive has several forms. A long vowel form *tee-* appears in perfective forms. The *s-* perfective is otherwise unmarked in 3rd person perfective forms marked with the distributive as in (54b) and (54d). Li identified this prefix and an allomorph <hε:> *hee-* in notecard 74, writing 'probably a distributive prefix.' It's likely an allomorph <hi> also exists though unattested, as intervocalic alveolar aspirated stop /t/ loses its place of articulation and

becomes glottal fricative /h/, except after the vowel /o/ as in (54c). In (54f), the obviative *y*-also behaves as a vowel, triggering the allomorph as well.

- (54) Distributive Prefix
- a. <**t**'**i**cildäi'>
ti-shí-l-dai'
DIST-1SG.S-CLS-dance
 'I dance.'⁴¹ JT (LFK_N:201)
- b. <**t**'**ɛ**·sildäi'>
tee-s-i-l-dai'
DIST-PFV-1SG.S-CLS-dance
 'I danced.' JT (LFK_N:201)(=4.26a, 4.45b)
- c. <**t**'**ɛ**·ldäi'>
tee-l-dai'
DIST-CLS-dance
 'He danced.' JT (LFK_N:201)
- d. <ɬ·**hɛ**·silyíts'in>
 ɬ-ee=**hee**-s-i-l-yíts'in
 RECP-against=**DIST**-PFV-1SG.S-CLS-tie=DUR
 'I did tie up many.' JT (LFK_N:192)
- e. <no' **t**'**ɛ**·lík'>
 no='**tee**-lík'
 to.there=INDF.S-**DIST**-handle.mush.PFV
 'They put (mush) down here and there.' JT (LFK_N:224) (=2.15b)
- f. <no· **t**'**ɛ**·si·lík'in>
 noo=**tee**-si-i-lík'in
 to.there=**DIST**-PFV-1SG.S-handle.mush.PFV=DUR
 'I put it down here and there.' JT (LFK_N:224)(=4.1b)
- g. <**t**'**ɛ**·híd'>
tee-híd'
DIST-burn
 '*Here and there it burned.' JT (LFK_T:25)

⁴¹ Though confusable with the conjunct adverbial prefix *ti-*, Hupa verb themes for dancing include the distributive (e.g.) *ti-(s)-l-ton* 'dancing (with steps)' (Sapir and Golla 2001:295).

4.8 Conjunct Adverbial Prefixes – Position 5

Wailaki adverbial prefixes are located in both the conjunct and disjunct prefix zones. Most are found in position 11 in the disjunct zone (see 4.13) but a small number are found in position 5 apart from position 11. Each has a particular perfective prefix required as a part of its theme when inflected for perfective mode, and are cognate with Hupa prefixes in the same position and semantics, though with some differences as to behavior and allomorphy (i.e. adverbial prefix *ti-* ‘off, along’) Sapir and Golla 2001:783). Each are glossed ADV for space in examples except for *si-* ‘up’ and *ti-* ‘off, along.’ As form and semantics do not appear to differ from Hupa, translations in Table 30 are from Golla’s (1970:124-129) analysis of Hupa adverbials. The following are attested conjunct adverbial prefixes in position 5, with allomorphs in parentheses:

<i>Form</i>	PFV	Translation
di-	yin-	‘starting off from a rest position’
ni-	nin-	‘approaching, arriving’
ni-	yin-	‘striking suddenly’
si-	s-	‘up’
ti-(tee-)(hi-)	s-	‘(starting) off along’

Table 30. Conjunct Adverbial Prefixes

(55) Conjunct Adverbial Prefixes

di- Starting Off, From a Position of Rest

a. <diłtc’ε’>

di-l-ch’eh (<di-n-l-ch’eh)

ADV-(2SG.S)-CLS-open

‘You open it apart (hole, mouth, etc.).’

JT (LFK_N:264)

b. <diyıltc’ε’>

di-y-ı-l-ch’eh

ADV-PFV-1SG.S-CLS-open

‘I have opened it apart (hole, mouth, etc.).’

JT (LFK_N:264)

ni- Approaching, Arriving

c. <ninya>

ni-n-ya

ADV-PFV-go

‘He/she went.’

JT (LFK_T:31)

d. <no·nindé’liŋ>

noo=**ni-n-dé’l=ŋ**

to.there=ADV-PFV-go.PL=DUR

‘They (birds, etc) have lit down (landed).’

JT (LFK_N:161)

ni- Suddenly, Striking Once

- e. <nai'nicil^gyał>
 naa=**ni**-shi-l-yał
 linear=**ADV**-1SG.S-CLS-club.IPFV
 'I'll knock (acorns) down.' JT (LFK_N:240)

si- Up

- f. <yik'ik'a·sı·yai>
 yik'-i kaa=**si**-i-yai
 house-EP up=**up**-1SG.S-go
 'I climb up the house.' JT (LFK_N:41)

Short vowels of the conjunct adverbial prefixes above are lengthened in forms with the s- perfective (see 4.6.2.1), shown in (56b-d) and (56f-g) below. Like the distributive, s- perfective is unmarked in many 3rd person forms, as shown (56c); however, there are also many exceptions, as shown in (56d), and (56f-g). Sapir and Golla (2001:841) also note exceptions in Hupa whereby the adverbial prefix *ti-* 'off along' appears with the s- perfective, but in Hupa extension neuter themes. Its possible certain verb themes allow for the s- perfective and the adverbial prefix *ti-* to co-occur in forms. More work is needed on Wailaki verb themes to determine whether these verb theme distinctions exist in Wailaki, but are beyond the current scope of this work.

Also shown are examples where intervocalic alveolar aspirated stop /t/ becomes glottal fricative /h/ just as it does in the distributive. In (56d), the lengthened *tee-* is shown, while in (56e-f) resulting /h/-initial forms are shown.

(56) Conjunct Adverbial Prefix *ti-(s)*, *tee-(s)* 'off along'

- a. <t'iłk'et'>
 ti-l-ky'et'
off.along-CLS-set.fire
 'You set fire going along (start setting).' JT (LFK_N:269)
- b. <t'ε:sıłk'et'>
 tee-s-i-l-ky'et'
off.along-PFV-1SG.S-CLS-set.fire
 'You did set fire going along (start setting).' JT (LFK_N:269)
- c. <yit'ε:łk'et'>
 yi-tee-l-ky'et'
 OBV-**off.along**-CLS-set.fire
 'He did set fire going along (start setting).' JT (LFK_N:269)
- d. <k'it'ε's^gyıŋ>
 ky'i-tée-s-y-iŋ
 THM.O-**off.along**-PFV-pack.PFV
 'He packed it (meat) away.' JT (LFK_N:160)

- e. <na^yhi⁹ɣic>
na=y-**hi**-ɣish
REV=OBV-**off.along** -PFV-pack.IPFV
‘He will pack it back.’ JT (LFK_N:160)
- f. <na^yhɛ·s⁹ɣiŋ>
na=y-**hée**-s-ɣiŋ
REV=OBV-**off.along**-PFV-pack.PFV
‘He did pack it back (away here and there)’ JT (LFK_N:160)
- g. <ba·t⁹ɛ·syai>
baa **tée**-s-yái
ahead **off.along**-PFV-go.PFV
‘He went ahead.’ JT (LFK_N:200)

4.9 Thematic Prefixes – Position 6

A number of thematic prefixes with abstract semantics occur in position 6. The forms and general semantics appear cognate with Hupa thematic prefixes given by Golla (1970:137-145). Though abstract, Golla provides some semantic areas to which thematic prefixes can be described which I use in description of Wailaki thematic prefixes given below in Table 31. The number of classes is small, and some may require particular classifiers when a part of larger verb themes, as the prefix *di-* ‘refers to strong perception’ requires a thematic classifier *n-*. The following are attested thematic prefixes in position 6.

<i>Form</i>	CLS	Semantic Area
di-	--	refers to noise
di	--	refers to protrusion
di-	n-	refers to strong perception
ɫ- (l-)	--	refers to non-tactile descriptive qualities
ni-	--	refers to tactile descriptive qualities
ni-	--	refers to the mind and feelings
si-	--	refers to temporary or internal descriptive qualities
ki-	--	refers to knowledge and awareness

Table 31. Conjunct Adverbial Prefixes

Short vowels of conjunct adverbial prefixes are lengthened by the s- perfective (see 4.6.2.1). In addition, *ɫ-* becomes *l-* in an intervocalic environment.

(57) Thematic Prefixes

di- Refers to Noise

a. <k'idilbil>

ky'i-dí-l-bil (<ky'i-dí-n-l-bil)

THM.O-THM-(2SG.S)-CLS-play.flute.IPFV

'You play an instrument (the flute).'

JT (LFK_N:214)(=2.52b)

b. <disníŋ>

di-s-n=íŋ

THM-1SG.S-say=DUR

'I said.'

JT (LFK_N:122)(=4.31b)

di- Refers to Protrusion

c. <tc'itc' k'ε' na·do·'a'>

chich=k'eh naa=d-oo-'a'

tree=manner linear=THM-OPT-stand.OPT

'Let him stand like a tree.'

JT (LFK_N:139)

d. <tc'itc' k'ε' na·dic'a'>

chich=k'eh naa=di-sh-'a'

tree=manner linear=THM-1SG.S-stand.OPT

'I stand like a tree.'

JT (LFK_N:139)

di-n- Refers to Strong Perception

e. <dintc'aD'>

dí-n-chat

THM-CLS=pain

'pain'

JT (LFK_T:80)

f. <dink'otc>

dí-n-k'otc

THM-CLS=sweet

'sweet'⁴²

JT (LFK_T:80)

l-, l- Refers to Non-Tactile Descriptive Qualities

g. <ltc'i·d>

l-chiid

THM-red

'red'

JT (LFK_V:36)

⁴² The Hupa cognate form *dinq'och* 'salty, sour' (Sapir and Golla 2001:781) has a negative taste perception where the cognate form in Wailaki is positive and translated by Li as 'sweet.' Merriam records a similar translation across dialects for similar forms.

h. <Itc'iq>
I-chiq
 THM-black
 'black' JT (LFK_T:103)

i. <ItáItc'iq>
I-tá=**I**-chiq
 THM-spotted=THM-black
 'black-spotted' JT (LFK_V:40)

j. <dilbai >
 di-**I**-bai
 THM-THM-yellow
 'yellow' JT (LFK_V:34)

ni- Refers to Tactile Descriptive Qualities

k. <se·nt'ε·Itc'i'>
 see=**n**-teel=tcí'
 stone=THM-flat=DIM
 'money (little flat stone)' JT (LFK_T:61)

l. <nick'áy>
ni-sh-kyáy
 THM-1SG.S-large
 'I am large, big.' JT (LFK_N:132)(=2.17b, 2.77b, 6.6d)

m. <ŋk'áG'>
ŋ-kyá-k
 THM-big-ADV
 'lots, many' JT (LFK_N:132)(=2.26e, 6.33b)

ni- Refers to Mind, Feelings

n. <ni ~ nε'>
 ni-, nee-
 'refers to mind' JT (LFK_N:80)

o. <nis'iq>
ni-s-siq
 THM-1SG.S-think
 'I think.' JT (LFK_T:80)

p. <ncoŋ>
n-shoŋ
 THM-good
 'good, beautiful' JT (LFK_T:80, 41)

- q. <k'ɑ·nɛ·sí·t'ɛ'>
 kaa=**nee**-sí-i-te'
 up.out=**THM**-1SG.S-look.for.PFV
 'I have hunted (searched) for it.' JT (LFK_N:159)(=4.45h)

si- Refers to Temporary or Internal Descriptive Qualities

- r. <st'ɪŋ>
 s-tiŋ
THM-cold
 'cold' JT (LFK_N:103)
- s. <k'ist'ɪŋ>
 ki-s-tiŋ
 AREAL-**THM**-cold
 'It is cold (weather).' JT (LFK_N:426)(=2.65a, 4.39b)
- t. <sdiyánntciŋ>
 s-di-yán=n-chiŋ
THM-CLS-old=**THM**-kind
 'old woman' JT (LFK_T:46)
- u. <tc'ɛ·gtc'ɪŋ siyilyin>
 ch'eeg=chiŋ si-yi-l-yin
 woman=kind **THM**-PASS-CLS-kill
 'The woman was killed.' JT (LFK_T:46)

ki- Refers to Knowledge and Awareness

- v. <ya'k'fliD'>
 ya='-kí-lit
 PL=INDF.S-**THM**-tell
 'They tell.' JT (LFK_N:127)
- w. <k'ik'ó·ni·'>
 ky'i-k-oo-niih
THM.O-**THM**-OPT-think.OPT
 'knowledge (let them/him think it?)' JT (LFK_T:73)

4.10 Object Prefixes – Position 7, 11

Transitive verbs are often inflected for direct object through a set of conjunct prefixes in position 7.

Form	Gloss
shi-, s-, sh-	1SG.O
ni-, n-	2SG.O
ŋho(h)-	1/2PL.O
(unmarked)	(3O)
kii-	INDF.O
ky ^ʔ i-, ^ʔ -	THM.O
ɫ-	RECIP, reciprocal
^ʔ aa=(di-)	REFL, reflexive

Table 32. Wailaki Object Prefixes

Transitive verbs that are 3rd persons acting on 3rd objects are inflected for an obviative prefix that does not co-occur with any object prefixes. In addition, 3rd person objects are generally unmarked, though indefinite object and thematic object prefixes are also attested and used for 3rd person objects in particular contexts.

For indirect object inflection in the disjunct zone, prefixes used resemble those in position 7, except 3rd person is marked by *bi-*. In this way, indirect object prefixes resemble nominal possessive prefixes, and postpositional object prefixes (see 4.13).

4.10.1 *shi-* 1st Person Singular Object Prefix

- (58) *shi-* 1st Person Singular Object
- a. <tc'in'da·cɪlt'εç>
 chin^ʔ-daa=**shí**-ɫ-tesh (< chin^ʔ-daa=shí-n-ɫ-tesh
 ruin-down=**1SG.O**-(2SG.S)-CLS-handle.living.being.IPFV
 'You spoil me.' JT (LFKN:128)
- b. <nincohólt'ic>
 nin=**sh**-ohó-l-tish
 off.ground=**1SG.O**-2PL.S-CLS-handle.living.being.IPFV
 '(You all) take me up!' JT (LFKN:177)(=3.77)
- c. <naçné·lai>
 na=**sh**-née-lai
 ADV=**1SG.O**-THM-touch
 'It touched me.' JT (LFKN:219)

- d. <nins·iltc‘íniŋ>
 nin=s-si-l-chin=iŋ (< nin=s-si-n-l-chin=iŋ)
 off.ground=1SG.O-PFV-(2SG.S)-CLS-make=DUR
 ‘You have taken me up.’ JT (LFK_N:177)

4.10.2 *ni-* 2nd Person Singular Object Prefix

- (59) *ni-* 2nd Person Singular Object
- a. <tc‘in’da·nicílt‘i’>
 chin’-daa=**ni**-shí-l-ti’
 ruin-down=2SG.O-1SG.S-CLS-handle.living.being.OPT
 ‘I’ll spoil you.’ JT (LFK_N:128)
- b. <nanniyí·lai’>
 na=**n**-ni-yí-i-lai
 ADV=2SG.O-THM-PFV-1SG.S-touch.PFV
 ‘I touched you.’ JT (LFK_N:219)(=4.1d)
- c. <no·ŋk‘icílna’>
 noo=**n**-ki-shí-l-na’
 to.there=2SG.O-THM-1SG.S-CLS-save
 ‘I save you.’ JT (LFK_N:135)

4.10.3 *nhoh-* 1st and 2nd Person Plural Object Prefix

1st and 2nd person plural objects are both indicated by a prefix *nhoh-* in position 7, cognate with Hupa 1st and 2nd person plural object prefix *noh-* (Sapir and Golla 2001:829). An allomorph *nhoh-* also occurs in (60a).

- (60) *nhoh-* 2nd Person Plural Subject
- a. <na·’**nhoh**‘dil’iŋ>
 naa=’-**nhoh**-di-l-’iŋ
 linear=INDF.S-2PL.O-THM-CLS-look.IPFV
 ‘They look at us.’ JT (LFK_T:28)
- b. <ya’**nhoh**‘t‘ítc‘iD’>
 ya=’-**nhoh**-tí-chit
 PL=INDF.S-2PL.O-DIST-guess
 ‘They (indefinite) guess us.’ JT (LFK_T:60)(=4.1e)

4.10.4 Unmarked 3rd Person Object

A 3rd person object is unmarked as in (61).

- (61) *Unmarked 3rd Person Object*
- a. <'ick'ʌŋ>
 'i-sh-ky'ʌŋ
 EP-1SG.S-hit.OPT
 'I'll hit him/her/it.' JT (LFK_N:291)(=2.13b, 4.29i)
- b. <tc'in'dacilt'ε'>
 chin'-daa=shí-l-te'
 ruin-down=1SG.S-CLS-handle.living.being.OPT
 'I'll spoil him, let me spoil him.' JT (LFK_N:128)

4.10.5 *kii*- Indefinite 3rd Person Object Prefix

Though rare in the documentation, a 3rd person indefinite object prefix is attested and occurs in (62a-c), with (62b) also featuring templatic reordering with a plural prefix (see 4.2). Example (62a) with the indefinite 3rd person object prefix is translated with an object 'general them' by Li, and may be compared with (62d) with an unmarked third person object translated 'one.'

- (62) *Indefinite 3rd Person Object*
- a. <'a·k'i·ní·la'>
 'aa=**kii**-ní-i-lah
 so=**INDF.O**-PFV-1SG.S-do
 'I did (so) to (general) them.' JT (LFK_N:321)(=4.69a)
- b. <na·**ki**a'díl'iq'>
 naa-**ki**-a='-di-l-'iq'
 ITER-**INDF.O**-PL=**INDF.S**-THM-CLS-look
 'People look at them people.' JT (LFK_N:278)
- c. <na·**k**'iidíl'inya'niq'>
 naa=**kii**-dí-l-'in=ya'niq'
 linear=**INDF.O**-THM-CLS-look=they.say
 'They look at them.' JT (LFK_T:28)
- d. <'a·ní·la'>
 'aa=ní-i-lah
 so=PFV-1SG.S-do
 'I did it to one.' JT (LFK_N:321)

- e. <na·'díl'íŋ >
 naa='-dí-l-'íŋ
 linear=INDF.S-THM-CLS-look
 'People look at him.'
 JT (LFKN:278)

In (62b-c) the objects are translated as 'them,' with the prefix, and in (62e) an unmarked third person object occurs. The indefinite 3rd person object prefix in this way is often translated as a plural. The form in (62b) also demonstrates a 3rd person indefinite subject acting on a 3rd person indefinite object. A 3rd person subject acting on a 3rd person object is usually indicated by the obviative prefix *yi-*, but if indefinite, these prefixes may be used. The obviative is restricted to 3rd person subject acting on a 3rd person objects to the exclusion of any other object marking.

4.10.6 *ky'i-* 3rd Person Thematic Object Prefix

Thematic object prefix *ky'i-* is common in verbs and appears in position 7. Its allomorph *'-* occurs when preceded by a disjunct prefix. The original palatalization of *ky'i-* however often colors the preceding vowel, making it a diphthong ending in [i] before the glottal stop *'-* or *'i-* allomorph prefix, a phonological process also found in Hupa observed by Gordon (2001).

- (63) 3rd Person Thematic Object Prefix
- a. <**k'**íla' >
ky'i-la
 THM.O-catch.deer.OPT
 'He will catch lots (of deer).'
 JT (LFKN:119)
- b. <**k'**ít'icílyiD' >
ky'i-ti-shí-l-yit
 THM.O-off.along-1SG.S-CLS-build.IPFV
 'I build a stone fence.'
 JT (LFKN:142)
- c. <se·'ít'icílyiD' >
 see='**i**-ti-shí-l-yit
 stone=THM.O-off.along-1SG.S-CLS-build.IPFV
 'I build a stone fence.'⁴³
 JT (LFKN:142)
- d. <nái'ít'o·' >
 nái='**i**-t'oo
 ADV=THM.O-set.snare
 'He sets a snare.'
 JT (LFKN:115)

⁴³ Some compound elements (e.g. *see* 'stone' appear to trigger the allomorphy.

4.10.7 *li-* Reciprocal Object Prefix

Reciprocal object is indicated by a prefix *li-* and specifies that a subject acts on an object that is also acting on the subject. In Hupa, a cognate reciprocal prefix *li-* also requires an additional *n-* prefix in animate third person subject contexts, a category that does not exist in Wailaki, but whose cognate form prefix *ch'i-* indicates indefinite subjects (Sapir and Golla 2001:830). In addition, the reciprocal causes shifts in classifiers. Though examples in Li's documentation are few, this is an area of possible further research with Goddard's materials that require reconstruction of forms.

- (64) Reciprocal Object Prefix
- a. <ɫɪnt'á·c>
li-n-táash
 RECP-ADV-like.IPFV
 'they come together' JT (LFK_N:397)
- b. <ɫ'ɔnɫidíl^sɣɛ·'>
 kyan=**li**-dí-l-yee
 ADV=RECP-1PL.S-CLS-like.IPFV
 'We like each other.' JT (LFK_N:374)
- c. <ɫ'ɔnɫohól^sɣɛ·'>
 kyan=**l**-ohó-l-yee
 ADV=RECP-2PL.S-CLS-like.IPFV
 'You all like each other.' JT (LFK_N:374)
- d. <ɫ'anya·ɫɪl^sɣɛ·'>
 kyan-yaa=**li**-l-yee
 ADV-PL=RECP-CLS-like.IPFV
 'They like each other.' JT (LFK_N:374)
- e. <ɫiyídiyɔŋ>
li-yí-dí-yaŋ
 RECP-PROG-1PL.S-kill.several.IPFV
 'We kill each other.' JT (LFK_N:376)
- f. <yá·ɫiyɔŋ>
 yáa=**li**-yaŋ
 PL=RECP-kill.several.IPFV
 'They kill each other.' JT (LFK_N:376)
- g. <ɫc'iyaŋ>
l-ch'i-yaŋ
 RECP-INDF.S-kill.several.IPFV
 'Killing each other (indefinite).' JT (LFK_N:376)

4.10.8 'aa=di- Reflexive Object

Reflexive object is indicated by a prefix complex 'aa=di- that specifies a subject is acting on an object that is itself. For reflexive object inflection, the first prefix 'aa= is a disjunct prefix immediately followed by di-, cognate with Hupa reflexive object 'a:=di- (Sapir and Golla 2001:831). Though the position of the reflexive object is partially or perhaps entirely in the disjunct zone, I include it this section as an object prefix. Li identified the reflexive object in notecard 24 as prefix in (65a). In (65c-d), both elements in the prefix precede adverbial naa= prefixes, and in (65e), it precedes a plural prefix which appears to lengthen and harmonize the short vowel in the element di-.

