



Here is old man winter tending the underground ice gardens.



"So'v ya been up to them ice caves?"

The SAG RAG is published by the Shasta Area Grotto of the National Speleological Society, Grotto meetings are held at different locations the fourth Friday of each month at 7:30 p.m. Meeting locations are announced in the SAG RAG, Membership dues are \$6 dollars per year and include newsletter subscription, Original material not otherwise noted is copyright to the SAG RAG, Such material may be copied with credit given to the author and the SAG RAG, For use outside of the caving community, please seek the permission of the author or editor first. Send material for publication any time to Bighorn Broeckel, 2916 Deer Meadows Road, Yreka, CA 96097 or <jbroeckel@snowcrest.net>. For more on SAG, check the web site at <http://www.caves.org/grotto/sag>.

CAVERS CALENDAR 2008-2009

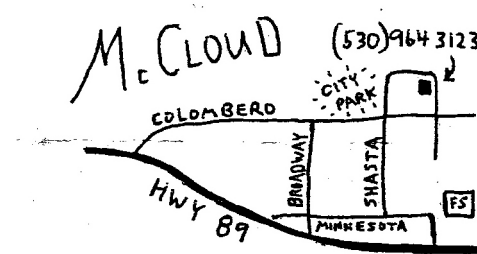
Nov 27-30 Lava Beds CRF. Bruce Rogers, Pat Helton. (510) 796-2283
 Dec 5 SAG meeting 7:30 pm at Wolffs in McCloud. (530) 964-3123
 July 19-26 NSS Convention in Kerrville, Texas

MAPS TO MEETINGS

Dec 5 - McCloud

Please bring cookies: Nominate grotto officers!

Old time slide show!



SAG RAG SUMMARY By Bill Broeckel

A blockbuster ice cave issue is coming at you this time; put on your mitts and ear muffs before reading this one. Toss an extra log on the fire. We put some cold ones in your hands... — Wayne Cedidla is a major contributor to the production with a great article and many fine photos from the grotto trip last August. Liz Wolff adds her take on the caves, and some fine maps showing these new ice caves around Francis' Folly. Some readers will recall the detailed Liz Wolff map of Francis' Folly that appeared in the Sag Rag 26:6 (Nov-Dec 2007), about a year ago.

Bighorn makes his regular offerings, and a strange item as well. Let me get this straight: Bighorn interviews himself about ice caves? Then his ice cave article has to do with a pretty marginal ice cave that his crew started mapping, what, 12 years ago? Are you kidding? In my opinion, this guy is getting a little out of control, and somebody needs to talk to him. If nobody else steps up, then I guess I'll just have to talk to this nut case myself.

This is yet another extra long issue, to make room for lots of photos, which people seem to enjoy even as copies of variable quality. Dave Smith is still putting out splendid color versions of the photos and the newsletter, available on the internet. I was pleased to find room to squeeze in Chimney Pit at the end of the issue. This is one that Liz Wolff had ready for the Rag some time ago. Luckily some ice is mentioned in the cave, but there is another reason why it belongs in this group. Chimney Pit is just a ways upflow in the same lava flow as Roman Bath and the other caves Liz and Wayne are presenting.

Also in this issue we find a return of Ray Miller's "All About Bats" column, this time with a little piece on where bats like to hide out and rest. Folks, these interesting little creatures are EVERYWHERE!

So we have newly described ice caves for you as follows: Roman Bath (583'), Little Ice (140'), Ice Candle (264'), Stub (143'), and Chimney Pit (56') for a grand total of 1,186 feet of recently mapped Siskiyou County cave passage. Not bad, guys. Note that for the record, I do not consider Chimney Pit or Stub Cave to be true ice caves. Now don't worry about this Bighorn fellow, I will personally work on some of his problems. And the grylloblattid said "Anchors aweigh!"

BB

SISKIYOU COUNTY ICE CAVES - Bighorn Bill's Q&A

What is an ice cave? Short answer: an ice cave is a cave that contains ice.

Are there different kinds of ice caves? I was hoping you would ask that. Yes there are different kinds. Most any Siskiyou cave will form entrance ice in the winter, like icicles on your house. However, a true ice cave contains ice deeper inside that lasts all year round. Some entrances collect snowdrifts which consolidate into ice, and may creep further down into the cave. Others freeze water that percolates into the cave to form icicles, ribbons, candles, natural ice sculptures, ice falls, and entire floors of smooth ice. The ice might build up and completely block a cave or passage. Finally, some ice caves are formed entirely in ice, as in a glacier.

How can you tell if a given cave is a true ice cave? Did someone give you a list of questions? OK, well, if the name of the cave has the word "ice" in it, that can be a good clue. If I go deep in there and find a thick or layered ice floor, not just ice coated rocks, but a wall-to-wall smooth floor of ice; now that seals the deal in my mind. Also, a large frozen waterfall will capture my attention and convince me.

Why does ice stay in some caves, and not others? Ice will not form in a cave that is too dry and warm. Many factors come into play, such as elevation, depth, the rainfall and snowfall over the cave, conduction of water into the cave, solar penetration, size and position of entrance(s). I think air flow patterns in the cave play a big role, but having enough precipitation to replenish the ice each year is huge. Climate changes are involved. Also, the effects of the ice breathing dragons are greatly underestimated.

