

January 2009

## Alaskan Caver, Volume 29, No. 1, January 2009

Carlene Allred

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# THE ALASKAN CAVER

Volume 29, Number 1  
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## THE ALASKAN CAVER

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## NIZINA CAVE HUNT AND ALDER THRASH

Wrangell-St. Elias National Park 2008, by Steve Lewis

### Nizina Cast of Characters:

Rob Cadmus-Juneau, AK, Jansen Cardy-itinerant, currently Anchorage, AK, Johanna Kovarick- Thorne Bay, AK, Jean (Creature) Krejca- Austin, TX, Steve Lewis- Tenakee Springs, AK, Erin Lynch- China & KY, Dan Nolfi- Smoky Mountains NP, TN, Kina Smith- Olympia, WA/ Whale Pass, AK.

25 August, 2008:

Group meets up at Anchorage International Airport--- and with the other Wrangell Cave team, led by Kevin Allred. Jansen meets us and we round up the rental rigs, a big van and hot little red sedan, hit up REI, round up a few groceries, eat way too much at the Golden Corral all-you-can-eat joint and head out to Palmer and a campground Jansen has learned of. Everybody seems to have all their tent parts and know how to use them, so off to a good start.

26 August, 2008:

Breakfast in Palmer and off to Copper Center and a meeting with Park Service folks. This goes well--- although caver and ranger ideas of most effective rescue methods did seem to differ a bit. We settled it, that if problems arose the first rescuers should come from the group of cavers on the other side of the park, especially if an actual cave rescue was required. Roll up the old railroad grade to McCarthy and, having called earlier, find a van from McCarthy Air that we manage to get all our gear shoved into, although some of us have to walk. Jansen drove the van back to Anchorage to save us many dineros. He is a caver, but hadn't been in Alaska when we set up the expedition, but still volunteered to help with transportation. We sing his praises!

(continues on next page)

Front cover: Jean Krejca maps passage in Cracked Up Cave, Wrangell-St. Elias National Park (see article beginning on page 2). Photo probably taken by Erin Lynch (with Johanna's camera).

Back cover: Vertical practice held at Tenakee Springs, late fall 2008. In this photo Steve Lewis and Rachel Myron practice ropework inside their shop several miles east of town. Other participants included Nick Olmstead, Molly Kemp and Jansen Cardy. Photo by Jansen Cardy.

## NIZINA CAVE HUNT..., continued from page 2

As he headed west, we set up camp above the runway, tents on the gravel bank and dinner of sorts on the tarmac. Chilly evening----nice stars and bugs non-existent with the frost.

27 August, 2008:

Two trips gets all the Nizina crew to the airstrip at the toe of the Nizina Glacier. Other group has a long day of shuttles since their airstrip can only handle a Super Cub, so they go one person at a time. We used a Beaver and then a Cessna 185 to get our crew out. We had the pilot fly the cliffs and circle a bit of the karsty landscape---things looked interesting, although some of the cliffs looked daunting. The promised big resurgence looked promising from the air, dumping silty water into a series of streams and a lake. A possible deep pit looked very dicey---apparently at the top of a huge and steep snow and ice slope that ran up into a cleft in the mile high cliffs. We named this the Crack of Doom and felt that it was a definite last resort---scary looking.

But, the best stuff looked to all be well to the south of the airstrip. So, everyone played mule and we lugged all our gear about 4 miles down to the midway point of our river section---at the base of a steeply dropping stream that offered a route up to the top of the cliffs and the high karst. Numerous holes gaped from the cliffs we passed as we slogged over easy terrain, river gravels covered with *Dryas* stalks and occasional small willowy channels cutting from the cliffs across the river flats to the Nizina, about half a mile to our west.

The most mulish of us did second loads while others got camp set up, tents out on the flats, well away from the kitchen area in the aspens with a stream running through it. Two tall aspens were climbed. Rob was the tree climber par-excellence and lines stretched between them allowed us to easily hoist food bags out of the reach of our ursine friends. Bear canisters were also used and a good thing they were since the bears batted them around and tried to chew them on several occasions.

Rob, Kina and I took advantage of the long evening to check out the stream cut, getting well up into the tangle of slide alder we were to become so acquainted with, and finding some interesting side channels that felt karsty. I also managed to fill my Xtra-tuffs trying to bridge a little waterfall. Just tipped a bit and filled them right up like a faucet, to the glee of the others.



*Rob Cadmus with a load, photo by Jean Krejca*

Dinner was, like always, freeze dried food that Johanna had ordered and had shipped to Wrangell Mountain Air for us. Plenty of dry wood, so we generally supplemented our cooking stoves with a wood fire that felt great most nights.

28 August, 2008: Entire group sets out to leap frog each other, checking out potential holes in the cliffs between camp and the West Fork River. However, our main goal was to assess the most promising leads per all our informants, the big resurgence that appeared to have a walking lead. We did discover 3 significant resurgences that, for unknown reasons were pumping silty water, apparently of glacial origin. However, there were no leads with any air, only some shadows that may have fooled airborne observers. We spent a long time confirming that there really were no more resurgences or holes leading down into resurgences. But, no luck. We did check out the West Fork for possible crossing potential. It looked pretty treacherous---very fast water with no obvious shallows and a quick trip to the much more treacherous Nizina if the crosser didn't rapidly get to shore. Rob, Kina and I checked up the shore until we  
(continues on next page)

## NIZINA CAVE HUNT..., continued from page 3

were cliffed out. Several potential caves along cliffs had us thinking that tomorrow might find us in the dark.

29 August, 2008: Decided to check out the contact between the impure McCarthy formation and Chitistone Limestone high above camp since the weather was clear, perfect for working up high. Kina, Creature, and Steve took the high route, but found ourselves cheating and working above the Chitistone at times because the slide alder was impassable and not the slightest bit holey. The other group worked down lower, trying to relocate several lakes that we had seen from the air in hopes that they drained into an underground system. The top group managed to get above one of the lakes---and to hear the others thrashing equally horrid slide alder below in their vain attempt to find anything, lake or otherwise.



*Dan and Johanna in one of the less horrible stretches of slide alder, photo by Jean Krejca.*

They did find their way out to the river sooner than we did---our route had been to stay high and drop into the West Fork, but that would have required several days, so we worked down into a promising valley, discovering what appeared to be a large entrance on the far side, but too late to do more than get a good location so we could find it tomorrow. Moose Cave beckoned, but the river beckoned more, so we headed down the canyon, only to get cliffed out and have to climb back up and follow more gentle slopes down to the Nizina. A long day, with at least 12 hours of thrashing and crawling through intense alder. But, the birthday back rub at dinner made it all worthwhile!

30 August, 2008: Creature, Kina and Steve headed back to explore Moose Cave while Rob, Johanna, Erin, and Dan checked out some climbing leads. Rob led the first climb, with Erin belaying and

Dan and Johanna heckling. Rob had about 3 nice meters of climbing and 20 meters of nasty loose horror. It all led to a perfectly beautiful...frost pocket. Derigging proceeded and they checked out the so called CrackHead Cave which they had located on the 28<sup>th</sup>. Dan scrambled up a talus slope and discovered that CrackHead was not a cave either. This led to a decision to contemplate bare feet in the sunshine, consume Power Bars, and then amble over to see if it would be possible to cross the Nizina to get to all the great looking holes on the other side. Not a chance, and the glacier crossing was far far away and didn't look too promising either. Nap time.

Meanwhile Kina, Steve and Creature scrambled up their escape route of yesterday and headed for the big opening of Moose Cave. (We'd named it because the size and shape reminded us of Deer Cave images we'd seen) We scrambled along the cliff band, getting sightings on our stance from yesterday. Moose Cave was just around the corner, but up the cliff, so we approached from above, hoping we could rappel down to it. Turned out we could walk down into it. It was indeed a fairly large opening, (3m wide x 7m tall) but it opened right out the top---just a natural bridge. So, Moose Cave was renamed Moose Arch and we took a nap, too.