- (65) Reflexive Object
- a. <ʔa·di>
 'aa=di
 REFL
 'reflexive (self)' JT (LFK_N:24)
- b. <tc'ε·G' 'a·dictc'in'kaŋ>
 ch'eek '**aa=di**-sh-chiŋ'=kaŋ (<'aa=di-si-l-chiŋ'=kaŋ)
 woman REFL=THM-PFV-(CLS)-make=EVID?
 'Woman he makes himself.' JT (LFK_T:29)(=6.9a)
- c. <'a·dina't'ε·ldzai'>
 '**aa-di**-na='-t'ée-l-dzai'
 REFL-THM-ADV=INDF.S-DIST-CLS-dry
 'They all dried themselves.' JT (LFK_N:24)
- d. <se·'a·dinai'icilyiD'>
 see '**aa-di**-nai='i-shilyit'
 stone REFL-THM-around=THM.O-1SG.S-CLS-build
 'I build a stone fence around myself.' JT (LFK_N:142)
- e. <'a·da·yai'ihilyiD'>
 '**aa-daa**-yai='i-hí-l-yit'
 REFL-THM-PL=THM.O-DIST-CLS-build
 'They build themselves a fence.' JT (LFK_N:142)

4.11 Plural Prefix – Position 9

A plural prefix yaa= occurs in position 9 as a disjunct prefix, and from attested forms, indicates plurality of subject, and is also used in forms that are translated by Li as both plural subject and object. Wailaki plural prefix ya= is cognate with Hupa plural prefix that may indicate plurality of subject, direct object, and indirect object, with the pronominal category it modifies made clear by context (Sapir and Golla 2001:832). The forms in (66a-e) are plural subject, while it is somewhat ambiguous as to whether the plural prefix in forms in (66f-h) is indicating plural subject or object. No particular attested forms appear to indicate

plural object without plural subject. Whether the plural prefix can indicate plural object exclusive of plural subject, or plural indirect object is an area for future study if forms can be attested in Goddard's notebooks.

As for form, a short vowel *ya*= appears when followed by a 3rd person indefinite subject prefix ' (i.e. *ch'i-*) as in (61b), while a diphthong *yai*= may occur when followed by a thematic object prefix ' (i.e. *ky'i-*) as in (61d). The plural prefix also appears as a superscript <^a> in Li transcriptions, which I transcribe as a superlong vowel /aaa/ if preceded by /aa/ in (66e) and (66g-h).

(66) Plural Prefix

Plural Subject

a. <yá·tc'ε'>
yáa=chēh
PL=cry
 'They cry.'
 JT (LFK_N:190)(=4.41b)

b. <ya'k'il'a'>
ya'=ky'i-l-'a
PL=INDF.S-THM.O-CLS-work
 'People work.'
 JT (LFK_N:370)(4.38f)

c. <yai'p'a'>
yai'=l-'aa
PL=THM.O-CLS-work
 'They work.'
 JT (LFK_N:370)(=4.38g)

d. <kε·a·le'inj>
 kyee-**yáa**=le'=inj
 THM-**PL**=sing=DUR
 'They did sing.'
 JT (LFK_N:144)

e. <t'á:^anac >
 táa-**a**=nash (< táa-**a**=n-yash)
 into.water-**PL**=DHM-go
 'They will go into water.'
 JT (LFK_N:146)

Plural Subject and Object

f. <ya'ila'>
yá'=i-la
PL=INDF.S-catch.deer.OPT
 'They will catch lots (of deer).'
 JT (LFK_N:119)

g. <sa·^aytdiliŋ>
 sáa-**a**=y-l-dil=inj
 into.mouth-**PL**=OBV-CLS-eat.bits=DUR
 'They eat, put (bits) into mouths.'
 JT (LFK_N:156)

- h. <yá·^ayldil>
 yáa-a=y-dil
 up-PL=OBV-CLS-throw.several
 ‘They throw them up.’ JT (LFKN:161)

4.12 Iterative, Reversative Prefixes – Position 11

A disjunct prefix *naa=* in position 10 indicates either the repetition of an action or the reverse of a motion. Li identified the iterative prefix in notecard 77 in (67a). Its occurrence with classifier *d-* in the reversative is also noted in the same card, though misidentified as modal. Reversal of motion requires classifier *d-* and with secondary themes, may result in a compound classifier. The iterative form of *naa=* matches semantics with a proclitic that may appear with nouns meaning “again.”

- (67) Iterative *naa=*
- a. <na ~ na·>
 ITER
 ‘again, repetitive’ JT (LFKN:77)
- b. <nái’iltc‘i·‘>
 nái=’i-l-chiih (< nái=’i-n-l-chiih)
 ITER=THM.O-(2SG.S)-CLS-make
 ‘You make it again.’ JT (LFKN:137)
- c. <ba· na·na’icilgiDj>
 b-aa naa-na=’i-cí-l-gij
 3PPO-for ITER-around=THM.O-1SG.S-CLS-cook.on.coals
 ‘I’ll cook it (i.e. stir on coals) again for him’ JT (LFKN:332)
- d. <no·nándiyiq>
 noo-ná=n-di-yiq
 to.there-ITER=ADV1PL.S-pack.things
 ‘We put things down again.’ JT (LFKN:317)
- (68) Reversative *naa=...di-*
- a. <na·ni·diyá·η>
 naa=n-ii-di-yáa=η
 REV=ADV-1SG.S-CLS-go=DUR
 ‘I came back.’ JT (LFKN:117)(=2.59d)
- b. <na’ndaç>
 na=’n-dash (< na=’n-di-yash)
 REV=INDF.S-THM-(CLS)-go
 ‘People come back.’ JT (LFKN:117)

The long vowel of *naa=* in the iterative/reversative may be shortened in certain contexts – when preceded by another disjunct prefix as in (68d), and before glottal stop as in the the 3rd indefinite subject prefix allomorph /ʔ/ in (68b).

4.13 Other Disjunct Prefixes – Position 11

Other disjunct prefixes include adverbial and thematic derivational prefixes that occur in position 11. Adverbial modification in general can consist of a conjunct prefix, a disjunct prefix, or a combination of the two, including two adverbial disjunct prefixes. Some disjunct prefixes take also take indirect object inflection, indicated by *P-*.

According to Golla (1996:372), 30 or so adverbial prefix constructions and 10 or so thematic prefixes occur in the disjunct zone in Hupa. A similar number could be expected for Wailaki. Both the adverbial and thematic disjunct prefixes are glossed either according to particular meanings in this work if discernable (e.g. *kaa=* ‘so’, *P-ee=* ‘against’, etc.) or ADV if unknown or to save space in glosses. Complete identification, listing, and description of each is beyond the scope of this work, along with their effect and influence in the derivation of particular primary or secondary verb themes, though some common and discernable adverbial and thematic prefixes from Li’s documentation are discussed.

The following will discuss some common disjunct prefixes in position 11, many that appear cognate with prefixes in Hupa identified by Golla (1970:124), apart from plural and iterative/reversative prefixes in positions 9 and 10. Indirect object inflection also occurs in the disjunct prefix zone, and is discussed wherein. Some particular adverbial/thematic prefixes in position 11 require indirect object inflection, marked as *P-*. Discontinuous conjunct prefixes that are required by an adverbial prefix, if known, are indicated after the disjunct marker <=> (e.g. *kaa=n-*).

Table 33 attested disjunct prefixes in position 11, representing a sample of the prefixes that potentially may occur in this position. Their interaction with other thematic and/or adverbial prefixes, as well as perfective prefix variants require further analysis. Other prefixes that occur in this position may be glossed ADV and also require further analysis.

Form	Gloss	Translation
'aa=	'so'	'thus, so (adjectival)'
P-e(e)=	against=	'against, touching, along, in concern of'
ch'ee=	out=	'out, away'
chin'-dá=	ruin-down=	'to spoil'
ch'oo=	weak=	'weak, lazy, mad'
dah=	on.top=	'above, on top'
dee=di-	into.fire=	'into the fire'
jee=	apart=	'split/move apart'
kaa=n-	up.out=THM	'up, out from behind or under, visible'
k'aa=	so=	'so, this way, that way (adjectival)'
naa=	around=	'non-directional motion'
naa=	linear=	'linear motion'
nin=	off.ground=	'off the ground'
ni-naa=	rise-linear	'rise linear from a rest position'
noo=	to.there=	'to a point, (put) down, completion'
P-saa=	into.mouth=	'into P's mouth'
taa=	into.bits=	'into pieces, disperse bits'
taa=	into.water/fire= out.water/fire=	'into the water/fire" "out of the water/fire"
yaa=	up=	'upwards, towards the sky'
yeh=	into=	'into house, enclosure, container'
O-oo=	DIR=	'action is directed at P-'

Table 33. Adverbial/Thematic Prefixes in Position 11

- (69) Directional Adverbial/Thematic Disjunct Prefixes
- a. 'aa=kii-ní-i-lah <'a·k'i·ní·la'>
so=INDF.O-PFV-1SG.S-do
'I did (so) to (general) them.' JT (LFK_N:321)(=4.62a)
- b. b-ee=s-í-l-t'oŋ' <bɛ·sít'oŋ'>
3PPO-against=PFV-1SG.S-CLS-jump
'I jump up (against) the tree.' JT (LFK_N:244)
- c. ch'é=l-'ai <tc'él'ai>
out=CLS-extend
'It is stuck out of a hole.' JT (LFK_N:265)
- d. chin'-da-aa=n-del' <tc'in'da·andel'>
ruin-down-PL=PFV-go.PL.PFV
'They all are spoiled.' JT (LFK_N:15)(=2.56c, 4.47a)

- e. **ch'oo**=n-dá'=aŋ <**tc'o·ndá'**aŋ>
weak=THM-be.lazy.PFV=DUR
 'He was lazy.'
 JT (LFK_N:352)
- f. **dah**=dí-sh-ch'ish <**da'dicte'**ic>
on.top=THM-1SG.S-cover
 'I put the hide over me.'
 JT (LFK_N:216)
- g. **dee**=dí-yí-l-ts'it <**dε·diyí**lts'id'>
into.fire=THM-PFV-CLS-fall
 '*He fell into the fire.'
 JT (LFK_N:238)
- h. **káa**=nash (< **káa**=n-yash) <**k'a·nac**>
up.out=THM-go
 'It comes up (in sight from behind hill).'
 JT (LFK_N:162)
- i. **k'ai**=y-óo-nih <**k'aiyó·ni'**>
so=OBV-OPT-think
 'Let him think that.'
 JT (LFK_N:191)
- j. **nin**=s-i-tái'n=t'ehŋ <**ninsit'ái'**nt'εⁿ>
off.ground=1SG.S-handle.stick.PFV=IPFV
 'I pick(ed) it up some time ago.'
 JT (LFK_N:344)(=2.29b)
- k. **ni-naa**=sí-i-di-ge' <**nina·sí·dige'**>
rise-linear=PFV-1SG.S-CLS-get.up
 'I got up.'
 JT (LFK_N:257)(=2.75)
- l. **noo**=ky'-óo-got <**no·k'ó·GoD'**>
to.there=THM.O-OPT-poke.in
 'Let him stick it in (arrows, etc).'
 JT (LFK_N:175)
- m. **sa**=l-díl-iŋ (< **sa**=n-l-díl=iŋ) <**sa**l'díliŋ>
into.mouth=(2SG.S)-CLS-eat.bits=DUR
 'You eat (little things, put into mouth).'
 JT (LFK_N:156)
- n. **táa**=l-kats' (< **táa**=n-l-kats') <**t'á·lk'ats'**>
into.bits=(2SG.S)-CLS-bite
 'You bite.'
 JT (LFK_N:280)(=4.25g)
- o. **ta**=i-l-ch'ai' <**t'áylt'**ai'>
into.water=1SG.S-CLS-hop
 'I did hop into the water like a frog.'
 JT (LFK_N:158)(=2.47c)

- | | | |
|----|--|--|
| p. | ya =l-tonʔ (< ya=n-l-tonʔ)
up =(2SG.S)-CLS-jump.IPFV
‘You jump.’ | <yaltʔonʔ>
JT (LFK _N :182)(=2.52a) |
| q. | yeh =yi-yáa=yaʔniŋ
into =PFV-CLS-go=they.say
‘In(to) (the house) he(/she) went.’ | <yεʔiyá·yaʔniŋ>
JT (LFK _T :41) |
| r. | ʔ- oo -yáa=ʔis
EP- DIR -PL=shoot
‘They shoot at him.’ | <ʔo·yá·ʔis >
JT (LFK _N :173) |

4.14 Conclusions and Future Research

While it can be said that the heart of any language may lie in its verbs, it would seem that it is especially true of Dene languages whose polysynthetic and complex verb structures are often the most fascinating part of the language to researchers.

Overall, I find Wailaki verb structure to closely resemble Hupa verb structure, but to differ in a few key ways. The first is in the phonological interactions between classifiers and neighboring prefixes. Wailaki verbs feature D-effects that are easily recognizable and were noted by Li in his verb stem list, though not exhaustively. Also, where Hupa verbs delete classifier *l-* in certain contexts, Wailaki appears to retain the classifier. Second, decidedly absent in the documentation is a customary aspect found in Hupa, though considered innovative in Hupa. I am curious if it is at all present in dialects further north such as Nongatl. Third, Wailaki is conservative in retaining many of the categories of third person subject and object prefixes, including the obviative. Future study would also examine further adverbial disjunct prefixes and their requirements of conjunct prefixes in adverbial modification.

Beyond the scope of the current work, this chapter does not examine verb themes in detail. My cursory remarks would be that many pattern with Hupa verb themes. Future study would include comparison of Hupa verb themes with Li’s verb forms to attempt an exhaustive list of Wailaki verb themes and verb theme types from the documentation. In particular, classificatory verb stems sets need examination and description. Common to the family are verb themes that refer to the motion, position, or handling of classes of entities (e.g.. round, stick-like, flat, container, granular, or doughy things, also beings), whereby if asked to ‘pick it up’ in Hupa, one would have to attend to the shape or quality of the object described in the verb stem to now what ‘it’ is (Sapir and Golla 2001:851-852). Further comparison with Kato would also be of benefit to all topics discussed regarding the verb, though requiring reconstruction of Goddard Kato materials.

5 NOMINAL MORPHOLOGY

5.1 Overview

This chapter discusses the various morphological types of nouns, and other aspects of nominal morphology. Nouns can be a stem, an affixed stem, a stem compound, or derived from verbs or verb phrases. Nouns can also be divided into primary and secondary noun categories as in Sapir and Golla (2001:85). Two formal classes of nouns otherwise exist in Wailaki based on inflection for possession – alienable and inalienable nouns. The majority of nouns in Wailaki are alienable nouns that can appear with or without inflection for possession, while inalienable nouns appear to require possessive prefix inflection and are generally kinship and body part terms. Inflection for possession is marked by possessive prefixes that are identical to postpositional and indirect object prefixes. A small number of nouns can also be inflected for plural number. While the majority of nouns are not inflected for number, a plural prefix is sometimes used, and a handful of stems referring to people encode plural subjects. Other affixes include dependent compound noun stems and locative suffixes.

In this chapter, I survey noun types in 5.2, discussing primary (5.2.1) and secondary (i.e. derived) nouns (5.2.3), with dependent compound noun stems (5.2.2) also discussed following primary nouns. After secondary nouns, alienable and inalienable noun classes are discussed (5.2.4). In 5.3, possessive prefixes are described. In 5.4, I describe a plural prefix with limited distribution, and in 5.5. I investigate the topics of borrowing and lexical innovation that occurred after the mid-19th century.

5.2 Noun Types

5.2.1 Primary Nouns

Primary nouns are nouns that are not derived from verbs and verb phrases, and are either a stem, an affixed stem, or are compounded from two or more stems. Nouns that are simple noun stems are often monosyllabic, and are most likely to be cognate with nouns in other Dene languages. Nouns that are minimally a stem have also been called stem nouns in Navajo (Young, Morgan and Midgette 1992: 961) and Slavey (Rice 1989:161). Examples in Wailaki include the following:

Noun	Form	English	Source
too	<t'o·'>	water	JT (LFK _T :87)
kosh'	<k'oc'>	berry	JT (LFK _V :44)
koŋ'	<k'óŋ'>	fire	JT (LFK _T :87)
chich	<tc'itc'>	wood, tree	JT (LFK _V :36)
jiŋ	<djiŋ>	day	JT (LFK _V :43)
look'	<lo·k'>	salmon	JT (LFK _V :48)
t'oh	<t'ó'>	grass	JT (LFK _T :87)
ne'	<ne'>	earth, land	JT (LFK _T :88)
lit	<liD'>	smoke	JT (LFK _T :105)
yas	<yas>	snow	JT (LFK _V :56)
see	<sé·'>	stone, rock	JT (LFK _T :87)
ts'ii	<ts'i·'>	stick	JT (LFK _T :87)
ts'iŋ	<ts'iŋ>	bone	JT (LFK _V :35)
ch'ahal	<tc'ahal>	frog	JT (LFK _T :108)
dilbil	<dilbil>	flute	JT (LFK _V :34)
laashe'	<la·ce'>	buckeye	JT (LFK _V :47)

Table 34. Monomorphemic Primary Nouns

A small number of related noun and verb stems are shown in Table 35. Li includes a note on the verb stem <si'> 'to make dizzy' that it is "denominal," but otherwise does not indicate the process by which it becomes a verbal stem. While these stems appear related in form and semantics, most noun and verb stems are distinctive. Forms for 'fever, to sweat' and 'house, to build a house' bear resemblance to light/heavy form stems in Hupa, whereby verb stem forms without a relative enclitic are "light" and verb stem forms in a relative clause with the relative enclitic are heavy (Sapir and Golla 2001:822). The historical presence of the relative enclitic conditions changes in the verb stem, causing it to become 'heavy,' which include vowel lengthening, and changes from stem-final /ʔ/ to /l/. In Hupa, this distinction was grammaticalized, and the morphological status of verbs determines stem shape more than syntactic position or status.

Form (N, V)	Li (N, V)	English (N, V)	Sources
yas	<yas>	‘snow, to snow’	JT (LFK _V :56, 31)
dik’oŋ, k’oŋ’	<dik’oŋ, k’oŋ’>	‘pimples, to have pimples’	JT (LFK _V :46, 18)
k’ah	<k’a’>	‘fat, to be fat’	
chek’, shek	<tcək’, cək’>	spittle, to spit’	JT (LFK _V :36, 25)
chaŋ, chiŋ’	<tc’aŋ, tc’iŋ’>	‘excrement, to defecate’	JT (LFK _V :36, 6)
si’	<si’>	‘head, to make dizzy’	JT (LFK _V :52, 21)
sil, sił	<sil, sił>	‘fever, to sweat’	
chit	<tcid’>	‘dry grass, to break off a branch’	JT (LFK _V :37,6)
yíit, yit	<yí·D’, yid’>	‘house, to build a house’	JT (LFK _V :57,32)

Table 35. Related Noun and Verb Stems

A small number of stems in Wailaki kinship terms have plural stem variants that contrast in vowel length with singular stem variants. In (1a), a form meaning ‘my grandchild (woman speaking)’ with a short vowel contrast with the form in example (1b) meaning ‘my grandchildren (woman speaking).’ The plural stem variant in (1b) features a long vowel ending in an offglide /aay/ or /aai/, while the singular stem variant in (1a) features a diphthong /ai/ or /ay/. Though examples are few in Li’s documentation, similar forms that differ in number indicated by the stem with vowel length can be examined from Goddard.

(1) Plural Stem Variants

- a. <ctc’aite’i’>
sh-**chai**-tci’
1SG.POSS-**grandchild**-DIM
‘my grandchild (woman speaking)’ JT (LFK_T:113)
- b. <ctc’a·yite’i’>
sh-**chaay**-i-tci’
1SG.POSS-**grandchildren**-EP-DIM
‘my grandchildren (woman speaking)’ JT (LFK_T:113)
- c. <bo·niŋ>
b-**ooniŋ**
3POSS-brother
‘his/her older brother’ JT (LFK_T:111)
- d. <co nag gat tce>
*sh-**ooniŋ**-i-tci’
1SG.POSS-**brother**-EP-DIM
‘my brother’ CJ (PG_T:3.36)

- e. <co nɛ gɛ yɑt tɕɛ>
 *sh-ooniiŋiiy-i-tci'
brothers-EP-DIM
 'my brothers'

CJ (PG_T:29.66)

Goddard's use of <ɑ> indicates a short vowel while other vowels may be long. Other plural stem variants can be found for 'brothers' in (1e). In Hupa, a small number of people nouns have plural variants also distinguished in part by vowel length; however, *k'isdiya:n* 'elder' and *tsumehstl'o:n* 'woman' with singular variants possess long vowels, while *k'isdiyun* 'elders' and *tsumehstl'on* 'women' as plural variants with short vowels (Sapir and Golla 2001:179, 280, 768). In Wailaki, the plural variant appears to be indicated by long vowels.

Elements involved in compound nouns formation include independent stems as in (2a-c), and dependent stems, which include the non-initial stems in (2d-e). The example in (2d) includes a dependent compound noun stem that only appears in compound nouns (see 5.2.2), while the example in (2e) includes a dependent noun stem 'skin' that outside of this construction, is inalienably possessed and requires a possessive prefix.

(2) Primary Nouns

Independent Stem Compounds

- a. <nɛ'yí·d>
 ne'=yiit
 earth-house
 'sweathouse' JT (LFK_T:106)
- b. <t'o·'ɑ'tɕ'ɛ·G'>
 too='ah=ch'eeek
 water-cloud-girl
 'Cloud Girl' JT (LFK_T:56)
- c. <si^ɛγá'>
 si=γá'
 head=hair
 'hair (head)' JT (LFK_T:89)

Dependent Stem Compounds

- d. <t'ɛ'-tciŋ>
 t'ɛ'-chiŋ
 blanket-kind
 'feather blanket' JT (LFK_V:55)
- e. <'intɕ'ɛ' sɪts'>
 'inch'e'-sɪts'
 deer-skin
 'deerskin' JT (LFK_T:53)

Example (2e) differs from what are otherwise noun phrases in that the referent in (2e) is indefinite, while similar noun phrases are definite. Indefinite *'inch'e'-sits'* in (2e) from the line (3b) differs from definite *shash bisits'* in (3a) where a particular bear's skin is referenced.