Is an ice cave still an ice cave if all the ice has melted? Great question. We see a cave which used to be an ice cave probably still has the potential to be an ice cave again in the future; probably more potential than another cave which has never been an ice cave, at least not recently. So the answer would be yes with an asterisk.

* (cave currently ice-free).



Cave ice photo #1 from Roman Bath Cave. By Wayne Cedidla.

If a cave is called “ ___ Ice Cave”, and all the ice melts, should the cave be renamed? Hey, you were setting me up! OK, as -a general rule, it is best to retain the correct historical cave names. When ice caves stay ice free for a few years, there seems to be a tendency for them to lose the “ice” part of their name, or even change names entirely. However, retaining the “ice” in the name reminds us that the cave did contain ice at a previous time, and so the old names can serve this interesting and useful purpose.

How many ice caves are in Siskiyou County? Lots of em’, nobody really knows.

What kinds of ice caves are in Siskiyou? Pretty much the whole spectrum. Most of the Siskiyou ice caves are in lava caves (pseudokarst), but there are also a few in the more customary solution type of caves (karst). Glacier caves are a possibility.

Is there a list of ice caves in Siskiyou County? At least two such lists have been attempted, but they are both incomplete. The whole list making process is fraught with difficulties. Some ice caves are somebody’s secret, or information is restricted by Resource Management. So we can’t list those. Then opinions differ about which caves qualify as ice caves. Some of them are not really ice caves, and others not considered as such, really are ice caves. Many are just getting found, and so do not have enough notoriety, or even a name, and so are not listed. So you see the trouble.

How about the regular local people? Interesting question. In fact, here locally the term “ice cave” is almost synonymous with “cave”. If someone might ask “Have you been up to the ice caves?”, that can mean almost anything. The old maps around here tend to be rather littered with “Ice Caves”.

What does cave ice look like? Quite lovely at times, the ice can deftly dress up an old lava tube or ugly solution pit. Sometimes the ice will mimic the underground landscapes seen in decorated limestone caves. Caves themselves tend to be pretty intriguing, so adding a little frozen water can really be like “icing” on the cake.



Cave ice photo #3 from Roman Bath Cave. By Wayne Cedidla.

Is it all right to break seasonal ice? Curious question. I guess it is all right since the seasonal ice grows back again differently every year. However, I still find myself being careful about it so others might have a chance to see this year's display, and for practice in good, gentle caving. If I do happen to break off an icicle by accident, I don't sweat it too much.

Can cave ice be photographed? Yes, but it is tricky. Clear ice might not show at all on straight up flash. So then we experiment with lighting, from the side, or backlighting, or multiple flashes, while the nude models get colder and colder. I have seen some beautiful cave ice photos taken by others, but my own casual attempts have been nearly worthless.

Any tips for visiting ice caves? Dress extra warm and move extra slow. It is slippery and freezing in there. Ice caves present additional hazards along with the usual cave dangers. Falls and injuries are more likely on the slick surfaces, some hard to see and anticipate. These caves are colder, so the onset of hypothermia is even more rapid in the immobile caver. Vertical techniques may be needed even on deceptively easy looking situations, and crampons may be of use. If underequipped, be mentally prepared to turn back from some icy-dicey spots.

Where can I find Ice Caves? Siskiyou County. Just start caving and sooner or later you will begin to encounter ice. If you want a fast track, go out to Lava Beds National Monument and ask to see Skull Cave, or make a reservation for the Crystal Ice tour.

Are there bats in ice caves? We see them sometimes. Bats might hibernate or roost in an ice cave if they can find a relatively safe, dry, and stable spot that seems to suit their needs. But then just when you have it figured out, along comes a bat doing something surprising or unexpected.

What other life forms live in "ice caves?" Highly adapted invertebrates such as grylloblattids, things with antifreeze for blood, moths, pack rats seem to coexist with ice somehow, I don't know... Oh, don't forget the ice worms, and the dragons.



Ice formations 4 — In places the formations were so numerous that care had to be taken not to damage them.
Photo credit: Wayne Cedidla

ROMAN BATH

Trip Report by Wayne Ceditla

On Friday August 8th, 2008, Melanie Jackson, Liz Wolff and I went on a survey trip to the Medicine Lake area of northern California. The first cave we decided to check out was a lava tube called Roman Bath. The last time this cave was visited the entrance was filled with water that formed a small lake. This lake was surrounded by a shelf from the original lava flow making it look a bit like a Roman bath. At that time the lake appeared to be deep and blocked any chance of exploring its obviously flooded main passage.

I was making my way down to the cave entrance when Liz asked me to see where the water level was. I was in the bright sunlight at that time and could not see into the black depth of the entrance very well. As I got closer I could see something but it didn't look like water so I told Liz I would climb down farther to check it out. Liz seemed surprised that I couldn't see the water from where I was. When I got down deeper into the entrance I was surprised to see what appeared to be a moderate sized frozen lake. After some discussion with Liz we realized that the surface level was a good 20 feet lower than on the previous visit and it was now frozen.