We then proceeded to follow the top of the cliffs back to camp. We did see the lake, but it did not look like it had anything but a standard stream drain. Nice swans too. However, it looked like a horrendous alder thrash down there so we opted for less alder and more talus scrambles and dwarf birch thrashing. Some moose sign, but no caves. We did find one large shallow sink, perhaps 100 meters across and several meters deep with no drain or opening. This was our first real karst feature above the river bottom area other than the arches and limestone cliffs of earlier in the day. There were some glorious views from the cliff tops and a nifty scramble down into the canyon above camp, but the potential for any features in the Chitistone band of limestone dimmed greatly today. What few there might be are so well hidden in the alder that it may take a tougher future generation of cavers (and a few millennia of dissolution) to find any karst or caves worth pursuing up there.

31 August, 2008:

Dan, Johanna, Erin, and Creature did a thorough reconnaissance of the area above the springs we'd discovered on day one. They did find a little pond, but no entrances, and no explanation of why the springs

(continues on next page)



## NIZINA CAVE HUNT..., continued from page 4

were pumping silty water. Is it coming from something on the West Fork River? The glaciers are many miles away, so a direct feed seems improbable.

Rob, Kina, and Steve decided to explore the north side of the West Fork river. Lots of walking since it is nearly 4 miles from camp to the lower end of the West Fork and we hoped to reach the contact with the McCarthy Formation, 4 miles upstream. However, it turned out that traveling along the West Fork is a chore. There are innumerable cliff-outs that vary from several hundred meters to kilometers in length. These generally entailed finding a route up steep steep slopes with mixed spruce and alder forest along the tops of the cliffs. And, frequently there were gullies and cuts that forced us far back from the edge of the river.

We did manage to reach the point across from the only really significant tributary, which entered via a long canyon, in limestone. Looked beautiful and perhaps karsty. We could not get down into the river from our side for as far as we could see, so decided that enough was enough. Kina did an amazing job of route finding on the way back, getting us out in jig time. We did see some very promising black holes high up on the cliff. We jokingly named them Mission Barely Possible Caves. There were also numerous small springs and seeps along the river bank. We wondered if there were also areas at corners of cliffs that pumped water into the rock, perhaps accounting for the silty springs at the Nizina ponds.

We decided that we should check out crossing potential on the West Fork again because it seemed fruitless to expend multiple days more effort in the area we'd been working in. Our nice weather---no precipitation to speak of, but still chilly---seemed to have reduced melting of the glacier upstream so that a drysuit crossing looked a little more reasonable. Once back at camp we all decided that we'd had enough alder thrashing and we would pack up and move camp tomorrow. Kevin Allred had heard about a potential deep pit at the top of the Crack of Doom, across the West Fork on the Mile High cliffs (discovered by a hang-glider who later crashed and is no longer in the area), and then there was that Mission Barely Possible.....

1 September, 2008:

We packed up and moved most of camp, leaving some food and vertical gear behind so that we could get everything in one trip. Also, the West Fork area did not offer good trees for hanging food, so all food had to fit in our bear canisters. Camp was nice, but drinking water was more of a problem since the West Fork was full of glacial sediment, unlike our clear stream at the old camp. The dropping river level had left a few pools that were settling, and we were able to make these do the trick.

Kina and I had brought our drysuits along thinking that we might need them in a cave or perhaps a river crossing. These made the West Fork thinkable. I got a really nice sturdy stick, and using skills developed several years before in a crossing of the Chitistone, found a way across the river. Kina, being a bit shorter, used good sense and didn't try to follow once I was over since one was all we needed.

I worked my way upstream to a narrow point that we had worked out earlier. Rob made a throw bag and after a number of misses, I finally caught it and pulled a line across. This section was not a place one would want to fall in---the pull on the line was quite significant and it was deep and narrow. However, I was able to pull a cave rope across and tie it off to a large spruce well anchored high on the bank. Now I could rest and watch the rest of the crew do amazing things with beach logs, webbing, and lots of experience in building tight line systems. Under Erin and Creature's  
(continues on next page)



*Building the tripod for the Tyrolean traverse across the West Fork, left to right: Rob Cadmus, Dan Nolfi, Jean (Creature) Krejca, Johanna Kovarick, Steve Lewis. Photo by Kina Smith.*



## NIZINA CAVE HUNT..., continued from page 5

expert direction, they had a solid tripod and a secure anchor and a very tight line rigged in about an hour. Not only that, we were all excited again, with new ground to explore tomorrow! I came back across and we plotted future adventures over yet more freeze dried adventure. Our line has been dubbed the "Tyrolean of Freedom".



*Steve crossing the West Fork on the Tyrolean,  
photo by Jean Krejca.*

Beautiful evening yet again, with nice sunset and beautiful stars----late enough in the season that we actually do get some darkness---means we can't work insanely long days and still get back to camp, which is nice for me, the old geezer on the crew.

2 September, 2008:

Dan and Rob made an early morning dash back to camp to get several forgotten items that were essential to exploration on the far side of the West Fork. Upon their return we split into 3 teams, with Steve and Creature attempting to at least get close enough to see if Mission Barely Possible was anything at all. Rob was excited to lead a crew up the Crack of Doom and Dan and Johanna decided to look doom in the eye. Kina and Erin would work the base of the mile high cliffs, going as far south as they could get and still get back to camp by nightfall.

Rob's crew followed the West Fork downstream till they were able to cut through the woods and follow the cliff band to the base of the scree slope beneath the Crack of Doom. Here they began the ascent, apparently preceded by a black bear that they saw grazing on raspberries high above, before they spooked it. The bear scooted across what looked to be sheer cliffs, heading for where Steve and Creature were attempting their barely possible mission. After a

perilous climb up scree and snow at the angle of repose, Rob, Dan, and Johanna reached a bit of ice and no pit. They surmised that the pit was probably a deep melt-hole between rock and ice that had been seen earlier in the season.

Meanwhile, Creature and I were working our way up about 2000 vertical feet of spruce and alder forest enroute to several more thousand feet of rock and snow below the little black holes, visible only with binoculars. As visions of alder thrash danced through our heads, an amazing sight did appear. We discovered a trail that had been cut through the dense alder---this might work after all. We popped out of the alders still on the trail, carefully waypointed the top of the trail for our return, and headed up beautiful alpine slopes, the toe of a glacier appearing as we rounded the amazingly convoluted cliffs---the exposed bedrock bent and twisted into dramatic shapes on many of the outcrops of the McCarthy formation. Several flocks of Dall sheep moved easily across the steep slopes to our north as we  
(continues on next page)



*Top of Crack of Doom---note Dan Nolfi along wall at left,  
photo by Johanna Kovarik*



NIZINA CAVE HUNT..., continued from page 6

struggled up the heather and into talus and then steep bedrock/talus/snow mixture. This terrain was not terribly difficult, but the exposure and potential for rockfall kept us thinking. We checked out a few dark spots, naming one frost shattered crack Almost A Cave, since it appeared to have a bit of dissolution happening along with the frost shatter. But, only a rat could have gotten past the first meter.

The final push to the primary hole of Mission Barely Possible was a bit dicey---loose rock near the angle of repose with perhaps 5 meters to a 10 meter plus drop with several hundred meters of tumbling fall guaranteed below that. Creature was not too thrilled when I called back that we actually had a cave. Three Sheep, No Skunk Cave was named for the sheep we could see from it's entrance and the fact that we were not going to be completely skunked on this expedition. The cave was essentially a frost enlarged joint with some enlargement by dissolution. It had a mud floor with ice at the back. At 1,851 m (6,035 feet), it was definitely the highest cave discovered on the expedition.



*Creature sketches in the entrance of Three Sheep No Skunk Cave. Photo by Steve Lewis.*

Erin and Kina had continued past the base of the Crack of Doom to explore the base of the cliffs along the west side of the Nizina. They hoped to reach the confluence of the Chitistone and close off the survey by relocating the Nizina Cut-off Borehole, discovered by earlier Glacier Grotto winter expeditions, when crossing the rivers was easily accomplished on skis. They didn't quite close the gap, but did have a very successful day.