(3) Compound Noun Suffix *-chiŋ*

- a. <cact'εG' k'a't'iŋŋite'ini yit'ε:l'ós ya'niŋ, yildzaŋ 'a·diyáandiŋ yinil'ós ya'niŋ, **cac bisits'** lot'ya'niŋ na·nlót' yow·noŋ'a'ya'niŋ >
 shash-t'ek ka't'inni-chiŋ yi-tee-l-lós=ya'niŋ,
 grizzly.bear-girl man-kind OBV-off.along-CLS-drag=they.say

yildzaŋ 'aa=di-yán-diŋ yi-ni-l-lós=ya'niŋ
 OBV-CLS-find.PFV REFL=THM-live-LOC OBV-ADV-CLS-drag=they.say

shash bi-sits'=lot'=ya'niŋ naa=n-lót' yow
bear 3POSS-skin=hang=they.say around=THM-hang there

no=ŋ-'a'=ya'niŋ
 to.there=THM-extends.PFV=they.say
Grizzly bear girl a man she took away. She found him to her home she took him. Her bearskin it hung they say, around (the wall) there it extended.
 '*Grizzly bear girl took a man away (they say). She found him, to her home she took him. Her bear skin hangs (they say), around (the wall) there it extended.'
JT (LFKT:64)

- b. <'inte'ε' sits' yisilt'ats'>
 'inch'e'-sits' yi-sí-l-t'ats'
deer-skin OBV-PFV-CLS-cut.PFV
Deerskin he cut it fine.
 '*He cut (a) deerskin fine.'
JT (LFKT:53)

5.2.2 Dependent Compound Noun Stems

A small class of stems regularly forms compound noun-like forms in Wailaki, and only appears in non-word-initial position, suffixed to other noun stems. Wailaki dependent compound stems do not occur independently or with inflection, and many are cognate with what Sapir and Golla (2001:854) identify as noun suffixes in Hupa. They phonologically appear to be a part of the word, and often denote a subcategory of the noun they modify. The result is similar to simple compounds identified in Navajo by Young, Morgan and Midgette (1992:961), that 'involve two stem nouns joined together to function as a semantic unit', although the second stem in such complexes in Wailaki are completely dependent and do not appear outside of noun compounds. The following are a few of the most common noun suffixes found in texts recorded by Goddard and Li.

5.2.2.1 *-chij* ‘kind, class, type of’

The noun suffix *-chij* is cognate with Hupa *-chwiŋ* ‘class, kind’ (Sapir and Golla 2001:740) and Kato <tcũñ> ‘that kind (of person)’ (Goddard 1912:24) and indicates that the referent of the form is a type of the noun stem to which it is attached. Whether the suffix is entirely productive however is somewhat unclear. Its distribution appears limited; however this may be the consequence of a closed corpus.

(4) Compound Noun Suffix *-chij*

- a. <tc’ε·Gtc’ij>
ch’eeg-**chij**
woman-**kind**
‘woman (kind)’
JT (LFK_T:51)(=5.17a)
- b. <an tcãñ>
'an-**chij**
leaf-**kind**
‘pepperwood (nuts)’
CJ (PG_T:1.64)
- c. <k’ã’t’iññtc’ij>
ka’t’ín-n-**chij**
man-THM-**kind**
‘man (kind)’
JT (LFK_T:33)
- d. <k’ε·t’ε·yitc’ij>
kee=teey=i-**chij**
ADV=train.doctor=REL-**kind**
‘doctor trainer’
JT (LFK_N:383)

5.2.2.2 *-kot(’)* ‘creek, stream’

The noun suffix *-kot* indicates locative phrases in place names for creeks, streams and other small waterways. Many names for creeks recorded by Goddard feature locative suffix *-kot*, while Goddard records in his notebooks <ca nañ> or <ca nãñ> for an independent lexical item meaning ‘creek’ (PG_{WN}:2.45,46). If recorded, the English name is also given in parentheses in the following:

(5) Place Names Featuring *-kot*

- a. <da tōl kot>
dat’ol-**kot(’)**
grape(vine)-**creek**
Grapevine-Creek (Wilson Creek)
CH (PG_{WN}:23)

- b. <djoñ **kot**>
 joñ-**kot**(?)
 mud-**creek**
 Mud-Creek CH (PGWN:23)
- c. <kai tcīn ta **kōt**>
 kaichin-ta-**kot**(?)
 christmasberry-among-**creek**
 Christmasberry-Creek CH (PGWN:15)
- d. <se na tai kot >
 see-na-t'a=i-**kot**(?) (< see-na-d-'a-i-**kot**(?)
 rock-ITER-(CLS)-stand=REL-**creek**
 Christmasberry-Creek CH (PGWN:15)

Because the above forms are recorded by Goddard only who unreliably transcribed vowel length and ejectives, its possible that the suffix form may contain either a long vowel, and/or an ejective /k'/. A possible cognate in Hupa may be a verb stem *qot* 'to bend, wriggle, move bent,' which suggests an ejective coda /t'/ for this form, *-kot*'.

5.2.2.3 *-ch'e* 'female'

The noun suffix *-ch'e* 'female' is cognate with Hupa noun suffix *-ch'e* 'female' (Sapir and Golla 2001:854) and possibly the Kato plural suffix <kī> in <tcī yan kī> 'women' as compared to <tcī yan> woman (Goddard 1912:24).

- (6) *-ch'e* 'female'
- a. <beyá·**tc'e**'>
 bi-yaa-**ch'e**'
 3POSS-young-FEM
 'her daughter' JT (LFK_T:111)
- b. <cbé·**tc'e**'>
 sh-bée-**ch'e**'
 1SG.POSS-?-FEM
 'my mother-in-law' JT (LFK_V:34)

The noun suffix *-ch'e* appears related to the Wailaki noun stem *ch'eeek* 'woman,' cognate with Kato <tc'ek> 'woman' (Goddard 1912:20). Wailaki *ch'eeek* occurs in a first or main stem position as well as second to a main stem in a compound in the following:

- (7) *ch'eeek* 'woman'
- a. <**ctc'e**·**G'e**'>
 sh-**ch'eeek**-e'
 1SG.POSS-woman-POSS
 'my wife (my woman)' JT (LFK_T:112)(=2.10d)

- b. <cac tc'εG'tc'in>
 shash-**ch'ek**-chin
 bear-**woman**-kind
 'Bear Woman' JT (LFK_T:64)
- c. <tc'ε·Gk'i·tc'i'>
ch'eeg-kii-chi'
 woman-THM-DIM
 'little girl' JT (LFK_T:111)
- d. <t'εGtc'i'>
t'eg-chi'
 woman-DIM
 'girl' JT (LFK_V:55)(=6.26a)

It's possible that the suffix *-ch'e'* and morpheme *ch'ek~ch'ee* with a word-final velar stop may be related, and that the form <tc'εG'> contains a fossilized suffix or enclitic, possibly related to adverbial enclitic *k* (see 6.1.5). Worth noting, (7d) has a related stem form *t'eg* that is reproduced also in wordlists following verb stem lists.

5.2.3 Secondary Nouns

Secondary nouns are derived from verbs and verb phrases through processes such as relativization, and passivization. Historically, an enclitic *i* marking relative clauses existed and in some languages within the family, still exists as an active relative clause marker and/or nominalizer (Sapir 1923, Sapir and Golla 2001:729, Rice 1989:170). Since word-final short vowels are deleted, relative enclitic *i* in Wailaki isn't usually overtly present phonologically in forms except through its effects on stems. For example, when enclitic to a verb stem ending in a vowel, the vowel becomes a diphthong. Stems in (8b-c) feature relativized verb stems and diphthong vowels, while (8a) does not.

(8) Open Verb Stem with Relative Enclitic *i*

- a. <k'ε·lε·'>
 ky'ee=lee
 ADV=sing.IPFV
 'He sings.' JT (LFK_N:144)
- b. <k'ε·lεi>
 ky'ee=le=**i**
 ADV=sing.IPFV=**REL**
 'singing' JT (LFK_T:105)

- c. <tc'ε·ya'ləi' yidε·ts'an' ya'nin>
 ch'ee-ya='-le=i yi-dee-ts'an'=ya'nin
 THM-PL=INDF.S-sing.IPFV=REL OBV-THM-hear.PFV=they.say
 'Singing he heard it they say (i.e. he heard singing they say).'
- JT (LFK_T:4)

Secondary nouns formed through passivization and relativization featuring the verb stem 'to tell' are shown in (9), derived through suffixes such as relative enclitic *i* appears as <yi·> following /i/.

(9) Open Verb Stem /i/ and Relative Enclitic *i*

- a. <liD'>
 lit
 V.STEM
 'to tell' JT (LFK_V:24)
- b. <yiyəŋ k'iyilliDin>
 yi-yaŋ=ki-yil-lid=in (< yi-yaŋ=ki-yin-lid=in >)
 OBV-about=THM-PFV-tell=DUR
 'He (/she) told.' JT (LFK_N:127)
- c. <k'yiyəŋ k'iyiliyi·>
 ky'i-yaŋ=ki-yi-lí=yii
 THM.O-about=THM-PASS-tell=REL
 'storyteller' JT (LFK_N:331)
- d. <k'yiyəŋ k'iyiliD'>
 ky'i-yaŋ=ki-yi-lit
 THM.O-about=THM-PASS-tell
 'story (that which is told)' JT (LFK_V:48)(=4.51b)

Deverbal nouns (9c-d) also include a passive prefix *yi-*, though (9c) 'storyteller' is nominalized through relativization with <yi·>, and (9d) 'story' with passive prefix *yi-*.

Verb stem forms also appear to differ with (9c) and (9d) <liD'>. The cognate verb stem in Hupa for 'to tell' has a form of *lik*. With no sound correspondences between Wailaki /d/ and Hupa /k/, it's possible that (9c) 'storyteller' preserves a verb stem **li* without either /d/ or /k/, and that either reflexes Wailaki *lid* and Hupa *lik* have reanalyzed a former suffix or enclitic as a part of the stem. Enclitics have distribution across word classes, whereas suffixes are more limited in distribution and function. In general, possible reanalysis of former enclitics and/or suffixes, and morphological innovation between California Dene languages and Wailaki dialects is an important area of future study.

In addition, classifier *l-* functions as a passivizer in many Dene languages (see 4.4). In (10a), the perfective verb stem and classifier for 'to throw objects' is shown, while deverbal nouns for 'stick game' are shown in (10b) and (10c), with (10c) with a relativized verb stem, but both (10b-c) featuring a classifier *l-*. The relative enclitic in this way may be optional when other options for deverbalization are present.

- (10) Closed Verb Stem with relative enclitic *i*
- a. <ł-dɛł’>
ł-dɛł’
CLS-throw.several.PFV
‘to throw (several objects)’ JT (LFK_V:9)
- b. <ḵ’in ná·ldɛł’>
kyin naa=l-dɛł’
stick around=CLS-throw.several.PFV
‘stick game’ JT (LFK_V:41)
- c. <ḵ’iŋ ná·ldɛ’l>
kyiŋ naa=l-dɛ’l=(i)
stick around=CLS-throw.several.objects.PFV=(REL)
‘stick game’ JT (LFK_T:87)

Relativized verb stems have been called heavy stems in Hupa by Sapir and Golla (2001:823), and are often the only indicator of the presence of enclitic relative *i* that is otherwise deleted in surface forms.

5.2.4 Alienable and Inalienable Nouns

Nouns fall into two formal classes according to inflection for possessive prefixes. Inalienable nouns feature dependent noun stems and never occur without a possessive prefix. Alienable nouns feature independent noun stems and can occur both with and without a possessive prefix (for possessive prefixes, see section 5.3).

Most nouns in Wailaki are alienable with independent noun stems, and can appear with or without inflection for possession, like ‘arrow’ in (11):

- (11) Alienable Noun – ‘Arrow’
- a. <k’a’>
k’a’
‘arrow’ JT (LFK_V:46)(=2.11b)
- b. <c k’a n doñ >
sh-k’a’ n-don
1SG.POSS-arrow THM-NEG
‘My arrows are none.’ CJ (PG_T:29.23)
- c. <n ho k’a oc dɛ >
ŋho-k’a’ ’-oo-sh-te’
1/2PL.POSS-arrows EP-DIR-1SG.S-look.OPT
‘Your arrows let me see (i.e. give them to me).’ CJ (PG_T:6.17)

In alienable nouns, the relationship expressed by possession inflection is ownership and/or possession, and may not be durable or inherent to the possessed referent.

Generally, alienable nouns inflected for possession also feature a possessive suffix *-e'* and may appear as allomorphs *-e'* or *-'*. The examples in (11) above don't have a suffix, but since the noun ends in a glottal stop it would be obscured. A Hupa possessive suffix similarly has forms *-e'* or *-'* *whijiw'/whijiwe'* 'my ear' with the stem *jiw*. (Sapir and Golla 2001:811). Wailaki possessive suffixes and possession inflection as shown in (12) can also trigger noun stem variation, similar to the light/heavy distinction in Hupa and Wailaki verbs.

- (12) Possessive Suffix *-e'* or *-'*
- a. <sk'úi>
sk'úi
'baby' JT (LFKV:44)
 - b. <cisk'éyε>
shi-sk'éy-ε'
1SG.POSS-baby-POSS
'my baby' JT (LFKV:44)
 - c. <tc'ék'>
chék'
'spit' JT (LFKT:23)
 - d. <çtc'é·Gε>
sh-chéeg-e'
1SG.POSS-spit-POSS
'my spit' JT (LFKT:97)
 - e. <k'íya'>
kí-yah
AREAL-country
'country' JT (LFKV:56)
 - f. <ck'íyaŋ'>
sh-kí-yaŋ-'
1SG.POSS-AREAL-land-POSS
'my country' JT (LFKV:56)
 - g. <k'int'ot>
ky'in-t'ot
bow-string
'bowstring' JT (LFKT:105)

- h. <mi-t'ol'>
 mi-t'ol-'
 3POSS-string-POSS
 'string (its string)' JT (LFK_N:308)

Examples (12e) and (12f) in particular resemble stem alternation in Hupa between *xontah* and *whi-xontaw'* in Hupa (Sapir and Golla 2001:786). Interestingly, Li did not record a glottalized segment in (12d) though glottalized <k'> is indicated in (12c). Without Li eliciting more possessed forms, this alternation is difficult to compare and contextualize.

Within the Dene language family, inalienable nouns are a smaller class of nouns and are often body part and kinship terms that require inflection for possession (Sapir and Golla 2001:855, Rice 1989:167, Young, Morgan and Midgette 1992:962). Inalienable nouns with possessive inflection usually indicate a relational meaning (kinship terms e.g. 'P's younger sister') or a relationship that is a part to a whole (body part terms e.g. 'P's nose').

While it is difficult to determine the status of every body part and kinship term from the available data, I treat body part and kinship terms nouns listed by Li and other researchers consistently with possessive prefixes as inalienable nouns with dependent stems. While Li did not indicate dependent nouns consistently through notation, Li may have indicated two dependent stems through the use of a hyphen above a brace mark, resembling <{ }> in (13):

- (13) Dependent Noun Stems – Body Parts
- a. <na(·)'>
 -naa'
 'P-eye' JT (LFK_T:91)
- b. <ńtç'ic̣>
 -nchish
 'P-nose' JT (LFK_T:91)

The noun stems for 'eye' and 'nose' also do not appear without inflection for possession. Following this notation, Li gives body part terms and kinship terms with possessive prefixes attached to each except for the following forms in Table 36:

Noun	Form	English,	Source
si'	<si'>	'head'	JT (LFK _T :89)
síywoł	<síy ^w oł>	'throat'	JT (LFK _T :92)
k'os	<k'os>	'neck'	
toobi'skaan	<t'o·bi'sk'a·n>	'bladder (water bag)'	JT (LFK _T :95)
ky'óoshe'	<k'ó·ce'>	'female genitalia (vulva?)'	
naashahle'	<ná·ca'le'>	'ankle'	JT (LFK _T :96)
ke'	<k'ε'>	'feet'	
seelinnínky'it	<se·linnínk'it>	'vein'	
ts'in̄'	<ts'in̄'>	'bone'	JT (LFK _T :23)
kone'	<k'one'>	'anus'	JT (LFK _T :24)

Table 36. Body Parts in Li Wordlists without Possessive Prefix Inflection

Forms in Table 36 do not feature possessive prefix inflection, though ‘bladder,’ ‘throat,’ ‘vagina,’ ‘ankle’ and ‘vein’ may be morphological complex. The form for ‘vagina’ in particular looks to have the suffix *-e*, and forms a compound noun shown in one form transcribed by Li in (14):

(14) Dependent Noun Stems – Body Parts

<k'ó·cɛ'k'ɑŋ>
 ky'óoshe'-ky'ɑŋ
 female.genitalia-hole
 '*vagina (?)' JT (LFK_T:91)

Body parts with thematic possessor prefix *ky'i-* are also recorded in Li texts and word lists, but not kinship terms. In Hupa, thematic possessor inflection is required for dependent stems appearing in contexts that independent stems appear without possession. Examples in (15) are body related terms that appear in Li texts with thematic possessor prefix *ky'i-*:

(15) Body Related Terms with Thematic Possessor Prefix *ky'i-*

a. <k'ik'a'>
 ky'i-k'a
 THM.POSS-fat
 'fat' JT (LFK_V:46)(=2.12b)

b. <k'isiŋ' >
 ky'i-siŋ'
 THM.POSS-meat
 'meat' JT (LFK_T:54)(=5.33a)

c. <k'i^gýése'>
 ky'i-ýese'
 THM.POSS-egg
 'egg' JT (LFK_T:104)

d. <k'iniŋ'>
 ky'i-niŋ'
 THM.POSS-face
 'deerhead' JT (LFK_T:2)(=5.33b)

Several other nouns are translated without possession in English but occur only with inflection for possession and/or nearly identical postpositional object or direct object prefixes. These include nouns referring to clothing. When these noun stems are translated without possession in English, a 3rd person possessive or postpositional prefix *bi-* is used as in examples in (16):

- (16) Forms Translated Without Possession With 3POSS/3PPO Prefix *bi-*
- a. <binist'e'>
 bi-nist'e'
 3POSS-flesh
 '(lean) meat' JT (LFK_T:23)
- b. <bi-dji.'>
 bi-jii'
 3POSS-heart
 'heart' JT (LFK_T:24)

5.3 Possessive Prefixes

Nouns are inflected for possession through a set of possessive prefixes identical in form to postpositional object prefixes or indirect object prefixes (P-) (see 4.10). Separate singular and plural forms exist for most person categories, and are listed in the table below:

Form	Gloss, Translation
shi-	1SG.POSS, "my"
ni-	2SG.POSS, "your"
ŋho(h)-	1/2PL.POSS, "ours, your (plural)"
bi-	3POSS, "his, her, its, their (plural)"
ki-	INDF.POSS, indefinite
'aa-	REFL, reflexive
ky'i-	THM.POSS, thematic
yidi-	OBV.POSS, obviative
ɬ-	RECIP, reciprocal

Table 37. Possessive Prefixes

Possessive prefixes are formally identical to postpositional object prefixes (P-) in Wailaki for 1st, 2nd and 3rd person categories, both singular and plural. Some differences exist between 3rd plural and reflexive possessive and postpositional object forms in that an additional prefix *di-* appears with postpositional prefixes below. Examples are given in Table 38:

	Nouns		Postpositions	
	-si' 'head'	-t'a' 'feather'	-l' 'with'	-ch'in' 'against'
1SG.POSS/PPO	s-si'	--	shi-l	--
2SG.POSS/PPO	ni-si', n-si'	--	ni-l	--
½PL.POSS/PPO	ŋhoh-si'	--	ŋhoh-l	ŋhoh-ch'in'
3POSS/PPO	bi-si'	bi-t'a'	bi-l	bi-ch'in'
INDF.POSS/PPO	ki-si'	--	ki-l, kidi-l	kii-ch'in'
REFL.POSS/PPO	'aa-si'	--	'aadi-l	--
THM.POSS/PPO	--	ky'i-t'a'	--	--
OBV.POSS/PPO	--	--	yidi-l	--
RECIP.POSS/PPO	--	--		l-ch'in'

Table 38. Possessive Prefixes, Postpositional Object Prefixes

In Table 38, categories for thematic, obviative and reciprocal aren't attested for both possessive and postpositional object prefixes; however, since other categories are formally identical, and related language Hupa attests cognate forms in both categories (Sapir and Golla 2001:856), it is likely that they are formally identical in Wailaki as well.

Wailaki stems meaning 'head' and 'feather' in Table 38 are inalienable nouns. Alienable noun stems require an additional possessive suffix *-e'* with an allomorph *-'* that appears following stem-final fricatives (see 5.2.4). Compare the two forms for my wife, one of which is an inalienable noun with a dependent stem, and the other is an alienable noun with an independent stem:

- (17) Possessive Suffixes
- a. <tc'ɛ·G'tc'in>
ch'eek-ch'in
woman-kind
'woman (kind)' JT (LFK_T:51)(=5.4a)
- b. <ctc'ɛ·Ge'>
sh-ch'ɛeg-e'
1SG.POSS-woman-POSS
'my woman (wife)' JT (LFK_T:112)(=2.10d, 5.6a)
- c. <c'ád'>
sh-'át
1SG.POSS-wife
'my wife' JT (LFK_T:112)(=5.20f)

Possessive prefixes are also used for longer phrases of greater morphological complexity expressed in the following:

- (18) Longer Expressions with Possessive Prefixes
- a. <cic tco dǎñ>
 shi-sh-cho=diŋ
 1SG.POSS-1SG.POSS-grandmother=LOC
 ‘my grandmother’s place’ CJ (PG_T:4.171)
- b. <sǎldjǐywoi bik’os>
 sǎldjǐywoi bi-k’os
 crane⁴⁴ 3POSS-neck
 ‘Crane (its) neck’ JT (LFK_T:27)
- c. <bǎi bisí’ noy k’t’áŋ >
 b-eí bi-sí’ no=y-k-t’áŋ
 3POSS-son 3POSS-hair to.there=OBV-CLS-set.fire.PFV
 His son his hair he set on fire.
 ‘He set his son’s hair on fire.’ JT (LFK_T:13)

5.3.1 1st Person and 2nd Person Possessive Prefixes

5.3.1.1 *shi-* 1st Person Singular Possessive Prefix

In Wailaki, the 1st person singular possessive prefix has three forms *shi-*, *sh-*, *s-*, as well as further variation combining these forms expressing semantics such as endearment and affection in kinship terms. The first person singular possessive prefix *shi-* is cognate with forms of the same function in other California Dene languages: Hupa *whi-* (Sapir and Golla 2001:67), and Kato *sh-* <c> or *s-* <s> (Goddard 1912:21) and Mattole *shi-* (Li 1930:128).

Possessive prefix *shi-* is often reduced to *sh-* in seemingly free variation. Both *shi-* and *sh-* appear before complex consonant clusters, though one might expect *shi-* to appear in avoidance of complex (tripartite) consonant syllable onsets. The environment does not preclude the allomorph *sh-* as (19b) shows with the consonant cluster [shky’], (19g) with <c^gy^w>, as do other forms including postpositions inflected for first person object (e.g. *shch’ij* ‘towards me’ in notecard 364). Allomorph *sh-* appears before vowels and a number of consonants. The distribution of allomorph *s-* is more limited, appearing before nouns that begins with /s/, and other alveolar consonants such as /d/ an affricate /ts’/. Possessive prefix *shi-* is shown in (18), prefix *sh-* shown in (19) and *s-* shown in (20).

- (19) 1st Person Singular Possessive Prefix *shi-*
- a. <cits’o’>
shi-ts’o’
 1SG.POSS-breast
 ‘my breast’ JT (LFK_T:92)

⁴⁴ Likely a derived noun cognate with Kato <sǎL tc’ōī> ‘heron(s)’ (Goddard 1912:30).

