In 1923, on a trip up the road along the Klamath river, I interviewed two intelligent Indians near Clear creek, in the upper part of Karok territory, which I had never before visited. They were Ned, reputed the oldest of his people and apparently well over 80 years old; and Mary Jacops, sister of Frank Jacops, a middle-aged to elderly woman noted, with her family, for conservatism to the old ways. Ned spoke English, but a young relative interpreted for Mary. From both I obtained a list of Karok native towns or settlements in their order down the Klamath. Ned's began at Happy Camp and ended at the falls below the mouth of the Salmon, and he added for each place the number of houses he had seen or heard of there. Mary Jacops' list begins above Happy Camp, in territory generally assigned to the Shasta, about which matter more below; and continues to where the Karok met the Yurok between Redcap and Bluff creek-mouths. Especially around populous centers, she named more sites than Ned, apparently through listing separately the parts or "suburbs" or "wards" of what by others is treated as a single settlement. Some of her names were avowedly those of sweat houses each of which, on the average, served perhaps three living houses, and, by Yurok custom, usually took its name from one of these. It is therefore indicated, by the way, that the Karok, like the Yurok, named their houses.

I give the two lists consolidated into one. Although no data obtained in this enumerative fashion can be wholly satisfactory, ideally authentic information involves visits to all sites and questioning of many people—a matter of weeks of study at least. The present data are at any rate much more orderly and complete, on internal evidence, than those which I tried to interpret in Handbook of California Indians, page 99.

The statement in the Handbook, page 100, that upper Karok speech was somewhat differentiated, is erroneous, and evidently refers to the territory above Happy Camp about Seiad, which is in dispute between Shasta and Karok. Both Ned, whose grandfather lived at Clear creek, and Mary Jacops, who was born at Utk, a few miles below, declared that the language of their natal districts was the same as that of the Karok downstream about Orleans.
LIST OF SETTLEMENTS

(In order downstream. Unstarred, from Ned; starred, from Mary Jacops. w, z, on west and east sides of Klamath. Marked with ¿, from Orvel M. Allen, a young Karok of Orleans; with †, from Grover Sanderson (Eaglewing), of Camp cr. Numbers in parentheses, houses according to Ned. Other matter in parentheses, Yurok or other data; C, Curtis, The North American Indian 13:222, with number of houses about 1860 in parentheses; Hdbk, Handbook of California Indians. Seiad valley district discussed separately below.)

e Impu'rák (4), 1 m. above Happy Camp. *Impu'rák. (C, Impurak, 0.)
w Nowi'rakan (3), opp. last.
w Ixwu'ruw'unup (0). (C, Yułtu'ivnen, 0.)
† Kiri't'íkan (4).
† Okiromın'ru'k (3), 100 yds. downstream, on creek.
w *Asisuf-wunum. (C, Asisuf-tiširam, 2–3; 2 m. above Happy Camp.)
w Asisuf'yu-wunum (7), at Happy Camp, on Indian cr. *Asisuf'-ùnup. (C, Asisuf-wunupma or -ünuk, most populous.)
w Yu'xtu'ivnen (4–5), ¼ m. below last, downstream from creek. *Yo'xtoi'évné'ità.  
e Siva't'im (2), opp. little creek. *Siva't'imí.
e *Ya'xurup-mó'vunop, mouth of Elk cr. (By map, 1½ m. below Happy Camp.)
w *I'sipíši-niavnítë. (C, Ishipísha-tiširam, 6.)
† Kašemírak (0), 3 m. below Happy Camp, 6 above Clear cr. *Kašahimvi'rák. (C, Kašem-cr. 1.)
w A'yunup (2–3), ½ m. below last. *A'yunupum.
w Ikiyiriravónop.
w *Patsi'tíriš, Oak Flat. Position of these 2 relative to next 3 not certain. (C, Pachichi-rish, 1 +.) (By map, 2 m. above Clear cr.)
e Ixtšunë'rim (0), 1¼ m. above Clear cr.
e Epuku'nuu'uf (0, but inhabited now), ¼ m. below last.
w Akramu'rum (1), opp. last.
w Yu'xtui (saw 0, heard of 2), 1¼ m. below last, ½ m. above Clear cr. *Yu'xtui.
e *Xansifí'kiri.
w Apaka'ì'pan (7), on upstream (n) side of mouth of Clear cr., on 150-ft. (†) terrace. *Apaka'ì'pan.
w Taštíši-píšu'vìram (7), on same terrace ½ m. up Clear cr. Ned's gr.f. lived there.
w I'nà'm (5), on s side Clear cr., on uphill side of road by little flat near bridge over creek.  
*Înà'm. (C, Înám-sufkarom.) (Yurok Òkoni'l.)
e Pipta'as (1, and summer camps for drying salmon), opp. last. *Pipta'as, between Xansifí'kiri and Apaka'ì'pan.
w Ta'yukunatë (3, never seen by inf't; his gr.f. told him that his br. had lived there); ½ m. up Clear cr. on s side, opp. first little ridge.  
e Aχrásaviš (2), 2 m. below Clear cr. *Aχrásaviš.  
e *Aχrás'vík.
w *Tî'nxmlëmmep, in plowed field by Jacops house. (C, Tî'nxmlëmmep, 3–4.)
e *Thiík, diagonally opp. last.
w Taš'á'xak (4), at school house, below Jacops. *Tašá'xak. (C, Tasa'xak, 2–3; opp. next.)
‡ Xumaru' (5), Ferry Point, opp. last. *Xumaru'ru. (C, Xumaru, 9; Ferry Point.) (By map, Titus cr., 3 m. below Clear cr.)
‡ *Píkiva'hatš.
w *U'tuk (1). (C, Utki, 0; 2–3 m. below Xumaru.)
Kroeber: Karok Towns

