"NORTH TO ALASKA"
Winter  
Glacier Caving at Byron Glacier some weekend or elsewhere as weather permits. Contact Jay Rockwell at 277-7150 if you are interested.

Winter  
Rusty Rubeck may be interested in trying to snow machine in to Star Cave from McCarthy sometime this winter. If you are interested contact him at 694-3571.

April 16  
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 entitled "An Introduction to Northwestern Volcanospeleology."

May 21  
Glacier Grotto Meeting. Meetings are held in room 312 Grant Hall, Alaska Pacific University at 7:30 pm.

June 18  
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 Wyandotte Cave, Indiana.

July 16  
Glacier Grotto Meeting. Meetings are held in room 312 Grant Hall, Alaska Pacific University at 7:30 pm.

Calendar continued on page 8.

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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Publisher:  
David Moll

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THE GOLDEN HORN LIMESTONE LENTIL

In the same area as, and as little as five miles away from, the Chitistone Limestone which was described in the last issue of the Alaskan Caver, in fact only about twenty miles north of Star Cave, is a pocket of Permian limestone which "forms high cliffs and massive bold outcrops with local sinkholes" (Smith and MacKevett, p 20). The Golden Horn Limestone Lentil is part of the Hasen Creek Formation and is named and described in USGS Bulletin 1274Q, The Skolai Group in the McCarthy B-4, C-4, and C-5 Quadrangles, Wrangell Mountains, Alaska, by J. G. Smith and E.M. MacKevett Jr., pages 20-23. It is usually the highest layer in the Hasen Creek Formation and is often overlain by Nikolai Greenstone which is itself often unconformably overlain by the Chitistone Limestone. As shown on the map on page 4, its entire exposed extent is less than three by ten miles, and half of this area is covered by glaciers and aluvial gravel. There are three patches of the rock; in the McCarthy C-4 Quadrangle just east of the Nizina Glacier and just north and south of Skolai Creek there are patches about three to four square miles each. Further to the northwest by five or so miles is a small patch of about one square mile which is adjacent to Ronn Glacier in the northwest corner of McCarthy C-4 Quadrangle and the northeast corner of McCarthy C-5 Quadrangle.

The name "Golden Horn" was given to the yellow and red stained cliffs of the prominent peak in the area by early prospectors due to the trace amounts of iron in the rock which bled over the surface. The limestone is referred to as a lentil because while the Hasen Creek Formation is quite extensive, this limestone is thick only in the small area as mentioned above and the lentil, which is nearly 800 feet thick at its thickest, thins out at the edges. Likewise, "individual beds having centers as thick as 10 feet pinch out over a distance of several hundred yards" (Smith and MacKevett, p 20). The portion by Ronn Glacier is 250 feet maximum thickness. However, there is often a band of limestone associated with the Hasen Creek Formation elsewhere although it is seldom very thick and is not existant at all in some locations. This band exists in the southern part of the McCarthy C-8 quadrangle and is shown separately in MacKevett et. al., 1978. I assume it also exists in the McCarthy D-3 quadrangle since a stream there is named Lime Creek and no other formation in the area is known to have limestone. The Hasen Creek Formation is contemporaneous with the Eagle Creek Formation also of Permian age which contains two limestone layers and is located in the Mt. Hayes A-1 Quadrangle (Richter and Dutro) and the Tankidit Limestone in the Eagle and Charley River Quadrangles (Brabb and Grant).

"Limestones of the Hasen Creek Formation are dominantly fossiliferous wackestones consisting of worn disarticulated fossil fragments as much as 1 cm long in a matrix of carbonate mud is mainly calcite, but it is locally dolomitic and generally contains some clay minerals and carbonaceous material" (MacKevett, 1970a, p 10).

continued on page 5.
LOCATION OF THE GOLDEN HORN LIMESTONE LENTIL IN THE MCCARTHY C-4 AND C-5 QUADRANGLES

THE GOLDEN HORN LIMESTONE LENTIL

- Golden Horn Limestone Lentil
- Glaciers

Contours in 1000 feet intervals.

Base from U. S. Geological Survey McCarthy C-4 & C-5 Quadrangles.

