Place-Intensive Narratives in the Dene Ethnogeographic Research Program

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Abstract

Place-Intensive Narratives in the Dene Ethnogeographic Research Program

The cornerstone of an ethnogeographic research program is the cumulative drainage-based place names list. For Alaska Dene languages the shared constantly informative rule-driven generative geography can be reconstructed by the cultivation of archival sources and by repeated reviews of place names lists with the most expert speakers. The place names database promotes editorial consistency and cross-disciplinary research options. When we have recorded place-intensive narratives by experts who know the geography of the Dene band territory really well, these recordings should be the highest priority for specialized language work.

In recent projects for Western Ahtna and Upper Kuskokwim place-intensive narratives on travel and land use by Jake Tansy (Ahtna) and Miska Deaphon (Upper Kuskokwim) are being advanced through editorial stages. The narratives reconfirm and refine the place names lists and maps for each language. When Tansy’s or Deaphon’s travel routes can be translated and mapped, we glimpse Dene landscape cognition in its most rarified and specialized register.

Depending on the investment of editorial time, it is possible to track Tansy’s or Deaphon’s orchestration of place names, inflected riverine directional words, landscape descriptors, as well as directional affixes in verbal derivations. There are interesting translation conundra: when mentioning some proximate ridges is the expert using place names or offering highly technical geomorphological descriptions?

In the Tansy and Deaphon texts the constant awareness of the flow of water is conspicuous. The Dene riverine directional system is showcased in a distinctive grammatical category: nine roots occur in a mini-verb-like complex: PREFIX-ROOT-SUFFIX. Tansy and Deaphon adjust and clarify geographic views by combining place names with one to three directionals in a sentence.

This nine-root directional system can be reconstructed for Proto-Dene, and should be viewed as the Dene semplate, viz. the semantic theory of Levinson and Burenhult (2009). The nine roots appear in distinct word categories such as the disjunct verbal prefixes, postpositions, and the noun lexicon (e.g. parts of houses or boats, anatomy, and especially place names).
Dene (a.k.a. Athabascan)

largest Native language family in area of North America

Na-Dene = Dene+Eyak+Tlingit

> Elaborate prefixing languages
> Discontinuous templatic word formation ("interrupted synthesis" Sapir 1934)
> Striking conservativism within Dene Languages (kari 2010b)
May 1972, Kenai
first work with
Peter Kalifornsky

Shem Pete,
c. 1960
Willow

Jake Tansy,
1982
Valdez Creek
Now available at
http://www.uaf.edu/anlc/dy/


The Dene-Yeniseian Connection

Anthropological Papers of the University of Alaska
New Series, Vol. 5 (1-2), 2010

Edited by James Kari and Ben A. Potter

A special joint publication of the UAF Department of Anthropology and the Alaska Native Language Center
Elementary ethnogeographic axioms & methods

• Methodologies for place names research tend to be underestimated

• Who is the editor? Who keeps track of all names on record?

• Lists of place names must be grouped by drainage areas

• Are all data for language’s place names consolidated? (e.g. historic maps, anthro/ling. field notes, recordings, grey literature).

• Work and funding for place names research can be incremental

• Are place names records for a language being maintained in dated versions; with linguistic and editorial authority?

• Mapping stages (marked quads, draft maps, expository maps, cartobibliography + cartotoponymy)

• be aware of limitations of ~ problems with GIS mapping
Shem Pete's Alaska
The Territory of the Upper Cook Inlet Dena'ina
(Revised 2nd edition)

JAMES KARI, JAMES A. FALL, AND SHEM PETE

July
8.5 x 11.432 p., 27 color photos, 324 halftones, 66 maps.
978-1-60223-306-5
Paper Price: $39.95

 Anthropology

Shem Pete (1896–1989), the colorful and brilliant raconteur from Susitna Station, Alaska, left a rich legacy of knowledge about the Upper Cook Inlet Dena'ina world. Shem was one of the most versatile storytellers and historians in twentieth-century Alaska. His lifetime travel map of approximately 13,500 square miles is one of the largest ever documented in this degree of detail anywhere in the world.

The 1987 and 2003 editions of Shem Pete's Alaska contributed much to Dena'ina cultural identity and to public appreciation of the Dena'ina place names network in Upper Cook Inlet. Expanding upon the already extensive source materials from Shem Pete and more than fifty other contributors, this 2016 edition has nearly four hundred new annotations or revisions, including twenty-eight new place name entries and twenty-one new pictures and maps. The authors provide synopses of Dena'ina language, culture, history, and prehistory; summaries of the rule-driven Dena'ina/Athabascan geography; and discussions of place name research methodology. This edition's indexing and cross-referencing features enhance its utility both for research and as a field guide.