*Išvinip-yë’nipanats. The position of these 3 relative to the unstarred settlements between Xumaru and Aχašuruk is not clear.

(3) Ašvisvi’išram (4, not seen by inf’t), “up Elk creek”; had sweat house. (Elk cr. is not here, but above Clear cr. But Independence cr., a large stream, comes into the river from x about here, viz., 5 m. by map below Clear cr.)

(3) Xoparísiišram (3), c. 2 m. farther up Elk cr.

(3) Uši’išivi (3, not seen by inf’t), c. 1½ m. farther up Elk cr.

*Suruku’nwulnup (2 heard of, not seen).

*Inni’nats. (1), diag. opp. last. Yu’Xna’mit is the mt. opp. Išwirip, a little upstream (approximately Ukonom mt. of our maps, pron. Yukenam, for Yuχnam.) (Ukonom cr. by map comes in from x 9 m. below Clear cr.)

*Jacops data give 9 names here, perhaps all “wards” or parts of Išwirip-Yuχnam, viz.:

*Yuχna’mit, *Iknimitch, w *Tšimuyash, w *Puri’pirik, w *Isvi’ript, w *Pikiva’y-nats, w *Yuχnam, w *Uruhaš, w *Ašata’naniš opp. last. (C however lists 6, viz.:

Pahipas-tishiram, 1; Iknimich; w Chimuyaas, 10–12; w Yuhunam, 2–3; w Uruχnas; w Asatannanech, 2–3.)

*Kas’aXk’ni’ik (4), at Alberry cr., below it. *Kašaχa’nik. (C, Kasuχannik, a little below Cottage Grove.) (By map Alberry is 2 m. below Cottage Grove and nearly 4 below Ukonom cr.)

*Somorokš’kuk (5), at Dillon cr. *Sa’murokš’kuk. (C, Samvaru-Kakukam, just below Tailinge cr.)

(2 m. below Clear cr.)

(2 m. above Cottage Grove.) Cf. under Yuχnam above.

*Wumni’pak (5), upstream from bridge. *Wumni’pak. (C, Wumnipak, a little below Samvaru-Kakukam.)

*Sa’rum-ihuvunvirak (3), downstream from bridge; mining claim. Position relative to next 2 not clear. (C, Sarumihi-vonuviruk.)

*Inni’nats. (C, Atsi’ptsinik.

*Pašitru’u’vura (5), 1½ m. below Šarum-ihuvunvirak. *Paš’iru’rura. (C, Pasiruuvara, a few houses.)

*Avissihirak.

*Tši’i (7). Tea bar, 1 m. below Paširu’uvura. *Tši’. (C, Tši, T-Bar cr.) (By map, Tea cr. is 4 m. below Dillon cr. and 2 m. above Eyese. Tea bar stretches along the river nearly a mile.)

*Tšihiyurukam (=“Tši’i-downstream”; a suburb?).

*Aša’mmi (2, perhaps more), 2 m. below Tši’. *Aša’mmi’iš, put below next. (C, Asam-miif, 2; below next.)

*Sufka’ro’om (6), at Rock cr., 1 m. above Ayis (according to map). *Sufka’ro’om. (C, Sufkarom, Rock cr.)