Geologic data based on USGS Geologic Quadrangle Maps GQ-844 and GQ-899.
NEW YEAR'S IN WEST VIRGINIA

Since Liz and I were outside (East Coast in fact) to visit our folks for Christmas, we figured we would also visit some old friends in the D.C. area. So I called up Paul Stevens and arranged a carpool ride to Ronceverte, West Virginia for the weekend after New Year's for their monthly Organic Cave trip. We had spent many weekends at the fieldhouse there when we lived near D.C. and it felt good to be back. Given my choice of where in the cave I wanted to go I chose a few small leads in Hewdick's Maze, an area of the 360 mile cave system which I visited these days because it's been pretty thoroughly checked and mapped. I had been mapping in that area a few years before we left for Alaska and had meant to return some day to survey those last few remaining leads. Paul Stevens, a guy named Harold who had never been in Organic Cave before, and I headed for the cave about 10 am with plans to work hard and be out by six. We left some clean clothes in the tourist section of the cave to change into later and headed downstream. Every turn brought back memories of old cave trips and every hour brought back memories of muscles that I haven't used in a long time. But it was lots of fun anyway. Paul wanted to resurvey about a dozen stations in Hewdick's main stream because he thought the compass that had been used was about three degrees off true (in fact the instrument eventually became adjustable in that you could set it for any number of degrees bias you wanted.) Well - it took us about three stations to come up with 14 good shots since several of the stations couldn't be found. First mission - accomplished - survey differences ranged from 1.5 to 4 degrees and averaged 2.88.

Our second mission was a small (12 inches high) lead that I had checked for 50 feet once before but hadn't surveyed. But, alas, the way was not easy; after the mud slope off D.C. Avenue and 100 feet of muddy crawling we came to the double pinchedown - nine whole inches between rock and flowstone. Having the largest body there, I went first, made it through the first pinch and then realized I should have removed one more layer of clothing before trying the second pinch. As I lay there on the wet flowstone with my sweater bunched around my waist, realizing our goal was most of a mile further on, I decided that this was really supposed to be a tourist trip, not a hardcore push and that maybe we could get some chihuahuas to survey the time later. So we came around to head out the crawl, down the mud slope and through the breakdown in D.C. Avenue to our third objective - to check what may be an entrance nearby. But Paul said "wait, have you been down there?" pointing toward a side hole which he said went to a small formation room. Admitting I hadn't, I hopped in only to find no way out of a small breakdown chamber. But Paul said that it really did go and showed me which crack went. I thanked him for so enlightening me but declined the opportunity to do that kind of stuff again. On a positive note however, we realized that this passage, which Paul had surveyed years before, was not on the map (which I had drawn) and this left something for Paul to worry about when he gets home.

Along our route upstream toward the possible entrance, was another formation room which Paul had never seen so we stopped, poked our noses in a few places, decided it was time for lunch (4 pm), ate, and then decided there wasn't really time to check the entrance after all. So we didn't get there either. By now, having become for the most part tourists, we decided we would try a different passage out. At the bottom of 96 Avenue, Paul hopped down in a lower level that I swore to him went and while Harold and I kept in voice contact from the overhead 15' high by 30' wide passage, Paul enjoyed the 15' high by one to two foot wide passage below (I'd been in there before, I wasn't crazy) until the two merged two hundred feet later.

Leaving was easy; our last task (to salvage the serious nature of our scientific expedition) was to compare a certain part of the passage to the map. It was quickly accomplished - "No resemblance, someone should come in and re-sketch it sometime (we had now degenerated to 100% tourists)." We trudged on, changed into our dry clothes, headed out into the cold right on schedule, drove to the fieldhouse in the car that Lee Stevens had thoughtfully left for us, and then went to town for dinner. We were in a hurry because someone was having a slide show at 8:30. On what? Caves of Alaska, of course.

Rich Mall

NSS NEWS

For the benefit of those Glacier Crupto members who are not NSS members, I have pulled a few bits of information from recent issues of the NSS News. The News is sent monthly to NSS members and contains stories of cave goings-on all around the country.

The December News stated that the 1976-77 issue of American Cave Accidents will be available later this winter from Steve Knutson, 505 Roosevelt St., Oregon City, OR 97045. Or if you know of a cave accident in your area (Alaska?) please write him so it can be included.

Roppel Cave in Western Kentucky is now the second longest cave in Kentucky and eighth in the country at 23.9 miles. This is only four and a half years after that cave was discovered! It is also expected that a major new river in the cave is the same as in the Morrison-Proctor section of Mammoth Cave.

This list of deepest caves in the world and in the United States is from the December News.