After walking under several "mile-high" waterfalls, Erin was excited to find a small bubbling spring. This was quickly followed by a much larger, 20



*Terrain we searched on North side of West Fork— Lakes in the Foreground are where large springs are; the Nizina Glacier is at top of the photo. View from Three Sheep No Skunk Cave Entrance area. Photo by Steve Lewis.*

cfs spring. A black hole beckoned, but needed rope and harnesses. Further on Kina pushed into Latticework Chamber. The 5 meter high, 1 meter wide entrance led to a steep floor of shattered limestone to a 7 meter high by 3 meter in diameter room. A muddy floor is lubricated by drips and little nooks line the walls, along with moonmilk.

All three groups arrived safely back in camp before dark, crossing yet again, what Erin dubbed the "Excellent Tripod Tyrolean Contraption" to each consume another delectable dinner of *BackPacker's Pantry* treats.

3 September, 2008:

Dan, Johanna, and Steve decided to work the south side of the West Fork today, hoping to check out the canyon that the August 31 foray had spotted from the north side of the river. Once again, there were numerous springs along the base of the bluffs along the river, with some very nice clear pools. And, once again, the river frequently forced us up and around, as it washed the base of steep cliffs. The last cliff-out required a major back-track to ascend and we decided that time precluded making it to the canyon. Nothing but the springs suggested active karst in the area.

Meanwhile, Rob and Kina, Creature and Erin headed back down the Mile High Cliff's section to push the holes they'd found yesterday. Rob led a 10m pitch up a crack to one of the holes they'd spotted. Kina followed and then the others---What they found was a miniature version of the Nizina Cutoff Borehole----

(continues on next page)



## NIZINA CAVE HUNT..., continued from page 7

several small sections of cave that still remain after the main cave was destroyed by glaciers when the Nizina and West Fork glaciers were much larger. An awkward 2 m climb led to another lead where "mud floor met rock ceiling" in an unpleasantly pinching way. Erin, Kina, and Creature surveyed Cracked Up Cave---the two leads were connected by an overhung walkway, so constituted one cave. A rappel down, some dances on beaver dams, and one last Tyrolean had the group back at our spike camp ready for another freeze-dried dinner under the magnificent starry Alaskan sky.

4 September, 2008:

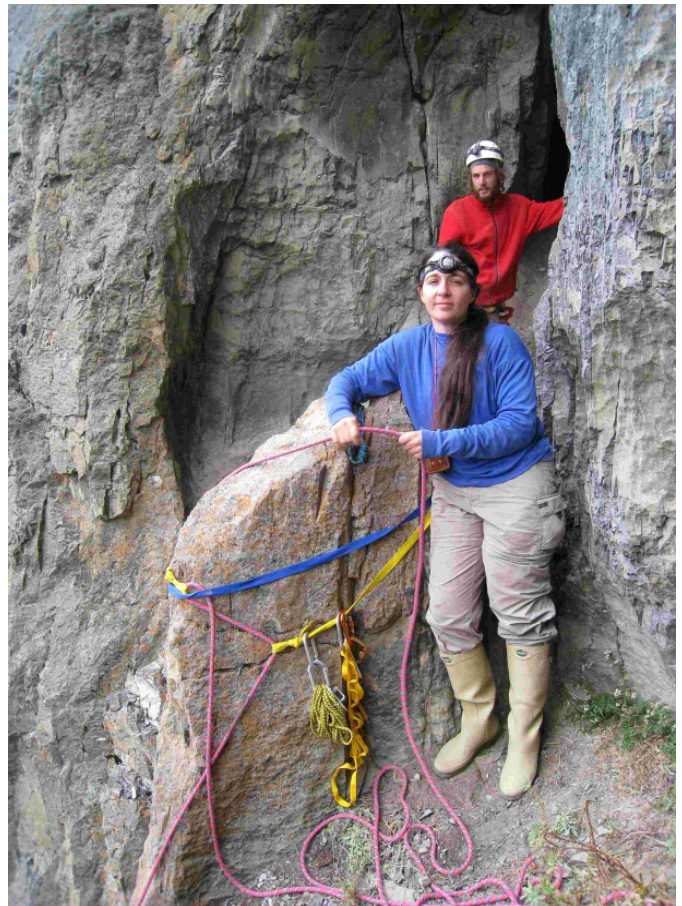
Today is the last day before our scheduled pick-up. It was a bit sad to have to pull down the Freedom Ride-but quite simple with Erin's expertise, to derig without anyone needing to get in the river. We broke down the tripod so that the site was left looking pristine, not even a sling on the rigging tree on the far side.

Then back to camp one, pick up all the gear there and make sure it was pristine before shuttling everything up to the airstrip. The bad thing about freeze dried food is that the loads haven't shrunk as much as you'd wish at the end of the trip. Still a few double runs to get all the gear to the strip. We checked out the little cabin, but it was well away from the strip and not particularly nice--- not tempting when the stars were still shining. A last companionable group around a campfire was still a treat.

5 September, 2008:

Made satellite phone contact with Wrangell Mountain Air to determine our pickup time. Found we had some time to explore. Creature and Erin hiked up to the toe of the Nizina Glacier, spotting a black bear walking the beach along the lake, then scrambling onto the ice and finding an ice cave, 10-12 m long with a mud sump at the back. Dan, Johanna, Rob and I did a reconnaissance of the cliffs to be sure that we hadn't missed any caves since we had done most of our looking at this end with big monkeys on our backs. There was plenty of nice terrain and limestone, but no caves or likely prospects.

Two flights had all of us out---our last flight was excellent, with great views of the Nizina, the cliffs, and the McCarthy Creek area before we flew into a hailstorm right at the runway. Good thing it is a big runway---we could barely see and a deluge kept us in the plane for awhile before making a mad dash to the packed van--- all the Fosse and Hidden Valley crew had returned ahead of us. We all shared tales of our trips---



*Kina and Erin explore Cracked Up Cave, photo by Jean Krejca.*









the other group had a few real caves to report as we waited out the rain.

Jansen was back with our van and we treated him and ourselves to NON-freeze dried dinner at the McCarthy Hotel before loading up and heading for the Copper River Campground at the west end of the McCarthy road for the night. The little red sedan had a back seat party as Erin, Johanna, and Creature reviewed photos on Erin's computer.

6 September, 2008:

Packed up camp and headed for Anchorage. Breakfast of sorts at a roadside café in Kenny Lake, then a couple of hours in Copper Center discussing the trip and copying data sheets for the Park--- then the long drive with beautiful vistas on the sunny day, dinner in rainy Anchorage and Jansen and Stacey put all of us up in their tiny apartment for the night. Stacey wisely went to work on the night shift after making us welcome. Last minute runs to get gas for the vehicles so we could return them in the morning. Also, laundry and shower facilities thanks to Jansen and Stacey. A great way to end the trip all clean and spread all over the floor in luxury. ▯▯

# LEGEND

-  passage wall
-  rocks
-  wet mud fill
-  slope (splays downward)
-  vertical drop
-  entrance dripline
-  change in ceiling height
-  bedrock