With editorial refinements spanning more than three decades, this 2016 edition of Shem Pete's Alaska will remain the essential reference work on the Dena'ina people of Upper Cook Inlet. Already influential in the ethnogeographic genre, the book's use of Native language materials and sources, and its blend of linguistic and anthropological scholarship, is unlikely to be surpassed.
Shem Pete’s Alaska

MAP 1
Chapter guide to Shem Pete Alaska and major Datolina place names in Upper Cook Inlet

©1987, 2003, 2016 NPS

MAP BY JAY GARNLY KKG JAMES GARR

Chapter drainage boundaries

Numbers in circles are chapter numbers

Chapter number
Place name
Datolina name in bold

U.S. Geological Survey place name

L.3 Kilivinu
Kashwina R.

Scale
20 miles

Prince William Sound
Advanced ethnogeographic methods

• Well-organized archival sources (notes, audio, maps, references on p.n. for this language)
• Editorial & linguistic control of place names records
• Database w consistent editorial policies
• GIS mapping is complex, labor-intensive, often one-time-only; strict file exchanges of Database file and GIS table can allow for continuous refinements
• Use of place-intensive narratives very promising
Comparative Dene Ethnogeography

- Comparing Dene name networks in Alaska Range (9 langs., 8900 p.n.)
- Field methods (drainage lists, d.b., GIS, base maps)
- Cumulative records for 9 of 12 Ak Dene lng (12,000+ recorded); Names in similar database formats
- Formal features: memorizability, generative geography, name networks
- Travel & place-intensive narratives; geo-ref. Routes; Dene landscape cognition
- Dene comparative-diachronic context, detecting Dene band expansions
- What makes certain names have historical linguistic & Proto-Dene significance?
- Archaeo-linguistic hypotheses
Introducing the Proto-Dene *Lex Loci* with Selected Dene Place Names South and West of the Alaska Range

by James Kari

For further study on PDLL refer to discussions and examples on pages xii, 14, 39, 141, 154, 214–215, 217, 221–222, 227–229, and 309.

Since 2010 I have been taking notes and lecturing on a theory of Dene prehistory I call the “Proto-Dene *Lex Loci*” (‘word/law of location,’ or PDLL). This theory is based upon historical linguistic inferences from place name networks and other linguistic patterns from contiguous Alaska Dene languages. With this article, Table 12-ABC (three groups of place names selected for their traits of significance), and with annotations and cross-references to entries in *SPA*, we can provide a brief introduction to the PDLL.

The PDLL was prompted by the Dene-Yenseean Hypothesis. Edward Vajda’s 2010 article presented grammatical and lexical evidence that the Na-Dene languages

For Table 12 I selected significant names for three subregions south and west of the Alaska Range. Table 12A-B-C has three regional diachronic layers with a convention Å²Å³Å⁴. Table 12A has oldest group of selected names, Å², Ahtna in the Upper Susitna River (mainly in Chapter 10 of *SPA*); 12B has the next oldest, Å³, Upper Kuskokwim or Dena’ina names along the western piedmont of the Alaska Range; and 12C, Å⁴, has eight place names that stimulate discussion about phases of the Dena’ina occupation of Cook Inlet Basin.

This is the current outline of *PDLL traits of diachronic significance* (some traits are not presented in Table 12).
Stages in Ahtna p.n. research

• 1975-1979, notes, slip files, 1st lists
• 1980-82 typed lists w edits
• Kari 1983 1368 names, 21 sec. 2 wall maps
• 1999-2004 c. 1900 names, draft print outs
• Kari 2008 2208 names, report, no maps
• Kari 2010a Ahtna Travel Narrtives
• Kari 2013 2246 names, CD w maps
• Kari 2014, vers. 3.1.3 2515 names with Susitna Hydroelectric project (8.7% since 2008, GIS maps, West Ahtna narratives, place names d.b. combined with archaeological d.b.)
Elements in Dene Geographic Names

Reinforcing memorization and conservatism
THE PROTO-DENE GLOBAL POSITIONING SYSTEM

Five Views of Ahtna Riverine Directionals

nine directional roots
PF + ROOT + SF = dir. words;
(c. 424 dir. words per root)

