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Alaskan Caver, Volume 6, No. 4, July-August 1981

Richard A. Hall

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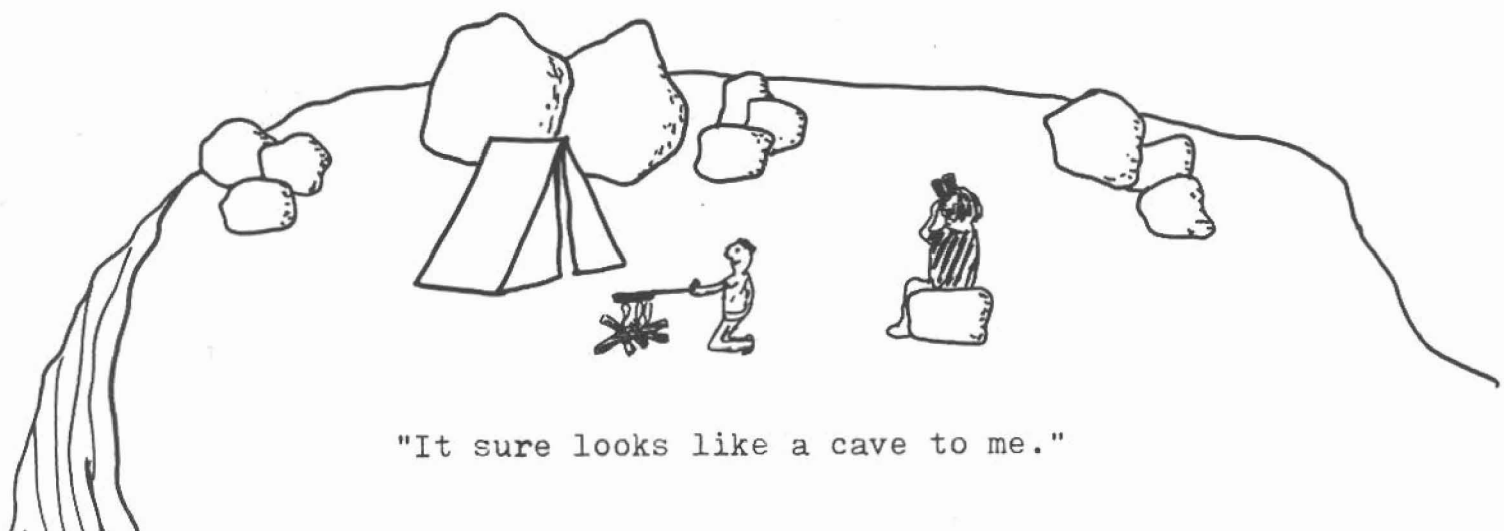
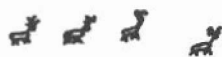
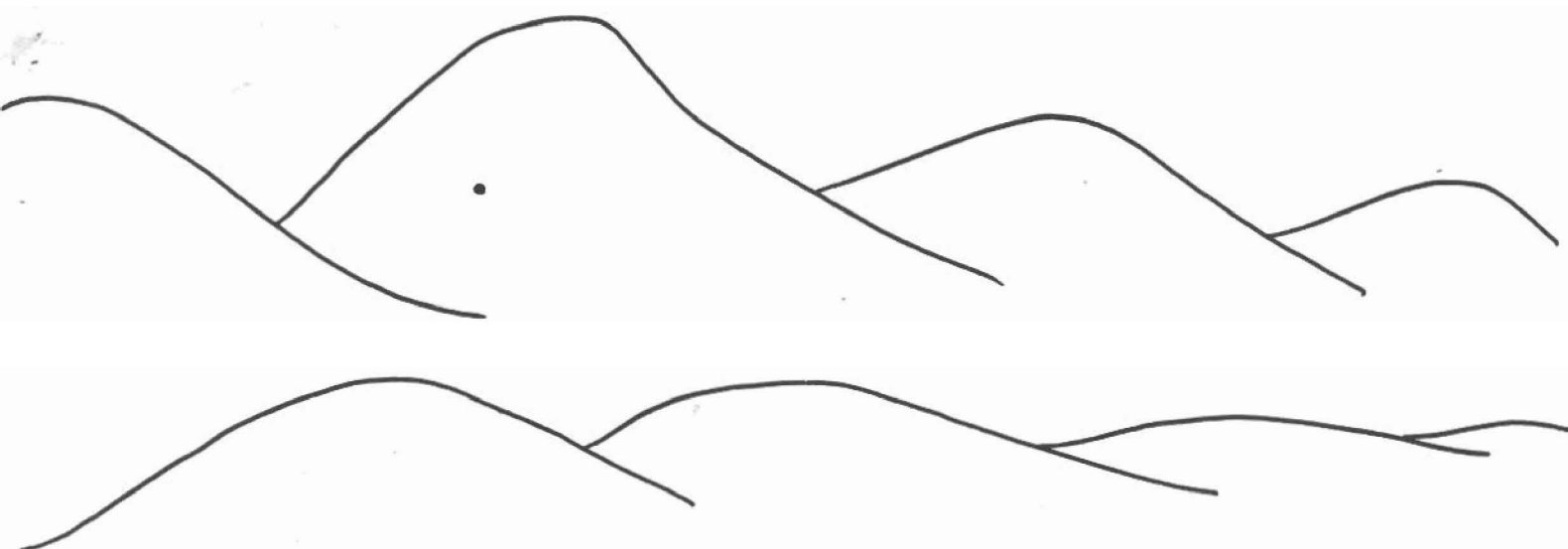
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THE ALASKAN CAVER