- b. <cidji·ʼ>
shi-jiiʼ
 1SG.POSS-heart
 ‘my heart’ JT (LFK_V:43)
- c. <cibítʼ>
shi-bítʼ
 1SG.POSS-stomach
 ‘my stomach’ JT (LFK_T:92)
- d. <cińṭʼic>
shi-ńchish
1SG.POSS-nose
 ‘my nose’ JT (LFK_T:91)(=2.72c)
- (20) 1st Person Singular Possessive Prefix *sh-*
- a. <ceiʼ>
sh-eiʼ
1SG.POSS-son
 ‘my son’ JT (LFK_T:111)
- b. <ckʼi·tcʼεʼ>
sh-kyʼiichʼ-eʼ
1SG.POSS-guts-POSS
 ‘my guts’ JT (LFK_T:95)
- c. <cdáʼ>
sh-dáʼ
1SG.POSS-mouth
 ‘my mouth’ JT (LFK_T:38)
- d. <cna·ʼ>
sh-naaʼ
1SG.POSS-eye
 ‘my eye’ JT (LFK_V:50)(=2.70c, 3.5a)
- e. <clo·geʼ>
sh-loog-eʼ
1SG.POSS-calf-POSS
 ‘my calf’ JT (LFK_V:48)(=2.6c)
- f. <cʼádʼ>
sh-ʼát
1SG.POSS-wife
 ‘my wife’ JT (LFK_T:112)(=5.17c)

- g. <ɕʷóʂ>
sh-ywós
1SG.POSS-thigh
 ‘my upper leg (thigh)’ JT (LFK_V:95)
- h. <ctc‘o·>
sh-choo
1SG.POSS-maternal.grandmother
 ‘my (maternal) grandmother’ JT (LFK_T:33)
- (21) 1st Person Singular Possessive Prefix *s-*
- a. <s·í’>
s-sí’
1SG.POSS-head
 ‘my head’ JT (LFK_T:51)
- b. <sdísne’>
s-dísne’
1SG.POSS-paternal.uncle
 ‘my father’s brother (paternal uncle)’ JT (LFK_T:112)
- c. <sts’i·lɛ’>
s-ts’iil-e’
1SG.POSS-forearm-POSS
 ‘my forearm’ JT (LFK_V:35)(=2.70a)

1st person singular possessive prefixes also vary in kinship terms shown in Table 39a-b.

RELATION	REFERENCE		SOURCES
mother	sh-naŋ	<cnəŋ>	JT (LFK _V :50, 42)
	shish-naŋ	<cic nəŋ>	CJ (PG _T :16.18)
	shis-naŋ	<cis nəŋ>	CJ (PG _T :16.6)
father	sh-taʼ	<Sta>	(CHM 169)
	shish-taʼ	<cic ta>	CJ (PG _T :1.64)
sister (younger)	sh-dee	<Sʼtē>	(CHM 169)
	sh-dee-chiʼ	<cde·tcʼiʼ>	JT (LFK _V :38)
sister (older)	sh-aat	<ca·Dʼ>	JT (LFK _T :112)
brother (younger)	sh-kil	<Sʼchel>	(CHM 169)
brother (older)	sh-ooniŋ	<co·niŋ>	JT (LFK _T :62)
grandmother (maternal)	shish-choo	<cic tco>	CJ (PG _T :1.42)
	shis-choo	<cis tco>	CJ (PG _T :4.17)
grandmother (paternal)	s-tsʼiŋ,	<stsʼiŋ>	JT (LFK _V :35)
grandfather (maternal)	shi-chiyii	<citciyi·>	JT (LFK _V :36)
grandfather (paternal)	sh-ʼáy,	<çʼáy>	JT (LFK _V :33)

Table 39a. Kinship Reference Forms

RELATION	ADDRESS		SOURCES
mother	ʼena	<ε nε>	CJ (PG _T :2.1)
father	ʼish-ta	<ic ta>	CJ (25.15)
sister (younger)	ʼis-deechiʼ	<is de tce>	CJ (PG _T :3.35)
sister (older)	--	--	--
brother (younger)	ʼish-kil	<ic kɛl>	CJ (PG _T :1.41)
brother (older)	--	--	--
grandmother(maternal)	ʼish-choo	<ic tco>	CJ (PG _T :1.28)
	ʼis-choo	<is tco>	CJ (PG _T :2.36)
grandmother (paternal)	--	--	--
grandfather (maternal)	ʼish-chiyii	<ic tcəg gi>	CJ (PG _T :12.46)
grandfather (?)	<chiy>	<cəg>	CJ (PG _T :22.6)

Table 39b. Kinship Address Forms

In general, forms in Table 39a-b show that address forms appear with vowel-initial prefixes *ʼish-* or *ʼis-*, used in speaking directly to the person, while attested reference terms feature a prefix form *shish-* or *shis-* in speaking about a person. Address forms are unattested

- d. <is kya>
 'is-kya'
 1SG.POSS-apron
 'my apron' CJ (PG:4.26)
- e. <is t'a nai>
 'is-t'anai
 1SG.POSS-skirt
 'my skirt' CJ (PG_T:4.27)
- f. <ic ke ta >
 'ish-keta
 1SG.POSS-people
 'my people' CJ (PG_T:4.59)

Variant *shish-* or *shis-* found in forms such as *shishnan* 'my mother' and *shishta* 'my father,' Golla (1976:220) analyzes Tututni forms such as *shish'ad* 'my wife' as having the internal structure of an inalienable noun stem inflected for possession with a proclitic pronoun of the same category:

- (24) Tututni Proclitic Pronouns with Possessive Prefix
- a. shi=sh-'ad
 myself=1SG.POSS-wife
 'myself-my wife'
- b. ne=noh-xwe
 ourselves=1PL.POSS-feet
 'ourselves-our feet'

Golla (1976:220) analyzes a similar construction in Tututni to not be limited to 1st person singular possession. Wailaki at times features proclitic pronouns in possessive forms in other categories discussed in subsequent sections; however, only 1st person reference forms *shish-* and *shis-* more clearly take forms similar to the structure described by Golla for Tututni.

5.3.1.2 *ni-* 2nd Person Singular Possessive Prefix

2nd person singular possessive prefix *ni-* is cognate with Hupa *ni-* (Sapir and Golla 2001:67), and Kato *n-* <n> (Goddard 1912:21) and Mattole *ni-* <ni-> (Li 1930:133). The Wailaki 2nd person singular possessive prefix *ni-* is shown in (24), and is often reduced to *n-* as in examples in (25). Li transcribes geminate [n] in (25b-c) with the prefix *n-* followed by stems beginning in /n/ .

- (25) 2nd person Singular Possessive prefix *ni-*
- a. <**ni**sí'>
ni-sí'
2SG.POSS-head
 'your head' JT (LFK_T:91)
- b. <**ni**ló·gε'>
ni-loog-e'
2SG.POSS-calf-POSS
 'your calf' JT (LFK_T:95)
- c. <**ni**ntç'ic>
ni-ńchish
2SG.POSS-nose
 'your nose' JT (LFK_T:91)
- d. <**ni**ntç'isk'əŋ>
ni-ńchish=ky'əŋ
2SG.POSS-nose=hole
 'your nostrils' JT (LFK_V:36)
- e. <**ni**dji·k'ε·nyái>
ni-jii=k'-ee=n-yái
2SG.POSS-mind=THM-against=2SG.S-go.SG.PFV
 'you have forgot' JT (LFK_N:17)
- (26) 2nd Person Singular Possessive prefix *n-*
- a. <**n**si·'>
n-sii'
2SG.POSS-head
 'your head' CJ (PG_T:3.136)
- b. <**n**·tç'ick'əŋ>
n-ńchish=ky'əŋ
2SG.POSS-nose=hole
 'your nostrils' JT (LFK_T:92)
- c. <**n**·a·'>
n-naa'
2SG.POSS-eye
 'your eyes' JT (LFK_T:38)
- d. <**n**dji·k'ε·nyái·ŋ>
n-jii=k'-ee=n-yáa=ŋ
2SG.POSS-mind=THM-against=2SG.S-go.SG.PFV=DUR
 'you forgot' JT (LFK_N:17)

- e. <n da bi>
n-da'=b-i'
2SG.POSS-mouth=3PPO-in
 'in your mouth' CJ (PG_T:2.149)

Although rare in the documentation, a Wailaki 2nd person singular possessive form in (27) features a possible proclitic pronoun:

- (27) <nãñ tcag gai tcãñ>
niñ=chíyii-chiñ
2SG=maternal.grandfather-kind
 'your grandfather' CJ (PG_T:16.19)

5.3.1.3 *ñhoh-* 1st and 2nd Person Plural Possessive Prefix

The prefix *ñhoh-* is used both for 1st and 2nd person plural possession inflection, differentiated by context and the use of independent pronouns as shown in (28):

- (28) 1st/2nd Person Plural Possessive Prefix *ñhoh-*
 a. <ñhiñ **ñho**'sí'>
 ñhiñ **ñhoh-sí'**
 us **1/2PL.POSS-head**
 'Us, our head' JT (LFK_T:91)
- b. <ñhoñ **ñho**'sí'>
 ñhoñ **ñhoh-sí'**
 You.all **1/2PL.POSS-head**
 'You all, your head' JT (LFK_T:91)

The prefix *ñhoh-* used for both 1st and 2nd person plural possession inflection in Wailaki is cognate with Hupa 1st/2nd person plural possessive prefix *noh-* (Sapir and Golla 2001:854), and Kato <nō'> (Goddard 1912:21) and Mattole <no'> (Li 1930:133).

One example exists of a pronoun *ñhiñ* 'us' acting as a proclitic to an inalienable stem that otherwise is uninflected for possession.

- (29) <**ñhin**'tc'ic>
ñhin-ńchish
1PL=nose
 'our nose' JT (LFK_T:91)

Golla (1976:220) notes that in the Oregon Dene language Tututni, "demonstrative or independent personal pronouns are often proclitic to nouns inflected for possessor." In Wailaki, (29) may indicate that pronouns can act as proclitics even without possession inflection. It's possible that this construction was in the process of being grammaticalized as a possessive prefix at the time of documentation.

5.3.2 3rd Person and Other Possessive Prefixes

5.3.2.1 *bi-* 3rd Person Possessive Prefix

3rd person possessive prefix *bi-* is shown in (30), and is cognate with Hupa *mi-* (Sapir and Golla 2001:67), and Kato <b, bi-> (Goddard 1912:21) and Mattole <bi-> (Li 1930:133). Though most instantiations of /m/ is the result of a nasal assimilation process (see 2.5.1.1), the allomorph *mi-* appears inconsistently and without a phonological conditioning environment. With examples found among various speakers, the allomorph *mi-* is marginal and in free-variation with *bi-*; moreover, its occurrence may be a part of dialectal or other types of sociolinguistic variation (see 2.8.3).

- (30) 3rd person singular possessive prefix *bi-*
- a. <**biyi**·ʔ>
bi-yiiʔ
3POSS-breath
 ‘his breath’ JT (LFK_T:19)
 - b. <hai **bisi**ʔ>
 hai **bi**-síʔ
 DET **3POSS**-head
 ‘his head’ JT (LFK_T:91)
 - c. <cac **bisits**ʔ>
 shash **bi**-sitsʔ
 bear **3POSS**-skin
 ‘bear (its) skin’ JT (LFK_T:64)
 - d. <**bei**ʔ>
b-eiʔ
3POSS-son
 ‘his son’ JT (LFK_T:111)
 - e. <**minán̄**>
mi-nán̄ (< **bi**-nán̄)
3POSS-mother
 ‘his mother’ JT (LFK_V:50)
 - f. <**Mé**-ne tsung>
mi-nitsung
3POSS-backbone
 ‘(his/her) backbone’ LY (CHM:8)

The 3rd person possessive marker *bi-* can also be used as a possessor for a collective, treated as a singular group:

- (31) <kan nəs t'ε **bat** tsan nɛ səl də lɛñ>
 ki-nist'e' **bi**-ts'in-e'
 INDF.POSS-body **3**POSS-bone-POSS
- si-l-de'l=iŋ
 THM-CLS-throw.several.objects.PFV=DUR
 'People (Indians) their bones are scattered.' CJ (PG_T:4.36-37)

5.3.2.2 *ki(i)*- Indefinite Possessive Prefix

A likely Indefinite possessive prefix *ki-* is somewhat rare in the documentation, but Li records *ki-* <k'i> with notes 'probably related to indefinite pronoun' and 'indefinite person' in successive notecards 90 and 91. Unfortunately, the forms to confirm the function of this prefix are lacking in Li's documentation, and are difficult to discern from either Goddard or Merriam forms. The form *kii-* <k'i> is attested in the postpositional object prefix paradigm though, and in other California Dene languages, the postpositional object prefixes are related or identical to the possessive prefixes. The postpositional object prefix *kii-* is shown in (32):

- (32) Indefinite Postpositional Object Prefix *ki-*
- a. <k'i·tc'iq' k'inla' na·sda'a'>
kii-tc'iq' kinla' naa=s-da-'a'
 INDF.PPO-against grass.game ADV=PFV-1PL.S-handle.round.PFV
 'Against them grass game we played.' JT (LFK_T:50)
- b. <k'i·yaŋ k'inohólyi·>
kii-tc'iq' ki-n-ohó-l-yiih
 INDF.PPO-at THM-ADV-2PL.S-CLS-win.IPFV
 'You all beat them.' JT (LFK_T:61)
- c. <dow k'aŋ nk'aG' k'inicilyi' nk'aG'
 dow-k'aŋ n-kyak k'i-ni-shi-l-yii' n-kyak
 NEG-now THM-lots THM-ADV-1SG.S-CLS-win.IPFV THM-lots
 'Long ago lots I won (sometimes), lots.' JT (LFK_T:61)

The context for which the forms in (32) are given is the discussion of the speaker's past habitual playing of a game against indefinite opponents never named. This indefinite context is corroborated by the line in (32c).

A corresponding indefinite category in the possessive prefix paradigm is indicated in Hupa by *ky'i-* (Sapir and Golla 2001:67), and in Mattole *gwo-* <gwo-> (Li 1930:134). For the same indefinite category, Goddard records Kato *kw-* <kw-> and a 3rd person plural possessive prefix *kush-* <kûc> often translated as 'their' (Goddard 1912:21). Wailaki *ki-* is also likely cognate with Oregon Dene indefinite possessor **xo-*. The "Athabaskan indefinite pronoun set" according to Golla (2011:85) which includes the categories of object/possessive prefixes are reanalyzed in Hupa and Kato but are not reanalyzed in Mattole or Wailaki. Wailaki possessive prefix *ki-* as an indefinite possessive prefix may nonetheless be

interpreted at times with general 3rd person, 3rd person plural, or unknown possessor meanings.

Translations of examples in (32) as “their” for a possessive prefix *ki-*, or “them” for postpositional *kii-* would seem to indicate possibly 3rd person plural possession; however, interpretation of the possessive prefix *ki-* as an indefinite prefix seems more likely given categories found in Oregon and California Dene. A 3rd person plural possessive prefix isn’t found in Hupa, or other California Dene languages. Golla’s (1976:220) analysis of Tututni includes a 3rd person plural possessive prefix with forms *xo-* and *xo-m-* with *-m-* treated as 3rd singular possessive. Later work by Golla (2011:75) however discusses Oregon Dene as having two indefinite possessive prefixes across languages. The distinction between the two possessive prefixes in Oregon Dene is that **xo-* indicates unknown possessors, while **ch’i-* indicates a known, specific thematic possession.

5.3.2.3 *ky’i-* Thematic Possessive Prefix

A thematic possessive prefix *ky’i-*, which sometimes appears as *ch’i-* in free-variation indicates a known, specific thematic possessor as in (33):

- (33) Thematic Possessive Prefix *ky’i-* ~ *ch’i-*
- | | |
|---|------------------------------------|
| a. <k’isiŋ’>
ky’i-siŋ’
THM.POSS-flesh
‘meat’ | JT (LFK _T :54)(=5.15b) |
| b. <k’iniŋ’>
ky’i-niŋ’
THM.POSS-face?
‘deerhead’ | JT (LFK _T :2)(=5.15d) |
| c. <k’int’əŋ’>
ky’i-n-t’əŋ’
THM.POSS-THM-leaf
‘acorn’ | JT (LFK _V :55)(=2.80a) |
| d. <tc’int’əŋ’>
ch’i-n-t’əŋ’
THM.POSS-THM-leaf
‘acorn’ | JT (LFK _T :101)(=2.80b) |

Goddard records two separate possessive categories for Kato that are similar in form with the Wailaki prefixes above. In Kato, possessive prefix *ch’-* <tc’> indicates a 3rd person of detached, unassociated members, which is likely of a description of thematic possessive prefix (Goddard 1912:21).

Goddard also recorded the following in Wailaki. The exact forms of these prefixes are ambiguous, and may be *ki-*, *kii-*, or possibly *k’i-* or *ky’i-* since Goddard did not attend to vowel length, front velars, or glottalization well.

- (34) Indefinite Possessive Prefix *ki-*
- a. <dje ki si kat no ni añ hat tẽñ
 jeh ky'i-si'=k'it noo=ni-i-'añ=hit-iñ
 pitch THM.POSS-head=on.it to.there=PFV-1SG.S-handle.round=when-
 DUR
 kin a bał tce no ni ang hat>
 ky'i-naa' bi-l-che noo=ni-i-'añ=hit
 THM.POSS-eyes 3PPO-with-near to.there=PFV-1SG.S-handle.round
 'I put pitch on their heads, I put it by their eyes.' CJ (PG_T:32.24-5)
- b. <kis tek' n kya iñ >
 ky'i-stek n-kyah=iñ
 THM.POSS-bed THM-large=DUR
 'Their beds were large.' CJ (PG_T:6.35)

The forms in (34) are likely thematic. From the context of their use, the character is describing their children in (34a), and in (34b), the character of the story is describing deer that he killed. They are not likely to use an indefinite form in this context, as one's own children are known, and deer are often referred to thematically as objects in verb forms too. In interpreting Goddard texts and in reconstruction of forms, forms are ambiguous and anyone involved in such an exercise should attend to indefinite and thematic context in any reconstruction of forms.

5.3.2.4 *l-* Reciprocal Possessive Prefix

Reciprocal possessive prefix *l-* is not well attested in the documentation, but is found in the same form in Hupa (Sapir and Golla 2001:856), and Oregon Dene Tututni (Golla 1976:220). In example (35), a possible noun *P=k'ee* 'friend' is found both in (35a-b) but in (35a) appears with 3rd person possessive prefix *bi-* and in (35b) with a reciprocal prefix *l-*:

- (35) Reciprocal Possessive Prefix *l-*
- a. <bał ke n do i >
 bi-k'ee n-dow=i
 3POSS-friend? THM-NEG=REL
 'Their friends were none.' CJ (PG_T:30.29)
- b. <lk'ε·naslín'tε·l>
 l-k'ee na=s-lín'=tε·l
 RECP-friend? ITER=THM-become.PFV=FUT
 'They will be friends again' JT (LFK_T:71)

Possessive prefixes are often identical in form to postpositional object prefixes or indirect object prefixes (P-), which also include a reciprocal object prefix *l-* shown in (36):

- (36) Reciprocal Object Prefix *l-*
- a. <łɛ·diyileɣ>
 ł-ee-di-yi-leɣ (< ł-ee-di-yi-leh-i)
 RECP-against=THM-PASS-fight=(REL)
 ‘a fight’ JT (LFK_T:72)
- b. <łtc’ij’>
 ł-ch’ij’
 RECP-against
 ‘toward, against each other’ JT (LFK_V:37)(=2.70e, 3.39a)

5.3.2.5 ‘*aa-* Reflexive Possessive Prefix

Reflexive possessive prefix ‘*aa-*’ is a well-attested possessive prefix, and its meaning is to indicate that the object to which it is prefixed is the owner’s ‘own’ item. It is cognate with Hupa ‘*a:di-*’ (Sapir and Golla 2001:67), and Kato <*a-*> (Goddard 1912:21) and Mattole <‘*a-*> (Li 1930:134). Translations of forms with a reflexive possessive prefix often cross 1st, 3rd person possessive categories, as well as number as shown by examples in (37). Example (37c) is a derived noun, and has a thematic *di-* prefix likely related to classifier *d-*.

- (37) Reflexive Possessive Prefix ‘*aa-*’
- a. <‘**a**·ja·dɛ’ts’ínɛ’>
 ‘**aa**=jaade’=ts’in-e’
 REFL=leg=bone-POSS
 ‘our leg-bone’ JT (LFK_T:13)
- b. <‘**a**·ja·dɛ’>
 ‘**aa**=jaade’
 REFL=leg
 ‘his own leg’ JT (LFK_T:13)
- c. <**a** dɔg gan dɔñ bi>
 ‘**aa**-di-yan-diŋ=b-i’
 REFL-THM-live=LOC=3PPO-in
 ‘in my own house’ JT (LFK_T:13)
- d. <‘**a**·na’bi’ >
 ‘**aa**-na’=b-i’
 REFL-eye=3PPO-in
 ‘in your eyes’ JT (LFK_T:49)

5.4 Plural Prefix

Number is not usually distinguished in nouns either by stem or affix, and the majority of nouns are not inflected for number. Nouns such as *'inch'é'* 'deer' are either singular or plural according to context; however, a small number of nouns appear with a nominal plural prefix, recorded by Li as a 'plural sign' morpheme in (38a):

- (38) Nominal Plural Prefix *yii-*
- a. <yi·>
yii-
 PL
 nominal plural prefix, 'plural sign' JT (LFK_V:57)
- b. <haidi· yi·k'iníst'ε' >
 hai-dii **yii**-kiníst'e'
 the-here PL-people/person
 'these Indians' JT (LFK_N:19)(=3.5b, 3.16a)
- c. <haiyow yi·k'iníst'ε' >
 hai-yow **yii**-kiníst'e'
 the-DIST PL-people/person
 'those Indians' JT (LFK_N:19)(=2.64a, 3.16b)
- d. <haiyowⁱ k'iníst'ε' >
 hai-yow kiníst'e'
 the-there people/person
 'that Indian' JT (LFK_N:19)(=2.64a)
- e. <yow yide' yi·k'iníst'ε' ya·nim·á' ya'niŋ>
 yow yide' **yii**-kiníst'e' yaa=ni-m-máh=ya'niŋ (< yaa=ni-n-báh)
 this downstream PL-indian PL=ADV-PFV-fight=they.say
 '(From) the north (downstream) Indians they came to fight.
 JT (LFK_T:9)

5.5 Borrowing and Lexical Innovation

A third morphological type that might be expected may be words borrowed from other languages, especially English. Both by consequence of linguistic purism in the context of elicitation sessions themselves (Hill 1994), and known language family or language area avoidance of lexical borrowing (Sapir 1921:93, Golla 2011:5), almost no borrowed nouns or noun stems are found in the documentation. Though difficult to assess, it is a strong possibility that English or Spanish borrowings may have been suppressed or left out of the written record of Wailaki, since Spanish borrowings are attested in Yuki (Sawyer and Schlichter 1984). Names for items you might expect to be borrowed from English or Spanish instead are lexical innovations from productive morphological resources already in present in

Wailaki. Words recorded for referents introduced since the arrival of Euro-Americans appear to be comprised of morphemes or words already present in Wailaki language in Table 40:

Wailaki	Translation	Source
łiŋ'-kyoh	'horse' (lit. 'pet-big')	JT (LFK _v :48)
ch'indiŋ	'dead person(s), white person(s)'	JT (LFK _v :37)
bik'is-ch'indiŋ	'mixed race white/native' (lit. 'half-dead')	JT (LFK _v :37)
'isinto'	'grease, sugar'	JT (LFK _v :54)
ky'iyidishchi'- ch'innaayilóots'	'fiddle'	JT (LFK _v :48)
bi-k'iyits'is	'(his/her) coat (lit. 'it-on top put it on')	JT (LFK _v :34)
bi-stal'	'(his/her) pants'	JT (LFK _v :34)
bi'shchit	'(his/her) shirt'	JT (LFK _v :34)

Table 40. Wailaki Lexical Innovations Post-1849

The form for horse is constructed from existing a noun stem and noun suffix in Wailaki, while fiddle, coat and pants appear to be constructions from existing verb stems. The verb stem in fiddle *loots* bears resemblance to Hupa *lo:s* 'pull/drag' (Sapir and Golla 2001:764) which is also used in a word for fiddle or violin in Hupa, describing the bow movement. For 'his/her coat' the verb stem *ts'is* resembles the verb stem *ch'ish* in Wailaki 'to wear' on Li's verb stem list (7), while 'his/her pants' has *tal'* which means 'to move one's legs, feet' in perfective mode according to Li (27). The composition of the form 'his/her shirt' is obscure, but may represent a borrowing from the word English word 'shirt.'

