The current backup can be downloaded (with instructions) from the usual location at

1. I received formal confirmation that my grant will be funded for three years by the NSF.

2. The most prominent change in the database this month is in the orthography, the way words are spelled. Here's the old way with the familiar · length mark:

> Tí·q̇a·ti ckinánca. As a·wátca ckúuwí. Qa kwán sápʰ·i·wáté ckwaná·yúmcí haṁísqʰám. Qa cé·mul cktitítúwá·ẏíumá. Ckwátá·lá·tiwíní. Ċástíl mát·íkca ckwíntáwá·ẏá. ckwiṅím·á·cí qʰahé.

Here's the same text fragment in the new orthography, with doubled letters:

> Tííq̇aati ckinánca. As aawátca ckúuwí. Qa kwán sáppʰiiwáté ckwanááyúmcí haṁísqʰám. Qa céémul ckitítúwááẏíumá. Ckwátáálááti̇wíní. Ċástíl máttíkca ckwíntáẇááẏá. Ckwiṅímmáácí qʰahé.

An important reason for this change was to improve legibility by making word boundaries more evident, because the · character looks too much like a space between words. (I am extremely grateful to Ken Zook of SIL for creating and running scripts to make this change.)

There is a small subset of words in which the · is used to mark a syllable boundary in t·t or c·c, indicating that the first t or c is voiceless-released. Most of these are the initial t·t that should be familiar to many of you from e.g. táq t·tánuwí qá pi? "What is this?" (We could replace these with a rule that whenever tt occurs at the beginning a word the first t is released, but it may be best to leave it this way for consistency.) I have also cleaned up places where I typed · (1 in our keyboard customization) instead of · (shift + .).

3. I've begun working out how verb root morphemes are combined to make verbs. I'm looking at how they fit in a verb stem template with three slots (Ri) Rv (Rm), with meanings roughly glossed as "by doing Ri do Rv while doing Rm". We could say a root in slot Ri is instrumental, one in slot Rv is the main verb root, and one in slot Rm is an adverb of manner, direction, etc. Parentheses show that either or both slots Ri and Rm may be empty. Each of these roots is a single syllable. CVC roots seem only to occur in the Rv slot, but the CV roots can occur in more than one slot, and the meaning shifts within its semantic range depending on which slot the root in—and of course depending on the larger context. where both are empty, a CV root is usually (always?) in the Rv slot. Examples:

ca	grasp	icaaq́ááti	making a snowball	Ri
	(cp. c "do")	q̇at q̇at icááci	compressing in hand(s)	Rv
		as wíc icááci	feeling like water	Rv
ca	in/through air	wacáápóóqi	air is dusty	Ri
		ílaacátẏéimi	shooting through it	Rv
		sásiicáátúmíní	I jumped/ran up onto it	Rv
cé	see, appear	icééhaaṗi	being unable to find (haṗ tuci "disappear")	Ri
		áẇ wíc icééci	looking like wood	Rv
ċi	using foot, stand, upon, on top			
	(cp. ċíkkoȟ "foot")	iċiiq́ááli	kicking	Ri
		tínásiċílamámé'	unable to jump over it	Ri
		sááċiimí	I fell	Rv
		wacasṗútċíci	wind/hand tore the top off (sṗut pluck out)	Rm
		tulúpċíci	sunset (lup come together, pile)	Rm
		uulúcċíci aaq̇u	Bald Mountain (luc clean)	Rm
cu	thrust, flow, cross	icuuṫáási	ironing (stretch wrinkles)	Ri
		icummi; acúmmá	flowing; river	Rv
		tááyíícumí	go across, wade across	Rm
ċu	rise, lift, accompany (= "while lifting" with a motion root, hence, go along with)			
		iċuumááȟi	getting dark, night arising	Ri
		iċúúci	rising up, arising	Rv
		icuuċúci	flowing up, welling up	Rv/Rm?
		wacasṗútċúci	wind/hand tore up by roots	Rm
		tááyííċumí	accompany thither	Rm
ċwa	biting	saċwaaq́íísi	I break with teeth	Ri
ċá		siniiċáke	I bite myself (n- iter., intnsv.)	Rv
	(cp. iiċá teeth)	íiċi, sóóċá	biting, I bite	Rv
ȟi	heading, using head			
	(cp. láȟ "head")	tiȟiisáál̇ami	push in with head	Ri
		aȟíící	taking the lead	Rv
		tilááȟiimi	head thither	Rv