Volume 6 Number 4

July-August 1981



"It sure looks like a cave to me."

CALENDAR OF EVENTS

- July 16 Glacier Grotto Meeting; 7:30
Aug. 20 Glacier Grotto Meeting. Meetings are held in room 312 Grant Hall, Alaska Pacific University at 7:30 pm. The program will be an NSS slide show on Wind Cave, South Dakota.
Sep. 17 Glacier Grotto Meeting. Meetings are held in room 312 Grant Hall, Alaska Pacific University at 7:30 pm.
Oct. 15 Glacier Grotto Meeting. Meetings are held in room 312 Grant Hall, Alaska Pacific University at 7:30 pm. The program will be an NSS multimedia show based on John Denver's tune 'Country Roads' and titled 'Caving Roads'.
Nov. 19 Glacier Grotto Meeting. Meetings are held in room 312 Grant Hall, Alaska Pacific University at 7:30 pm.
Dec. 17 Glacier Grotto Meeting. Meetings are held in room 312 Grant Hall, Alaska Pacific University at 7:30 pm. The program will be an NSS slide show on the C-3 Expedition into Floyd Collins Crystal Cave, Kentucky.

The ALASKAN CAVER is a periodic publication of the Glacier Grotto of the National Speleological Society. Subscriptions are free to members. Membership dues are \$3 per annum. Dues can be sent to Elizabeth Rockwell at 2944 Emory St, Anchorage, AK 99504. Copyright 1981 by Glacier Grotto. Material not copyrighted by individuals or other groups may be copied by other NSS publications provided credit is given to the ALASKAN CAVER and a copy of such publication is sent to the editor.

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NEW MEMBERS

New members are always welcome. Recently we received dues from Julian Wilkerson of Anchorage who is a surveyer on the pipeline. He hopes to be able to check out some of the caves in the Brooks Range that are near the Haul Road. Also new is Jeffrey Cunard who has spent several years working around Alaska and spent this past year on a farm in the Yukon Territory. All you jealous cavers take note - he plans to spend the summer roaming around the Wrangell Mountains looking for caves. Another new member is Matthew Hall, NSS 22131, of the same address as the editor. Welcome Julian, Jeffrey and Matthew, we hope you all find some caves this year.

According to the Anchorage Times, the State Division of Geological and Geophysical Surveys has issued Geologic Report 63 which contains brief reports on recent geological investigations in Alaska. Authors include University of Alaska graduate students and faculty, personnel from the State Division of Geological and Geophysical Surveys, and the U.S. Geological Survey.

LIMESTONE ALONG THE GLENN HIGHWAY

Kings River Limestone Deposit

A question everyone asks when they hear about the Glacier Grotto is "how close are the caves?" After telling them about the plethora of glacier caves and the hundreds of square miles of limestone in the state I admit that the glacier cave season is short and that there are no limestone caves near Anchorage.

Well, maybe I've been wrong. I recently came across a USGS article (Csejtey et. al. 1978) which showed a patch of Jurassic limestone of about three square miles at the headwaters of the Kings River as well as other miscellaneous patches along the border of the Anchorage and Talkeetna Mountains Quadrangles and within the Talkeetna Mountains Quadrangle. Jurassic Limestone, to my knowledge, is very uncommon in Alaska and I therefore know very little about what kind of rock to expect. Shortly after discovering this document a friend put me in touch with George Fennemore, a mostly retired prospector with the Anchorage Gem and Mineral Society who mentioned this same patch of limestone. He said it was high grade limestone and forms cliffs up to 500 feet high.