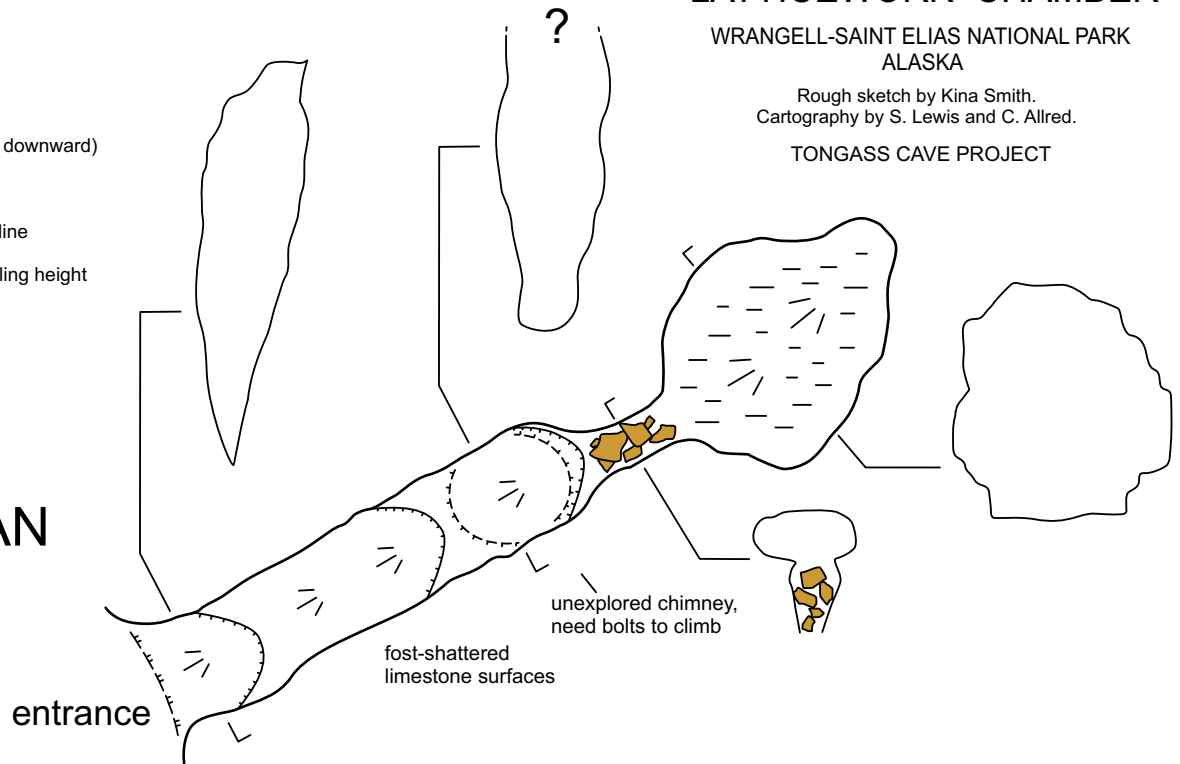
## LATTICEWORK CHAMBER

WRANGELL-SAINT ELIAS NATIONAL PARK  
ALASKA

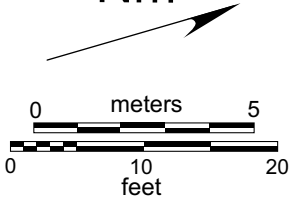
Rough sketch by Kina Smith.  
Cartography by S. Lewis and C. Allred.

TONGASS CAVE PROJECT

### PLAN



Nm



entrance

### PROFILE

spring emerges from  
cliff wall about 45 m  
away from entrance

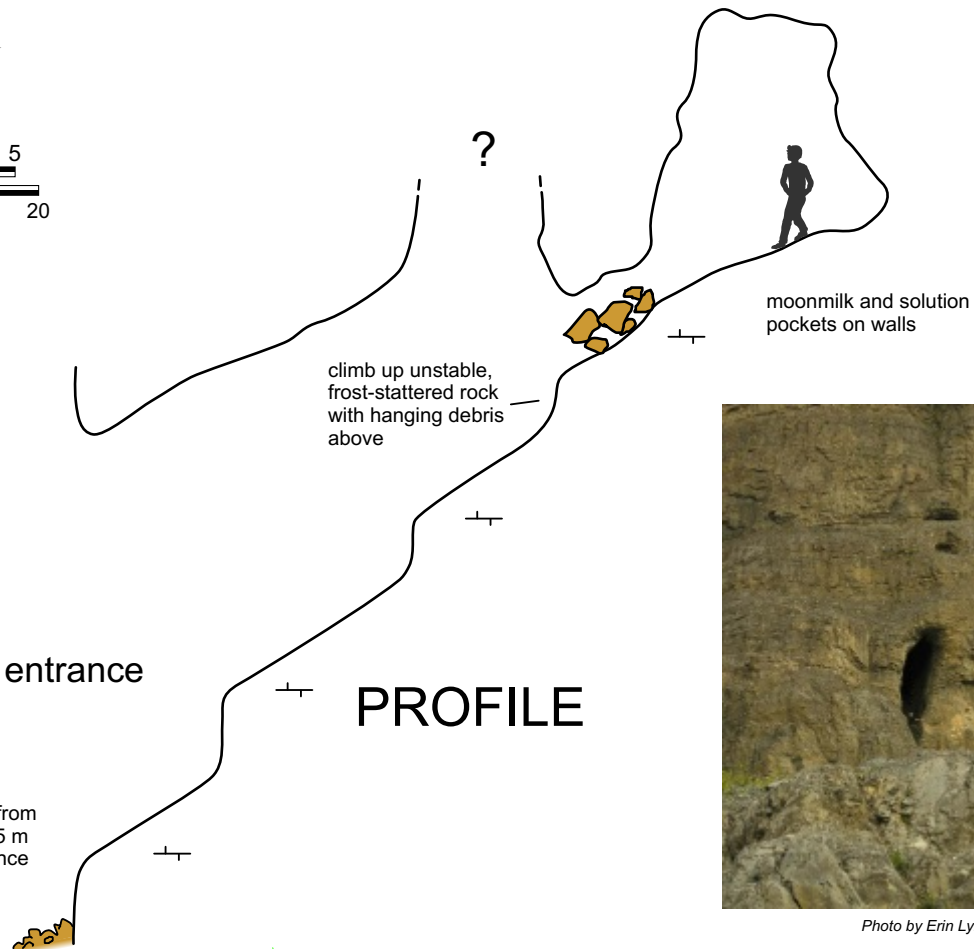


Photo by Erin Lynch



# THREE SHEEP NO SKUNK CAVE










WRANGELL-SAINT ELIAS NATIONAL PARK  
ALASKA

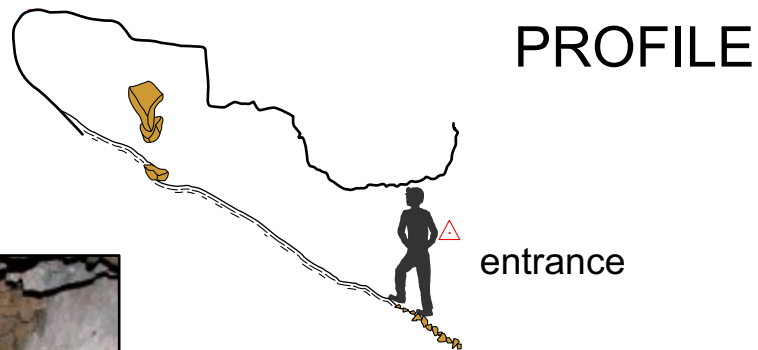
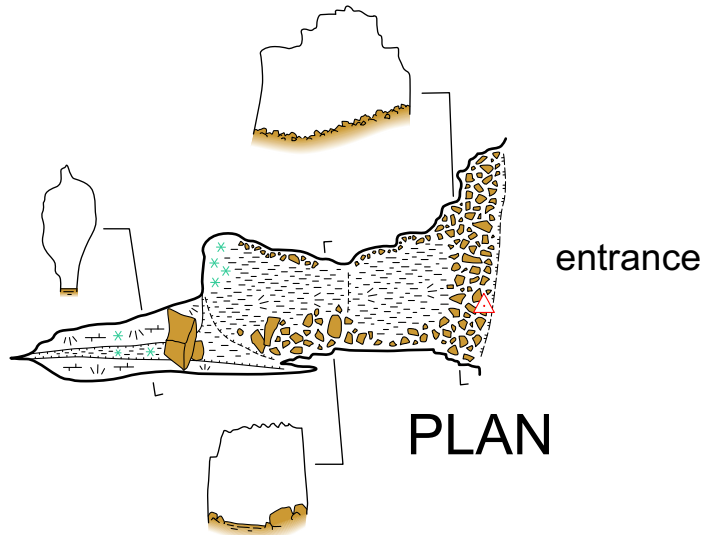
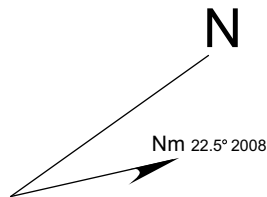
Surveyed September 2, 2008 by J. Krejca and S. Lewis. Map by S. Lewis and C. Allred.