The form for dead person appears to have been extended semantically to mean white persons. According to Bauer (2016:16), a historian of Wailacki heritage who interprets stories from Nancy Dobey (BANCFILM 2216), the first people were a pair of dark persons – a man and woman, along with a corresponding light pair of persons, also a man and woman. The dark persons were associated with maternal force and life, and the light pair with death. The light left, while the dark pair remained on this land. Later Wailaki people used these stories to interpret the coming of Euro-Americans, and extended the term *ch'indin* to white people. Notably, Wailaki *ch'indin* is cognate with the same form meaning 'ghosts, dead persons, spirits' in Hupa (Sapir and Golla 2001:744). The form for 'grease' may have been extended semantically to 'sugar' as well. A similar form *ky'insinto* 'trees-water/juice' are used in Hupa for both as well. The sap of the sugar pine was known to be sweet and was the referent (783).

6 CLITICS AND SYNTAX

The following chapter discusses clitics and syntax. In 6.1, I examine clitics that express categories such as tense, aspect or mode (6.1.1), or perform syntactic functions and are used across word classes such as nouns and verbs (6.1.2-6.1.8). The chapter also features limited description of aspects of Wailaki syntax, including conjunctions (6.2), negation (6.3), question formation (6.4), and limited discussion of word order (6.5).

6.1 Clitics

A good number of elements occur as clitics across word classes and phrases. Enclitics resemble postpositions, but are not inflected with postpositional object prefixes. They are also relatively short, and typically do not carry stress (Schachter and Shopen 2007:52-54). Most Wailaki clitics are enclitics. A Wailaki proclitic for negation is discussed in 6.3.1.

6.1.1 Tense, Aspect and Mode Enclitics

There are enclitics in Wailaki that convey tense, aspect and mode listed in Table 41.

Form	Li	Goddard	Function	Gloss
*bege, *ge	--	<be ge, ge>	Future (habitual)	FUT.HAB
de'	<de'>	<de>	Future (conditional)	COND
e'	<e'>	<e>	Future (imperative)	IMP
iŋ, aŋ	<iŋ, aŋ>	<iñ, añ>	Durative	DUR
je'	<Dje'>	<dje>	Desiderative	DES
kaŋ, kan	<k'aŋ, k'an>	<kañ>	Evidential	EVID?
sh	<c>	<c>	Dubitative	DUB
teel, tel	<t'ε:l, t'εl, t'ε:l, t'εl₂>	<tel>	Future (general)	FUT
teł	<t'εł>	<teł>	Future (immediate)	IMM
t'eeŋ	<t'ε:n>	<teñ>	Imperfective	IPFV
yee	<yε:'>	<yε>	Past (remote)	REM

Table 41. Wailaki Tense Aspect and Mode Enclitics

Absent in Wailaki is a recent past morpheme. The closest overt element to this function is perhaps adverb *ndaŋ* 'already' (3.7.3.2). Most temporal semantics in Dene languages revolve around aspect rather than tense though. As per Comrie (1976), the distinction formally between tense and aspect is that tense (or temporal location) locates a situation in time (i.e. past, present, future), where aspect conveys the internal temporal structure of a situation regardless of temporal location. In determining categories such as tense or aspect, criteria from Klein (1994) are considered in this work along with Dene language family conventions, as well as Smith, Perkins and Fernald's (2007) discussion of interpretation of tense in Navajo from aspect/mode verbal inflection (see 4.6).

Wailaki verbs and sentences are not always directly marked for tense. When tense-like categories are more overtly marked though, enclitics are used. Enclitics in Wailaki encode tense, aspect and/or mood meanings. Included in 6.1 are also evidential enclitics that may or may not include modal meanings when speakers use them to evaluate and/or express sources of information in texts.

6.1.1.1 <bε gε>, <gε> Future Habitual

In Goddard's texts, numerous forms feature <bε gε> or <gε> after the verb stem and are translated with English future 'will' as in (1a-b) and (1e) or 'will always' as in (1c-d). The form <bε gε> is enclitic to 3rd person subject verb forms in (1a-c), while the form <gε> is enclitic to a 1st person subject form.

(1) Future Habitual <bε gε>

a. <to sal sañ bε kε>

ʔ-oo=si-l-siŋ=**bege**

RECP-DIR=PFV-CLS-think=**FUT.HAB**

'They will understand each other.'

CJ (PG_T:1.114)

b. <ba hañ do ye bε gε>

bahaŋ do-ye=**bege**

war NEG=EMP=**FUT.HAB**

'War will end.'

CJ (PG_T:30.38)

c. <yis sε ban kyo bat tas k'ε na cε bε gε>

yise' baŋ-kyoh bi-tis

west across-big(ocean) 3PPO-over

k'-ee=nash-i=**bege**

ADV-against=move-EP=**FUT.HAB**

West ocean over it (the sun) will always go down.

'West over the ocean (the sun) will always go down.'

CJ (PG_T:7.87-88)(=3.67c)

d. <nε ban a na gət da cε bε gε>

ne' bi-naa na=yi-dash-i=**bege**

earth 3PPO-around around=PFV-come-EP=**FUT.HAB**

'Earth around it will always go.'

CJ (PG_T:7.88)(=3.60b)

e. <kał bi tce na si lał nən tε ca ge >

kił-b-i' ch'i-naa=si-lał ti-sha=ge (< ti-sh-yaa=**ge**)

darkness-3PPO-in THM-ADV=PFV-dream off.along-(1SG.S)-go=**FUT.HAB**

'In the night I dreamed I will go.'

CJ (PG_T:11.23-24) (=3.42a)

Whether translated as ‘will’ or ‘will always,’ examples in (1) describe future habitual actions with people often describing how things will be in creation. The first text from which like (1a) is sourced is title ‘First People’, and the context is that the people will speak differently, but will still understand each other. Many lines in this text describe the actions of first people that share in how people do things through time thereafter. The context of (1b) is that after killing or war, and exchange or trade happens, and this is how war can end. Many customs are described in this way. In adjacent line examples (1c-d), the regular occurrences of the sun setting, and the sun going around the earth are described with future semantics.

Where ‘will’ or ‘will always’ is not the translation of lines featuring <bε gε>, future or habitual semantics are nonetheless implied or future is encoded. In example (2) that does not have ‘will’ as a part of the translation, a future conditional is enclitic to verb stem ‘do’:

- (2) <hai ka tɪn dε co nε bε gε>
 hai ka=t’in=de con-e=**bege**
 here so=do=COND NEG=EMP=**FUT.HAB**
That he does that is good way.
 ‘*When/If he does this, it’s in a good way.’ CJ (PG_T:6.140-141)

Unfortunately Li does not appear to transcribe this future oriented enclitic in his texts, and the exact form of the enclitic is unknown. I retain his form **bege* in retranscription, though in (1a) the enclitic is also written <bε kε>. An alternative first vowel may be /i/ if historically this enclitic came from a postpositional object with the prefix *bi-*. The closest attested form, though not matching in function, may be *bik’eh*.

- (3) <k’inist’ε’ tc’indij **bik’ε’** nay’sil^gye’>
 kinist’e’ ch’indij **bi-k’eh**
 Indians white.people **3PPO-in.the.manner.of**
 nai=’-síl-l-ye’
 around=THM.O-PFV-CLS-pack.PFV
 ‘Indians, like the white people, work(ed) (i.e. pack).’ FM (LFK_T:121)

The form *bik’eh* as postposition would more often precede a verb though, and its unlikely that a postposition would become grammaticalized as an enclitic in this way.

6.1.1.2 *de’* Future Conditional

Enclitic *de’* is a modal enclitic that conveys futurity and functions as a conditional in texts. As a conditional, enclitic *de’* indicates that the first clause (or the antecedent) indicates a condition under which the second clause (the consequent) is asserted to be true or realize. Enclitic *de’* is cognate with Hupa *de’* ‘when (in the future), if’ (Sapir and Golla 2001:864) and Tututni ‘if’ (Golla 1976:227).

- (4) Future Conditional Enclitic *de'*
- a. <yəł dai bi yis sɛ tcəs lat **dɛ** cən **dɛ** kɛc lətc>
 yildai=b-i' yise ch'e=sh-lat-**dɛ'** shi=n=**dɛ'** k'e-sh-lit
 door=3PPO-in west out=1SG.S-run-COND 1SG=THM=COND THM-1SG.S-burn
 'In the doorway west if I run out, (if me,) I will burn.' CJ (PG_T:11.48-49)
- b. <di· bił ɫo·k' 'ink'ác**Dɛ'** 'inyáj'ɛ'>
 dii bi-ɫ ɫook' 'i-n-kásh=**dɛ'** 'i-n-yáj'=e'
 DET 3PPO-with fish EP-2SG.S-catch=COND EP-2SG.S-eat=IMP
With this if fish you'll catch, you'll eat!
 '*If you catch fish with this, you'll eat!' JT (LFK_T:52)
- c. <k'isiŋ' k'on'diŋ noŋ'ác**dɛ'** 'it'éc t'án'aŋ'ác**dɛ'** 'inyáj'ɛ'>
 ky'i-siŋ' kon'=diŋ no=ŋ-'ásh=**dɛ'** 'i-t'ésh
 THM-meat fire=LOC to.there=2SG.S-handle.round=COND EP-charcoal
 ta-n='a-ŋ-'ásh=**dɛ'** 'i-n-yáj'-e'
 out.fire-REV=THM-2SG.S-handle.round=COND EP-2SG.S-eat-IMP
The meat in the fire you'll put down, cooked you take out, you'll eat later.
 'You put down the meat in the fire, you take it out cooked, then you eat.'
 JT (LFK_T:54)
- d. <ciłdiŋyiŋ ya·ŋhiłtc'índ**dɛ'** k'ildo'yin'>
 shi-ɫ=di-ŋ-yiŋ yaa-ŋhi-ɫ=tc'ín=**dɛ'**
 1SG.PPO-with=THM-2SG.S-suck PL-1PL.PPO-with=make=COND
 ky'i-ɫ=d-oh-yiŋ'
 THM-with=THM-2PL.S-suck.PFV
 '...“Suck me!” if they say to you (us), you suck (doctor) them.'
 JT (LFK_T:79)

6.1.1.3 *e'* Future Imperative

Enclitic *e'* is a modal enclitic that conveys futurity while also indicating imperative mode and/or a sense of obligation. Enclitic *e'* may be cognate with Tututni *le'* imperative (Golla 1975:227) and Hupa *ne'* 'must' or enclitic of obligation (Sapir and Golla 2001:856). Enclitic *e'* appears attached most often to optative stems, and imperfective stems. In texts, futurity is conveyed while in notecards, Li writes forms' translations with <!>, a convention usually used for imperatives as in (5):

- (5) Future Imperative *e'*
- a. <'inyáj'ɛ'>
 'i-n-yáj'=e'
 EP-2SG.S-eat.OPT=IMP
 'You'll eat it later on!' JT (LFK_N:47)(=2.63a, 4.32f)

- b. <'o'yáŋ'ε'>
 '-oh-yáŋ'=e'
 EP-2PL.S-eat.OPT=IMP
 'You all will eat it later on!' JT (LFK_N:47)(=2.63b, 4.34b)
- c. <di· k'ał'inde' 'inyáŋ'ε'>
 dii k'a=ł-'in=de' 'i-n-yáŋ'=e'
 DEM so=CLS-do.IPFV=COND EP-2SG.S-eat.OPT=IMP
 'This way you'll do, you eat afterwards.' JT (LFK_N:47)
- d. <di· k'ał'inde' t'inyáε'>
 dii k'a=ł-'in=de' ti-n-yásh=e'
 DEM so=CLS-do.IPFV=COND EP-2SG.S-go.IPFV=IMP
 'This way you'll do, and go!' JT (LFK_N:47)

6.1.1.4 *iy* Durative

Li identifies the enclitic *iy* as a 'durative' in notecard 291. Durative indicates that the action progresses over a period of time, and is not viewed as a punctual event. The enclitic *iy* sometimes appears as *ay* following verb stems ending in laryngeal preceded by vowel /a/. Enclitic *iy* appears across interpretations of tense as past, present, and future, which is characteristic of aspect. Durative enclitic *iy* appears with perfective aspect as in (6b) and (6e), with progressive stem variants as in (6c), and verb stems like 'be large' in (6d) and 'cry' in (6f) that have only one stem form for all modes.

(6) Durative *iy*

- a. <di· k'it'ε' k'inla' niyi'ániŋ ki·yaŋ k'inohólyi·>
 dii kit'e' kyinla ni-yi-'an=iŋ
 this night grass.game THM-PASS-handle.round.PFV=DUR

 kii-yaŋ ki-n-ohó-l-yiih
 INDF.PPO-about THM-ADV-2PL.S-CLS-win.IPFV
 'This night the grass game is played, you all beat them.'
 JT (LFK_T:61)
- b. <tc'o·ndá'ay>
 ch'oo=n-da'=ay
 weak=2SG.S-be.lazy.PFV=DUR
 'You were lazy.'
 JT (LFK_N:352)
- c. <nacneliŋ>
 na=sh-nel=iŋ
 ADV=1SG.S-move.camp.PROG=DUR
 'I am moving camp.'
 JT (LFK_N:361)

- d. <nick'á'aŋ>
 ni-sh-kyáh=aŋ
 THM-1SG.S-be.large=DUR
 'I am large, big.' JT (LFK_N:132)(=2.17b, 2.77b, 4.571)
- e. <tcitc' k'ε' na·diyε·s'á'aŋ>
 chich=k'eh naa=di-yees-'á'=aŋ
 tree=in.the.manner.of linear=THM-PFV-stand=DUR
 'He has been standing like a tree.' JT (LFK_N:139)
- f. <dow ndowŋ'ic tc'εha'aŋ yinya'niŋ>
 dow=ŋ dow=ŋ 'i-sh-cheh=a'-aŋ yi-n=ya'niŋ
 NEG=DUR NEG=DUR EP-1SG.S-cry=REL=DUR OBV-say=they.say
 'No! No! I am crying still he said (they say).' JT (LFK_T:67)

Though past tense is usually inferred from the use of perfective aspect, durative enclitic *iŋ* appears with past tense semantics in perfective forms with an adverb meaning 'yesterday' as in (7b) and is also often paired with immediate future *tel* as in (7c).

(7) Durative *iŋ* with Immediate Future *tel*

- a. <k'ina·'dε·silyé'aŋ>
 ky'i-naa='-dee-si-l-yéh=aŋ
 THM-ADV=INDF.S-THM-PFV-CLS-hunt=DUR
 'They (indefinite) went to hunt.' JT (LFK_N:113)
- b. <k'ándaŋ' k'ina'dε·silyé'iŋ>
 kán-daŋ' ky'i-naa='-dee-si-l-yéh=iŋ
 now-PST THM-ADV=INDF.S-THM-PFV-CLS-hunt=DUR
 'Yesterday they hunt(ed).' JT (LFK_T:2)(=3.80a)
- c. <kan'dε' k'ina·^adε·silyé'tel-iŋ>
 kán'-de' ky'i-naa-a=dee-si-l-yéh=tel-iŋ
 now-COND THM-ADV-PL=THM-PFV-CLS-hunt=IMM-DUR
 'Tomorrow they'll hunt.' JT (LFK_T:2)

6.1.1.5 *je'* Desiderative Enclitic

Desiderative enclitic *je'* is written <dje> by Goddard in two instances and <dje'> once by Li. It appears to be cognate with Kato <dja^ε>, which Goddard writes is 'used of future predictions in which determination or desire on the part of the speaker that the events shall come to pass is usually evident. For this reason it occurs more frequently in the first person' (Goddard 1912:82). Though examples are few, and Goddard appears to misparse <dje>, all three examples in (8) are similar to Goddard's later description of Kato <dja^ε>. All three are in the first person with the speaker expressing desire to do an action or to have an event come to pass.

- (8) Desiderative Enclitic
- a. <'ε·he' ci· k'aclé' **Djε**'>
 'eehe' shii k'a=sh-léh=**je**'
 alright I so=1SG.S-do=**DES**
 'Alright I will do that.' JT (LFK_T:12)(=3.7b)
- b. <te tā ca sε tas si an nañ kon dañ dεc a **djε** o lat>
 te=ti-shaa (< te=ti-sh-yaa) see ta=s-i-'an=iŋ
 water=off.along-(1SG.S)-go stone into.water=PFV-1SG.S-handle.round=DUR
- kon-diŋ dee=sha=**je**' (< dee=sh-'a'=**je**') 'o-lit
 fire-LOC INTO.FIRE=1SG.S-handle.round.OPT=**DES** OPT-burn
 'I will go to the river. Stone I brought up. Fire-place I (want to) put it. Let it
 (burn) get hot.' CJ (PG_T:2.64-65)
- c. <o nαc lañ co tε ha dε dαc a **djε** lit dañ sε>
 'o-ni-sh-laŋ' choot'e'ha
 OPT-PFV-1SG.S-get.PFV again
- dee=di-sh-'a'=**je**' lid-diŋ see
 into.fire=THM-1SG.S-handle.round.OPT=**DES** burn-LOC stone
 'I get one. Again I (want to) put it in the fire. They are hot stones.'
 CJ (PG_T:2.66)

6.1.1.6 *kaŋ* Evidential Enclitic

An element *kaŋ* appears post-verbally in an enclitic position, with an allomorph *kan*. It does not appear to have been glossed, or targeted specifically for elicitation by Li. It is likely an evidential, but with semantics that are unanalyzable directly from the data. Goddard (1912:80-81) records a similar form <kwañ> in Kato as a suffix referring to the “source of information,” and to “acts which while not directly observed, are inferred with certainty from the nature of the evidences observed.” Each example’s translation offered by Goddard does not appear to reflect this though. For example, the form <nag a kwañ> ‘he had walked’ is indistinguishable in translation from forms without <kwañ> (81). Li forms of *kan* appear in texts and similarly are not analyzed or translated. In this work, *kan* is glossed EVID?.

- (9) Evidential Enclitic *kaŋ*
- a. <tc'ε·G' 'a·dictc'iŋ' **kaŋ**>
 ch'EEK 'aa=di-sh-chiŋ'=**kaŋ** (< 'aa=di-si-ł-chiŋ'=**kaŋ**)
 woman REFL=THM-PFV-(CLS)-make=**EVID?**
 'Woman he makes himself.' JT (LFK_T:29)(=4.65b)
- b. <bitc'ow ba· yaŋk' **áñ** ya'niŋ sa'diŋ>
 bi-chow b-aa=yaŋ=**kán**=ya'niŋ sah=diŋ
 3POSS-grandmother 3PPO-for=to.stay=**EVID?**-they.say alone=LOC
 'His grandmother he made a home for her alone.' JT (LFK_T:5)(=3.73a)

- c. <hat'a' t'anáyε·diya·**kan** t'o·nilin ya'nin>
 hata' ta-ná=yee-di-yaa=**kan**
 same.place out.water-REV-PFV-REV-go=**EVID?**

too=ni-lin=ya'nin
 water=ADV-flows=they.say

'The same place where she came out of water, water flows.'

JT (LFK_T:41)(=3.84b)

6.1.1.7 *sh* Dubitative Enclitic

The modal enclitic *sh* appears in Li and Goddard materials indicating uncertainty and doubt, and may be translated as 'I think, I guess, it seems' as in (10):

- (10) Modal Enclitic *sh*
- a. <n tæc>
 n-t'e=**sh**
 THM-be=**DUB**
 'I guess it is' CJ (PG_T:12.72)(=2.73d)
- b. <doc>
 do=**sh**
 NEG=**DUB**
 'I guess none' CJ (PG_T:2.73)
- c. <n co næc>
 n-shon=i-sh
 THM-good=REL-**DUB**
 'I guess (it) is good' CJ (PG_T:2.93)
- d. <dic>
 di=**sh**
 DET=**DUB**
 'I guess this' CJ (PG_T:2.46)
- e. <di bi ac>
 di b-i'=i-**sh**
 DET 3PPO-in=EP-**DUB**
 'this in I guess' CJ (PG_T:12.37)

6.1.1.8 *teel* General Future Tense

The enclitic *teel* indicates a general future tense with TT after TU in the future, often translated as ‘will,’ ‘going to’ or ‘about to.’ Enclitic *teel* is cognate in form with Hupa future tense *tel* ‘imminent future,’ related also to Hupa tense *te* ‘general future’ (Sapir and Golla 2001:857-858), Kato <teL, tē le> (Goddard 1912:82), and Tututni <te> ‘future tense’ (Golla 1975:227). Enclitic *teel* occurs with perfective, imperfective or progressive stems as shown in (11). It is unclear whether optative stems co-occur with enclitic *teel*.