1. House (on l. bank, entrance toward river) (6)
- dak, tgyge “up”
- yax, ygge “down”
- nae, nitl “upstream”
- tsene “downstream”
- yax “down”
- me “to fire, in front”
- yax “upstream (wall)”
- yax “wall”
- nge “upland, back wall”
- nge “upland, back wall”
- nge “upland, back wall”
- nge “upland, to shore”
- nge “upland, to shore”

2. House interior (back to front) (9)

3. In view, in the landscape (7)

4. Fire, sunset, open water (2)
- nge “toward sun,” “out in lake”
- nge “to fire, in front”

5. Anatomy & intrinsic shapes (2)
- nge “front”
- nii “rear, back”

Ahtna geographic names

‘ATna’ Copper River “beyond (other side)
stream”

‘ane’, ‘aaxe’, ‘aat “beyond, to other side”

2004 drawing by James Grant Sr.
**database format & editorial consistency**
array and route in place-intensive narratives

- “the array” a commonly attested subtype,
- E.g. a list of names in Q&A survey (audio, written, sketch map, historic map); places mentioned tend to be disjunct
- “the route,” a rare subtype among place-intensive narratives
- an expert presents an uninterrupted monolingual text, that details a series of place names on a travel route, with landscape descriptors and a full display of directional/deictic features.
Three place name “arrays”

Moffit 1904 sketch map

Secondchief 1977, notes with Kari

J. Tyone text
Jake Tansy’s 13 “routes”

Table C.1. Summary of Jake Tansy’s 13 routes

<table>
<thead>
<tr>
<th>No.</th>
<th>Route Name</th>
<th>Route Line Length</th>
<th>Route Description</th>
<th>Route Distance (mi)</th>
<th>Route Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lower Gate Creek</td>
<td>10 mi</td>
<td>Lower Gate Creek</td>
<td>10 mi</td>
<td>10 hours</td>
</tr>
<tr>
<td>2</td>
<td>Upper Gate Creek</td>
<td>20 mi</td>
<td>Upper Gate Creek</td>
<td>20 mi</td>
<td>20 hours</td>
</tr>
<tr>
<td>3</td>
<td>Middle Gate Creek</td>
<td>30 mi</td>
<td>Middle Gate Creek</td>
<td>30 mi</td>
<td>30 hours</td>
</tr>
</tbody>
</table>

Note: Jake Tansy's routes are marked on the map with colored markers. The routes are named after different landmarks and are marked with distances and duration times. The map also includes a legend and a scale for distance.

Jake Tansy’s (first name and last name) 13 “routes” are marked on the map with colored markers. The routes are named after different landmarks and are marked with distances and duration times. The map also includes a legend and a scale for distance.
• Xona xu el hwtsicdze sdentah u’eł ts’estniige.
• /So thus I do not know all the separate (i.e. non-contiguous) places.
• Ye Banazdeni (1) c’a eli uk’e łu’esyaale.
• /The upon ‘one current flows around’ (‘Big Bend” mt. on Susitna R) I have not walked upon it.
• Dae’ Banazdeni (1) el gha hwtsicdze’ gha Ts’itu’ (2) ’udaa’ uneke’l’aax el
• /that way ‘one current flows around’ here completely by ‘main stream’ (Susitna River), downstream the stream that flows around it.
• hwtsicdze’ u’uze’ el dade’estnes.
• /I know all of the names.
• Xuk’a eli’ ye łu’esyaale, u’eł ts’estniige.
• /But where I have not walked about, I do not know those (names).
• C’a xona gaa Cets’i Cae’e (3) hwk’e yaen’ tsicdze’ hw’eł ts’estnes.
• /So here just to ‘spearing mouth’ (mouth of Gilbert Creek) only up to there do I know all the names.
• ’ungga łu’u gha hwts’en (4)
• /From the uplands by the glaciers.
• ’udaa’ Gedi Hwcaek’e (5) ye’ da’andze’ Hwniidi Ben (6) yet xu’ane ba’aaxe Debetse’ Na’ (7) xu
• /to the downstream of ‘rotten mouth’ (stream into Canyon Ck) over to the other side to ‘upstream lake’ (Butte Lake), and to over (via passes) to the outside at ‘sheep head stream’ (Watana Creek)
• xuk’a tsicdze’ łunesyał.
• /I have walked around there completely.
• c’a xona Idu’ yehwk’e yaen’ u’eł ts’estnes.
• /And so that is exactly where I know (the names, the country).

red = landscape descriptors, blue = riverine directionals
Archaeological Sites
J Tansy routes
Place names
Unpublished A-List West Ahtna place/travel narratives (Kari 2014)

- 135 p. Appendix C-A: 5 Jake Tansy nar. (102 m); 3½ Jim Tyone (72 m); ½ Fred Ewan (10 m); 1 Jack Tyone (23 m); 1 Jim Sinyon (36 m) (c. 4 hrs)

- Travel Text conventions:
  - 3-line format:
  - 1...2...3 (order of listed names)
  - **Place Name**, riverine directional, landscape descriptor
  - / ‘lit. translation of p.n.’, [p.n. seq. no.]
What can we learn from the **Shared Dene geography** of Jake Tansy or Jim Tyone?