TONGASS CAVE PROJECT

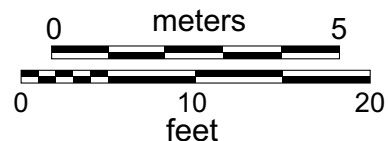
Surveyed length: 7.8 meters (25.5 feet)

Vertical extent: 2.6 meters (8.6 feet)

- LEGEND
-  passage wall
  -  rocks
  -  silt fill
  -  slope (splays downward)
  -  vertical drop
  -  entrance dripline
  -  change in ceiling height
  -  bedrock
  -  frost and ice



Jean Krejca in the cave entrance, photo by Steve Lewis



© 2009 by Carlene Allred

# CRACKED UP CAVE

WRANGELL-SAINT ELIAS NATIONAL PARK  
ALASKA

Surveyed with compass, clinometer and tape  
September 3, 2008 by R. Cadmus, Kina Smith, Erin  
Lynch and J Krejca. Map by S. Lewis and C. Allred.

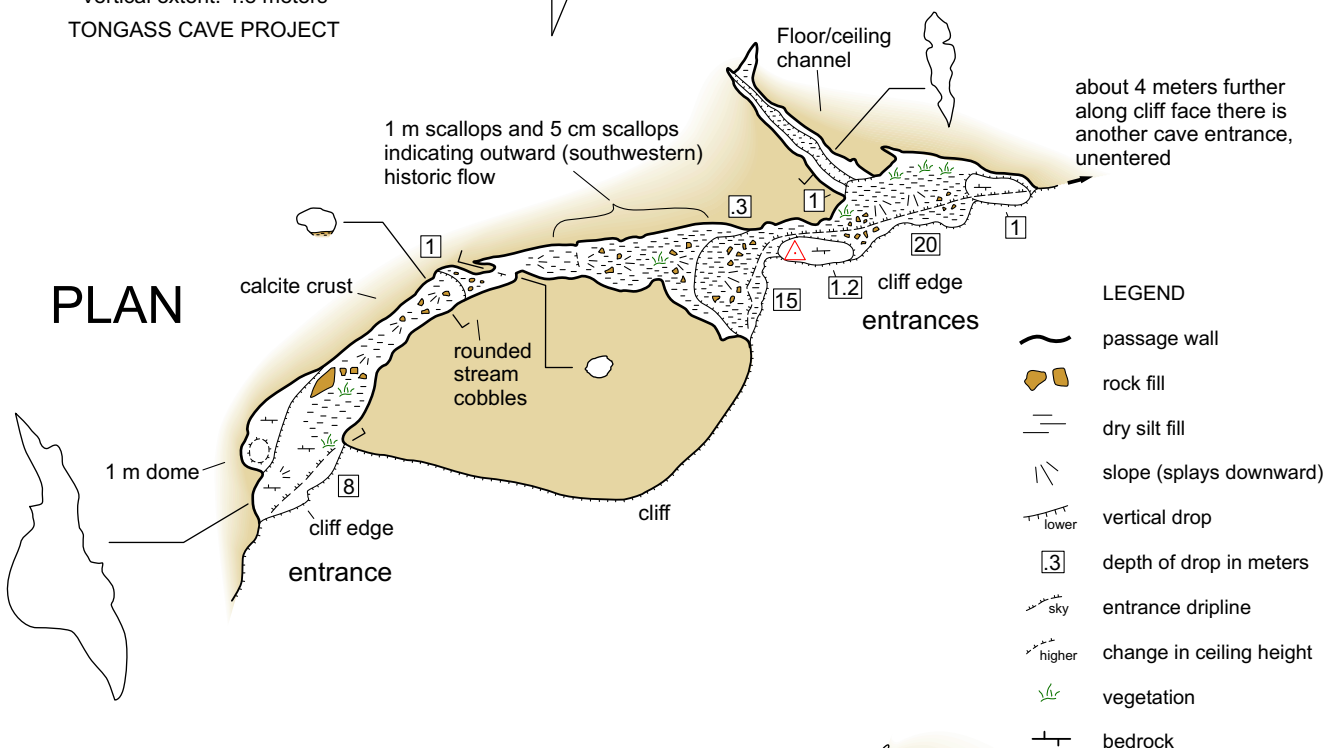
Surveyed length: 19 meters  
Vertical extent: 4.8 meters

TONGASS CAVE PROJECT

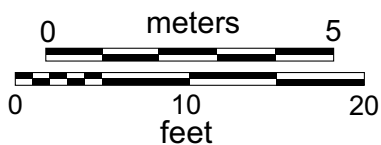
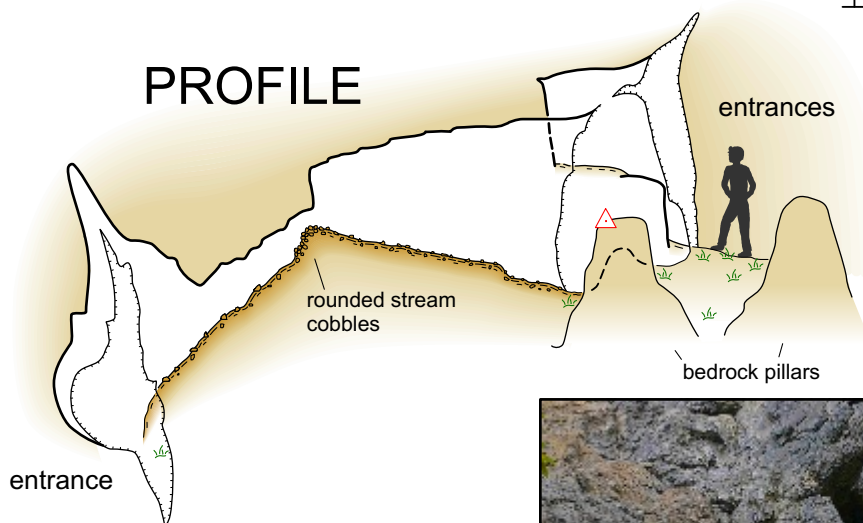
N

Nm 22.8° 2008

## PLAN



## PROFILE



Jean, Kina and Erin just outside the entrances, photo by Kina Smith



# MENDENHALL GLACIER CAVES HIKE

Article and photos by Jansen Cardy

On Saturday December 6, 2008, several Glacier Grotto members and friends hiked out to Mendenhall Glacier to take a look at some glacier caves. Trudging through the rain on slushy snow-covered trails were Gwen Herrewig, Johanna Kovarik, Matthew Thompson, and Jansen and Stacey Cardy.

We departed the parking lot at 9am, and hiked around the edge of the lake. Our route got



*The group outside the entrance*

progressively more adventurous as we had to push through trees and brush, scale a cliff near an icy waterfall, and scramble up and down over slippery rocks. After enduring a few slips and slides, we eventually made it out to the western edge of the glacier about 11:30am. Soon after we arrived, we heard another group approaching behind us. The leader turned out to be a Juneau caver named Louie Hooch,



*Stacey in the entrance of the blue ice tunnel*

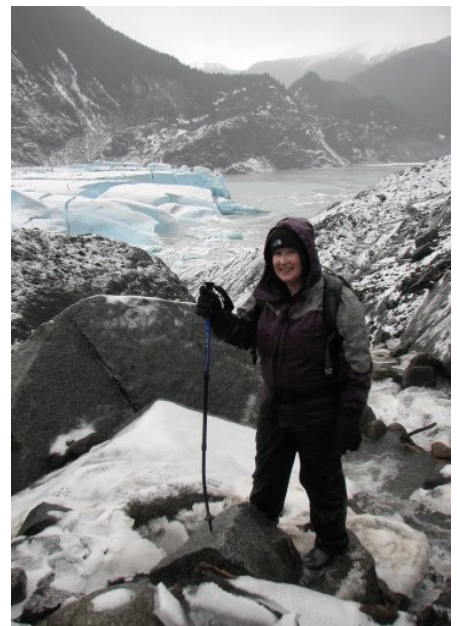


*Stacey and Jansen under the Mendenhall Glacier*

who chatted with us for a while before leading his group out onto the glacier to practice ice climbing.