I ventured down to the edge of the ice with caution since breaking through a frozen lake was the last thing I wanted to do. Soon, Liz and Melanie caught up with me. Our view from the edge of the ice turned out to be one of the more intriguing I have experienced while caving. From the frozen lake edge we could see additional passage with alluring ice formations faintly visible in the distance; unfortunately our lights weren't bright enough to give a good view of the void ahead. This meant we would have to cross the ice if we wanted to explore further. Melanie, being bravest, decided to carefully test the ice. After much deliberation it was decided that the ice near the edges was strong enough to hold.



Mel Crossing Ice — Melanie walking as close as possible to the edge of the ice based on the assumption that if she broke through the water wouldn't be as deep there. The ceiling was a convenient handhold.

Photo credit: Wayne Ceditla.

Mel went first with Liz and I staying behind, prepared to mount a rescue if necessary. When she made it across to a small area of breakdown she got off the ice and I then inched my way across. Staying upright on slick ice is no small feat; however we could steady ourselves on a low ceiling which helped tremendously. Liz stayed behind for safety while Melanie and I scoped out what we could. As far ahead as we could see was more passage and ice. At this point the ice made a smooth drop down of about six feet. The problem was that the slope of the ice was just enough that coming back up might not be possible. I had 30 feet of webbing with me so we rigged up a hand line which I anchored from my position on the breakdown pile while Melanie made her way down the slope. We felt confident that between the hand line and some handholds on the walls that she would be able to make it back out.

By this time we were building confidence in the load bearing capacity of the ice, in fact in places it was so clear we could see through it to the rocky floor underneath. The parts we could see through appeared to be 18 to 24 inches thick and frozen solid while in other places we couldn't tell. There was a small amount of melt water on the ice surface but this didn't cause any problems other than to get things wet and cold. Melanie carefully went ahead while Liz and I waited at our strategic rescue points. After what seemed like a long time Melanie came back with an amazing description of the frozen passage ahead that was loaded with beautiful ice formations. Based on her successful push we decided to survey the passage.

Seeing traditional cave formations in ice was a thrill I won't soon forget. Most every formation you would see in a good limestone cave was duplicated here in ice. There were the usual stalactites and mites but also large columns and at one place a frozen waterfall. However, the most beautiful sights in my opinion were the ice draperies. These were identical in shape to calcite draperies except in crystal clear ice. It was an amazing sight to be surrounded by the beautiful ice and rock.



Handline for ascending ice slope — In this photo the hand line can be seen going over the ice drop-off. The white line crossing over the hand line is the survey tape. Photo credit: Wayne Cedidla.



Stalagmite — These formations were unusual in that they were located by themselves on the otherwise flat surface of the lake. It was a strange sight to see them standing guard near the ice drop-off. The largest formation is approximately 18 inches in diameter and 3 feet high. Photo credit: Wayne Cedidla

We started our survey as we exited the passage and I soon learned that just because I could see an excellent place for a survey station I couldn't necessarily get safely across the slippery ice to use it. I did make one discovery that helped me and may help others finding themselves on ice without crampons. The ballistic nylon on my Gonzo Guano Gear type of knee pads had an amazing grip on the slippery ice. There was something about the nylon mesh that sort of melted into the ice and grabbed like crampons. I soon found myself scooting around on my knees like they were meant for ice climbing. On the way out I actually made it back up the ice slope without the need for the hand line.

After we finished surveying the frozen passage we checked out another small opening inside the main cave entrance but after a few feet it dropped into a small pit filled with ice. We also surveyed another passage within the main entrance that was well above the water line and therefore was dry and dusty. Each of the passages we surveyed turned out to have a length of approximately 250 feet giving the total length of the cave at approximately 500 feet. We believe that Melanie's exploration of the frozen passage may have been a first since there are no known maps or descriptions of the cave and the previous visit to the site found it flooded preventing exploration. **WC**

Cave Trips — By Liz Wolff

Friday August 8, 2008, a very auspicious day to the Chinese 08-08-08. This day found Wayne Cedidla, Melanie Jackson, and Liz Wolff out in the Chimney Crater lava flow. Our objective was the Roman Bath Cave below Francis' Folly Cave. To survey was the plan. When we arrived, expecting to see a large pool of icy water, we were surprised to see an ice floored passage extending into the unknown. The first time I had been there was around 1995 with Francis Mangels to look at some caves he had found while working. At that time the water was up to the ledge surrounding the entrance room and an ice floored pool of water. I knew that there was a side passage, but not how far it went. Wayne will be writing about this trip. The cave turned out to be 582.7 feet long and 37+ feet deep.

The next day Russ Yoder, Vic Lilya and his son Jesse joined Liz for the survey of Little Ice Cave and perhaps Ice Falls Cave. Little Ice cave is on a branch of the flow beside Francis' Folly. It has a vertical sided sink about 15 feet deep. It is easily climbed. The first level is breakdown floored and ends at a six foot ledge, undercut all around. The guys graciously built a cairn so that I could get down, and back up, easily. The room at this point is intact tube, but this doesn't continue far before becoming nearly blocked with breakdown. After climbing through the breakdown, a tall intact room with a ledge passage surrounding it appears to be the end of the cave. There is a small crawl passage that appears to be blocked with breakdown, perhaps diggable. On the ledge, one side ends after about four feet, but the other side goes about 20 feet. Immediately after the breakdown ends, a passage takes off to the right for 32 feet. This is an ice floored side passage and ice is below the breakdown too. The total cave length is 140.3 and the depth is 29 feet.