Shared Dene Geography is a constantly informative & rule-driven

Three concurrent systems: **place names**, **directionals**, **landscape descriptors**

Our maps mark names, trails, resources, stream flow, viewsheds, fore marks, back marks; *(confidential info.: arch. sites)*

Jake & Jim have contrasting & overlapping personal land use territories

Jake & Jim state places they know AND the edges beyond which they do NOT know
• *not shown here*
• Kari 2014 West Ahtna Travel Narratives by Jake Tansy and Jim Tyone
• 92 pages; text formatting: *red* = landscape descriptors, *blue* = riverine directionals, **bold**, lit. ‘…’, p.n. sequence number.

*See below*

four-colors, 3 pages Jake Tansy, Yanert Fork route
Red, blue, green (dir. Verb prefixes), yellow (deictics/demonstratives)
Dene place-intensive narratives: what more can be done?

Are place intensive narratives of this quality and detail being used in allied fields, and in other languages here at GeoGram?

Are there ways to present “routes” as visualizations/animations?

Comparative Dene questions (e.g. contrasts between uplands::lowlands)
Why is this such a rare narrative genre cross-linguistically?

• Articulate expert speakers who know the geographic system and have mental & physical travel skills may be able present “routes”
• Can only be done in conjunction with a well documented, well mapped place names network
• These segments must be tape-recorded; a dictated text (in Boasian-sources) probably is more akin to a list of places

Usually (but not always) a place-intensive recorded segment requires prompting by the linguist/researcher

Editorial work is laborious

PLEASE TELL ME ABOUT COMPARABLE NARRATIVES!
James Kari Ethnogeographic References


• 2004 A Discussion of Three Ethnogeographic Narratives: Nick Kolyaha (Of Iliamna), Jim McKinley (of Copper Center), Jake Tansy (of Cantwell). Alaska Native Language Center Working Papers No. 4: 172-79.


• ___. 2011b. (with Adeline Peter Raboff). Compilation of Yukon Flats Athabascan Place Names for Stevens Village, Beaver, Birch Creek and Fort Yukon. *Dena’inaq’ Titaztunt & Arivahan*.

• ___. 2012 Lower Tanana Athabascan Place Names, version 1.3. with 3 maps. ANLC.


• ___. 2015. Upper Kuskokwim Dena Place Names Lists, version 3.31, February 16, 2015. ANLC.

Chapter Three
Saen Tah Xay Tah C’a Łu’sghidel
We Used to Travel Around in Summer
by Jake Tansy

Recorded by JK with Jake Tansy on Nov. 6, 1980 in Fairbanks on AT21(2) or at5006. The first segment was first published in Kari 1999.

total: 3:05
colors, an experiment

¶
1) Summer Travel Routes: mouth of Brushkana River to Yanert Fork to Valdez Creek village
Place Name (bold) ‘literal’ [number, gloss]

directional derivatives
trajectory derivational prefixes

Landscape descriptors
deictic/demonstratives

Xona first nen’ [’stghidel de ’c’a saen ta c’a Ba,s Ggeze Na’, Saas Nelbaay Na’] hwets’edel.
/When we first went out in the country during the summer we would ascend ‘bare bank stream’ [3-1, Wells Creek] or ‘sand that is grey stream’ [3-2, upper Wells Creek].

Nildenta hw’e Dghateni yi ’el Tanidzeh xu Dghateni [ts]dinilen.
/Sometimes also to ‘stumbling trail’ [3-3] or ‘the one in the middle’ [3-4] or the ‘stream flowing from stumbling trail’ [3-5].

Yic’a Tanidzehi Deyii Na’ k’a hwk’e’e kudeleye dze’ xuyii hwtes’sghidel.
/There at ‘the canyon of the stream of the one in the middle’ [3-6, Creek from NW into Wells Creek], a short ways before that, we went through a pass.

0:26
C’eldaan’ne ele ‘unggu xangguxu tes ts’udae de kiyniziix ts’e’
/Or if some of the people to the upland, next upland intend to go over a pass and

Xangguxu Dghateni hwtes kedel.
/at ‘upland stumbling trail’ [3-7, westerly trail to Yanert Fork] they went over a pass.