The five of us spent the next hour and a half exploring and photographing several caves under the edge of the glacier. Daylight from overcast skies filtered through the ice, casting soft hues of blue light. Small ice stalactites sprouted from the ceiling, some spraying streams of water. Constant drips fell from the icy ceiling everywhere, but by this time we were rather drenched anyway so it didn't much matter. The last glacier cave we visited had the shape and dimensions of a road tunnel. Although fairly short in length, it had a large arched ceiling and the ice was a very picturesque deep blue color.

Around 1pm we left the glacier and started the trek back, allowing ourselves a two and a half hour window before dark. We made it back to Gwen's vehicle in good time, and by 3pm we were on the road heading back to her apartment for a big lasagna dinner. ♪



*Stacey and the glacier*

# CATARACT CAVE

Prince of Wales Island, Alaska

August 18, 2008, by Gwen Herrewig. Photos by Jansen Cardy

Three tired cavers, Jansen Cardy, Gwen Herrewig, and Dan Nolfi volunteered for the Forest Service to collect samples out of Cataract Cave on the Prince of Wales Island. This after the action packed Cave Rescue Workshop (August 15-17, 2008), Jansen and I stayed in Thorne Bay an extra day to get underground. Dan only decided at the last minute to go along with back to back cave expeditions on the horizon, he certainly had more reason to take the day off than we did. It was really an act of chivalry that he came along; he knew the cave was hard to find and that Jansen and I were clueless.



*Hiking down through the old growth*

After a long drive and wandering through the woods, we arrived at Cataract Cave with supplies and instructions. Two relatively close entrances faced downhill in the growth forest. The left cave entrance had a stream flowing out of it, and the right the

one we wanted, was dryer with standing pools of water. The first pool was deeper than our Xtratufs and we each attempted to enter the cave by balancing on rocks. It didn't matter, with a low ceiling and angles just right; we all scooped cold water into the top of our boots, like a bucket, within the first five feet.

Cataract Cave is a smaller cave in size with a fork in the middle the right leads to the stream passage and the left to our upper sampling area with ultra delicate formations. Dan used webbing for a make-shift ladder to aid in our climb up where tape marked a short trail to protect the rest of the room from possible damage. At first glance, the room revealed many stalactites, a waterfall of moonmilk, and delicate cottonballs in still pools.



*Gwen trying to keep her feet dry*

The sampling was self-explanatory although due to my lack of sleep I had to keep reading the instructions over and over to make sure we had it right.  
(continues on next page)



*The Cottonball pool*



## CATARACT CAVE, continued from page 13

We collected water samples out of two pools, temperature readings in and out of the cave, moonmilk and cottonballs for DNA testing, and forest litter from above the cave.

We soon discovered that collecting samples in a cave had specific challenges and even proved to be quite maddening at times. First, with the DNA testing, we could not touch or breathe on the samples or risk



*Calcite formations*

getting our own DNA on it... Gosh, ever breathe in a cave? Yeah, your breath hangs in the air for quite some time. In addition, our rubber gloves got wet and dirty within 30 seconds, which got the labels on the bottles wet and so our markers wouldn't write on the labels without some how drying them off in the wet, dirty cave. After all that, most of the little plastic syringes for filtering water didn't work properly. The ones that did work



*Gwen taking temperature readings*



*Gwen and Dan collecting samples*

were agonizingly slow. Maybe it was our state of mind, but this took some serious patience. Luckily there were three of us available so when one person cracked, someone else could step in and finish.

After a couple hours at the cave, we started the journey back with our perfectly labeled samples and leaf litter. ▼▼



*Calcite formations*

# PRESIDENTS CORNER

Greetings to all the Glacier Grotto, Tongass Cave Project and UAS Caving club members! This is a "heads-up" regarding Senator Lisa Murkowski's Senate bill 3651 introduced last year to provide for the settlement of native claims under the Alaska Native Claims Settlement Act (ANCSA). Through this bill, Sealaska corporation has asked to be able to select additional lands on northern Prince of Wales (NPOW), Kosciusko and Tuxekan islands outside the land entitlements previously defined by ANCSA.

These "economic development lands", as they are called, include NPOW from Red Bay to Calder, the southwestern Kosciusko island and almost all of Tuxekan island. The Sealaska selection includes areas underlain by karst equal to 52,210 acres (71% of total selection).

The areas selected contain a total of 1590 inventoried karst features of which there are 198 caves that have been designated significant, or most likely would be found to be significant when nominated, under the Federal Cave Resources Protection Act. Many of these areas have such a high density of features that we have just never inventoried them so the actual number of caves from areas like Mount Francis, Flicker Ridge and the Calder Area would be much higher. The Sealaska proposal includes 7,359 acres of proposed Geologic Special Areas.

Based on the evidence of the past land management practices on Sealaska lands, as well as the lack of a defined land management plan, these areas would likely not be protected as they have been under the administration of the US Forest Service. These karst lands are national treasures containing karst features of international significance, transferring them to Sealaska would cause irrevocable damage if no protective measures are put in place.

Glacier Grotto members David Love, Tim Heaton and Kevin Allred are drafting the Grotto's response to this proposal. If you wish to sign your name to this letter, which is included in this edition of the Caver, please contact David Love at [pandalid@yahoo.com](mailto:pandalid@yahoo.com) ASAP! This letter will be sent to both representatives, Senator Murkowski, President Obama and this bill will be discussed in this years' congress and we have a bit of time before it becomes law, but we need to be proactive in order to be heard!

Thanks and happy caving!

David Love, Glacier Grotto President ▼▼

Cavers, check out our new grotto website. This is in the process of being put together by the University of Alaska Southeast caving club.

[Http://www.uas.alaska.edu/sandbox/Programs/envs/caving/links.html](http://www.uas.alaska.edu/sandbox/Programs/envs/caving/links.html)

## LETTER

Senator Lisa Murkowski  
709 Hart Senate Building  
Washington, D.C. 20510

Dear Senator,

I am writing this letter on behalf of the membership of the Glacier Grotto listed below. The Glacier Grotto is a statewide chapter of the National Speleological Society (NSS) dedicated to the discovery, mapping and conservation of the karst and cave resources of the state of Alaska. The Glacier Grotto membership is very concerned about the new land selections that Sealaska Corporation has requested under the Alaska Native Claims Settlement Act as introduced initially as House Bill 3560 by representative Don Young and reintroduced in Senate Bill (SB) 3651 by Alaskan senator Lisa Murkowski.

First, definition of the type of landscape the Glacier Grotto and NSS are particularly concerned about:

Karst topography is a landscape shaped by the dissolution of a layer or layers of soluble bedrock, usually carbonate rock such as limestone or dolomite. Due to subterranean drainage, there may be very limited surface water, even to the absence of rivers and lakes. Many karst regions display distinctive surface features, with sinkholes or dolines being the most common. However, distinctive karst surface features may be completely absent where the soluble rock is mantled, such as by glacial debris, or confined by a superimposed non-soluble rock strata. Some karst regions include thousands of caves, even though evidence of caves that are big enough for human exploration is not a required characteristic of karst.

It should be noted that current land management practices on federal lands underlain by carbonate rock in Alaska, especially on the Tongass National Forest, manage these karst lands-

(continues on next page)



LETTER, continued from page 15

scapes for the unique hydrological, speleological, archeological and paleontological resources underlying the surface of these landscapes as well as the biological community that covers and protects their surface.