Csejtey describes the rock as "light to dark gray, fine- to medium-grained unfossiliferous limestone; near granitic rocks recrystallized to medium- to coarse-grained marble. Forms discontinuous lenticular bodies, as much as 30m thick, within Talkeetna Formation" (Csejtey et. al., 1978, p 11). The map in that article shows twelve different lenses or outcrops of this limestone, two of which are the same as the Lower Cretaceous limestone mentioned in Barnes, (1962) on the north side of Castle Mountain. Other masses are spread out over fifteen miles north of Castle Mountain with the largest (2 square miles) being six miles up river from Castle Mountain which itself is about five miles from the Glenn Highway. The locations are shown on the map on the next page.

The first question to arise is "are there any caves in the limestone? Neither the USGS publications nor Mr. Fennemore said anything about solution or solubility of the limestone. Even if it is fairly soluble, the limited size of the outcrops and lenses will restrict cave development and the recent glaciation may have destroyed any preglacial caves.

The second question to arise is "how do you get there to find out if there are any caves? Mr Fennemore said that he drove to the large deposit in a four wheel drive via the Kaiser Road off the Glenn Highway two years ago. The road is not shown on the USGS topographic maps of the area because they are too old.

In May Jay and Tad Rockwell went with Rusty Rubeck to try to drive up Kaiser Road. They didn't make it all the way due to having a wet road. Their trip report will be in the next issue.

Rusty Rubeck took a light plane flight with a friend in early June up the Kings River to check out the road condition and see what the limestone looked like. He said the road seemed to be pretty good all the way to the sharp bend where it ended. That's OK because that is where the largest limestone deposit is located. One peak looked particularly like limestone but the largest outcrop was very orange looking.

ACCESS ROUTES TO THE KINGS RIVER LIMESTONE LOCATED WITHIN THE DRAINAGE OF KINGS RIVER AND CHICKALOON RIVER



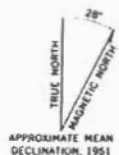
Primary Roads

Secondary Roads

Trails

 Glaciers

Kings River Limestone



Topography from USGS Talkeetna Mts
Quadrangle and Anchorage Quadrangle,
Alaska 1:250,000 topographic maps.

Geologic features from Csejtey et
al, 1978.



Nelchina Limestone

In the Talkeetna Mountain A1 and A2 quadrangles is a small layer of limestone called the Nelchina Limestone. Based on Grantz (1960a and b), there appears to be about 14 square miles of limestone in four major and several minor outcrops spread over eighteen miles distance. About 5 square miles of the limestone are covered by a cap of calcareous sandstone.

The deposit is located between 12 and 20 miles from the Glenn Highway in the Area of Tahnetá and Eureka. Actual hiking distance would be much longer. One possible route would be in from the highway at Squaw Creek and/or Caribou Creek to Billie Creek. The largest deposit is seven miles up Billy Creek (a total of about 25 miles hiking). An alternate route may be up the little Nelchina River which drains most of the limestone but is at least twenty miles from the Glenn Highway. Of course, the best access method would be by plane; there are reportedly several small airstrips which are used by hunters in the area. A map of the area showing location of the limestone and trails is on page 6. This map and the map on page 4 have a common border on the west side of this map.

Grantz (1965) describes the Nelchina Limestone as "very light gray, cross bedded calcarenite with abundant silicate detritus". Csejtey et al, (1978) describes the Nelchina Limestone as "thick bedded to massive clastic limestone; interpreted as a continental shelf type deposit; over 100m thick." Csejtey also suggests that the Nelchina Limestone correlates with the Berg Creek Formation of the southern Wrangell Mountains. The clastic nature of the rock may inhibit cave formation to some degree and Grantz (oral communication, 1979) suggested that that was the case. Whether or not that is true, it is well worth checking out because of its proximity to Anchorage.

Rich Hall

Barnes, F.F., 1962, Geologic Map of Lower Matanuska Valley, Alaska: U.S. Geol. Survey Misc. Geological Inv. Map I-359.