Cave ice photo #2 from Roman Bath Cave. By Wayne Cedidla.

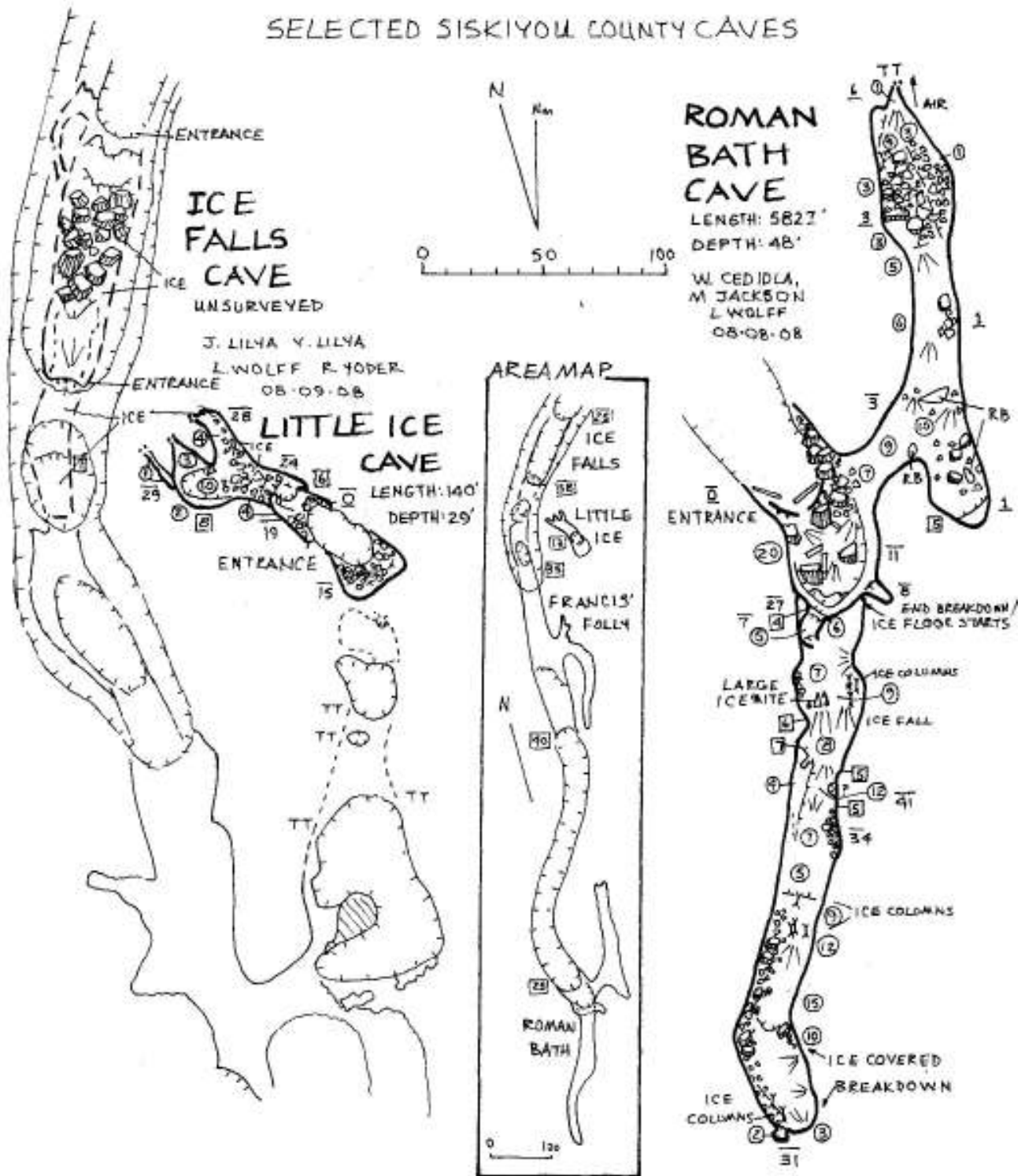


Cave ice photo #4 from Roman Bath Cave. By Wayne Cedidla.

I had thought that Ice Falls was further down the flow than it was, but it was the next cave up from Francis' Folly. Ice Falls has two entrances and two levels. The lower level is ice floored and has a seven foot tall ice fall with a hazardous climb down. The south entrance is easy to get into and drops quickly down a rubble slope to the drop through large breakdown into the lower level. I estimated that the cave is about 285 feet long and about 50-60 feet deep.