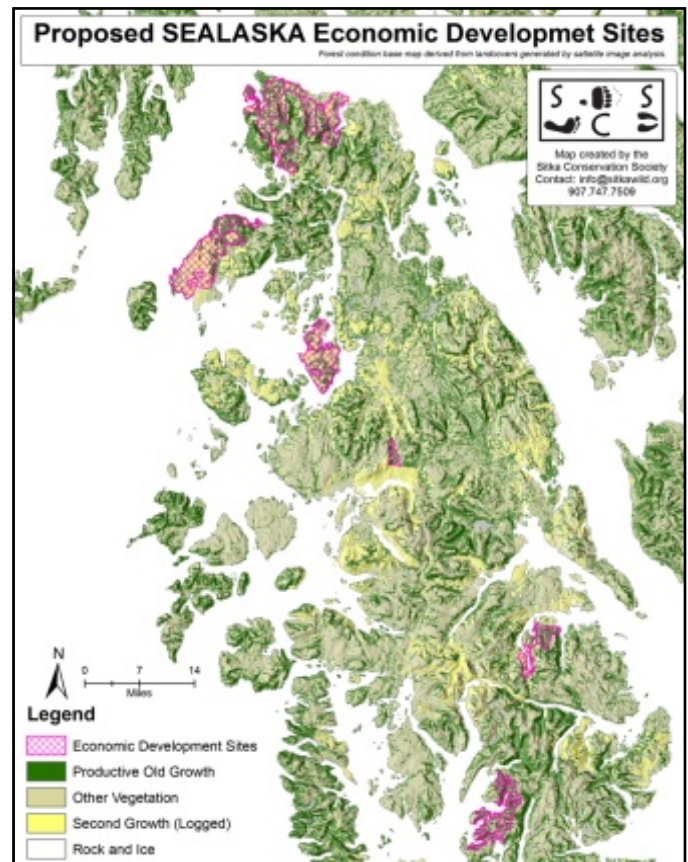
These areas contain unique biological microhabitats, for example, freshwater streams sourced or passing through karst bedrock produce significantly more invertebrates which feed a larger number of salmon than do non-karst systems, thus providing greater opportunity for subsistence, commercial and sport fishing harvest.<sup>2</sup>

Karst regions in Southeast Alaska contain irreplaceable archeological and paleontological deposits, internationally significant cave and karst geologic features, surprising hydrological interconnectedness and remote recreational opportunities like few other places on the planet.<sup>3</sup> Archeological and paleontological research in Southeast Alaska has not only redefined how indigenous people arrived and colonized the Americas, but has also provided a picture of the plant and animal communities present in this region for the past 40,000 + years. The potential for additional paleontological and archeological discovery in this region is extensive and many of the cave-containing karst lands within the Sealaska selections have not been thoroughly inventoried. Each year, this region attracts researchers and cave explorers from around the country and worldwide. To date, the US Forest Service (USFS) land management practices associated with karst lands in Southeast Alaska have been a model for other agencies in other parts of the world.<sup>4</sup>

Three of the areas suggested for conveyance to Sealaska occur in some of the most highly developed karst landscapes in Alaska (containing features that are unique internationally). These areas are: Northern Prince of Wales Island, Tuxekan Island and Kosciuszko Island. Below is some Geographic Information System (GIS) analysis provided by James Baichtal, Forest Geologist of the Tongass National Forest, relating to HB 3560:

"...Kosciuszko Island: Total area of Sealaska selection equals 25,882 acres of which 23,839 acres (92%) are underlain by karst. We (USFS, entered by D. Love for clarification) have inventoried some 1090 karst features we consider significant within the proposed land selection, of which there are 145 caves that have been designated significant<sup>5</sup> or most likely would be found to be significant when nominated. The 2008 TLMP included a 7678 acre Geologic Special Area encompassing Mount Francis and karst areas to the south with a boundary change to include the results of tracer dye studies. The Sealaska proposal includes 5,708 acres of the 7,678 acres or 74% of the Geologic Special Area. We have not inventoried this area but karst features may exceed a density of thousands per square mile.

NPOW: Total area of Sealaska selection equals 32,482 acres of which 16,435 acres (51%) are underlain



by karst. We have inventoried some 161 karst features we consider significant within the proposed land selection, of which there are 23 caves that have been designated significant or most likely would be found to be significant when nominated. The Sealaska proposal includes 1,651 acres of the Geologic Special Areas found in the 2008 TLMP. The Sealaska proposed land selection also includes the Port Protection Watershed identified by through a Village Safe Water Grant and tracer dye studies.

Tuxekan Island: Total area of Sealaska selection equals 15,758 acres of which 11,936 acres (76%) are underlain by karst. We have inventoried some 339 karst features we consider significant within the proposed land selection, of which there are 30 caves that have been designated significant or most likely would be found to be significant when nominated. There are no Geologic Special Areas on Tuxekan Island.

In summary, the Sealaska selection on the Thorne Bay Ranger District where there are karst landscape concerns equals 74,112 acres, 52,210 acres underlain by karst (71%). We have a total of 1,590 karst features inventoried of which there are 198 caves that have been designated significant or most likely would be found to be significant when nominated. Many of these areas have such a high density of features that we have just never inventoried them so the actual number of caves from areas like Mount Francis, Flicker Ridge and the Calder Area would be much higher. The Sealaska proposal includes

(continues on next page)

LETTER, continued from page 16

7,359 acres of Geologic Special Areas...." <sup>6</sup>

Although the Glacier Grotto agrees that the tribes of Southeast Alaska (i.e- now represented by the Sealaska Corporation) have the right to lands promised under ANCSA, the Glacier Grotto does NOT believe that House Bill 3560 or Senate Bill 3651 should be passed unless changes are made to the bills. This letter is in opposition to this bill asking for additional withdrawals of public US National Forest lands outside of the original ANCSA withdrawal areas if these new withdrawal areas overlie karst terrain and/or caves. Refer to Sec 3 (b) (1), page 19 of the Senate Bill 3651 authorizing Sealaska to select lands categorized as "Economic Development Lands" (see the map entitled "Sealaska ANCSA Land Entitlement Rationalization Pool, dated March 6, 2008 and labeled Attachment A). Karst landscapes and caves underlying lands selected by Sealaska currently receive protection from damage under federal laws. These selected areas include and/or overlie karst landscapes and/or cave systems, and the Glacier Grotto and members of the NSS believe that these lands should not be developed but should be protected as they currently are under the FCRPA. Since no State cave resource protection law exists for State or privately owned lands, these areas should not be allowed to be managed under (non-existent) State law, but should continue to be managed under the FCRPA. In addition, if any of the "Traditional and Customary Trade and Migration Routes", "Native Futures Sites" and "Sacred, Cultural, Traditional and Historic Sites" overlie karst terrain or cave containing bedrock then these areas should also be removed from the selections and continue to be managed under USFS and the FCRPA..

While the membership of the Glacier Grotto signed below would like to believe that Sealaska Corporation would protect the karst landscapes and cave systems underlying the land selections in these bills, this may be an unrealistic expectation given Sealaska's past poor forest management (ex.- clear-cut logging on steep hillsides) on other lands it currently owns. Forests overlying karst in some of the new selections ("economic development area") are oldgrowth stands that were not harvested in USFS timber sales because of concerns about impacting the interconnected "high vulnerability" karst bedrock below. As outlined by Jim Baichtal's work above, these areas contain a large number of fragile cave systems, undelineated hydrologic systems and fragile soils supporting unique plants and animals. Transfer of these areas to Sealaska would endanger these unique cave resources and karst landscapes.