Ba’aadze’ den lu’ Tl’ahwdicaax Na’ hwts’e’ hwets’edelde Lena udghidlen xunt’ae.
/out from there to ‘valuable headwaters stream’ [Yanert Fork, 3-8] we ascend what is ‘streams join together’ [3-9, Louise Creek].

Yet Tl’ahwdicaax Na’ usu layenk’e ghenaay ’el xona ka’sdal’iix.
/There at ‘valuable headwaters stream’ [3-8] out on the river plain we would see caribou.

0:45
NiIldenta łdu’ yet Tl’ahwdicaax Na’ ’udaa’a ’unaa daa’a ts’e’ts’edel dze’
Sometimes then there we come out downstream and across and downstream of ‘valuable headwaters stream’ [3-8, Yanert River] and

dae’ Nts’ezī Na’ hwts’e’ ḋes ninats’edel.

‘that way we come back through a pass on ‘seed (pit) stream’ [3-10, Moose Creek].

Nts’ezī Na’ ye cu tceniyii kughīl’aen’, I mean dahtsaa, dahtsaa hwghīl’a’.

‘At ‘seed (pit) stream’ was an underground cache, I mean there was an elevated cache.

1:05
Teye k’a ’udii c’etsen’ nghilgaasia dahtsaa ḋanahghilael.

‘All the time they put lots of dry meat in the pole cache.

Xona ye lu Nts’ezī Na’ ye kae na’sdelgges dze’,

‘Then there we would come back with that (meat) on ‘seed (pit) stream’ and,

dets’en dets’en Nts’ezi Na’ ba’aa ḋighlaay ḋhaki daan de ḋanats’edel.

‘that side, that side beyond ‘seed (pit) stream’ we would ascend back up through a canyon in the mountains.

N’el Bes Ggeze Na’ ye cuu cu Bes Ggeze Na’| hwk’e koodaam yehwk’e na’sdelgges xu.

‘Or at ‘bare bank stream’ [3-1, Wells Creek] there also is a gorge and we would come back through where the canyon goes through ‘bare bank stream’.

1:28
Bes Ggeze Nangge’ na’stedel dze’.

‘We would get back to the ‘uplands of bare bank stream’ [3-11, Wells Creek uplands].

’unggu Saas Nelbaay cu ye lu udi’aan cu ye same s’ena su, cu ’ungga cuts’en dze’ ‘nay’det’aan.

‘In the upland of the one named ‘sand that is grey’ [3-2, upper Wells Creek], it is the same stream but in the uplands (the fork) has a different name.

Saas Nelbaay Na’ Ngge’ cu ye xona ba’aa Luynanest’aani Na’ su hwtahw dadaa’ ḋanats’edel.

‘ ‘uplands of sand that is grey stream’ [3-12, upper Wells Creek uplands] then there again beyond there we would ascend ‘stream of the one protruding into the glacier’ [3-13 upper Nenana River] sometimes toward the downstream.

Luynanest’aani Na’ yanaasts’en hwtil’adaak’e su Ts’es Ce’e de gaa hwnax gaani ‘idighilcaax xu dez’aan.

‘On the other side of ‘stream of the one protruding into the glacier’ is a bluff ‘big rock’ [3-14, rock ledge above Siksik Lake] that is as large as this house.

7.06
Ye su xona ’udii hw’el hnats’at’iix hwghak’aay hw’el ḋu’steltset c’a snakaey ts’ghile’ de.

‘We always used to play there, we would run around on the flank (of the rock) when we were kids.

2:00
Yak’a k’adii c’a dae’ z’aan.
/It is still there like that.

Xona yet lu’ ye c’a ye lu Luyinanest’aani Na’ tsen Saen Tene na’sghidel.
/Then there at ‘stream of the one protruding into the glacier’, we come back to the lowlands to ‘summer trail’ [3-15, main trail at base of range].

Ye yak’a Luyinanest’aani Na’ Tene ka’sghidel hwana.
/There at ‘stream of the one protruding into the glacier’ we ascend the trail.

xu yae’ Kuyxi Dghilaay Cene’ane Kuyxi Dghilaay Cene ba’aa Taben’aa Tayene’ yi na’sdaldel.
/and this way we descend again beyond ‘base of marmot mountain’ [3-16, base of mountain between West Fork Glacier and Nenana River] and out beyond ‘base of marmot mountain’ to ‘lake current flows- river plain’ (3-17, West Fork glacier plain).