After looking into Ice Falls we hiked down to Looping Route Cave, to tour it. The entrance is into an intact section of cave with some nice small formations. A section of crawling around some breakdown piles then more intact tube. A short side crawl exits on the right side of the passage and ends quickly. The main passage has several pillars before a large room with a skylight is encountered. Following this the passage slopes steeply down with a small stream along one side of the passage. A seal finishes the tube. Back at the skylight, Russ and Vic climbed the skylight, but there was no way I could even reach the first handhold, and Jesse couldn't quite, so we zipped back through the cave to meet up at the entrance. Climbing up the lava flow to return to camp, Russ and I stopped at Shelter Cave, a small cave, about 45 feet long. Vic and Jesse blitzed up the flow and got back to camp well before Russ or I. Watermelon called me, and did it taste good after the hot hike up from Looping Route.

LW



Map: Francis' Folly Cave, Ice Falls Cave, Little Ice Cave, Roman Bath Cave

ICE CANDLE CAVE By Bill Broeckel

Ernie Coffman brought this cave to our attention on May 4, 1996. We had some down time on a joint grotto caving trip to Gaping Holes and Three Level Ice, maybe it was lunchtime. Ernie, who was leading the trip, went off for a few minutes, coming back to say that there was a cave with ice candles, just over there. Two weeks later my boys and I returned to survey Ice Candle Cave.

We sent a big shot down to the bottom of the entrance slope, and saw that there were a number of leads. However, the crew (ages 7 & 8) were not really into it that day, so we backed off and adjourned to Chucky Cheese Pizza. We came back after the crew achieved manhood, ten years later.

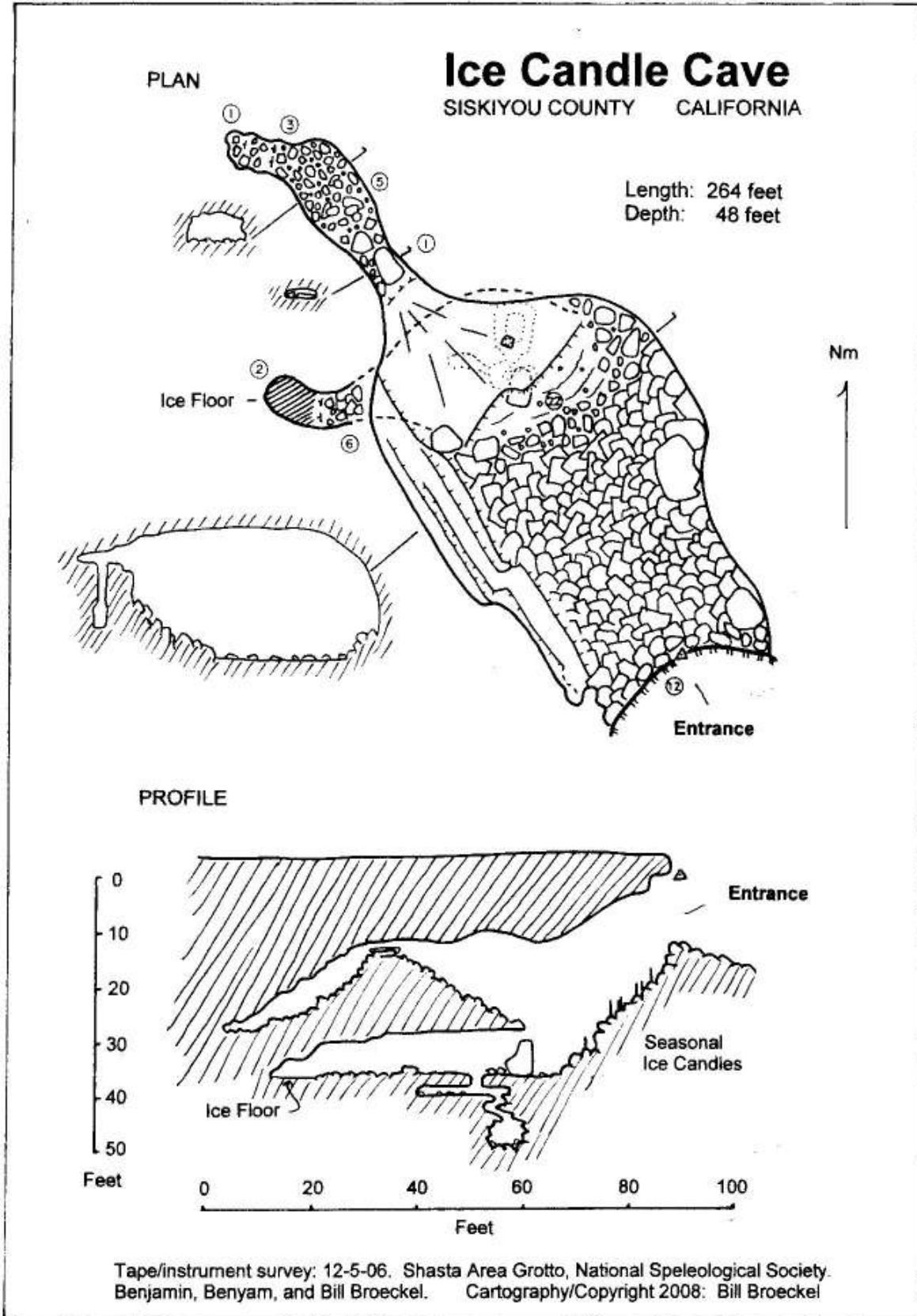
Dec. 5, 2006. The cave was still in the second sink down from Three Level Ice Cave. The entrance is not visible from the parking spot, but is only a short walk away. In early winter, the ice candles were just getting started. Down below, the cave had some small surprises. The crawl at the top of the upper level opened up again into a short passage, only to slam shut in breakdown. The rat crack up on the side ledge did not go very far. The second level ended in ice, and the small ice floor we found back in there elevated the status of seasonal Ice Candle Cave to "true ice cave".