hu	run, (wind) blow	tiḣuulúúli	blow horn	Ri
		waḣuupóóqi	dusty wind blows	Ri
		tiḣuumi	run; wind blows	Rv
		wáluċḣúúmí	he has a cold	Rm
			(luc "clean" is not in the Ri slot)	
ka	act collectively	wikasaykántiwi	herds cattle around	Ri
		tikááċúci	rash, measles, pimples, blister	Ri
		ís tikkááci	live among people	Rv
		lhímmaakáákumá	we burned up (all the wood)	Rm
la	make a line			
		tínásiċílamámé'	unable to jump over it	Rv
li	moving arm & hand	tiliikʰááti	saw, cut by sawing	Ri
	(cp. íĺ "hand")	sááliċḣi	I stick it into water	Rv

There is a kind of iconicity to these, something like assembling components of a Chinese character, with meanings which then may be constrained to one of several possible readings or translations. I have identified many more roots, of course—lu, nu, pĺa, qus, su, ta, ṫe, ti, tu, ṫu, ma, pʰu, ha, wa ...; this set will suffice to illustrate. Those constrained to Ri have Rv occurrences only before c "do" and with no preceding Ri or following Rm. Such constraints may be semantic rather than formal, with counterexamples to be found or invented in the future of language revitalization. If and when I'm confident I'll distinguish the i and m subclasses of roots. For now these are all analyzed as Vroot— talk of instrumental prefixes and adverbial suffixes is inappropriate for something that can also be the verb root. There are in addition many Vroot morphemes (usually CVC) which apparently do not occur in the Ri and Rm slots, and some (e.g. ca "in air") which occur in all three slots, taking part of their meaning from their template location.

Alternations of length and pitch, and aphaeresis as in ċaḣ ~ ċḣ "in water" and laq ~ lq "turning, reversing", appear to arise from a set of stress contours in verbs that remain to be identified, with exceptions where morphemes have lexical low pitch. It remains uncertain whether vowels at margins of verb stems are part of the affixes, part of the stem, or a combination.

4. Something like a good news/bad news dichotomy, though it's really all good: While I was changing the names of collections in the database to make their relative chronology more evident, I discovered many pages of notes from Lela Rhoads that I have not yet entered into the database. My work has

been much interrupted, more so when I was also working for BBN and Cisco full time. It appears that on returning from a more extended interruption I took up a different part of the work—perhaps transcribing a text or working on notes from another person—and never returned to finish the binder with her notes. I have an estimated 100 pages to work through (about 1/6 of that binder). That's the challenging aspect. The delightful aspect is that it is as though I get to sit down with Grandma Lela again, and maybe I'll discover answers to some of those questions that I've been wishing I had asked, and maybe did in fact ask her. So that's really great. I have already confirmed that the word for tapeworm is ḣiiẇá, which I had only from de Angulo (always imprecise). You will find new material beginning with the collection named LR 1972 30: 3/16, ending eventually in 1974.

5. What will be done with the data? (a) I have written how and why morphemic analysis is indispensible for linguists to reconstruct prehistory. With languages that work this way, comparing whole words very quickly becomes illusory. Linguistic theory and psycholinguistics will take longer to find the usefulness of these data, as the notion of a genetically determined universal human nature loses its dominance and is brought into better balance with the diverse ways in which the scaffold of language helps people organize their universe of perceptions. (b) Community initiatives to revitalize this language face familiar challenges of support, indigenous resources, and adaptation. Paul and Lisa will continue creating games and other activities engaging kids in using the language. We will organize instruction such as we had at NILI 2019, and develop on-line presentations—necessary not only in this time of pandemic but also because of the distances over which the people are dispersed. Connor and I will be helping to support fund-raising and proposal writing by the Indigenous Language Network (ILN). ILN has applied for funding to cultivate language nests in participants' homes. We have no fluent speakers, but we hope to find 'rememberers', the elders of today who lived as children with their elders speaking the language. To reach out to them, Connor will work with ILN in Redding/Burney and with Paul and Lisa in Alturas to organize children and youth to record audio and video on their smartphones. Where do important things grow? How do you harvest them and process them? Can they regain songs, prayers, ceremony? They will naturally show their elders what they are learning in the language, and this may reawaken sleeping memories. And of course the kids will come back with new questions for the database. The database already has to tell us how to talk about things that did not exist more than a century ago when the people whose words are recorded in the database were children and youths. To use what we have, we must master how this language can assemble morphemes to create new words. We are in the position of Shakespeare, who introduced so many new words into English. He borrowed from Latin and Greek, but for us the indigenous talisúúwaci of this language should be ample.