Taben’aa Tayene’ du’ four miles ghihaes xun’tae, four mile wide ce’el nlaen.
/ ‘lake current flows - river plain’ is four miles wide, it is four miles wide.

K’ay’ k’ali’ uke’di’ah, t’ai’ hwtscidze’ de gaa airplane field k’e sunt’ae de.
/There are no willows protruding on it and it is all just like an airplane field.

Yelu’ utsii ye c’a utsii ye Taben’aa Tayene’ utsii taz’aa de Taben’aa Bene’ hwdi’aan.
/and downland from there downland of ‘lake current flows - river plain’ in the downland is situated the water called ‘lake current flows- river plain’. 2:28

Taben’aa Bene’ gha yet is’inats’edel.
/We come back out at ‘lake current flows -lake’[3-18, lake off West Fork of Susitna R].

Xona yet xu tsene lyee kanats’edel dze’
/then in the lowlands we ascend again in the dwarf birch (“buckbrush”) and

ye Ben Datgge cu yae’ is’inats’edel dze’ Ben Datgge Na’.
/there at ‘lake up above’ [3-19, lake below West fork of Susitna] we come back out that way to ‘stream of lake up above’ [3-20, creek into Susitna R].

Hwtsene xona yelu’ utsii Ts’itu’ gha.
/In the lowlands then there to ‘major river’ (3-21, Susitna River).

Xona some, bede c’a kekon’... kekon’sghiyel, cu kaletildox hwna cenuu negha kekaes.
/Then someone, f.s. someone would build a fire and while the smoke ascended, they would come over to us in a canoe (from Valdez Creek village).

Dae’ su tkat’aen’, xona.
/That is how it was.

3:07
Ahtna place names have been maintained in the same drainage-based lists since the 1980s. New versions of Ahtna place names were published in Kari (2008 and 2013). During 2012–2014 an “ethnography phase” was included as part of the sponsored research for the Susitna Hydroelectric Project. From 2008 to 2015 the Ahtna place name inventory increased 8.7 percent (from 2208 to 2515 records) as we added names on audio recordings and as

MAP 44
1904 Moffit sketch map with feature numbers from SPA.
Geologist Fred W. Moffit and an unnamed Ahtna speaker collaborated on this sketch map in Moffit’s 1904 field notebook. Moffit labeled the map with 25 place names in English, Ahtna or Dena’ina. In probably 15 or 20 minutes an Ahtna expert from the Tyone Village area sketched out over 300 miles of drainages and intersecting trail routes. (See the 2003:231–32 edition for further details.)

FIG 144A
Kari’s notes with Dick Secondchief, March 5, 1975, with feature numbers from SPA and compared with J. Tyone text.

On March 5, 1975, Dick Secondchief of Tyone Lake gave this list of place names in a brief encounter with Kari in Copper Center. Second首席 mentioned 22 names that extend from the east near Gulkana; to the north at Nenana Village, and to the south, a name for Knik River. (If plotted as a triangle, this is an area about 300 miles on the west, 180 miles north-to-east, and 200 miles south-to-east). The symbol □ marks nine features shared between Secondchief’s list and the Moffit map; marked with ◊ are eight features shared with the Jim Tyone text (p. 223–25). Such repeated confirmations (Moffit-Secondchief-Tyone) are the hallmark of the shared Dene geographic names and evidence for the antiquity of the rule-driven Dene names. We can generate maps and tables to display these place name arrays.
we reviewed and mapped lists with Ahtna experts. The two most important features of the recent Ahtna geography research are a) the use of database formats with ARC-GIS mapping, and b) the incorporation of place-intensive narratives—audio recordings by Ahtna experts who know the geography well (Kari 2010b and 2014).

The database format promotes editorial consistency and expands cross-disciplinary research options. Some of the fields being used are: Ftype (feature type) for sorts on features lakes, landforms, villages, trails, etc. Stype (semantic type) for analysis of name meanings (hydrology, plant, event, technology, metaphor, etc.). A field match tracks traits of significance within Ahtna names or in neighboring Dene languages. (See pp. 144–147 or the patterned duplications noted at 10.12, 10.29, 10.57, 10.58, 10.60, 10.63, 14.70, and 14.71, and geoduplicates, discussed at 10.34.) An array field allows for comparisons of lists of place names on maps, field notes, audio segments, or texts (see Map 44 and caption). Also included with draft materials for the Susitna Hydro project are maps that combine displays of archaeological sites, with Ahtna place names and several types trail data.