The coolest surprise was the discovery of a small breakdown chamber that represented a third level to the cave. A small hole in the floor of the 2nd level led down to 60 feet of cave passage including a looping crawlway and a short climb down to the chamber, the lowest point in the cave. It was quite cold down there.

The ice candle area is near the entrance. To make these seasonal candles, a cave needs a porous ceiling that drips, and a temperature gradient with freezing temps down near the floor. This scenario is not uncommon, so ice candles can be found just inside many cave entrances, less commonly deep in the caves. Some years seem better for ice candles than others, depending on the moods of Old Man Winter.



Entrance to Ice Candle Cave 12-5-06. By Bill Broeckel.



Map: Ice Candle Cave



Benjamin Broeckel eating ice candle 5-18-96. By Bill Broeckel.



Ice Candle Cave entrance 11-4-08. By Bill Broeckel.

So Ice Candle Cave is 264 feet long, 48 feet deep, and has some admirable attributes. It is a candlemaker, it's an ice cave, and it has three levels. However, that third level business is a bit of a stretch. Note that the third level in nearby Three Level Ice Cave is eighty feet below the surface. So that third level in Ice Candle might really be some little intermediate level, like level 2.5. Unmapped intermediate crawlway levels like this can also be found in Three Level Ice.

BB



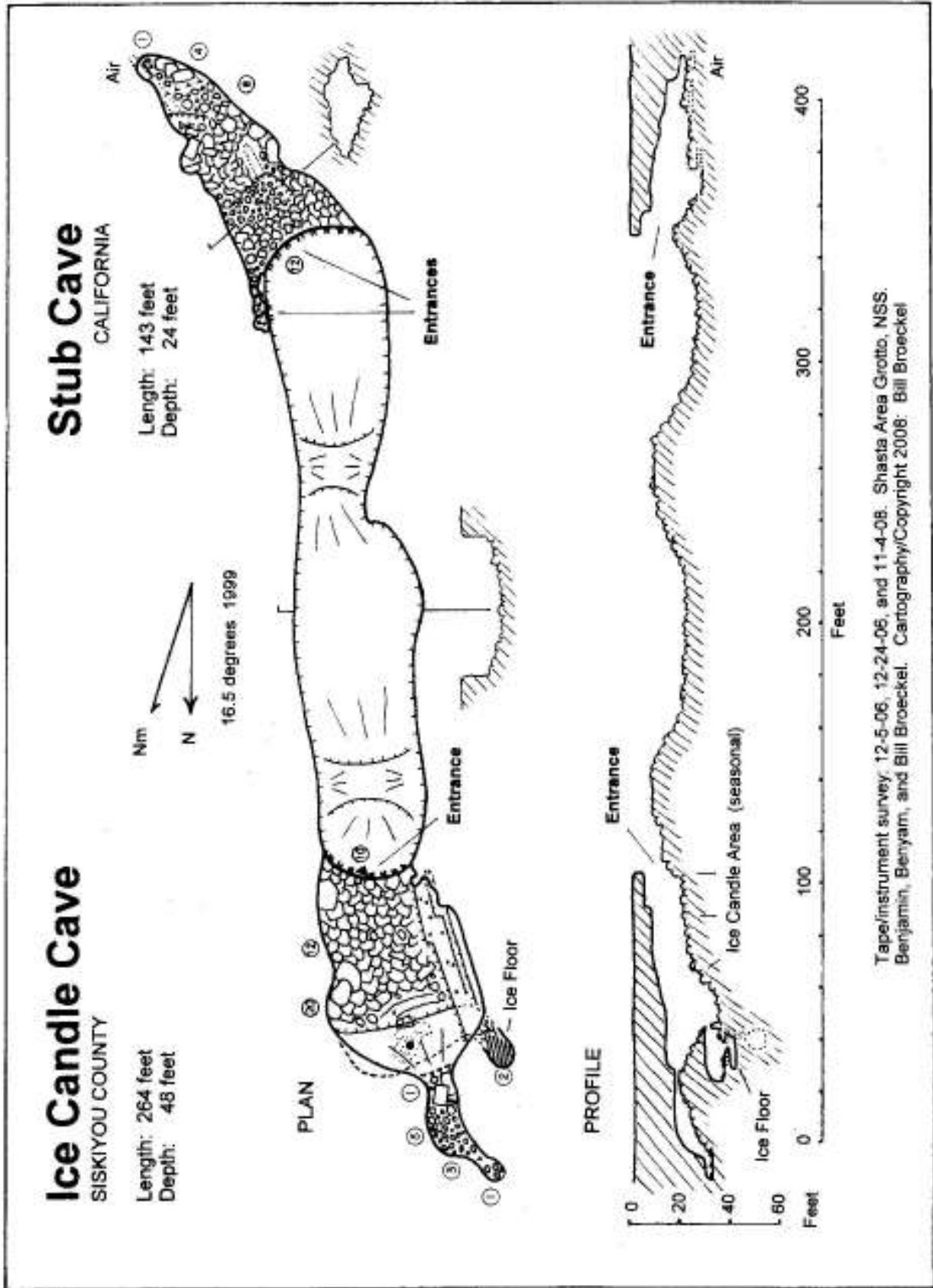
"Moss-tites" in Ice Candle Cave entrance 12-5-06. By Bill Broeckel.