*Aχa’maši (2), 1 m. below Aša’mmi. *Aχa’maši. (C, Aχuvaich, 2–3.)

w Ayi’s-iirim (5), opp. last. *Ayi’s. (C, Ayisthirm, many houses; at Iyis.) (Yurok Rayolk.) (On map, Eyese bar.)

*Ipnuvaram. Possibly a suburb of Ayis. (Cf. C, W Asapivtunuvak, 2; between Ayis and next.)

*Ukurumkirik. (C, Ukurumkirik, 3.)

*Xweru’u’vura. (C, Inpiit, a few houses.)

*Iširāmihi’rak (inf’t saw 3, heard of 6), 2 m. below Ukurumkirik. *Iširā’mhirak. (C, Tishiram-hiruk.)
University of California Publications in Am. Arch. and Ethn.

Afta'ram (3; anciently many), little below last. *Afta'ram. (C, Aftaram, 3; Stanshaw cr.) (If Aftaram is at Stanshaw cr., it is only 1½ m. below Ayis instead of 4 as stated by Ned (his distances added together); 4 m. brings one to Horseshoe Bend, Iramni-hirak.)

(C follows with: e Kochiifi, 1, 1 m. below last; but cf. Kots'i and his Kochvo below.)

Xava'ramnik (4 heard of), 1 m. below last. *Xava'ramnik. (C, Xavaramnik.)

*Iramni'hirak. (C, Iramni-hiruk, 3; 4 m. below Ayis instead of 4 as stated by Ned; his distances added together; 4 m. brings one to Horseshoe Bend.)

*Kö'tšivis-yá'ra. (C, Kochvo-koskum.)

*Kö'tši'i (4). *Kö'tši'i. (C, Kochvo.)

*Akuvati'iv (3), 4-5 m. upstream from Katimin. *Akwativi, given below next. (C, Akuvati-tiif, Reynolds cr.)

Yuxhip (3). *YuXXip. (C, YuXunammit, 2; put, however, above last.)

*Inuxtakatg (5). *Eyinu'Xta'kitA. (C, Inutakueh, 3.) (By map, opp. Offield cr.)

*amsiri'hirik. (C, Samsiri'hirik, 5 m. below next.)

*Ats(i)vi'v-hi'rak. *Atsivi'v-hi'rak. (C, Atsivi'v-hirak, downhill from Yu'xtuyurup, "many sweat houses here")

*Mā'kava'ri

*KitaXrea'rareiXkam

*Ma'kava'ri

*KitaXrea'rareiXkam

(Ispisi, as follows):

Ašap'e-t'pan (3), at upper riffle, opp. Išipiši

Atšiv'hi'rak (2), downstream

Yu'xtuyurup (16), downstream

*Kiri'vi-rukan

*Xavišti'imi

*Išwiri'păm

*Ikiri'fakuna

*Ikiri'ru'pño

*Ivišip

*Wen'aram (Hdbk. pl. 12)

*Yu'uti'mitš

*Ači'ipan

*Mā'hinu

*Mā'hinu-va-yuva'ra

"All this is Katimin, but I have forgotten some sweat houses."

(C, Yuhtuyirup, about 15 houses; Katimin, level field 200 yds. below; Xavishtim, on hill, 3/4 m. below.)

Here begin the large clusters, called Katimin on east and Išipiši on west side of the river, at a rough riffle or rapids. Ned gave Išipiši first and Mrs. Jacobs Katimin (more upstream), but the difference is technical, as the 2 towns face each other. Neither gave Katimin as a town name, but listed its parts or wards.


(Yurok Hdbk. pl. 12, background, 22, right.)

(Katimin, as follows):

Mā'hinu, uphill from last, close to wagon road
The late Lieutenant Governor John Daggett told me of "Sar-nee-pa" on the w side at Sandy Bar. The Yurok call this Sandy Bar settlement Wetasits-iko.
GROUPING

Geographically and functionally, this array of settlements organizes about as follows.

1. Upper district, with 2 foci of concentration:
   a. Happy Camp or Atsishunup subdistrict: from Impurak to Ayunup; 29–31 houses.
   b. Clear creek or Inam subdistrict: from IXtsunerim to Elk cr.; 48 houses, of which 23 in and about Inam at the mouth of Clear cr., and 11 up "Elk" (†) cr., off the river. Inam had a world-renewal ceremony.