The Western Ahtna place names are very informative in the search for undiscovered archaeological sites.

A high priority for specialized language work on Alaska Dene languages should be careful and enhanced editing of place-intensive narratives by Dene experts who have had the linguistic and physical skills to travel and to describe the landscape spontaneously. One fine example, on pp. 223–226, is Jim Tyone’s detailed 210-mile route from Tyone Lake to Knik.

For the 2012–14 Susitna Hydroelectric Project we gave special attention to two sets of travel routes—thirteen by Jake Tansy and nine by Jim Tyone. Jake Tansy’s thirteen routes are all within the range of the Cantwell-Valdez Creek band. Jim Tyone’s nine routes are centered at Tyone Village, Crosswind Lake, or Gulkana. In contrast to Jake, Jim’s routes ranged beyond his local into neighboring band territories (Cantwell, Tangle Lakes) and his long trip to Knik.

Map 45 presents the Tansy and Tyone routes with two dashed line styles. At a larger map scale and with colored routes it is possible to track the Tansy and Tyone routes

| TABLE 15 |
| Summary of thirteen routes by Jake Tansy and nine by Jim Tyone. |
| KARI 2014 |

<table>
<thead>
<tr>
<th>text route area described</th>
<th>audio time</th>
<th>p.n./repeats (total)</th>
<th>distance</th>
<th>landmarks</th>
<th>riv dir lscp descr</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAKE TANSY ROUTES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 1 Banazdleni vista</td>
<td>0:48</td>
<td>7/1 (8)</td>
<td>161 km (100 mi)</td>
<td>2</td>
<td>6/1</td>
</tr>
<tr>
<td>A1.2 2 Brushkana-Yanert Fork-Valdez Creek routes</td>
<td>3:02</td>
<td>24/13 (37)</td>
<td>201 km (127 mi)</td>
<td>5</td>
<td>20/15</td>
</tr>
<tr>
<td>A1.3 3 Brushkana to mid Susitna</td>
<td>3:16</td>
<td>11/21 (32)</td>
<td>157 km (108 mi)</td>
<td>3</td>
<td>23/10</td>
</tr>
<tr>
<td>A1.4 4 Watana R-Jay Creek loop</td>
<td>1:50</td>
<td>13/7 (20)</td>
<td>88 km (56 mi)</td>
<td>5</td>
<td>10/12</td>
</tr>
<tr>
<td>A1.5 5 upper Susitna R-W Fork McLaren loop</td>
<td>0:46</td>
<td>12/1 (13)</td>
<td>134 km (84 mi)</td>
<td>4</td>
<td>8/3</td>
</tr>
<tr>
<td>A2.1 6 Valdez Creek-Tyone Lake; mid Susitna</td>
<td>7:30</td>
<td>28/11 (39)</td>
<td>217 km (134 mi)</td>
<td>6</td>
<td>41/26</td>
</tr>
<tr>
<td>A2.2 7 Tyone Creek-Mid Susitna loops</td>
<td>7:06</td>
<td>27/20 (47)</td>
<td>237 km (147 mi)</td>
<td>4</td>
<td>27/24</td>
</tr>
<tr>
<td>A2.3 8 Cantwell area loops</td>
<td>12:25</td>
<td>38/27 (65)</td>
<td>204 km (127 mi)</td>
<td>10</td>
<td>52/26</td>
</tr>
<tr>
<td>A3.1 9 Carlo Creek-Yanert Fork</td>
<td>2:15</td>
<td>8/3 (11)</td>
<td>53 km (33 mi)</td>
<td>2</td>
<td>14/12</td>
</tr>
<tr>
<td>A3.1 10 Cantwell-Tsusena Creek</td>
<td>0:46</td>
<td>5/1 (6)</td>
<td>71 km (44 mi)</td>
<td>0</td>
<td>0/1</td>
</tr>
<tr>
<td>A3.1 11 Wells Creek - Yanert Fork</td>
<td>3:21</td>
<td>12/9 (21)</td>
<td>65 km (40 mi)</td>
<td>7</td>
<td>21/26</td>
</tr>
<tr>
<td>A3.1 12 Upper Nenana R loops</td>
<td>4:19</td>
<td>18/17 (35)</td>
<td>121 km (75 mi)</td>
<td>8</td>
<td>28/17</td>
</tr>
<tr>
<td>A3.1 13 Caribou Pass-Tsusena Creek</td>
<td>0:55</td>
<td>7/2 (9)</td>
<td>65 km (40 mi)</td>
<td>2</td>
<td>1/3</td>
</tr>
<tr>
<td>subtotals 13 48:21</td>
<td>210 (343)</td>
<td>1742 km (1115 mi)</td>
<td>59</td>
<td>251/126</td>
<td></td>
</tr>
<tr>
<td>JIM TYONE ROUTES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A4.1 1 Tyone Lake to Knik</td>
<td>9:53</td>
<td>36/19 (55)</td>
<td>334 km (208 mi)</td>
<td>5</td>
<td>45/37</td>
</tr>
<tr>
<td>A4.2 2 mid and upper-Susitna R trails</td>
<td>5:35</td>
<td>18/10 (28)</td>
<td>78 km (109 mi)</td>
<td>5</td>
<td>25/7</td>
</tr>
<tr>
<td>A4.3 3 Tyone Lake to Tangle Lakes and Valdez Creek</td>
<td>3:50</td>
<td>19/8 (27)</td>
<td>185 km (115 mi)</td>
<td>4</td>
<td>15/9</td>
</tr>
<tr>
<td>A4.4 4 Tyone Lake to Gulkana, summer trail</td>
<td>3:34</td>
<td>13/2 (15)</td>
<td>159 km (99 mi)</td>
<td>5</td>
<td>7/5</td>
</tr>
<tr>
<td>A4.5 5 Tyone Lake to Gulkana, winter trail</td>
<td>2:36</td>
<td>10/3 (13)</td>
<td>124 km (77 mi)</td>
<td>4</td>
<td>16/7</td>
</tr>
<tr>
<td>A5.1 6 Tyone Lake west to Talkeetna Mountains</td>
<td>7:00</td>
<td>17/17 (34)</td>
<td>184 km (114 mi)</td>
<td>3</td>
<td>8/13</td>
</tr>
<tr>
<td>A5.2 7 Hogan Hill Vista</td>
<td>0:57</td>
<td>8/2 (9)</td>
<td>68 km (42 mi)</td>
<td>5</td>
<td>8/3</td>
</tr>
<tr>
<td>A6.2 8 Bear Creek Trail</td>
<td>3:15</td>
<td>20/8 (28)</td>
<td>66 km (41 mi)</td>
<td>11/10</td>
<td></td>
</tr>
<tr>
<td>A7 9 Hwnax Ggaay to upper West Fork</td>
<td>1:10</td>
<td>10/1 (11)</td>
<td>21 km (13 mi)</td>
<td>1</td>
<td>2/5</td>
</tr>
<tr>
<td>subtotals 9 37:28</td>
<td>151 (207)</td>
<td>1219 km (818 mi)</td>
<td>34</td>
<td>178/132</td>
<td></td>
</tr>
</tbody>
</table>
Comparison of two sets of travel routes: thirteen by Jake Tansy and nine by Jim Tyone.