New ice candles in Ice Candle Cave 12-5-06. By Bill Broeckel.



New ice candles in Ice Candle Cave 12-5-06. By Bill Broeckel.



Map: Ice Candle Cave, Stub Cave

AND STUB CAVE TOO By Bill Broeckel

We noticed a big cave entrance at the other end of the Ice Candle sink (the downflow end). We had such a good caving experience at Ice Candle, we came back in a few weeks to search out the secrets in Stub. Amazingly, the roads were still clear on Christmas Eve. However, try as we might we were unable to make any of the leads go as we probed into the breakdown. Stub Cave proved to be quite stubborn. It was possible to follow along a short distance under the edge of the sink, sideways from the entrance. This was on the left side and led to a second entry point. The cave did have a little airflow in the back. Current length stands at 143 feet and depth is 24 feet. **BB**



Entrance to Stub Cave 11-4-08. By Bill Broeckel.



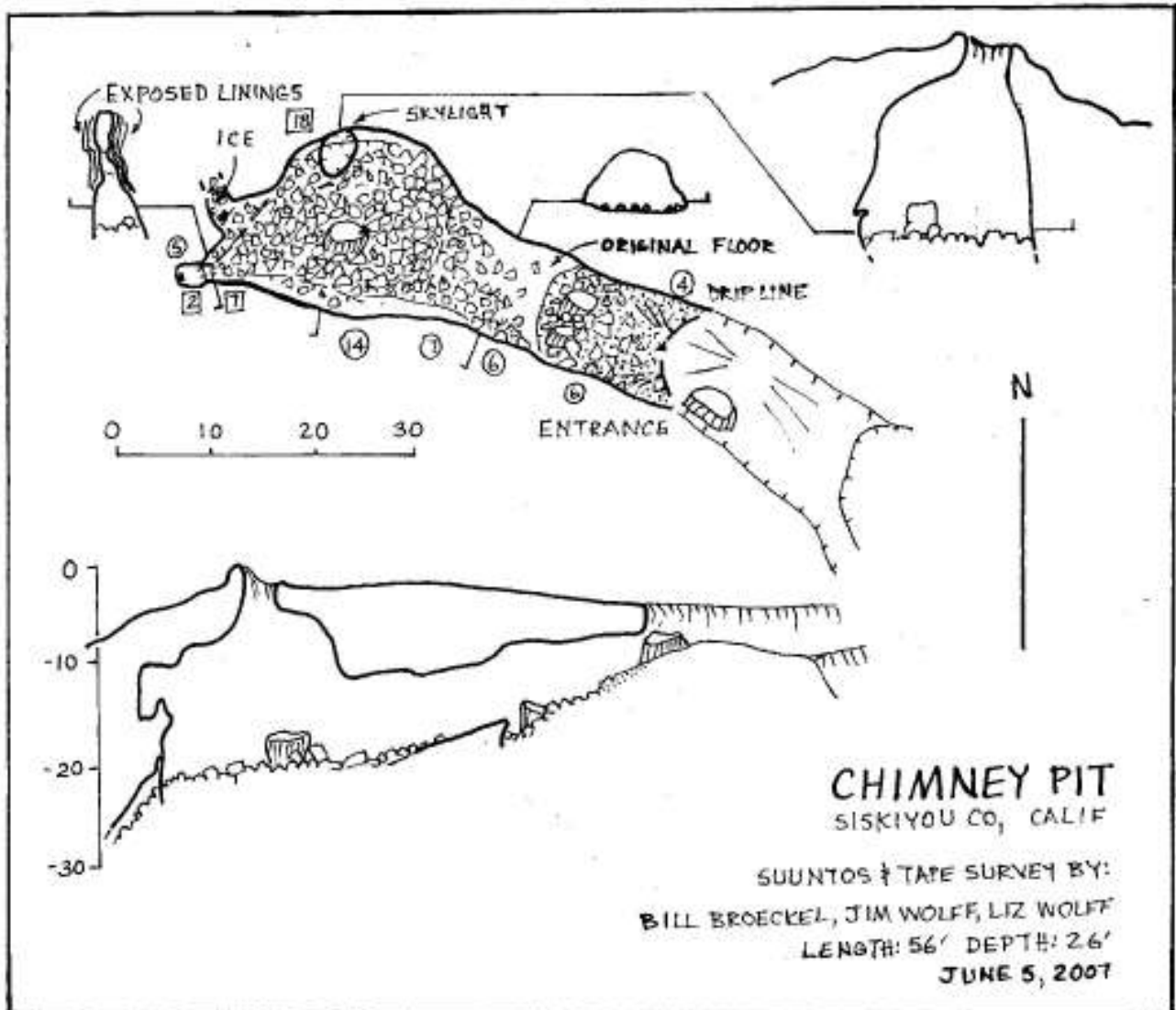
Ice drips in Stub Cave 12-24-06. By Bill Broeckel.