2. A long stretch of "Middle" district follows, without large towns, but with a total of about 85 houses. This perhaps groups into the following 5 subdistricts:
   a. Iširīrip, Yuxmin, etc., 17 houses.
   b. Xumnipak, etc., 17 houses.
   c. Tič, etc., 12 houses.
   d. Suškarom, Ayis, etc., 19 houses.
   e. Aftaram, etc., 20 houses, incl. Ikisi and Kotši.

3. Mouth of Salmon district, with a total of 91 houses and 2 world-renewing ceremonies, at Katimin and Amaikiara. There are 4 clusters:
   a. Ašipak, etc., above Katimin, 14 houses.
   b. Katimin and Išipiši, at rapids above Salmon, 42 houses.
   c. On Salmon r., off Klamath, 11 houses.
   d. Ašanamkarak and Amaikiara, at falls below Salmon, 24 houses.

4. Lower or Orleans district, number of houses unknown; dividing probably into:
   a. Orleans proper, Panamenik, Tišanik, etc., with a world-renewal.
   b. Readcap, Wupam, etc.

POPULATION

These data allow of some inferences concerning population. My estimate of 1500 persons, in the Handbook, p. 101, is evidently too low. The 254 houses on the three upper reaches of the river yield, at the York figure of 7½ persons per house, 1905 persons, if the houses were all occupied simultaneously. This leaves the fourth or lower district to be added. Ned’s list averages almost exactly 4 houses per settlement. The Jacops list names 23 settlements in the lower stretch, but, with allowance for suburbs and parts of towns, these may

*For 15 towns the Ned and Curtis lists both name exact numbers of houses. The aggregates are 60 and 57–60, average 4. The Jacops list, which dwells more on parts of towns as if they were separate—typical Yurok usage, also—would presumably run lower: 3 houses or a little less to the named settlement. I add the numbers for the 15 towns, to illustrate the variability, which is probably not so much in individual memory as in the period referred to, and therefore has bearing on the question of ratio of occupied houses to house sites which is discussed in the next paragraph. 4; 0:0; 0:2; 4:2–3; 5:9; 3:1; 1:3–3; 2:2; 2:2–3; 4:3; 3:3; 5:3; 3:6; 16:15; 8:7. It is apparent that, for any particular settlement, no precise figure, even by a good informant, is very reliable unless based on an enumeration of the

reduce to about 15 settlements* of 4 houses each, or 60: say, 450 population. The local resident cited in the Handbook (Sheriff Mac Brown, a great friend of the Indians) estimated 425, plus 1500 more Karok upstream. The McKee-Gibbs expedition of 1851 counted 69 houses in the mouth-of-Salmon and 37 in the Orleans area. The Ned list adds up to 91 for the former; the ratio would yield 49 for the latter, or 367 persons. The district is some 15 miles long and its concentration may not be rated too low, both because it made a world renewal and because of the importance it had in Yurok eyes. Some 50 or 60 houses and around 400 population must be allowed it. This gives, with 1900 in the three upper districts, a gross total of 2300.

But some reduction is necessary. Among the Yurok (Handbook, p. 18), two occupied houses may be reckoned for each three house sites recognized when full detailed data are in hand. They are obviously not detailed for the Karok. Yet the frequency in Ned’s list of items like, “I saw no houses there,” or “I heard of 6, saw only 3,” indicates that some reduction is in order. We may estimate it at one-half of the maximum, or a sixth instead of a third. This would take 400 from our gross of 2300, leaving us with an actual Karok total of about 1900 in native times; in round numbers, not much below and almost certainly not above 2000.* The corresponding Yurok figures are 2400 and 2500.

THE KAROK-SHASTA BORDER

The Klamath from Happy Camp nearly to Hamburg is in doubt between Karok and Shasta ownership. Shortly above Happy Camp, the river flows through a sheer canyon which would have been uninhabitable for several miles. The modern river road climbs a rather high mountain to avoid this canyon. Here would have been a natural boundary between Karok and Shasta, especially as the stream valley changes. Below, it is precipitous; flats are few, even at creek mouths; a really level acre may be miles from the next; town sites are mostly on narrow terraces or benches, usually more or less sloping; the river, flowing from north to south, is a succession of riffles and rapids. Above Happy Camp, the river flows from east to west, rippling along much more evenly as regards depth, breadth, and speed. It is bordered, not continuously but frequently, by low flat land sufficient to be profitable to American farmers; the bordering hills rise farther from the shore. These qualities continue with little change up at least as far as Hornbrook, while the Karok type of setting extends downstream through Yurok territory virtually to tidewater. The ethnic maps have all set the Karok-Shasta boundary at the natural barrier of Happy Camp mountain.