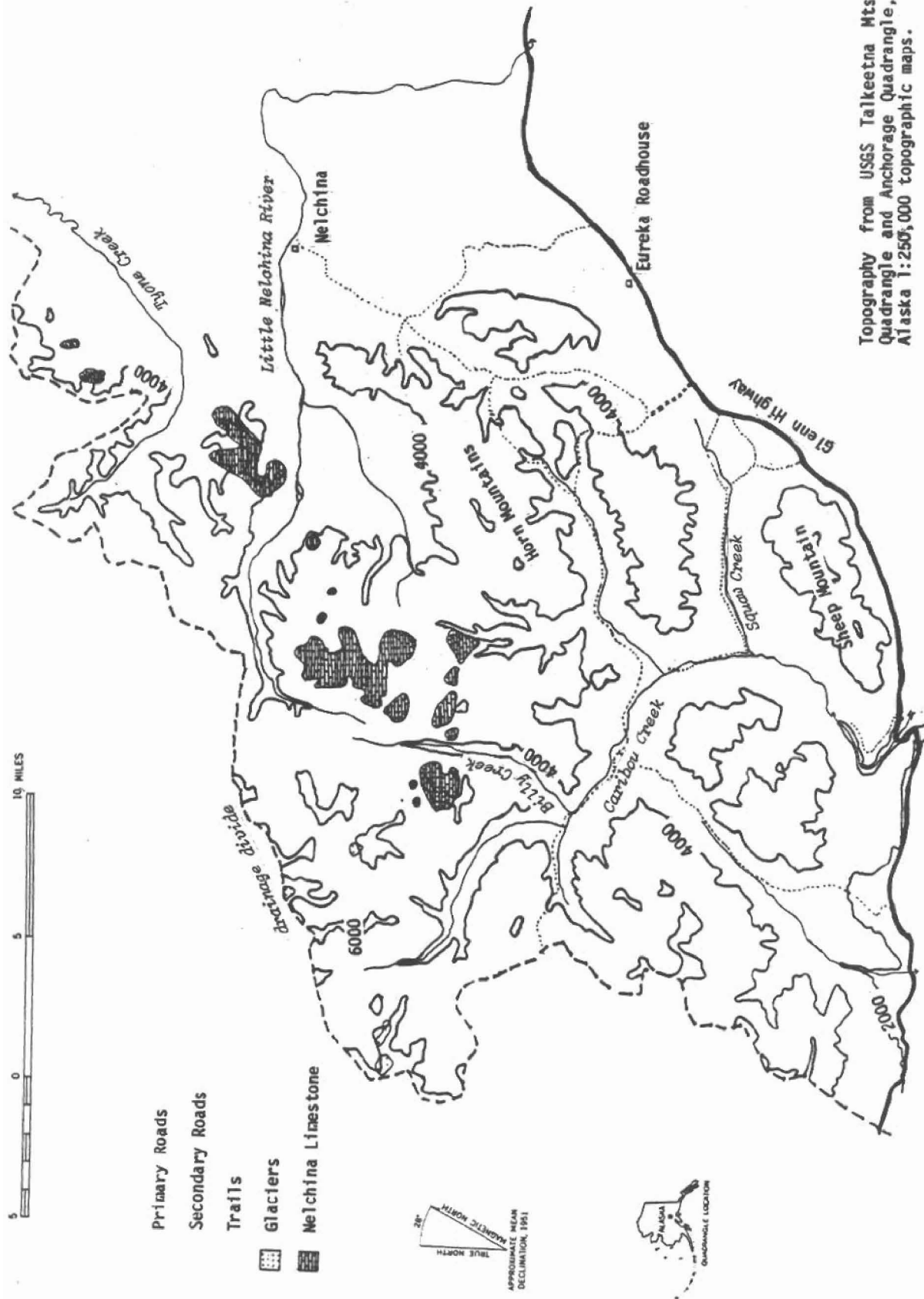
Csejtey, Bela Jr., W.H. Nelkson, D.L. Jones. N.J. Silberling, R.M. Dean, M.S. Morris, M.A. Lanphere, J.G. Smith, and M.L. Silberman, 1978, Reconnaissance Geological Map and Geochronology, Talkeetna Mountains Quadrangle, Northern Part of Anchorage Quadrangle, and Southwest Corner of Healy Quadrangle, Alaska: U.S. Geol. Survey Open-file Report 78-558-A.

Grantz, Arthur, 1960a, Geologic map of Talkeetna Mountains (A-1) Quadrangle, and the South Third of Talkeetna Mountains (B-1) Quadrangle, Alaska: U.S. Geol. Survey Miscellaneous Geologic Investigations map I-314.