- (11) Future Enclitic *teel*
- a. <no‘cónt‘ε·l̥>
 n-oh-shón=**teel**
 THM-2PL.S-be.good.IPFV=FUT
 ‘You all will be good.’ JT (LFK_T:78)
- b. <k‘o‘na·t‘ε·l̥>
 k‘-oh-naa=**teel**
 THM-2PL.S-be.alive.IPFV=FUT
 ‘You all will live.’ JT (LFK_T:79)
- c. <t‘ε·si·a·t‘ε·l̥>
 tee-si-i-yaa=**teel**
 off.along-PFV-1SG.S-go.PFV=FUT
 ‘I’m going away.’ JT (LFK_T:34)
- d. <yicyalt‘ε·l̥·t‘ε’^{inj}>
 yi-sh-yal=**teel-t’eenj**
 PROG-1SG.S-kill.several.PROG=FUT-IPFV
 ‘I(‘ll) kill them right along.’ JT (LFK_N:198)

Like (11d), not all instances of enclitic *teel* are translated ‘will,’ ‘going to’ or ‘about to.’ A verb form’s mode prefixes and verb stems also contribute to temporal interpretations. Examples in (12a-c) have other future oriented semantics:

- (12) Verb Stem Aspectual interactions with *teel*
- a. <na·kina·tε·l̥>
 naa=ki-naa=**teel**
 ITER=THM-be.alive.IPFV=FUT
 ‘He is getting well.’⁴⁵ JT (LFK_T:22)

⁴⁵ Golla records a Hupa verb theme *na:=P=xi-nay* ‘to recover’ which appears to be cognate with a similar Wailaki verb theme (Sapir and Golla 2001:774).

- b. <tc'it'ε·bá'təl>
 ch'i-tee-báh=**teel**
 THM-off.along-fight(war)=FUT
 'People went to war.'
 JT (LFK_T:9)
- c. <ḵ'i-k'ó-ni·' yictc'in't'ε·l̥ ncónG'>
 ky'i-k-óo-niih yi-sh-chín'=**teel** nshón-k
 THM.O-THM-OPT-think OBV-CLS-make.PFV=FUT THM-good=ADV
 'Knowledge he taught them well.'
 JT (LFK_T:73)

In (12a), an imperfective verb stem within a larger verb theme meaning 'to recover' with enclitic *teel* is translated 'he is getting well,' or in other words, that he will be recovered and alive in the future. Example (12b) is translated 'people went to war,' but could be translated 'people were going to war,' indicating a prospective future placed in the past set by the context of the story. Lastly, example (12c) translated 'knowledge he taught them well' features a perfective verb stem, and refers to a state of having knowledge that can extend into the future once attained. Perfective categories are often interpreted as past tense in Dene languages, but with enclitic *teel*, 'he will have taught them well' is also a possible future-oriented reading referring to a state that extends into the present and well into the future.

Future tense enclitic *teel* is often immediately followed by enclitic *t'eeη* (see 6.1.1.9). This combination appears to emphasize a future state such as married in (13c) and undead in (13a). Future research would account for situation type aspect interactions. When followed by *t'eeη*, the future tense enclitic's vowel is also shortened to *tel*, as in examples in (13):

- (13) Future Tense and Modal Enclitic *tel t'eeη*.
- a. <dow nḵ'aG tc'ε'k'ó'siη nandac t'əl·tε·"n>
 dow=n-kya=k cheh=k-óh-siη na=n-dash=**tel-t'eeη**
 NEG=THM-big=ADV cry=THM-2PL.S-do REV=THM-go.IPFV=FUT-IPFV
 'Don't cry too much, he (the dead) will come back.' JT (LFK_T:67)
- b. <si·ḵ'αη t'əl·t'ε^{en}>
 si-i-ky'αη=**tel-t'eeη**
 PFV-1SG.S-hit.PFV=FUT-IPFV
 'I'll hit him (shoot with an arrow).' JT (LFK_N:292)
- c. <is tcε gε slin təl tēñ>
 is-ch'eeg-e' s-lin=**tel-t'eeη**
 1SG.POSS-wife-POSS THM-become.PFV=FUT-IPF
 'My wife is soon to be.' CJ (PG_T:3.77-78)
- d. <do təl tēñ>
 do=**teel-t'eeη**
 NEG=FUT-IPFV
 'will not.' CJ (PG_T:7.73)

6.1.1.9 *tel* Immediate Future Tense

The enclitic *tel* expresses an imminent future tense with a TT after TU in the future like general future *teel* but closer to TU. Enclitic *tel* is cognate both in form and meaning to Hupa *tel* or *tel* that “implies a more definite, imminent futurity and a more permanent, less uncertain state” (Sapir and Golla 2001:856). Verbs with enclitic *tel* are shown in (14):

- (14) Immediate Future Tense Enclitic *tel*
- a. <dan'doŋ tɛ·so'dɛl't'ɛl>
 dan'-doŋ tee-s-oh-del'=tél
 where(?)=INT off.along-PFV-2PL.S-go.PL.PFV=FUT
 'Where(?) are you (all) going?' JT (LFK_T:33)
- b. <k'inla' niyi'ant'ɛlya'niŋ >
 kyinla' ni-yi-'an=tel-ya'niŋ
 grass.game THM-PASS-handle.round=FUT-they.say
 'Grass game is going to be played, they say.' JT (LFK_T:61)(=4.51d)

The future tense enclitic *tel* often occurs followed by enclitic *ij*. The semantics of this combination are uncertain at this time. Examples are shown in (15):

- (15) Future Enclitic *tel* with Modal Enclitic *ij*
- a. <sɛ·siŋint'ɛliŋ>
 see-s-i-l-yín=tel-ij (< s-ee-si-n-l-yín=tel-ij)
 THM-PFV-1SG.S-CLS-kill=FUT-DUR
 'You are going to kill me.' JT (LFK_T:7)
- b. <k'ɛ·lit'ɛliŋ>
 k'-ee-lit=tel-ij
 THM-against=burn.PL.PFV=FUT-DUR
 'He is going to be burnt up.' JT (LFK_T:48)
- c. <ick'ict'ɛliŋ>
 'i-sh-ky'ish=tel-ij
 EP-1SG.S-hit.IPFV=FUT-DUR
 'I'll hit him(/her/it).' JT (LFK_N:292)

6.1.1.10 *t'eeŋ* Imperfective

The enclitic *t'eeŋ* appears to indicate imperfective aspect and expresses an action without reference to initiation or conclusion. Imperfective aspect expresses that TT includes TSit without reference to the bounds of TSit, and regardless of temporal location; however, because imperfective aspect contrasts with perfective aspect and perfective aspect is often interpreted in its definiteness as past tense, the imperfective in this respect is most often used with readings in the present and future as in (16). The enclitic also *t'eeŋ* often appears with

general future tense enclitic *teel* as in (16b-c). The semantics of the combination are uncertain at this time, and require further study.

- (16) Imperfective *t'eeŋ*
- a. <ncont'ε·ⁿ>
 n-shon=**t'eeŋ**
 THM-good=**IPFV**
 'It's alright (good).' CJ (PG_T:1.57)
- b. <yick'ict'εlt'εⁿ>
 yi-sh-ky'ish=**tel-t'eeŋ**
 PROG=1SG.S-hit.IPFV=**FUT-IPFV**
 'I'll be hitting him right along.' JT (LFK_N:292)(=2.29a)
- c. <silyint'ε·l·t'ε·ⁿ>
 si-l-yin=**teel-t'eeŋ**
 THM-CLS-kill.PFV=**FUT-IPFV**
 'They'll kill you.' JT (LFK_T:47)

A likely related independent form *nt'eeŋ* with a thematic prefix *n-* appears in Goddard texts translated as 'it is.' Li also records an imperfective verb stem <t'ε·> 'to be, act' (LFK_N:47).

- (17) Verb stem *t'eeŋ*
- a. <hai n tεñ>
 hai n-**t'eeŋ**
 DEM THM-**be.IPFV?**
 'That it is.' CJ (PG_T:1.22)
- b. <n do n tεñ>
 n-do=n-**t'eeŋ**
 THM-NEG=THM-**be.IPFV?**
 'There is no one.' CJ (PG_T:1.44)(=2.73f, 3.13b)

6.1.1.11 *ts'eh* Non-visual Evidential Enclitic

The evidential enclitic *ts'eh* appears in Li and Goddard materials indicating that evidence is sensed in a non-visual way, usually interpreted as 'heard' as (18a-b), but also is translated as perception of touch as in (18c):

- (18) Evidential Enclitic *ts'eh*
- a. <da coc ic kai tce tsey>
 da-sho=sh 'ishkai cheh=**ts'ey** (< cheh=**ts'eh-i**)
 what-INDF=DUB baby cry=**EVID-(REL)**
 'What baby I hear cry?' CJ (PG_T:1.12-13)

- b. <ndo tsɛ>
 n-dów=ts'eh
 THM-NEG=EVID
 'I heard none (i.e. nothing).' CJ (PG_T:1.31)(=6.47b)
- c. <ɕɛ·nilɛ'ts'ɛ'>
 sh-ee=ni-leh=ts'eh
 1SG.PPO-against=THM-touch.IPFV=EVID
 'It touches me (I perceive).' JT (LFK_T:14)

6.1.1.12 *ya'niŋ* Quotative Evidential Enclitic

An enclitic construction *ya'niŋ* '(so) they say, it is said' is common to lines in Li and Goddard texts, and functions as a quotative evidential enclitic. As such, enclitic construction *ya'niŋ* indicates that someone else (indefinite) is the source of the information presented, and/or that the information is common knowledge. Discursively, the enclitic may function to organize, connect, and manage speech into segments for the speaker.

The form is so common as an ending to lines in Li texts that in many instances, Li doesn't acknowledge its presence in English translation though it is present in the Wailaki forms. Though the form may differ, such a particle or enclitic is common to many California Indian languages (Mclendon 2003, Schlichter 1986).

In (19), the first page of a Li text, Li consistently writes <(they say)> in translations for *ya'niŋ*, with the translation given exactly as Li transcribes. In later transcriptions, he neglects translation of the enclitic. In this work, it is often written glossed 'they.say' to save space. Its morphological composition is given in (19a). The enclitic affects the stems it attaches to, as shown by stems <ts'an'> with the enclitic and <ts'aŋ'> without in (19c).

- (19) Quotative Evidential Enclitic *ya'niŋ*
- a. <ŋ>
 ŋ
 V.STEM.IPFV/PFV
 'say' JT (LFK_V:19)
- b. <yá'niŋ>
 yá='-n=iŋ
 PL=INDF.S-say=DUR
 'they say' JT (LFK_T:2)
- c. <do yá'niŋ k'andan'daŋ' k'iŋila' yá'niŋ>
 dow=yá'niŋ k'an-dan'-daŋ' ky'i-yi-lah=yá'niŋ
 NEG=**they.say** now-when.PST-when.PST THM.O-PROG-catch.lots=**they.say**
 'None (they say), the day before yesterday were lots (caught deer)(they say).' JT (LFK_T:2)

- d. <tc'ε·ya'lei' yidε·ts'an' yá'niŋ yidε·ts'aŋ'>
 ch'ee-yá='-leih yi-dee-ts'an'=yá'niŋ yi-dee-ts'aŋ'
 out-PL=INDF.S-sing OBV-THM-hear.PFV=**they.say** 3-THM-hear.PFV
 'Singing he heard it (they say) he heard.' JT (LFK_T:2)

6.1.1.13 *yee* Remote Past Tense

The enclitic *yee* is recorded by Li as <-yε·ε> and translated as 'long ago.' This enclitic denotes a remote past, or a past further back in time than recent past, shown in (20):

- (20) *yee* 'long ago (remote past tense)'
- a. <-yε·ε>
yee
 ENCL
 'long ago' JT (LFK_N:121)
- b. <do=yiɫdzisk'a' nandiyá· yé· ya'niŋ 'a·di·yandiŋ>
 doo=yi-ɫ-dzis=ka' ná=n-di-yaa=yé·ya'niŋ
 NEG=OBV-CLS-see=before REV=PFV-CLS-go=**REM**-they.say
 'aa=dii-yan=din
 REFL=THM-home=LOC
 'He does not see her (before) she got home long ago, her own home'
 JT (LFK_T:34)
- c. <ya·yiñyé·ε ya'niŋ>
 yaa=yi-n=yé·ya'niŋ
 PL=OBV-say=**REM**-they.say
 'That is what they said long ago (they say).' JT (LFK_N:121)
- d. <k'on' ndó·ya'niŋ k'an·yé·dan'>
 koŋ' n-dóo=ya'niŋ k'an=yé·dan'
 fire THM-none=they.say now=**REM**-when.PST
 'There was no fire long long ago.' JT (LFK_T:25)(=3.100b)
- e. ya·yiñyé·ε ya'niŋ ndán'daŋ nε' noyŋá·ŋ>
 yaa=yi-n=yé·ya'niŋ n-dán'-daŋ nε'
 PL=OBV-say=**REM**-they.say THM-extent-when.PST earth
 no=y-ŋ-'áaŋ
 to.there=OBV-PFV-handle.round
 'That is what they said long ago, long ago he put earth down.'
 JT (LFK_T:3)

Example (20b) demonstrates that though other examples seem to place TT in an ancient, mythic or historic past before fire in (20e) or the earth was put down presumably as a part of creation times in (20d), a remote past is more accurate. In (20b), after a sequence of events, a man presumes a woman to be in another location but she instead had returned home. The use of remote past *yee* emphasizes she wasn't where he thought she'd be at a particular time rather than placing the time story in ancient times.

6.1.2 Locative Enclitic *diŋ*

Locative enclitic *diŋ* indicates general locative phrases, and may be translated as 'at that place' or 'at that time' when used temporally.

- (21) General locative phrases marked by *diŋ*
- a. <yiD'k'iné'**diŋ**>
 yit-ky'i-né'=**diŋ**
 house-THM.O-ground=LOC
 'place where the wall touches the ground' JT (LFK_N:296)
- b. <nlá·ŋ**diŋ**>
 n-láaŋ=**diŋ**
 THM-many=LOC
 'are many there' JT (LFK_T:14)
- c. <nes **dañ**>
 nees=**diŋ**
 far=LOC
 'far (place)' CJ (PG_T:3.100)
- d. <yiná'**diŋ**>
 yi(d)-ná'=**diŋ**
 house-eye=LOC
 'smoke hole' JT (LFK_V:50)
- e. <cik'iyá''**diŋ**>
 shi-ki-yáh=**diŋ**
 1SG.POSS-AREAL-land=LOC
 'my country' JT (LFK_N:130)

Many place names recorded by Goddard are marked by locative enclitic *diŋ* as in (22):

- (22) Place Names Featuring *diŋ*
- a. <tsin teL nìn ya **diñ**>
 tsin-teł=ni-n-ya=**diŋ**
 bone-wide=ADV-PFV-go.SG=LOC
 Turtle-Comes-Place CH (PG_{WN}:15)

- b. <ga tcûn ka **dûñ**>
 gaachaŋʼ=ka=**diŋ**
 crow⁴⁶=arrow=LOC
 Crow's-Arrow-Place CH (PG_{WN}:19)
- c. <kaiL tcī ta **dûñ**>
 kaiłchi-ta=**diŋ**
 redbud-among=LOC
 Redbud-Among-Place CH (PG_{WN}:48)
- d. <nō læ tcō ta **dûñ**>
 noleh=cho-ta=**diŋ**
 waterfall(s)-AUG-among=LOC
 Waterfalls-Large-Among-Place CH (PG_{WN}:23)
- (23) Locative Phrases on the Body Marked by *diŋ*
- a. <ç ná·**diŋ**>
 sh-náa=**diŋ**
 1SG.POSS-eye=LOC
 'my eye place (face)' JT (LFK_V:39)
- b. <cidji' **diŋ**>
 shi-jii=**diŋ**
 1SG.POSS-eye=LOC
 'my heart place' (chest?) JT (LFK_V:43)

When used temporally, *diŋ* may be translated as 'at that place in time,' as in (24):

- (24) Temporal Phrases Featuring *diŋ*
- a. <tc'iyibá' **diŋ** k'isäi k'int'a' yilDzánya'niŋ>
 ch'i-yi-báh=**diŋ** k'isay kintah yi-l-dzán=ya'niŋ
 thm-PROG-go.to.war=LOC coyote camp OBV-CLS-find=they.say
 'When they are going to war, Coyote finds a camp (they say).'
 JT (LFK_T:9)
- b. <la·cē' no'té·lik' **diŋ** 'a-t'inya'niŋ>
 laashe' no='-tee-lik'=**diŋ** 'aa-t'in=ya'niŋ
 buckeye to.there=INDF.S-DIST-handle.mush=LOC this-do=they.say
 'When they put buckeye down, he does this (they say).'
 JT (LFK_T:14)

⁴⁶ Cognate with archaic Hupa *ga:chwung* 'raven' i.e. Redwood Creek dialect (Sapir and Golla 2001:753).

- c. <na·yildal**diŋ** 'a·k'ε' ndow yistcín'ya'niŋ>
 naa=yi-l-dal=**diŋ** 'aa-ke' n-dow
 around=PROG-CLS-run.PROG=**LOC** REFL=foot THM-NEG

yi-s-chín' (< yi-s-l-chín'>)=ya'niŋ
 OBV-PFV-(CLS)-make.PFV=they.say
 'When he was going, he doesn't make his track(s) (they say).'
 JT (LFK_T:57)

If attached to a numeral, locative phrase enclitic *diŋ* expresses the number of times an action was done repetitively.

(25) Expressions of Repetition with *diŋ*

- a. <ná**Gdiŋ**>
 nág=**diŋ**
 two-**LOC**
 'twice, two times' JT (LFK_T:80)(=3.28b)
- b. <t'á·k**diŋ**>
 táak=**diŋ**
 three-**LOC**
 'thrice, three times' JT (LFK_T:72)(=3.28c)

6.1.3 Diminutive Enclitic *chi'*

Wailaki diminutive enclitic *chi'* often modifies nouns with the meaning of 'small, little,' indicating a smaller, littler version of what the enclitic modifies as in (26):

(26) Nouns with Diminutive Enclitic *chi'*

- a. <t'εgt**chi'**>
 t'εg=**chi'**
 girl=**DIM**
 '(little) girl' JT (LFK_V:55)(=5.7d)
- b. <se·ntε·l**chi'**>
 see-n-teel=**chi'**
 rock-THM-flat=**DIM**
 'little flat rock' JT (LFK_V:54)
- c. <mo·n' **chi'**>
 moon'=**chi'**
 piece=**DIM**
 'small piece, a small bite' JT (LFK_V:49)

- d. <ło·k' ya·ctci'>
 łook'-yaash=**chi**'
 fish-young=**DIM**
 'young (little) fish' JT (LFK_T:62)
- e. <biyantci'>
 bi-yan'=**chi**'
 3POSS-thing=**DIM**
 'small thing' JT (LFK_N:300)
- f. <binditc'i'>
 bíndi=**chi**'
 feline=**DIM**
 'wildcat' JT (LFK_T:19)

Diminutive and augmentative enclitics are not mutually-exclusive, as they co-occur in (27) and express a sense of affection when modifying the word for husband.

- (27) <ckaṅ'k' ó'tc i'>
 sh-kan'=kyóh=**chi**'
 1SG.POSS-husband=AUG=**DIM**
 'my dear husband' JT (LFK_T:50)

The meaning 'little' quantifies adjectival qualities as in (28a-b). Diminutive enclitic *chi*' also has a meaning of 'close, nearby' as in (28c-d). Li records <tce'> 'be close to' in (28e):

(28) Other Word Classes with Diminutive Enclitic *chi*'

- a. <kan sal tce'>
 ki-n-sil=**chi**'
 AREAL-THM-heat=**DIM**
 '(a) little warm' CJ (PG_T:5.8)
- b. <do łan che'>
 dow=łaan=**chi**'
 NEG=many=**DIM**
 'few, not many' CJ (PG_T:33.3)
- c. <k'idiłtc'i'>
 ki-di-ł=**chi**'
 INDF.PPO-THM-with=**DIM**
 'close to them' JT (LFK_N:143)
- d. <ciłtc'i'>
 shi-ł=**chi**'
 1SG.O-with=**DIM**
 'close to me' JT (LFK_N:143)

- e. <-tce'>
che'
 DIM
 'to be close to' JT (LFKV:36)

6.1.4 Augmentative Enclitic *kyoh*, *choh*

The augmentative enclitic has two forms in free-variation which are *kyoh* and *choh*, with the meaning of 'big, large,' indicating a bigger, larger version of what the enclitic modifies as in (29).

- (29) Augmentative Enclitic *kyoh*, *choh*
- a. <siŋ'k'o'>
 siŋ'=**kyoh**
 star=AUG
 'big star' JT (LFKV:41)
- b. <biyá'k'o'>
 bi-yá'=**kyoh**
 3POSS-hair=AUG
 'blanket' JT (LFKV:42)(=2.9b)
- c. <la kyo>
 la'=**kyoh**
 one=AUG
 'large one' CJ (PGT:6.113)
- d. <clá·yalk'o'>
 sh-láa-yal=**kyoh**
 1SG.POSS-hand-(unanalyzable)=AUG
 'my thumb' JT (LFKV:41)
- e. <ta'nk'o'>
 ta'=n-**kyoh**
 water=THM-AUG
 'Eel River' JT (LFKV:54)(=2.80c)
- f. <taŋtco>
 ta'=n-**choh**
 water=THM-AUG
 'Eel River' CJ (PGT:30:47)(=2.80d)
- g. <bwĩdatco>
 bwĩdi=**choh**
 feline=AUG
 'mountain lion' LY (FE:85)

- h. <clá·yalte‘o‘>
 sh-láa-yal=**choh**
 1SG.POSS-hand-(unanalyzable)=AUG
 ‘my thumb’ JT (LFK_V:47)
- i. <gos **tco**>
 gos=**choh**
 bulb=AUG
 ‘soap root’ CJ (PG_T:29.38)

In an example from Goddard in (30), the meaning of an instance of *kyoh* appears to indicate a great distance, the opposite of some examples of the diminutive as ‘close, nearby.’

- (30) <ya añ **kyo**>
 ya’añ=**kyoh**
 from.across=AUG
 ‘from (way) across over there’ CJ (PG_T:12.7)

The augmentative enclitic may also act as an intensifier, as in (31a) whereby ‘hurry’ is composed of an interjection *ka* ‘ok’ followed by the augmentative, and in (31b) where to sleep intensely is translated by Goddard as to ‘sleep soundly.’

- (31) Intensifier Augmentative Enclitic *kyoh*
- a. <ka **kyo**>
 ka=**kyoh**
 ok=AUG
 ‘hurry’ CJ (PG_T:1.93)
- b. <ki kał gał wos sε **kyo**>
 *ki-ki-t=yi-t-ywosh-i=**kyoh**
 INDF.O-THM-with=PFV-CLS-sleep-EP=AUG
 ‘Let them sleep soundly.’ CJ (PG_T:7.31)

6.1.5 Adverbial Enclitic *k*

An adverbial enclitic *k* is used to form adverbial phrases as in (32) that modify verb phrases mostly for manner, and may be translated as ‘in that way, manner.’