KARI 2014; MAP BY GERARD M. SMITH

rather closely. Jake Tansy, in 48 minutes of speech, summarizes 1115 miles on his 13 routes and mentions 210 places 343 times. Jim Tyone, in over 37 minutes, summarizes 818 miles on his nine routes and mentions 151 places 207 times. Table 15 presents the locations for these routes. In Kari (2014) we experimented with four mark-up features (see below).

From Kari (2014): “Tansy and Tyone have constant awareness of the flow of water. In blue highlight color we marked their use of riverine directional words. When Jake or Jim uses two and three directionals in one sentence, we try to translate each one. The red highlight color marks are Tansy and Tyone’s use of landscape descriptors. They often makes note of various land features (a ledge, a mountainside, eskers, gorges, trails, mineral licks, vegetation). These areas typically do not have place names. Also we find it useful to mark salient landmarks that they mention. These tend to be off the trail and are being kept in sight as Jake or Jim determines junctions with streams and alternate trails. When Jake or Jim mentions man-made structures (camps, cache, weir, rock blind, tent frame) these features usually do not have distinct place names.”

On a worldwide basis (with ground rules for valid comparisons!), Jake Tansy’s thirteen routes certainly can be considered to be among the most precisely detailed travel narratives that have been edited and mapped with some accuracy. Furthermore, the confidence, precision, and facility of Jake Tansy’s knowledge is evident in his voice, as he uses place names plus the riverine directionals, and in his reconfirmations and successive refinements to the landscape. The text marking conventions and the GIS route maps give us a sense of Tansy’s expertise. The audio files and time-markings provide access to and authentication of these highly elite Ahtna travel narratives. In the future, perhaps with text-audio-geographic visualization, we can more fully convey the Jake’s cognition of his band territory.