*This reduction seems fair. From Impurak to Amalkiara, exclusive of settlements up "Elk" cr. and Salmon r., Ned lists 56 towns, Curtis 59, but Jacops 80 plus 19 sweat houses at Katimin and Amalkiara.

*Curtis estimates 2000.
However, Mary Jacops began her list of Karok settlements with this statement: "At Seiad and up to Hamburg they talked this our language. It was their main language; but they also spoke Kahi [Shasta], as at Redcap downstream they also speak Weitchpec [Yurok]." She then gave a list of these upper Karok towns. There is no corroboration from Ned because he declared himself too unacquainted with the country above Happy Camp canyon to give information, just as he stopped downstream at Amaikiara. In Seiad valley I encountered only Schuyler Phillips, a half-breed approaching middle age, born in the valley, fully cooperative, but too American in his ways of life to help very much. He did give as his opinion that Mary Jacops was right, and recognized some of her names of settlements.

This is the Jacops list, in order downstream, with the side of the river indicated by e and w as before, though s and n would be literally truer. (P) indicates recognition, (P ?) its lack by Phillips. C is Curtis as before.

E Vū'νva'raivak, 2 m. below Hamburg (P).
E Taχpū's, 2 m. below (P).
E Ara'kχat (P ?).
E Tsara'i'tšu'uf, 1 m. below last (P ?).
W Sā'mai, Seiad (P). (C, Sammai.)
W Aša'pitivunuup, 3 m. below (P: Grider cr., flowing in from s at lower end Seiad valley).
W Avaχi'širamū's, ½ m. below (P: Portuguese cr.).
W Siti'pkuuru, 3 m. below (P). (C, East side, Siti'pkyuru, O.)
W Siti'ptitā, 1 m. below (P ?). (C, Chipich-vunupma, O.)
E Ašaχei'-i's'antu (P ?).
W Takiri'p (P ?).
E Išnā'miš, diag. opp. last (P ?).
W Aša'χva'am (P: a creek).
E Ahupuru'χku.
E Impu'rač, etc., as before. (C, Impurak.)

Professor R. B. Dixon has kindly examined his original Shasta notes on the point. His principal informant, Sargent Sambo, a native Rogue River Shasta, later living above Oak bar and recognized about 1900 as leader of the surviving Klamath Shasta, gave A'awa, in Kunz flat, 3 miles below Hamburg on the s (= e) side, as the last Shasta village downstream. This coincides very closely with the Jacops statement from the Karok side. But Kimolly, a Shasta at Hamburg, about 70 years old 30 years ago, continued Shasta villages actually to Happy Camp. This of course is going too far, and suggests that he may merely have run on obligingly to the limit of his personal knowledge, without considering speech change as worth mentioning. This is Kimolly's list:

A'āwa (as ante), 1 m. below Mill cr.
Kwā'suk, a large settlement, 2¾ m. down.
Xarō'kwii, Walker bar.
A'raχiko, Grider cr.
Sū'mmaikaho, Seiad valley.
Asō'uru, Sinek bar.
This list is in Shasta, as the preceding is in Karok. There are no sure correspondences except Samai and Summaikaho for Seiad.

This much is clear: there was a stretch of the Klamath from a little above Happy Camp to a little below Hamburg, with permanent settlements but probably only a moderate population, which some Karok and some Shasta claimed as places of their people, whereas others assigned them to the opposite tribe. This can only mean that the intermediate group was essentially bilingual. Whether they were Shasta who had also learned Karok, or the reverse, I will not presume to decide. Of the two lists of their towns, one is obviously Karok, the other Shasta. It is possible, but seems hardly likely, that the Karok moved into former Shasta territory after the whites came. Such an event should be remembered 50 to 70 years later, but no informant on either side suggests it. The alleged upper Karok dialect (Handbook, p. 100) is evidently the somewhat altered Karok which the bilingual border group spoke.

The exact Karok-Shasta ethnic boundary must thus be left in doubt.