- (32) Adverbial Enclitic *k*
- a. <beltéłg k’it‘óhdibat’>
 b-e=l-tél=**k** k’i-t-oh-di-bat’
 3PPO-against=THM-wide=ADV THM-DIST-2PL.S-CLS-lie.flat
 ADV V
 ‘Flat(ly) side by side you all lie flat (one by one).’ JT (LFK_T:14)

- b. <hai k'it'ε' ncoŋG' no'tets' yín ya'niŋ>
 hai kit'e' n-shoŋ=k n-oh-tets' yin=ya'niŋ
 that night THM-good=ADV ADV-2PL.S-lie down.PL 3.say=they.say
 DET N ADV V V
 'That night "Good you lie down!" he said (they say).' JT (LFK_T:14)
- c. <yictc'in't'ε] ncoŋG'>
 yi-sh-chín'=tel (< yi-s-l-chín'=tel) n-shoŋ=k
 OBV-PFV-(CLS)teach.PFV-FUT THM-good=ADV
 V ADV
 'He (will have) taught them well.' JT (LFK_T:73)

In (32), adverbial enclitic *k* attaches to verb stems *tel* 'wide, broad' in (32a) and *shoŋ* 'good' in (32b-c). In (32a) the resulting adverb form translation is 'in a flat manner' or 'flatly,' while in (32b-c) 'in a good way.'

Adverbial enclitic *k* in (33b) may be compared to (33a) without *k*. In (33a), the stem is not followed by any enclitics and Li gives the translation 'big, large.' Example (33b) however is translated 'lots, many' by Li.

- (33) Adverbial Enclitic *k*
- a. ŋ-kyah <ŋk'á'>
 THM-big
 'big, large' JT (LFK_N:132)
- b. ŋ-kya-k <ŋk'áG'>
 THM-big-ADV
 'lots, many' JT (LFK_N:132)(=2.26e, 4.57m)

6.1.6 Relative Enclitic *i*

A relative enclitic *i* functions to mark relative clauses, although it is often elided through regular phonological deletion of word-final/phrase-final short vowels. Changes to verb stems as relativized verb stems are often the only indication of its presence (see 4.3). Relative enclitic *i* is used to form nouns from verbs, and in some instances appears as *yiih* (see 5.2.3).

6.1.7 Emphatic Relative Enclitic *yey*

An enclitic *yey* appears in contexts and with meanings that resemble Hupa emphatic relative enclitic *-e*: (Sapir and Golla 2001:860) and appears to serve an emphatic locative function. This enclitic may also share the form *yee*.

- (34) Emphatic Relative y
- a. <se bat tay ga yeñ>
 see bi-tay=i=yen
 rock 3PPO-along=REL=EMP
Rock along it they are.
 ‘They are against the rock (there).’ CJ (PG_T:2.79)(=3.66c)
- b. <cac n ke ye gan ya yen>
 shash n-k’eh yeh=yin-yaa=yen
 bear 2SG.PPO-follow into=PFV-go=EMP
 ‘Bear behind you is coming in (there).’ CJ (PG_T:11.58-59)(=4.39e)
- c. <n ye yeñ>
 n-yeh=yen
 2SG.PPO-under=EMP
 ‘They are under you (there).’ CJ (PG:2.80)(=3.70d)

6.1.8 Other Syntactic Clitics

The following syntactic clitics form subordinate clauses. Subordinating enclitics follow a subordinating clause indicating time and cause.

6.1.8.1 *day* ‘when (past)’

Enclitic *day* forms subordinate clauses, and is translated ‘when (past).’ Enclitic *day* is cognate with Hupa *day* ‘when (in the past)’ (Sapir and Golla 2001:864).

- (35) <kel lat dañ koñ dañ de dag gal sat>
 k’ee-lid=**day** koñ=din dee=di-yi-l-sit
 THM-burn=**when.PST** fire=LOC into.fire=THM-PFV-CLS-fall
 ‘He burned up (when) fire place he fell in.’ CJ (PG_T:4.33-34)

6.1.8.2 *hit* ‘at that time, when’

Enclitic *hit* forms subordinate clauses with the meaning ‘at that time, when.’ Enclitic *hit* is cognate with Kato <-hīt, hût> ‘at (the) time of’ (Goddard 1912:26), and Hupa *hit* ‘when, as soon as’ (Sapir and Golla 2001:864).

- (36) Enclitic *hit*
- a. <nanyai **hiD**‘ ɫa‘k‘o‘t‘a‘ nanya·iŋ siɽyint‘el·t’ε·ⁿ>
 na=n-yai=**hit** ɫah-kyoh-tah na=n-yaa=iŋ
 ITER-2SG.S-go=**when** one-AUG-among around=2SG.S-go.PFV
- si-l-yin=tel-t’eeŋ
 PFV-CLS-kill=IMM-IPFV
 ‘When you go out once in a while, when you go, they’ll kill you.’
 JT (LFK_T:47)
- b. <k‘on’diŋ nocilt‘ε’ yin**hiD**‘ biɫ ’a·diyana·yidit‘al’ ya’niŋ>
 kon’=diŋ no=shí-l-te’ yi-n=**hit**
 fire=LOC to.there=1SG.S-CLS-handle.living.being.PFV OBV-say=**when**
- bi-l ’aa=di-ya(n)-naa=yi-di-tal’=ya’niŋ
 3PPO-with REFL=THM-concerning-REV=PFV-CLS-move.leg.PFV=they.say
 ‘In the fire I’ll put (him?) he said when with him he bent his leg toward himself (they say).’
 JT (LFK_T:44)

Words for the four seasons in Wailaki also contain enclitic *hit*:

- (37) Seasons with Enclitic *hit*
- a. daŋ’=**hit** <daŋ’**hit**>
 spring=**when**
 ‘springtime, (in the spring)’ JT (LFK_V:38)(=2.11f)
- b. shíŋ’=**hit** <ciŋ’**hit**>
 summer=**when**
 ‘summertime, (in the summer)’ JT (LFK_V:43)
- c. kái=**hit** <k‘á**hiD**>
 winter=**when**
 ‘wintertime, (in the winter)’ JT (LFK_V:44)
- d. t’añk’=**hit** <t’añG’**hiD**>
 fall=**when**
 ‘fall, (in the fall)’ JT (LFK_T:69)

6.1.8.3 *yaŋ* ‘for that reason, because’

Enclitic *yaŋ* forms subordinate clauses, and is translated ‘for that reason, because.’

- (38) Enclitic *yaŋ*
- a. <hai **yaŋ** k‘i·yila‘ ya’niŋ>
 hai=**yaŋ** kii-yi-lah=ya’niŋ
 this=**because** IND.F.O-PFV-be.attacked?. PFV=they.say
 ‘Because of this they are killed⁴⁷ they say.’ JT (LFK_T:46)
- b. <a·tc’ε·ge’ yisε·lyiny**yaŋ** báhaŋ n̄kaG‘ y’isliŋ>
 ‘aa=ch’eege’ yi=see-l-yin-**yaŋ** báhaŋ n-kyak-y
 REFL=woman 3=THM-CLS-kill.PFV-**because** war THM-large-ADV
 ’i-s-liŋ
 EP-PFV-become.PFV
His wife he killed because war big came to be.
 ‘*A big war happened because he killed his wife.’ JT (LFK_T:70)(=3.58b)

6.2 Conjunctions

Forms resembling conjunctions are attested in Goddard’s Wailaki texts. Future analysis of his notebooks may yield more precise semantics, though future analysis of his materials alone are not likely to contribute to more accurate reconstructed forms.

6.2.1.1 *haik’itdaŋ* ‘(and) then’

One example of a conjunction particle *haik’itdaŋ* translated ‘then’ is given in (39). I offer a possible reconstructed form and derivation in terms of morpheme segmentation and glossing. Without a Li form, the exact form and morphological composition can’t be confirmed.

- (39) <nay a be n teñ **hak gat dañ** ya kəl dəl teñ>
 na-ya=be n-t’eeŋ ***hai-k’it=daŋ**?
 ITER-PL=swim THM-ITER ***DET-on.it=when.PST?**
- ya=ky’i-l-dil=t’eeŋ
 PL=THM-CLS-eat.bits=IPFV
 ‘They swim then they eat.’ CJ (PG_T:13.8)

⁴⁷ The exact verb stem in (38a) is undetermined and does not match any particular perfective verb stems recorded by Li, but may be related to Hupa verb stem <liw/leh> ‘attack’ (Sapir and Golla 2001:763)

6.2.1.2 *bila'*, *bil* '(and then) this time'

A form <bał a> appears to conjoin clauses in Goddard texts as in (40). Possible cognates include Li recording *hai bila'* as 'this time' in Mattole (Li 1930:143), while Hupa *mil* 'when, after, as a result of' forms subordinate clauses (Sapir and Golla 2001:865). Drawing from the Mattole example, *bila'* is the likely form, with either the following in (41) as possible derivations.

- (40) <ε dak kañ **bał a** sε kon dañ dε do hal dał>
 'i-di-kaŋ **bila'** see kon=diŋ dee=di-ho-ł-dił
 EP-THM-taste **then** stone fire=LOC into.fire=THM-2PL.S-CLS-
 throw.several
 'It is sweet, then stones fireplace put in fire.' CJ (PG_T:1.68)

(41) '(And) then' *bila'* Possible Derivations

- a. bi-ła'
 3PPO-one/another?
 'then'
- b. bi-ł-'a'
 3PPO-with-extends?
 'then'

One example in Li's texts includes *bil* in a similar function translated as 'when' in (42):

- (42) <yo·g ninyai k'ina' bił k'i·nai'łdik'is icte'in' ya'niŋ>
 yoog ni-n-yai kinah **bi-l** ky'ii-nai='-łdi-kis
 DIST ADV-PFV-go uphill **3PPO-with** stick-REV=THM.O-CLS-spring
 'i-sh-tcin'=ya'niŋ
 EP-1SG.S-make=they.say
 'Way he came to the top really when he makes a branch spring back (to hit him).'
- JT (LFK_T:45)(=4.28b)

6.3 Negation

Negation in Wailaki often occurs through negation of the verb, and the use of the proclitic *dow*; however, a less common construction for negation uses preverbal modal element *shot*. Some verb stems may also inherently express negation, as in (43):

- (43) Inherent Negation in Verb
- a. <nindó·>
 ni-n-**dóo**
 PFV-2SG.S-**be.not**
 ‘You were not at that time.’ JT (LFK_N:273)
- b. <nicdó·ya’niŋ>
 ni-sh-**dóo**=ya’niŋ
 PFV-1SG.S-**be.not**=they.say
 ‘I was not at that time.’ JT (LFK_N:273)
- c. <cɛ·Dilai>
 sh-ee=di-**lai**
 1SG.O-against=THM-**dislike**
 ‘He does not like me.’ JT (LFK_T:32)

The following is description of various negation constructions and their semantics.

6.3.1 *dow* Negation Proclitic

Negation is marked by a proclitic *dow* which may be translated as ‘not’ in combination with the stem it is modifying in (44):

- (44) Negation with Proclitic *dow*
- a. <dow>
 dow
 NEG
 ‘not’ JT (LFK_V:39)(=2.49a)
- b. <dowi’ tc’o·silt‘é’iŋ>
dow-i’=ch’oo=s-i-l-té’=iŋ
 NEG-EP=ADV=PFV-1SG.S-CLS-feel.PFV=DUR
 ‘I am not getting mad.’ JT (LFK_N:165)
- c. <dow lk‘aŋ>
dow=lk‘aŋ
 NEG=rain
 ‘it does not rain’ JT (LFK_T:83)

- d. <**dow** nḳˈaGˈ<
dow=n-kyak
 NEG=THM-much
 ‘not much’ JT (LFK_T:79)
- e. <**dow** ˈocdíyic>
dow-ˈo=sh-dí-yish
 NEG-DIR=1SG.S-CLS-take.a.look.IPFV
 ‘I do not take a look at her.’ JT (LFK_N:345)
- f. <**dow** ka· kícleˈ<
dow-kaa=kí-sh-leh
 NEG-so=THM-1SG.S-be.sick.IPFV
 ‘I do not get sick.’ JT (LFK_N:366)

In (45e), the directive still requires an epenthetic glottal stop (see 2.5.1.4).

When the proclitic *dow*- co-occurs with the relative enclitic *-i*, forms translate as “never” doing the verb to which the clitics are attached. The imperfective verb stem is also used in these forms, as in the following:

- (45) ‘Never’ Construction
- a. **dow**=ˈi-s-t’ás=i’ <**dow** ˈist’ási’ >
 NEG=EP-1SG.S-cut.IPFV=REL
 ‘I never cut.’ JT (LFK_N:48) (=EX 2.33a, 4.31c)
- b. **dow**-niŋ=ˈi-sh-ˈásh=i’ <**dow** niŋ’ic’áci’ >
 NEG-up=EP-1SG.S-handle.round.IPFV=REL
 ‘I never pick it up (stone).’ JT (LFK_N:48)
- c. **dow**-na=sh-ˈa=i’ <**dow** nac’ái’>
 NEG-around=1SG.S-carry.IPFV=REL
 ‘I never carry it around.’ JT (LFK_N:48)
- d. **dow**=t’i-sh-ásh=i’ <**dow** t’icáci’ >
 NEG=off.along-1SG.S-go.SG.IPFV=REL
 ‘I never go.’ JT (LFK_N:49)
- e. **dow**=ti-shi-l-dásh=i’ <**dow** t’icildáci’>
 NEG=off.along-1SG.S-CLS-run.IPFV=REL
 ‘I never run.’ JT (LFK_N:49)
- f. **dow**=di-shi-l-ch’é=i’ <**dow** dicilte’é’i’>
 NEG=THM-1SG.S-CLS-open.hole.IPFV=REL
 ‘I never open a hole apart.’ JT (LFK_N:49)

- g. **dow**-na=sh-cha(‘)=i’ <**dow** naetc‘ai’>
 NEG-ADV=1SG.S-cover.with.dirt.IPFV=REL
 ‘I never cover up with dirt.’ JT (LFK_N:49)

While the form *dow* is the most common form of negation as a preverbal proclitic, it also occurs following nouns as a verbal predicate with a thematic verbal prefix *n-*, with a verb that follows as in (46a) or as a predicate as in (46b-c):

- (46) *ndow* Following Nouns
- a. <‘a·ke’ **n-dó** yischin’ ya’niŋ>
 ‘aa-ke’ **n-dów** yi-s-chin’=ya’niŋ
 REFL-track THM-NEG OBV-PFV-make.PFV=they.say
 ‘His (own) track he does not make.’ JT (LFK_T:57)
- b. <k’oŋ’ **ndó**· ya’niŋ>
 k’oŋ’ **n-dóo**=ya’niŋ
 fire THM-NEG=they.say
 ‘There was no fire.’ JT (LFK_T:25)
- c. <dɛŋ k’oŋ’ **n-dów**’^woŋ>
 dɛŋ k’oŋ’ **n-dów**’^woŋ
 this.way fire THM-NEG=DUR
 ‘This way (i.e. side) there is no fire.’ JT (LFK_T:49)(=3.62c)

The verb stem *dooh* <do·‘> ‘to die, be gone’ is likely related to proclitic *dow*; however, Li does not list *dow*’ explicitly as a verb stem though it appears to function as a verb stem with prefixes and clitics attached. These forms behave as other verbs, and can appear alone, with translations as full sentences as in (47):

- (47) Full Sentences with *dow* as Verbal Predicate
- a. <**ndow**’^wɑŋ>
n-dów-ɣwaŋ
 THM-NEG=about
 ‘There is none.’ JT (LFK_T:61)
- b. <**ndo** tse>
n-dów-ts’eh
 THM-NEG=EVID
 ‘I heard none (i.e. nothing).’ CJ (PG_T:1.31)(=6.18b)

In addition, the forms *dow*, *ndow*, and *ndoŋ* appear as independent negatives translated as ‘no’ according to each transcribers, including Merriam in his Tsennahkennes wordlists.

- (48) Independent Negatives
- a. <n do, do ac cal san añ>
n-dów, **dow**=’i-shi-l-sin=iŋ
 THM-NEG, NEG=EP-1SG.S-CLS-find=DUR
 ‘No, I did not find (it).’ CJ (PG_T:2.116)
- b. <n doŋ>
 n-dóŋ
 NEG
 ‘no.’ CJ (PG_T:2.88)
- c. <n do>
 n-dó
 NEG
 ‘no.’ CJ (PG_T:14.28)
- d. <n’To’>
 n-dów
 THM-NEG
 ‘no’ *Tsennahkennes* (CHM:217)
- e. <To’-hah>
 dów-hah
 NEG-just
 ‘(just) no’ *Tsennahkennes* (CHM:217)

6.3.2 *shot* Negation Modal

A less common element used in negation is preverbal modal *shot* which expresses a negative ability on the part of the subject of the verb it precedes as in (49):

- (49) Negation with Preverbal Modal *shot*
- a. <**cot** ’act’iniŋ>
shot ’a-sh-t’ín=iŋ
 NEG.MOD EP-1SG.S-do.IPFV=DUR
 ‘I cannot do it.’ JT (LFK_N:262)
- b. <**cot** bite’iŋ ’act’iniŋ>
shot bi-ch’iŋ ’a-sh-t’ín=iŋ
 NEG.MOD 3PPO-towards EP-1SG.S-do.IPFV=DUR
 ‘I can’t get to it.’ JT (LFK_N:262)

6.4 Question Formation

Questions can be of two types. The first are those formed with indefinite pronouns and interrogative *dónj* and which have a broad range of answers possible as content questions. The second is yes-no polar questions formed with interrogative *shih*.

6.4.1 Content Questions

Content questions are questions that require open-ended answers depending on context. Content questions are formed with sentence-initial interrogative pronouns. An interrogative *dónj* used with indefinite pronouns form interrogative pronouns shown in (50):

- (50) Content Question Interrogative Pronouns
- | | | | | |
|----|--------------|-------------------|---------------------------|-------------------|
| a. | dan-dónj' | <dan Dó(·)ŋ> | JT (LFK _N :19) | 'who' |
| b. | dai-dónj' | <dai Dó(·)ŋ> | JT (LFK _N :19) | 'what' |
| c. | dah-dónj' | <da' Dónj> | JT (LFK _N :19) | 'where, where to' |
| d. | dan'-dónj' | <dan' donj> | JT (LFK _T :33) | 'when/where?' |
| e. | nah-dónj' | <na' Dó(·)ŋ> | JT (LFK _N :19) | 'how' |
| f. | dai-dónj ɣaŋ | <dai-Dó(·)ŋ ɣaŋ > | JT (LFK _N :19) | 'why' |
- (=3.8)

Interrogative pronouns are sentence-initial in distribution, and precede verbs as in (51):

- (51) Interrogative Pronoun Distribution in Questions
- a. <na'**Doŋ**' ahál'iŋ>
 nah-**doŋ**' a-há-l-'iŋ
 how-INT EP-2PL.S-CLS-do.IPFV
 'How do you all do that?' JT (LFK_T:11)
- b. <dai**doŋ**' k'ant'ei'ahal'iŋ yíŋya'niŋ>
 nah-**doŋ**' k'a=n-t'ei-'a=há-l-'iŋ yí-n=ya'niŋ
 how-INT so=THM-be-REL-2PL.S-CLS-do.IPFV OBV-say=they.say
How so it is you do/fix, he said, they say.
 '...“What is it you make it of?” (he said, they say)' JT (LFK_T:12)

6.4.2 Polar (Yes/No) Questions

Polar questions are answerable by yes or no, or an equivalent, and are formed with an interrogative focus particle *shii*. Li and Goddard in their transcriptions identify *shii* as an interrogative, though Li indicates it with a question mark <(?)>. Rather than indicating uncertainty of meaning, I interpret this as Li's shorthand for an interrogative. The constituent questioned and marked by *shii* appears in sentence-initial position, with *shii* appearing immediately after the first word of the sentence as in (52):

- (52) Interrogative Particle *shii*
- a. <cał **ci** gan yał tɛł ho n tcał ni yai teñ
 shi-ł **shii** yi-n-yał=tɛł
 1SG.PPO-with Q PROG-2SG.S-go.PROG=IMM
 ho n=ch'inj'-il ni-yai=t'eeŋ
 yes 2SG.S-towards-with ?=REL-IPFV
 '...“With me (interrogative) will you go?” “Yes, to you I came.”
 CJ (PG_T:4.28)
- b. <kañ lañ ha **ci** se so hal guñ>
 k'aŋ-laŋ-ha **shii** see-s-oho-l-yiŋ
 now-lots-just Q THM-PFV-2PL.S-CLS-kill.PFV
 'All (interrogative) did you kill?' CJ (PG_T:6.33)
- c. <n dañ **ci** tɛ sol dai>
 n-daŋ' **shii** tee-s-oh-l-dei'
 THM-when.PST Q off.along-THM-2PL.S-CLS-dance.PFV
 'Already (interrogative) have you danced?' CJ (PG_T:29.35-36)
- d. <kyañ **ci** n tɛ tci yañk nak ka tce dəl la ya nai>
 kyaŋ **shii** n-t'ee chiyaŋk naka je-di-laa yi-nai
 here Q THM-be women two THM-1PL.S-dislike.IPFV OBV-say
 'Here (interrogative) is it women two (we?) do not like they say?
 CJ (PG_T:29.36-37)

The position of *shii* in example (52) is somewhat ambiguous from Li's notation. Example (52) features *shii* after a constituent that possibly may not be in sentence-initial position; however, aspiration on the verb stem (a possible cue to word, clause and sentence boundaries) in the first content question likely is obscured by likely sentence-initial /h/ in *hai k'aŋha'*, the constituent questioned and marked by *shii*. I interpret example (53) to be two serial questions rather than one marked by a sentence-final *shii*.

- (53) <dah'doŋ' t'ɛ·sya· hai k'aŋha' **ci**>
 dah'-doŋ' tee-s-yaa(h) hai k'aŋ-ha' **shii**
 where-INT off.along-PFV-go DET now-just Q
 'Which way did she go (?) now (interrogative)? JT (LFK_T:33)

6.5 Word Order

More in depth analysis is needed in regards to Wailaki word order and text discourse-related structures. A range of word orders may be observed from the texts, though most Dene languages are thought to have a fairly rigid word order of SOV. Recent work on Hupa however has shown that word order in Hupa has considerable flexibility in texts (Conathan 2004, Newbold 2010). Conathan (2004:76-79) argues that postverbal nominals in Hupa tend to be referents that have previously been introduced to the discourse, and are old information; moreover, that a less-rigid word order in Hupa as compared to other Dene languages is likely

due to contact with other languages such as Karuk and Yurok. Newbold (2010) also examines the phenomenon of Hupa postverbal noun phrases using texts from Sapir and Golla (2001), and found that just over a quarter of all overt Hupa NPs occurred postverbally. Future study would examine Wailaki texts for noun phrase location with respect to verbs.

SOV word order is common in Wailaki, and can be observed from texts; however, alternative word orders are also observed. Verbs demonstrating sentence-final position are shown in (54). Independent words as subjects and objects are not always overtly expressed. In examples like (54d), an overt subject is not expressed.