1. Reseau Jean Bernard, France 1410m.
2. Reseau de la Pierre Saint-Martin, France 1323m.
3. Sistema Huasteca, Mexico 1221m.
4. Sliezowna Pieczysie, USSR 1127m.
5. Burguigia, Spain 1105m.
6. Gouffre Berger, France 1103m.
7. Sina B-15, Spain 1104m.
8. Schneeboch, Austria 1101m.
9. Sina C.S.F. Malaga, Spain 1094m.
10. Lorochechtoifen, Austria 1074m.
11. Reseau Felix Trombe-Benne, Morte, France 1018m.
I don't know how difficult the access is but Smith says that "because of the high cliffs, most traverses must be made with care down gullies" (Smith et. al., p 20). The topographic maps confirm a rise of up to 3000 feet over a mile distance. A trail is marked on the topographic map which crosses straight through the area paralleling Skolai Creek; it begins at the edge of Nizina Glacier and crosses the entire quadrangle heading east to Russel Glacier and Skolai Pass which is the lowest pass through the Wrangell Mountains at 4800 feet elevation.

Are there any caves in the Golden Horn Limestone Lentil? I'll bet there are at least a few small ones and it would be worth looking into. There are sinkholes and quite a slope in the terrain, both good signs.

As with glaciers elsewhere, there are probably also caves under all the glaciers in the area. The two mile wide Nizina Glacier would be interesting to check where Skolai Creek runs under the side of it.

Rich Hall

references:
Deep Caves of the United States

At the Cave Geology and Geomorphology Section meeting of the 1979 NSS Convention at Pullman, Wash., a committee was formed within the section to keep track of the status of the long and deep caves in the United States. What follows is the deep cave list; the long cave list was published in the January 1980 NEWS and the top 100 (99) in the August 1990 NEWS.

The International Congress of Speleology Commission on Long and Deep Caves defines deep caves as those whose total depth from highest accessible point to lowest accessible point exceeds 300 meters (984 feet). The NSS Committee on Long and Deep Caves has a cutoff of only 150 meters (492 feet). This list, as with any list, is not complete, but I'm doing the best I can to keep it up to date.

<table>
<thead>
<tr>
<th>No.</th>
<th>Cave Name and State</th>
<th>Feet</th>
<th>Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Great X Cave, Wyo.</td>
<td>1408</td>
<td>429.1</td>
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<tr>
<td>2.</td>
<td>Bigfoot-Mangrinder Cave, Calif.</td>
<td>1240</td>
<td>378.9</td>
</tr>
<tr>
<td>3.</td>
<td>Noffs Canyon Cave, Utah</td>
<td>1170</td>
<td>356.5</td>
</tr>
<tr>
<td>4.</td>
<td>Ellisons Cave, Ga.</td>
<td>1063</td>
<td>323.4</td>
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<tr>
<td>5.</td>
<td>Silver Creek System, Mont.</td>
<td>1052</td>
<td>320.6</td>
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<tr>
<td>6.</td>
<td>Carlsbad Cavern, N.M.</td>
<td>1028</td>
<td>312.3</td>
</tr>
<tr>
<td>7.</td>
<td>Big Brush Creek Cave, Utah</td>
<td>858</td>
<td>261.3</td>
</tr>
<tr>
<td>8.</td>
<td>Zazumura Cave -- lava tube, Hawaii</td>
<td>856</td>
<td>260.9</td>
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<tr>
<td>9.</td>
<td>Papoose Cave, Id.</td>
<td>825</td>
<td>246.3</td>
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<tr>
<td>10.</td>
<td>Sunray Cave, Mont.</td>
<td>804</td>
<td>245.1</td>
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<td>11.</td>
<td>Bull Cave, Tenn.</td>
<td>741</td>
<td>225.9</td>
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<td>12.</td>
<td>Lost Creek Siphon, Mont.</td>
<td>730</td>
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<td>13.</td>
<td>Virgin Cave, N.M.</td>
<td>723</td>
<td>220.4</td>
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<tr>
<td>14.</td>
<td>Alum Cave -- lava tube, Wash.</td>
<td>704</td>
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<td>15.</td>
<td>South Grotto, Ida.</td>
<td>690</td>
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<td>16.</td>
<td>Simmons Mingo-My Cave, W. Va.</td>
<td>680</td>
<td>207.3</td>
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<td>17.</td>
<td>Spanish Cave, Colo.</td>
<td>670</td>
<td>204.2</td>
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<td>18.</td>
<td>Gary Stil Pit, Ala.</td>
<td>651</td>
<td>198.4</td>
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<tr>
<td>19.</td>
<td>Jewett II Cave, Tenn.</td>
<td>637</td>
<td>192.4</td>
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<tr>
<td>20.</td>
<td>Jewett I Cave, Tenn.</td>
<td>615</td>
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<td>21.</td>
<td>Organ Cave, W. Va.</td>
<td>600</td>
<td>182.9</td>
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<tr>
<td>22.</td>
<td>Butler-Sinking Creek System, Va.</td>
<td>579</td>
<td>175.5</td>
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<tr>
<td>23.</td>
<td>Overholts-Blowing Cave, W. Va.</td>
<td>590</td>
<td>179.3</td>
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<tr>
<td>24.</td>
<td>Frias Hole System, W. Va.</td>
<td>585</td>
<td>178.3</td>
</tr>
</tbody>
</table>