Grantz, Arthur, 1960b, Geologic map of Talkeetna Mountains (A-2) Quadrangle, Alaska and the Contiguous Area to the North and Northwest: U.S. Geol. Survey Miscellaneous Geologic Investigations map I-313.

Grantz, Arthur, 1965, Geologic Map and Cross Sections of the Nelchina Area, South-central Alaska: U.S. Geol Survey Open-file Reports 65-65.

ACCESS ROUTES TO THE NELCHINA LIMESTONE LOCATED WITHIN THE DRAINAGE OF CARIBOU CREEK, LITTLE NELCHINA RIVER AND PART OF TYONE CREEK



Topography from USGS Talkeetna Mts Quadrangle and Anchorage Quadrangle, Alaska 1:250,000 topographic maps.

Geologic features from Grantz, 1960a and 1960b.

ITS NEVER TOO SOON

Lis and I thought we would do a bit of car camping somewhere the weekend of June 13th. Our son Matt had never been camping before and we thought he would be old enough now to enjoy it. Lis picked Porcupine Creek campground near Hope so we could check out a few seacaves while we were there. We stopped at Portage to look at the icebergs on the way and were amazed at how many more there were now than last winter. Even at Portage, which is known for rain and wind, the sun was shining and it continued to shine on us all weekend.

Saturday afternoon we walked from the campground to the village of Hope, a quaint turn of the century mining town with a general store that, since the 1964 earthquake and the correlated five foot ground subsidence in the area, gets a little wet now at extreme high tides.

Sunday we hiked a short way out the Gull Rocks trail at low tide, cut down to the water and started back along the beach. We climbed over the muddy rocks and searched for seacaves. There were three or four respectable ones on this stretch of beach that went in at least 15 feet so I took Matt in them and showed him what seacaves look like and told him how they were formed by wave action washing out the less resistant bands of rock at the high tide level. Lis thought this was a bit weird but I figure eight weeks old can't be too early to start explaining such important subjects.

Rich Hall

RUMORS

Rusty Rubeck has come across some cave rumors lately in addition to the one on the west side of Bodenbug Butte. Someone told him there is an 'obvious' cave on the right wall above the right fork of Kings River. This is in the same general area that is discussed on page 3 in this issue of The Alaskan Caver. Although the location given doesn't match where the reference puts the limestone, either one could be off far enough for the two to be in the same place. His other cave rumor has a stream coming out of it and is up a steep canyon near Trail Creek which is off the Seward Highway. I don't know of any limestone deposits in the area but the formation in that area is known to have thin limestone beds and concretions elsewhere.

ALASKA GEOLOGY

In the April 22 The Great Lander there was an interesting article by Thomas Sykes of Earth Science Magazine about how understanding the meaning of Native place names can help discover ore deposits. This method is apparently now being used by "Geneva Pacific Corp., of Glenview, Illinois, a geological and geophysical consulting firm with extensive copper claims in the Chitina Valley of South Central Alaska". Linguistics have been put to especially good use in the Chitina Valley. "Chita-na" means copper river; "chita-tu" means copper water and likewise Chitistone, the massive limestone formation from which the Kennecott Corporation removed 4.2 billion pounds of copper ore which averaged 12.4 percent copper, and which just coincidentally contains Star Cave and many other caves, would be a hybrid of Native and English words meaning 'copper rock'.

MT. ST. HELENS' APE CAVE

(quoted from the Anchorage Daily News 45(69): A8 Saturday Mar 14, 1981)

"Cave explorers reported that for the first time since the volcano's explosive May 18 eruption, they explored Ape Cave's more than two-mile-long main corridor on the mountain's southern flank.

Last weekend a team of 17 speleologists found that the lava tube cave survived the eruptions, earthquakes, and mudflows, said Dr. William Halliday (and Glacier Grotto member ed.) of Seattle, president of the Western Speleological Survey and the leader of the expedition.

The group had feared that mudflows had plugged the cave, valued as the longest lava tube cave in North and South America. Such caves are formed when the outside of a lava flow hardens and molten lava inside flows out, leaving a hollow tube.

The group had to obtain permission from the U.S. Forest Service for the venture inside the restricted red zone around the mountain. Previously, a rule requiring spelunkers to stay within 15 minutes of an escape vehicle limited how far they could explore within a cave."

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