ETHNIC NAMES
(From Ned)

Wati'iru, the Shasta.
T'tmurnina, Shasta farther up Klamath (Hdbk, 99, Kakamichwi-arara).
Ti'sra'var, Scott River Shasta (Hdbk, Tishrawarara).
Imti'pahai, people across ridge to N, different language. Ned's wife of them.
Si'sunan, people farther N.
Ikira'kpi, Rogue River Indians.
Asafu'kanpi'fa, another tribe, to w.
I[kê'skan, people w of here on a large stream N of Smith r., near Rogue r.
Yu'x'a'ra, Smith River people (Tolowa), also Requa Yurok (Hdbk, Yuhara-hi).
Yu'rukvar, Yurok.
Kišakévar, Hupa (Hdbk, Kišakewarara).
Mašuxa'ra, Forks of Salmon people (Hdbk, Mashuarara).

A further complication is made by Dixon's map (AMNH—B 17: pl. 49, cited in Hdbk. 100), which puts Nupatsu apparently below Happy Camp, Aukni above it on the opposite side, Ussini upstream on the north side (at China cr. t), and has Shasta villages begin only above, at Thompson cr., with Teitatowaki.

Curtis evidently also encountered this conflict of testimony. When treating of the Karok, p. 232, he gives Sammai (Seiad) as a Karok town. Under Shasta, p. 232, he lists as the first two divisions of this nationality the Katimu from Happy Camp to Seiad valley; and the Kammatwa, now extinct, on the Klamath (from the Katimu) up to Scott r., with villages at Aika, Hamburg, and at Assupak at Scott bar.

A Karok told me in 1902 that at Shammai, up river from Happy Camp, they spoke both Karok and Shasta
DISTANCES AND ELEVATIONS

I add, as an aid to further geographical study in this region, the mileage along the river, and its heights above sea level, from Sheets A and B of the U. S. Topographic Plan and Profile of the Klamath River. Unfortunately the mileages there given are reckoned not from the mouth but from an arbitrary point 0.9 miles below a proposed Tully Rapids Dam site. Nine miles above this point the Trinity river comes into the Klamath, and this is my zero datum.

**Yurok Stretch (6, plus 40-odd miles downstream)**

Trinity r., Pekwututl, e side diag. opp. Weitchpec, 0 miles, 175 feet
Bluff cr., w, 6

**Karok Stretch (60 miles)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Mileage</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slate cr., w, 7</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Redcap cr., e, 9.1, 275</td>
<td>Wupperam</td>
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</tr>
<tr>
<td>Boise cr., e, 12.2, 325</td>
<td>Sâyverum</td>
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</tr>
<tr>
<td>Ullathorn cr., w, 12.8</td>
<td>Tuyuvuk</td>
<td></td>
</tr>
<tr>
<td>Camp cr., w, 13.5</td>
<td>Tîšannik</td>
<td></td>
</tr>
<tr>
<td>Orleans (BM 399), w, 15.5</td>
<td>355. Panamnik</td>
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</tr>
<tr>
<td>Perch cr., e, 16.5</td>
<td>TaXasufkara</td>
<td></td>
</tr>
<tr>
<td>Ikes cr., e, 21.5</td>
<td>425. Aånamkarak (falls); Amaikiara diag. opp. below</td>
<td></td>
</tr>
<tr>
<td>Salmon r., e, 22.5</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>Auitš peak (Sugarloaf, 1265), e, falls at, 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Išipliš, w, 23.5</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Katimin, e, 23.5–23.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Ten Eyck cr.), w, 25, 530</td>
<td>Ashipak</td>
<td></td>
</tr>
<tr>
<td>Offeld cr., e, 25.8, 540</td>
<td>InuXtakats</td>
<td></td>
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<tr>
<td>Rogers cr., e, 29.2 (YuXlp, below; Akwa-tiv opp.)</td>
<td></td>
<td></td>
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<tr>
<td>Horsehoe bend, c, 31</td>
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<tr>
<td>Irving school (BM 675), e, 32.2, 600. Xavaramnik f</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Doubtful Between Karok and Shasta (25–30 miles)**

River in winding canyon, e, 71–76, 1120–1170
Thompson cr., N (=w ante), 81, 1275.

The Klamath here ends its w flow to turn s

Seiad cr., N, 88, 1350

**Shasta Stretch (40 miles, plus 15–20 above Shasta r.)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Mileage</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburg bar, s, 98.5</td>
<td>1500</td>
<td></td>
</tr>
<tr>
<td>Scott r., s, 100.3</td>
<td>1530</td>
<td>(Scott bar, 3 m. up, c. 1650)</td>
</tr>
<tr>
<td>Beaver cr., n, 118</td>
<td>1735</td>
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<td>Humbug cr., s, 129</td>
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<td>Shasta r., s, 134</td>
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