If you know of any changes or additions to be made please let me know.

NSS Committee on Long and Deep Caves
do Bruce I. Goldstein
905 Harmon Valley Ln.,
Gambill, MD 21054
Phone: 301-569-7822

Members of the NSS Committee on Long and Deep Caves of the U.S.A. include Peter Sprout, chairman and representative to the I.S.U., Will White, chairman NSS Cave Geology and Geomorphology Section, and Bruce I. Goldstein, data compiler and keeper of the list.

The November News featured some articles on Carlsbad Caverns celebrating the 50th anniversary of Carlsbad Caverns National Park. The pictures of this, one of the most decorated caves in the country, are mind-boggling even in black and white. In addition, the Big Room is the site of 14 football fields -- the largest in the country. The articles are very interesting.

Mike Dye, in the October News, in his monthly column, "Caves & Caving" summarized an article on alpine karst from the Alaskan Caver as he has on some other occasions as well. Thanks go to Mike for the publicity he has provided us.

For a record in cave discovery try the new cave in Buduquia, Spain listed above as fifth deepest in the world. The October News explains that the 1195 meter depth was attained three weeks after the cave was discovered earlier this year.

Over the Memorial Day weekend some cavers from Mother Lode Cavers were in Church Cave in Kings Canyon, California when a Richter magnitude 5.0 earthquake occurred with an epicenter only 30 miles from the cave.

SECRETS OF LIMESTONE

The program for the January meeting was a movie that Jay had borrowed on short notice from Inside Earth entitled "Secrets of Limestone". Its general message was that it is a lot easier to pollute the groundwater in limestone country than where there are sediments or solid rock to filter the water. In the process there was a good explanation of cave formation and lots of excellent photography of caves and springs. We’ll probably show it again in a year or so and hopefully we can get more advance publicity; it is well worth seeing.

JENKINSEES IN NORTH CAROLINA

A recent letter from Sydney Jenkins says they are alive and living in North Carolina (PO Box 2097, Chapel Hill, 27514). They had a good time at the NSS Convention in Minnesota last year and represented Glacier Cavern at the Congress of Crotos. They have been doing a fair bit of caving; they saw a few caves at convention, stopped at Mammoth Cave after the Convention, and did three Tennessee caves on a weekend this winter. They miss Alaska, especially now for Christmas, but didn't say when they'd be back.
July 18-24 Eighth International Congress of Speleology in Bowling Green, Kentucky. This is the first time that the International Congress has been held in the United States. There will be a week of sessions, meetings, and trips as well as pre-congress, post-congress and daily excursions to caves and karst features. For further information request the Second Circular from: Eighth International Congress of Speleology, The Secretariat, Department of Geography and Geology, Western Kentucky University, Bowling Green, Kentucky 42101. Fees range from $5 for a single day's sessions to $130 for full membership. An abbreviated NSS Convention will be held the weekend following the Congress (July 25-26).

August 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.

September 17 Glacier Grotto Meeting.

October 15 Glacier Grotto Meeting. The program will be an NSS multimedia slide show on John Denver's tune 'Country Roads' and titled 'Caving Roads'.

November 19 Glacier Grotto Meeting.

December 17 Glacier Grotto Meeting. The program will be an NSS slide show on the C-3 Expedition into Floyd Collins Crystal Cave, Kentucky.

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Richard Hall, Editor
4607 Klondike Court
Anchorage, Alaska 99504