- b. <bantç'o' bi' ɣaŋk'añya'niŋ k'iDé·ts'aŋ'
 banchoh b-i'-ɣaŋ-k'an=ya'niŋ ky'i-dée-ts'aŋ'
 ocean 3PPO-in-live-EVID?=they.say THM.O-THM-hear.PFV
Ocean in she is staying they say he heard.
 She is staying in the ocean, they say, he heard.
- c. bantç'o' bi' t'a·nya·nyé·y a'niŋ
 banchoh b-i' taa=n-yaa=nyee=ya'niŋ
 ocean 3PPO-in into.water=ADV-go=EMP-they.say
Ocean in he goes far off.
 '*He goes far off into the ocean.'
- d. <k'ináldaŋ nayɫɻál tc'ε·gtc'iŋ>
 kin-á-l-daŋ na=y-l-ɻál(=i) ch'eek-chiŋ
 puberty.dance around=OBV-CLS-dance.puberty(=REL) woman-kind
 V S
 'Menstrual (puberty) dances she dances, a girl.' JT (LFK_T:4-5)

7 REFERENCES

1955. Miscellaneous sound recordings from the Phoebe A. Hearst Museum of Anthropology, PHM MISC. Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley, Online: <http://cla.berkeley.edu/collection/11078>
- ANDERSON, W. (=SALLY). 2003. The California Athabaskan website. *Proceedings of the 2003 Athabaskan Languages Conference*: Arcata, California, June 5 - 7, 2003. Alaska Native Language Center Working Papers, 3. Fairbanks: Alaska Native Language Center, Univ. of Alaska
- AXELROD, MELISSA. 1993. *The semantics of time: Aspectual categorization in Koyukon Athabaskan*. Lincoln, Nebraska: University of Nebraska Press.
- _____. 1996. The semantics of classification of Koyukon Athabaskan. Paper presented at the Athabaskan Conference on Syntax and Semantics, Swarthmore College.
- BAUER JR., WILLIAM J. 2005. California Indian resources at the American Philosophical Society. *News from Native California*, 19(1):12
- _____. 2009. *We were all like migrant workers here: Work, community and memory on California's Round Valley Reservation, 1850-1941*. Chapel Hill, NC: University of North Carolina Press.
- _____. 2010. Family matters: Round Valley Indian families at the Sherman Indian Institute, 1900-1945. *Southern California Quarterly* 92(4):393-421
- _____. 2016. *California through native eyes: Reclaiming history*. Seattle, WA: University of Washington Press.
- BAUMHOFF, MARTIN A. 1958. California Athabaskan groups. *University of California Anthropological Records* 16(5):157-237
- BEAN, LOWELL J. and HARRY W. LAWTON. 1976. Some explanations for the rise of cultural complexity in Native California with comments on proto-agriculture and agriculture. *Before the wilderness: Environmental management by Native Californians*. Menlo Park, CA:Ballena Press. 27-54
- BRIGHT, JANE O. 1964. The phonology of Smith River Athapaskan (Tolowa). *International Journal of American Linguistics*. 30(2):101-7
- CAMPBELL, LYLE. 1997. *American Indian languages: The historical linguistics of Native America*. Oxford: Oxford University Press.
- CHESTNUT, VICTOR KING. 1902. *Plants used by the Indians of Mendocino County, California*. The US National Herbarium. 7.3. Washington, DC: Government Printing Office.
- COMRIE, BERNARD. 1976. *Aspect*. Cambridge: Cambridge University Press.
- _____. 1986. *Tense*. Cambridge: Cambridge University Press.
- CONATHAN, LISA. 2004. *The linguistic ecology of Northwestern California: Contact, functional convergence, and dialectology*. Ph.D. dissertation, University of California, Berkeley. Online: <http://escholarship.org/uc/item/0jj5h838>
- COOK, SHERBURNE F. 1956. The aboriginal population of the North Coast of California. *University of California Anthropological Records*. 16:81-130
- CRYSTAL, DAVID. 1997. *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press.
- CURTIS, EDWARD S. 1907-1930. *The North American Indian: Being a Series of Volumes Picturing and Describing the Indians of the United States, the Dominion of Canada, and Alaska*, edited by Frederick W. Hodge. Norwood, MA: Plimpton Press Reprinted 1970. New York: Johnson Reprint.

- _____. 1924. Mythology [Wailaki]. In *The North American Indian* 14:167-9
- _____. 1924. Tribal summary: Wailaki. In *The North American Indian* 14:185-6
- _____. 1924. Vocabularies: Athabaskan. In *The North American Indian* 14:201-7
- _____. 1924. Wailaki. In *The North American Indian* 14:19-35
- DIXON, ROLAND B., and A. L. KROEBER. 1907. Numeral systems of the languages of California. *American Anthropologist*. 9(4):663-90
- DOTY, CHRISTOPHER S. and SUSAN G. GUION. 2007. Tolowa peak pitch alignment: Perspectives from an autosegmental-metrical framework. *Annual Meeting of the Berkeley Linguistics Society*, 33.1
- ELSASSER, ALBERT B. 1978. Mattole, Nongatl, Sinkyone, Lassik and Wailaki. In *Handbook of North American Indians*, vol. 8: *California*, edited by Robert F. Heizer, 190-204. Washington, DC: Smithsonian Institution.
- ESSENE, FRANK. 1942. Cultural Element Distributions: XXI. Round Valley. *University of California, Anthropological Records*. Berkeley. 8(1):1-97
- ETHNOLOGUE. 2016. Wailaki. <https://www.ethnologue.com/language/wlk>
- GIFFORD, EDWARD WINSLOW. 1922. California kinship terminologies. *University of California Publications in American Archaeology and Ethnology* 18(1):1-285
- _____. 1926. Californian anthropometry. *University of California Publications in American Archaeology and Ethnology* 22:217-390.
- GODDARD, PLINY EARLE. 1901-1908. The Pliny Earle Goddard collection of Pacific Coast Athabaskan sound recordings [Hupa, Wailaki, Nongatl, Whilkut, Chilula, Tolowa]. PHM 56. Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley, Online: <http://cla.berkeley.edu/collection/11056>
- _____. 1902-1922. Field notes in California Athabaskan [and other] languages [Hupa, Kato, Wailaki, Sinkyone, Tolowa, Nongatl, and Pomo]. MS. 30(Na.3). Library of the American Philosophical Society, Philadelphia.
- _____. 1905. The morphology of the Hupa language. *University California Publications in American Archaeology and Ethnology* 3:1-344
- _____. 1906. Lassik tales. *The Journal of American Folklore* 19(73):133-40
- _____. 1909. Kato texts. *University of California Publications in American Archaeology and Ethnology* 5(3):64-238
- _____. 1912. Elements of the Kato language. *University of California Publications in American Archaeology and Ethnology* 11:1-176
- _____. 1914. Notes on the Chilula Indians of Northwestern California. *University of California Publications in American Archaeology and Ethnology* 10(7):289-379.
- _____. 1923. Wailaki texts. *International Journal of American Linguistics* 2(3/4):77-134
- GOLLA, VICTOR. 1970. *Hupa grammar*. Unpublished Ph.D. dissertation, UC Berkeley. Online: <https://escholarship.org/uc/item/6z0634f2>
- _____. 1976. Tututni (Oregon Athabaskan). *International Journal of American Linguistics*, 42:217-27
- _____. 1977. A note on Hupa verb stems. *International Journal of American Linguistics*, 43(4):355-58
- _____. 1984. *Hupa stories, anecdotes, and conversations*. Hoopa, CA: Hoopa Valley Tribe.
- _____. 1996. Sketch of Hupa, an Athapaskan language. In *Handbook of North American Indians*, vol 17: *Languages*, edited by Ives Goddard, 364-389. Washington, DC: Smithsonian Institution.

- _____. 2007. Linguistic prehistory. *California Prehistory: Colonization, Culture and Complexity*, ed. by Terry L Jones and Kathryn Klar, 71-89. Landham, MD: AltaMira Press.
- _____. 2011. *California Indian languages*. Berkeley, CA: University of California Press.
- GORDON, MATTHEW. 2001. Laryngeal timing and correspondence in Hupa. *UCLA Working Papers in Linguistics*, 7:1-70
- _____. 1996. The phonetic structure of Hupa. *UCLA Working Papers in Linguistics*, 93:164-86
- GORDON, MATTHEW, and EDMUNDO LUNA. 2004. An intergenerational study of Hupa stress. *Annual Meeting of the Berkeley Linguistics Society*, edited by M. Ettliger, N. Fleischer, and M. Park-Doob, 105-17. Berkeley, CA: Berkeley Linguistics Society.
- GUDGE, ERWIN G. 1998. *California Place Names: The Origin and Etymology of Current Geographical names*. 4th ed. Revised and enlarged by William Bright. Berkeley: University of California Press
- HARGUS, SHARON, and KEREN RICE (eds). 2005. *Athabaskan prosody*. Amsterdam: John Benjamins
- HAYNIE, HANNAH. 2012. *Topics in the history and geography of California languages*. University of California, Berkeley Ph.D. dissertation. Accessed: December 15, 2017. Online: <https://escholarship.org/uc/item/7zn0q7hr>
- HEIZER, ROBERT F. 1966. *Languages, territories and names of California Indian tribes*. University of California Press.
- HEIZER, ROBERT F. and ALBERT B. ELSASSER 1980. *The natural world of the California Indians*. 46. Berkeley, CA: University of California Press
- HILL, JANE. 1994. [Commentary on Brown (1994).] *Current Anthropology* 35:109-10
- HINTON, LEANNE. 2001. Sleeping languages: Can they be awakened? In Hinton and Hale (eds) (2001), 413-17
- _____. 1994. *Flutes of fire: Essays on California Indian languages*. Berkeley: Heyday Books
- HINTON, LEANNE, and KENNETH HALE, eds. 2001. *The green book of language revitalization in practice*. San Diego, CA: Academic Press
- HOIJER, HARRY. 1945. Classificatory verb stems in the Apachean languages. *International Journal of American Linguistics*. 11(1):13-23
- _____. 1946. The Apachean verb, part III: The classifiers. *International Journal of American Linguistics*, 12(2):51-59.
- _____. 1960. Athapaskan languages of the pacific coast. *Culture in History*. 970-76
- _____. 1963. The Athapaskan languages. *Studies in the Athapaskan languages*. ed. Harry Hoijer et. al, *University of California Publications in Linguistics* 29:1-29
- _____. 1971. Athapaskan morphology. *Studies in American Indian languages*, 113-47.
- HOIJER, HARRY and OTHERS. (eds.) 1963. *Studies in the Athapaskan Languages*. (University of California Publications in Linguistics 29). Berkeley: University of California Press.
- HOWREN, ROBERT. 1971. A formalization of the Athabaskan d-effect. *International Journal of American Linguistics* 37(2):96-113.
- JACOBS, MELVILLE . 1937. Historical perspectives in Indian languages of Oregon and Washington. *The Pacific Northwest Quarterly*. 28(1):55-74.
- KARI, JAMES. 1989. Affix positions and zones in the Athapaskan verb complex: Ahtna and Navajo. *International Journal of American Linguistics* 55(4):424-54.

- KETER, T.S. 2009. All those things that you're liable to read in the ethnographic literature ain't necessarily so. Paper presented to the Society for California Archaeology, Modesto, CA.
- KIBRIK, ANDREJ A. 1993. Transitivity increase in Athabaskan languages. *Causatives and transitivity*, 23:47-67.
- _____. 1996. Transitivity Decrease in Navajo and Athabaskan: Actor affecting propositional derivations. *Athabaskan Language Studies*, E. Jelinek (ed.), University of New Mexico, Albuquerque. 259-305.
- KLEIN, WOLFGANG. 1994. *Time in language*. London: Routledge
- KRAUSS, MICHAEL. 1964. Proto-Athapaskan-Eyak and the Problem of Na-Dene I: The Phonology. *International Journal of American Linguistics* 30:118-131.
- _____. 1969. On the classifiers in the Athapaskan, Eyak and Tlingit verb. *Indiana University Publications in Anthropology and Linguistics Memoir* 24:49-83
- _____. 1987. The Name Athabaskan. *Faces, Voices & Dreams: A celebration of the centennial of the Sheldon Jackson Museum, Sitka, Alaska 1888-1988*, ed. by Peter L. Corey, Sitka: Division of Alaska State Museums and the Friends of the Alaska State Museum. 105-8.
- KRAUSS, MICHAEL and VICTOR GOLLA. 1981. Northern Athapaskan languages. In June Helm (ed.), *Subarctic*. Washington, D.C.: Smithsonian Institution. 67-85.
- KROEBER, A. L. 1902-1958. The Alfred L. Kroeber collection of American Indian sound recordings, PHM 39, Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley, <http://cla.berkeley.edu/collection/11039>
- _____. 1919. Sinkyone tales. *The Journal of American Folklore*. 32(124):346-51
- _____. 1925. *Handbook of the Indians of California*. Republished 1976. New York: Dover Publications.
- _____. 1932. The Patwin and their Neighbors. *University of California, Publications in American Archaeology and Ethnology* 29(4):253-423
- KROEBER, A. L and PLINY EARLE GODDARD. 1967. Goddard's Athabaskan Texts. *International Journal of American Linguistics* 33(4):269-75
- KAUFMAN, TERRENCE. 1988. A research program for reconstructing proto-Hokan: First Gropings. In *1988 Hokan Penutian Workshop*, 50-168
- LAMONTAGNE GREG, and KEREN RICE. 1984. An Optimality Theoretic Account of the Athapaskan D-effect(s). In *Annual Meeting of the Berkeley Linguistics Society* 20(1):340-350. Accessed: December 12 2017. Online: <https://journals.linguisticsociety.org/proceedings/index.php/BLS/article/viewFile/1439/1223>
- LAKOFF, GEORGE. 1993. The contemporary theory of metaphor. In A. Ortony. (ed), *Metaphor and Thought* (2nd ed.). Cambridge: Cambridge University Press, 202-51.
- LEER, JEFF. 1979. Proto-Athabaskan verb stem variation. *Alaska Native Language Center Research Papers* 1:1-100
- LEVENTHAL, ALAN, LES FIELD, HANK ALVAREZ and ROSEMARY CAMBRA. 1994. The Ohlone: Back from Extinction. *The Ohlone Past and Present: Native Americans of the San Francisco Bay Region*. 297-336.
- LEVINSON, STEPHEN. 1996. Language and space. *Annual Review of Anthropology*. 25(1):353-82

- LEONARD, WESLEY. 2011. Challenging “Extinction” through modern Miami language practices. *American Indian Culture and Research Journal*, 35(2):135-60
- LI, FANG-KUEI. 1927. Wailaki notecards. Unpublished.
- _____. 1930. *Mattole: An Athabaskan Grammar*. Chicago: The University of Chicago Press.
- _____. n.d. [Wailaki noun and verb stem list.] Photocopy of original manuscript, in the possession of Cultural Resource Center, Humboldt State University.
- LIGHTFOOT, KENT and OTIS PARRISH. 2009. *California Indians and Their Environment: An Introduction*. Natural History Guide Series. 96. Berkeley, CA: University of California Press.
- MCDONOUGH 1990. *Topics in the Phonology and Morphology of Navajo Verbs*. Doctoral dissertation. Amherst, MA: University of Massachusetts
- MCLENDON, SALLY. 2003. Evidentials in Eastern Pomo with a comparative of the category in other Pomoan languages. *Typological Studies in Language* 54:101-30.
- MERRIAM, C. HART. 1850-1974. C. Hart Merriam Papers, BANC FILM 1022, Bancroft Library, University of California, Berkeley
- _____. 1923. Application of the Athapaskan Term Nung-kahhl. *American Anthropologist* 25. 276-77
- _____. 1955. *Studies of California Indians*. Berkeley: University of California Press
- MITHUN, MARIANNE. 1999. *The languages of Native North America*. Cambridge, UK: University Press.
- MURPHEY, EDITH V.A., and LUCY (T’TCETSA) YOUNG. 1941. Out of the Past: A True Indian Story Told by Lucy Young, of Round Valley Indian Reservation. *California Historical Society Quarterly* 20(4):349-64.
- NEWBOLD, LINDSEY. 2010. Word order in Hupa. In *Working Papers in Athabaskan Languages* 2009, Siri Tuttle and Justin Spence (eds.), 89-106. (Alaska Native Language Center Working Papers 8). Fairbanks, AK: Alaska Native Language Center.
- NOMLAND, GLADYS. 1935. Sinkyone Notes. *University of California Publications in American Archaeology and Ethnology* 36(2):149-78
- NOMLAND, GLADYS and DR. J.O. NOMLAND. 1929. The Dr. and Mrs. J.O. Nomland collection of California Athabaskan sound recordings, PHM 15, Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley, Online: <http://cla.berkeley.edu/collection/11015>
- O’NEILL, SEAN. 2008. *Cultural contact and linguistic relativity among the Indians of northwestern California*. Norman, OK: University of Oklahoma Press.
- PEDERSON, E., DANZIGER, E, WILKINS, D, LEVINSON, S., KITA, S, and G. SENFT. 1998. Semantic typology and spatial conceptualization. *Language*. 74:557-89.
- POWERS, STEPHEN. 1870s. [Comparative vocabulary of Hupa and Wailaki, without English equivalents ca. 1870s.] NAA MS 220. National Anthropological Archives, Smithsonian Institution:
- RADDEN, GÜNTER. 2004. The metaphor time as space across languages. In N. Baumgarten, C. Böttger, M. Motz & J. Probst (eds.), *Übersetzen, interkulturelle Kommunikation, Spracherwerb und Sprachvermittlung – Das Leben mit Mehreren Sprachen: Festschrift für Juliane House zum 60 Geburtstag*. Aks-verlag: Bochum, Germany.
- REED, SYLVIA L. 2012. Evaluating prospectivity in a neo-Reichenbachian aspectual system. *Coyote Papers: Working papers in Linguistics, Linguistic Theory*. 19. Tuscon, AZ:

- University of Arizona.
- RICE, KEREN. 1989. *A Grammar of Slave*. New York: Mouton de Gruyter.
- _____. 2000. *Morpheme Order and Semantic Scope*. Cambridge University Press.
- ROUND VALLEY INDIAN TRIBES. 2016. About us. Online: <http://www.rvit.org/about.php>.
- SAPIR, EDWARD, and HENRY HOIJER. 1967. *The phonology and morphology of the Navaho language*. University of California Publications in Linguistics 40. Berkeley, CA: University of California Press
- SAPIR, EDWARD, and VICTOR GOLLA. 2001. Hupa texts, with notes and lexicon. In *the Collected Works of Edward Sapir, Vol. 14: Northwest California Linguistics*, edited by Victor Golla and Sean O'Neill, 19-1011. New York: Mouton de Gruyter.
- SAPIR, EDWARD. 1914. Notes on Chasta Costa phonology and morphology. 2.2 Philadelphia: University of Pennsylvania Museum of Archaeology
- _____. 1923. A type of Athabaskan relative. *International Journal of American Linguistics*, 2 (3/4), 136-142.
- SAWYER, JESSE. 1975. [Notes to accompany tape "Grass game and its songs"], Sawyer.077, Survey of California and Other Indian Languages, University of California, Berkeley, Online: <http://cla.berkeley.edu/item/1639>
- _____. 1980. The non-genetic relationship of Wappo and Yuki. *American Indian and Indoeuropean studies: Papers in honor of Madison S. Beeler*. The Hague: Mouton de Gruyter:209-19
- SAWYER, JESSE O. and ALICE SCHLICHTER. 1984. Yuki vocabulary. *University of California Publications in Linguistics*. Berkeley: University of California Press.
- SCHACHTER, PAUL and TIMOTHY SHOPEN. 2007. Part-of-speech systems. *Language Typology and Syntactic Description*, ed. by Timothy Shopen, 1-60. 2nd edition. Cambridge: Cambridge University Press
- SCHLICHTER, ALICE. 1986. The origins and deictic nature of Wintu evidentials. In *Evidentiality: the Linguistic Coding of Epistemology*, Wallace Chafe and Johanna Nichols (eds.) Norwood, NJ: Ablex. 46-49
- SEABURG, WILLIAM R. 1977a. A Wailaki (Athabaskan) text with comparative notes. *International Journal of American Linguistics* 43(4):327-32
- _____. 1977b. The man who married a grizzly girl (Wailaki). In *Northern California Texts*, Victor Golla and Shirley Silver (eds), 114-20. *International Journal of American Linguistics Native American Texts* 2(2). Chicago, IL: University of Chicago Press.
- SHEPHERD, ALICE. 1980. The Alice Shepherd collection of Wailaki sound recordings, LA 152, Berkeley Language Center, University of California, Berkeley, Online: <http://cla.berkeley.edu/collection/10055>
- SHIPLEY, WILLIAM F. 1980. Penutian among the ruins: A personal assessment. In *Proceedings of the Sixth Annual Meeting of the Berkeley Linguistics Society*, 437-41.
- SILVER, SHIRLEY and WICK R. MILLER. 1997. *American Indian languages: Cultural and social contexts*. Tuscon, AZ: University of Arizona Press.
- SPENCE, JUSTIN. 2013. *Language change, contact, and koineization in Pacific Coast Athabaskan*. PhD dissertation, University of California, Berkeley. Online: <https://escholarship.org/uc/item/3vt496px>
- SPENCER, ANDREW. 1991. *Morphological theory: An introduction to word structure in generative grammar*. Oxford: Blackwell.

- SMITH, CARLOTA S; ELLAVINA PERKINS; and THEODORE FERNALD. 2007. Time in Navajo: Direct and indirect interpretation. *International Journal of American Linguistics* 73(1):40-71.
- SMITH, CARLOTA. 1997. *The parameter of aspect* (second edition). Dordrecht: Kluwer.
- STANLEY, RICHARD. 1969. *Navaho phonology*. PhD Dissertation, MIT.
- TALMY, LEONARD. 1983. How language structures space. In H. Pick & L. Acredolo (eds.), *Spatial Orientation: Theory, Research, and Application*. New York: Plenum Press, 181-238
- THOMASON, SARAH GREY, and TERRENCE KAUFMAN. 1988. *Language contact, creolization and genetic linguistics*. Berkeley, CA: University of California Press.
- THOMPSON, CHAD. 1996. The Na-Dene middle voice: An impersonal source of the d-element. *International Journal of American Linguistics* 62:351-378
- TUTTLE, CHERYL. 2015. 2014-15 RVHS Wailaki language class, video 1. May 29, 2015
Accessed: June 20, 2017 Online: <https://www.youtube.com/watch?v=ygFITSOTbmk>
- TUTTLE, SIRI. 1990. *Stress and vowel length in Tolowa*. Unpublished M.A. thesis, Seattle, WA: University of Washington
- VAN VALIN, ROBERT D. 2001. *An introduction to syntax*. Cambridge, UK: Cambridge University Press.
- WOODWARD, MARY. 1964. Hupa Phonemics. In W. Bright ed. *Studies in Californian Linguistics (UC Publications in Linguistics 34)*, 199-216
- WILLIE, MARYANN. 1991. *Pronouns and obviation in Navajo*. Ph.D. Dissertation, Tuscon, AZ: University of Arizona.
- YOUNG, ROBERT W and WILLIAM MORGAN SR. 1987. *The Navajo language: A grammar and colloquial dictionary*. (Second edition). Albuquerque, NM: University of New Mexico Press
- YOUNG, ROBERT W; WILLIAM MORGAN SR. and SALLY MIDGETTE. 1992. *Analytical lexicon of Navajo*. Albuquerque, NM: University of New Mexico Press