Further clarification of karst management on federal and state lands provided by James Baichtal, Forest Geologist, Tongass national Forest, is provided below:

"...The authority for management of the karst lands and the associated caves on public lands comes from

the Federal Cave Resources Protection Act (FCRPA) of 1988, The Antiquities Act of 1906, the Federal Land Policy Management Act of 1976 (FLPMA), and in Forest Service Management (FSM) directions 2356, 2361, and 2880, and 36 CFR 261 and 290. Subsequently, in the 2008 Tongass Land Management Plan, standards and guidelines were developed to protect the karst and cave resources found on the Tongass National Forest. For State of Alaska lands currently there is no "Cave Protection Act" in the State of Alaska (<http://www.caves.org/committee/conservation/>)(Conservation Laws and Policy, Cave laws and Policies) nor does the Forest Practices Code contain any provisions for protection of those resources from timber harvest, road construction and/or quarry development as stated by the Alaska State Division of Forestry (DOF) website at <http://forestry.alaska.gov/forestpractices.htm>. Neither the Alaska Forest Resources and Practices Act as published in 2000 nor the Alaska Forest Resources and Practices Regulations as published in 2000 contained language addressing karst or cave resources. In a Memorandum from the Department of Natural Resources dated March 6, 2003 which outlines the Coastal Region's Southern Southeast Area Five-year Schedule of Timber Sales for the period of January 1, 2003 through December 31, 2007, the DOF clearly states its position. In the description of the 2005 proposed El Cap Timber Sale, the DOF states, "The ADNR does not recognize karst topography as a significant resource to be managed on the State's limited land base in southeast. The DOF will protect karst formations that effect water quality as per the Alaska Forest Resources and Practices Act and Regulations. If significant recreational activity is found to be dependent on a karst resource, it will be taken into account during the design and FLUP (Forest Land Use Plan) process for a proposed timber sale." This memorandum can be accessed at the following website: <http://www.dnr.state.ak.us/forestry/pdfs/fysts2003prelimd oc.pdf>

Therefore, it can be assumed that if the ownership of these karst lands were transferred to Sealaska, no measures are in place to ensure their protection. "Section 2(b)(1)." of the FCRPA, Findings, Purpose, and Policy states that, "The purposes of this Act are "to secure, protect, and preserve significant caves on Federal lands for the perpetual use, enjoyment, and benefit of all people". It would be difficult to make a case that disposing of land containing significant caves (or those that may meet the criteria) meets this purpose.

There is also a planning and public participation section of the Act (Sec. 4. (b) (C)(1)(2) The Secretary shall - "(1) ensure that significant caves are considered in the preparation or implementation of any land management plan if the preparation or revision of the plan began after the enactment of this Act; and (2) foster communication, (continues on next page)



LETTER, continued from page 17

cooperation, and exchange of information between land managers, those who utilize caves, and the public." These sections require consideration of cave resources and assure a public process is followed.

Further more, the FCRPA Sec 4(a)(B) states " - .....including management measures to assure that caves under consideration for the list [of significant cave designation] are protected during the period of consideration." Therefore, I believe that if a cave is known or is nominated under the provisions of the Act, we have the responsibility to follow up and either designate it as a significant cave or make the decision that it does not meet the provisions of the law, and therefore not significant. Until this decision is made, known caves and nominated caves should receive the same protection as significant caves and we as an agency should not knowingly support an action that could jeopardize that resource.

The karst lands of the Tongass National Forest and the caves and all the resources within them belong to "all people". These karst lands are national treasures containing caves and karst features of international significance. Federal land managers (...and all reasonable people, the Glacier Grotto would argue...) have been charged with the "perpetual" protection of these resources. Knowingly transferring the ownership of these caves to a private entity with no provisions for protection in place, in our opinion, does not meet the purpose of the FCRPA. Based on the past liberal management strategies and practices on Sealaska lands, these resources would be irrevocably damaged and the resources within them and what we may learn from them threatened or lost..."<sup>6</sup>

Ideally, Glacier Grotto membership believes that there should be no transfer of karst lands without restrictions on development activities above and around these karst areas and with provisions allowing unlimited access for additional exploration and mapping, scientific study, and complete protection as if these areas were administered public lands protected by the Federal Cave Resources Protection Act. We simply do not believe that the selected "economic development lands" will be managed in any other way than clearcut logging, no matter what Sealaska states is their new land management strategy. As to management of the 200+ Cultural/Sacred/Historic Sites selected, Sealaska currently does not have an archeologist on staff, or a workable management plan for these sites that would protect the sites even for their own Native membership. Also, SB 3651, Section 18 (A-C) removes the

"protective covenant" that was in the original ANCSA legislation from past and future 14(h)(1) ANCSA sites that would have required that the sites be managed to federal standards. What are Sealaska's intentions? Sadly, we do not believe that Sealaska would protect the karst landscape, unique cave ecosystems and associated biota, hydrological systems (some associated with community water supplies), cultural and archeological sites, paleontological sites, and recreational opportunities in the same manner that these resources are currently being protected under federal management. We ask that the sponsoring members of the House and Senate consider our concerns regarding this bill. We will gladly provide more information and testimony, if necessary, to help in modifying or rewriting this bill such that it would protect the nationally and internationally unique karst resources in Southeast Alaska. Thank you for your time.

Sincerely,

David Love, Glacier Grotto President,  
Timothy Heaton, Paleontologist and NSS Fellow,  
Kevin Allred and Carlene Allred, Glacier Grotto and NSS fellows,  
Steve Lewis, Conservation chair - Glacier Grotto, NSS member,  
Rachel Myron, Glacier Grotto and NSS member,

#### References

1. Ford, D. and Williams, P. 2007 Karst Hydrology and Geomorphology John Wiley and Sones Ltd. 562 pp.
2. Bryant, M.D.; D.N. Swanston; R.C. Wissmar; and B. E. Wright. 1998. Coho Salmon Populations in the Karst Landscape of Northern Prince of Wales Island, Southeast Alaska. Transactions of the American Fisheries Society 127:425-433, 1998
3. Griffiths, P.; Aley, T.; Worthington, S.; Jones, W. 2002. Karst Management Standards and Implementation Review, Final Report of the Karst Review Panel, Prepared for USDA Forest Service, Tongass National Forest, Submitted to MWH (Montgomery Watson Harza) under the terms of USDA Contract 53-0116-2-55901, 27 pp. and appendices.
4. Baichtal, J.F. 1997. Application of a Karst Management Strategy: Two Cases Studies from the Tongass National Forest, Southeastern Alaska; The  
(continues on next page)

# NIZINA GLACIER PASSAGE

By Jean Krejca

The last day of our trip in the Nizina Valley allowed us about a half day of exploration before all the plane loads of gear and people could be shuttled out. I relished the opportunity to explore the banks of the lake formed by the Nizina glacier. The muddy waters of the lake itself were nothing remarkable, but the deep-blue-fading-to-white iceberg formations in the



lake are etched in my memory. Those idle battleships floated around the lake, framing the mountainsides on either side with their temporary yet powerful perspective.

On the way up to the glacier I had a close encounter with a black bear, about 40 feet up the bank in the brush. Not too long after that was the unique opportunity (particularly for a Texan) to walk across the glacier itself. Finding a couple decent places to scramble

west). It was approximately 15 meters long, on average 1- 1.5 meters in diameter passage. The passage ended in an ice and water sump. The photo is taken using a timer with the camera placed on a pack.

For future trips I expect it would not be exceptionally difficult to find a way across the Nizina. I found my way quickly to nearly the middle of it, and saw many opportunities for finishing the crossing. ▼▼



LETTER, continued from page 18

challenges of Implementation. In: Proceedings of the 1997 Karst and Cave Management Symposium 13th National Cave Management Symposium Bellingham, Washington and Chilliwack and Vancouver Island, BC, Canada, October 7-10, 1997, Bellingham, Washington. Edited by Robert R. Stitt, pp. 4-11.

5."Significant" caves are defined by the FCRPA as possessing one or more of the following: unique biota, cultural, historical or archeological resources, geologic, mineralogic or paleontologic resources, hydrologic

systems or water important to humans, biota or cave development, recreational value, educational or scientific values or are located within special management areas. See Federal Register [16 U.S.C. 4301-4309]

6. Baichtal, James F., Forest Geologist, Tongass National Forest, Memo to Scott Fitzwilliams, RLMH Staff Officer, dated March 13, 2003 Review of the Proposed Sealaska-Tongass National Forest Land Exchange Concerning Karst and Cave Resources. ▼▼



The Alaskan Caver  
2525 Fourth Ave.  
Ketchikan, AK 99901

Address Service Requested