Chimney Pit

Chimney Pit is an intriguing spatter cone-looking formation. The pit has been known for many years, but had not been entered to our knowledge. On a campout with the Willamette Valley Grotto, one of the WVG covers found a walk-in entrance near the pit, but as the objective for the day was further south, it wasn't entered. Bill Broeckel with Jim & Liz Wolff, returned on June 5, 2007 to drop the pit and survey.

Chimney Pit is bounded on the south by a much deeper trench. It is a short cave in an upper level of the lava flow. We reached the cave just as the snow started to blow across the barren lava landscape, and entered the relative warmth of the cave. Breakdown covers all of the floor except where a passage-wide tube-in-tube near the entrance appears to have pirated the flow from the main level of the cave. The cave is mainly five feet or taller in height, and ten feet or more wide.

We began to survey at the back of the cave in an upper level alcove 8 feet off the floor. The alcove is located at the end of the spacious chimney chamber itself. Below the alcove, a small passage descends steeply, and will require some digging to enter as it has ice holding the rubble floor together. The remelt covered chimney itself is 18 feet from the ground outside to the floor in the cave. The total length of Chimney Pit is 56 feet and the depth is 26 feet. LW

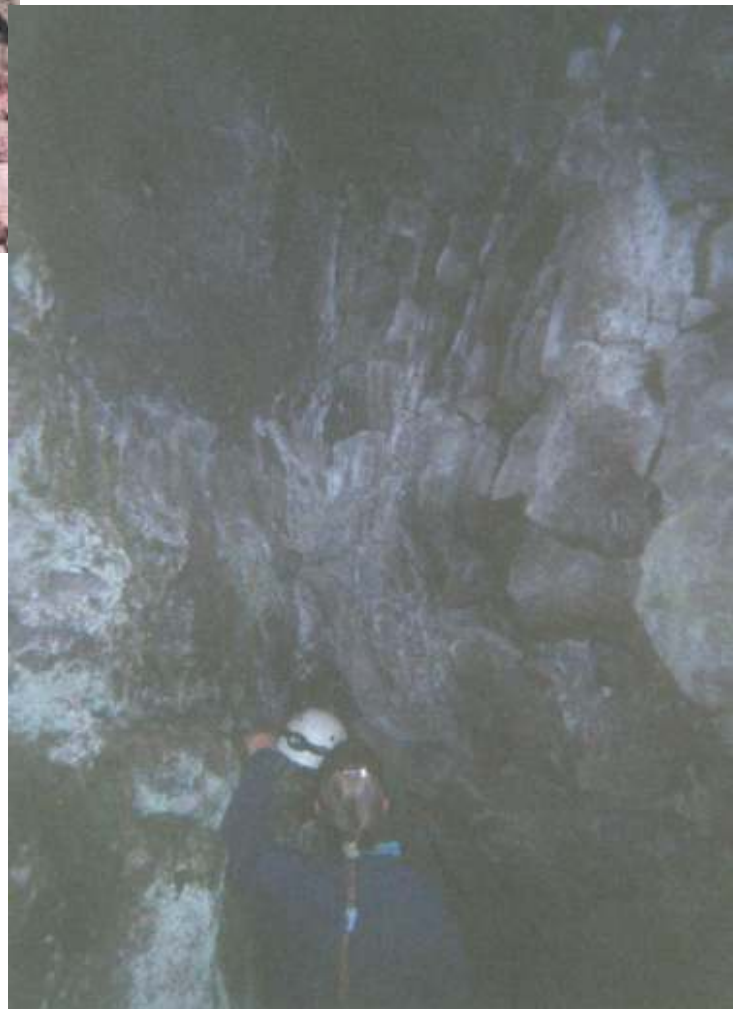


Map: Chimney Pit Cave



Vertical entrance to Chimney Pit
6-12-07. By Bill Broeckel

Liz Wolff in Chimney Pit 5-5-07.
Bt Bill Broeckel



**ABOUT BATS
ROOST LOCATIONS**

By Ray Miller

Bats roost in a wide variety of places, and each species has its preferences. Many will take advantage of manmade structures. Some prefer caves, while others roost in cliffs, loose piles of rock, woodpecker holes, crevices in bark or

among the leaves of trees.

Some species are solitary, and others are colonial with roosts containing hundreds to many thousands of individuals. **RM**



Cave ice photo #5 in Roman Bath Cave. By Wayne Cedidla.

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Yreka CA 90967

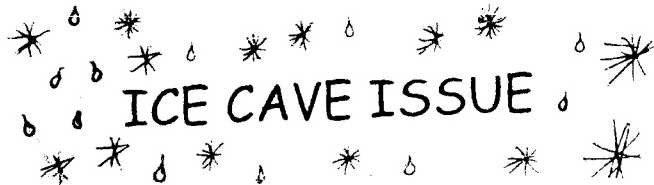


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TO: