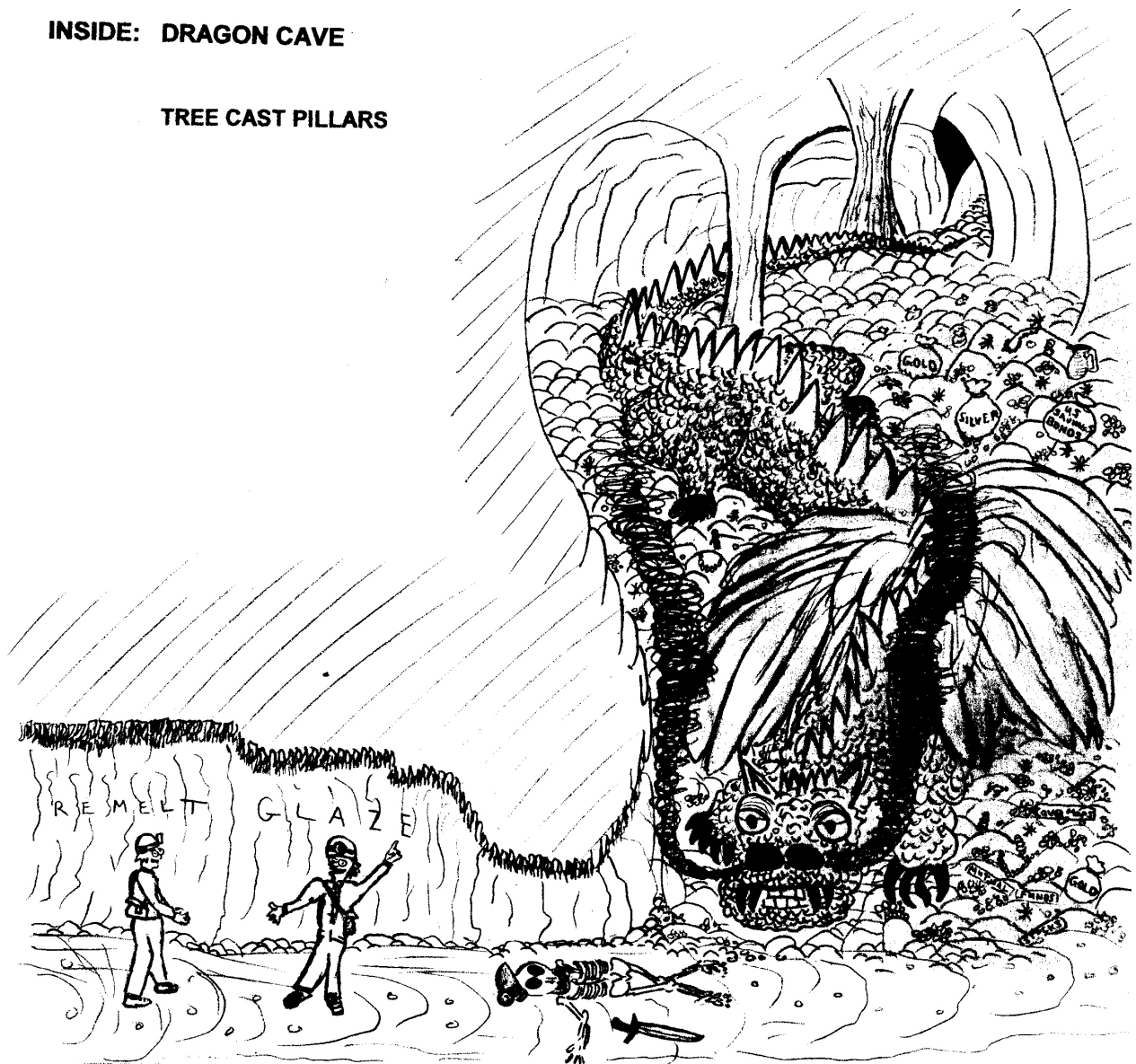


# sag rag

27:4 July-Aug 2008

**INSIDE: DRAGON CAVE**

**TREE CAST PILLARS**



" SOME OF THESE PASSAGES HAVE BEEN MODIFIED BY SUPER-HEATED GASES "

## **DRAGON CAVE      By Liz Wolff**

This is a little out of date; looking back through the survey data from 2006 and 2007, I came across the Dragon Cave notes. Dragon is a lava tube with only 3-4 ft of overburden, located in a major lava flow of Siskiyou County, CA.

Dragon Cave was discovered in 2005 by Russ Yoder while out looking for caves. He thought he had several related caves, but it turned out to all be the same cave. He returned on September 16, 2006 with Melanie Jackson and Liz Wolff to survey. It is a mile long hike from the end of the "road", around a large aa patch in the middle of the lava flow. We began the survey at the northern-most entrance, after re-locating and GPS'ing it. A short passage heads north from the entrance, but pinches down after about 50 ft; it wasn't surveyed. Heading south the spacious, intact passage is about 4 ft high with small domes. Three individual bats were seen in the domes. Several skylights give the passage a twilight glow all the way down to a major passage divide. At the divide we opted for the left side.

Russ dubbed it the Meatball Passage for a boulder wedged between the walls at the divide. This passage is also mainly intact, with roots and a fragile "hanging bridge"; a thin layer of lava broken loose from the ceiling and just touching the edge of the hole it is falling from. The passage continued past another entrance and passage divide, and got lower still. From this point the passage is called The Low Nasties Passage, as it is belly crawling in fairly grabby passage, and damp too. It continues past several divides to the right and one on the left that we didn't go down, just looked as it is blowing air and is lower still, about 10". We weren't up for that, with beckoning 15" high passage ahead of us. We came to a triple divide, with low broad passages ahead and to either side. Looking up the 12 ft wide passage on the left, we surmised it went back up to the 10" high passage, and went to our right which looked like it would open up a bit. It did, to 18" high, 21 ft wide and heading back toward the last entrance. The low continuation of the main passage was left for another day.

Heading back to the Low Nasties Entrance we picked up a lot of parallel passages. Most of this passage is paralleled on the west side with occasional passages on the east. In the low Nasties we came across curtains of roots, pools of bat guano, some fungi and mushrooms, and breakdown. Arriving back at the entrance, we had completed 1262.5 feet of survey.

The next weekend Russ and Liz returned to survey the right hand passage from the Meatball Passage divergence. This passage continued the parallel passage theme with the addition of ledge passages and lava falls. The end of the passage is a nearly circular room around a pillar with a pool of water, flat slabs of breakdown, roots and a possible southern continuation only 6" high exiting the room from a ledge. It sealed after 6 ft. We ended the day with an additional 650.1 feet of survey.

We didn't get back out to the cave for nearly a year to mop up the leads left on the north and south ends of the cave. Russ and I returned Aug. 18, 2007 and polished off the north lead with a disappointing 51.3 feet where the smooth remelt floor rises to within 4" of the ceiling in an intact passage. Several pillars break up the right hand wall of this passage. One low, damp lead remains at the extreme southern end of the Low Nasties Passage. All together the cave has totaled 1963.7 feet in length, contains 16 pillars, 3 lava falls, one "meatball" and 14 skylights.

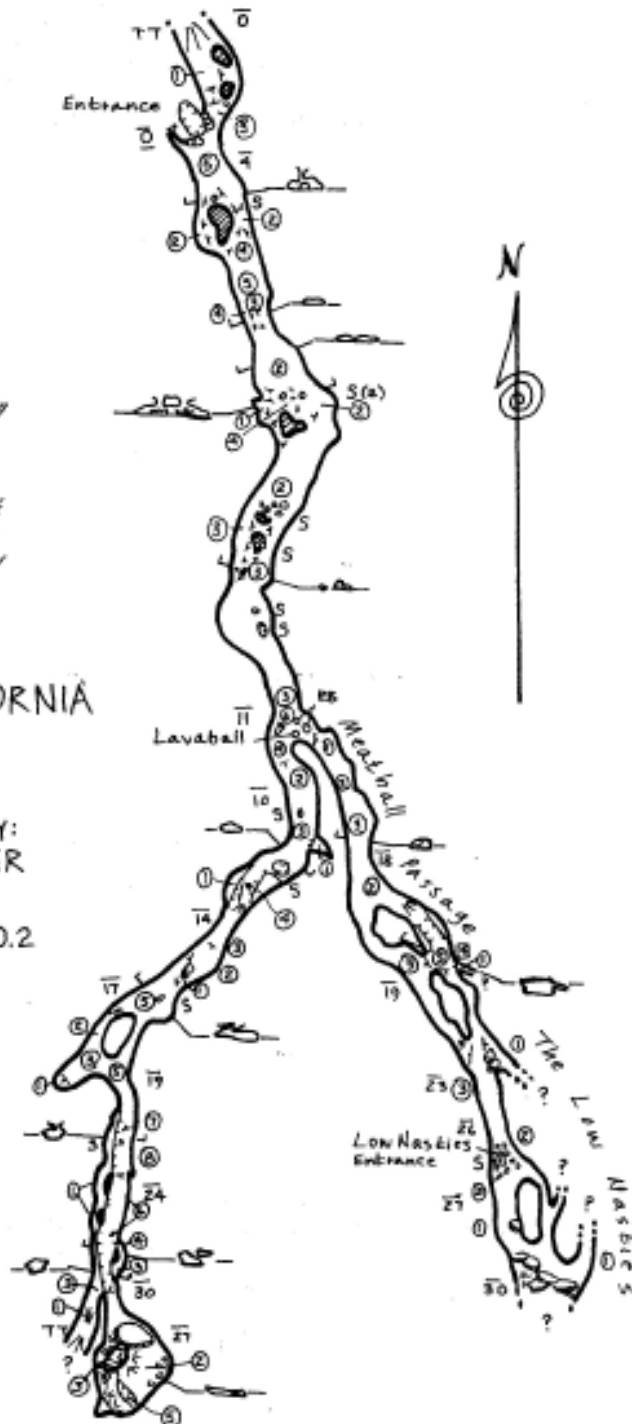
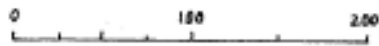
**LW**

# Dragon Cave

SISKIYOU CO, CALIFORNIA

SUUNTOS & TAPE SURVEYS BY:  
M JACKSON, L WOLFF, R YODER

LENGTH: 1963.7 DEPTH: 30.2

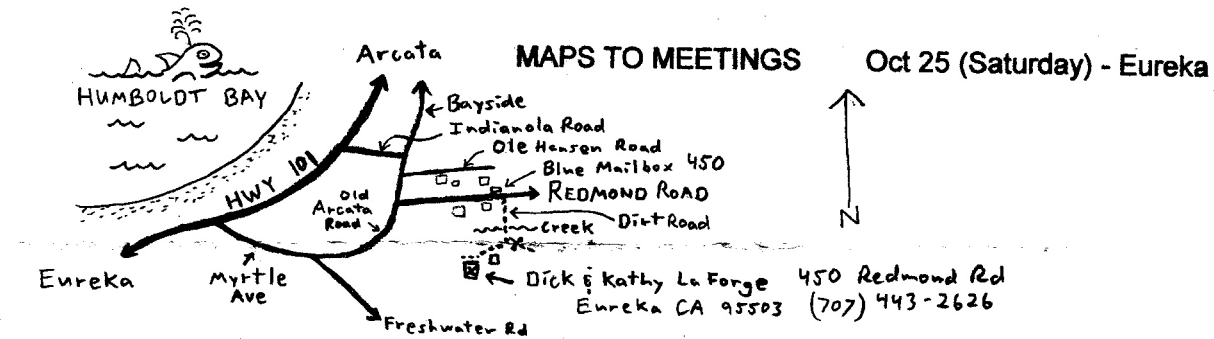


Map: Dragon Cave

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

Sep 27	ORCA Cave Restoration. Shawn Thomas
Oct 10-13	KMCTF Speleocamp. Bill Broeckel (530) 842-3917
Oct 11-13	Lilburn CRF. Lynne Jesaitis, Charlie Hotz (650) 625-1064
Oct 11-13	Lava Beds CRF. Bruce Rogers, Pat Helton (510) 796-2283
Oct 11-13	SEKI Crystal Cave Restoration. Joel Despain (559) 565-3717
Oct 24	SAG cave trip - limestone. Steve Hobson (530) 242-8707
Oct 25	SAG meeting at LaForge's in Eureka. (707) 443-2626
Nov	No SAG meeting this month.
Nov 8-9	Limestone cave work project. Steve Hobson (530) 242-8707
Nov 8-11	Lilburn CRF. Bill Frantz (408) 356-8506
Nov 27-30	Lava Beds CRF. Bruce Rogers, Pat Helton (510) 796-2283



## SAG RAG SUMMARY By Bill Broeckel

Here at last is the Dragon Cave report and map by Liz Wolff, well worth waiting for. Russ Yoder, SAG's best cave finder, came up with this great cave just a few years ago, and it immediately qualifies in the top 100 caves for Siskiyou County (caves over 1,000 feet long). It easily qualifies, as it comes very close to 2,000 feet. If someone would drag a tape through that 10-inch high meander passage, then the cave could officially top the 2,000 foot mark.

I don't know why Russ called it "Dragon Cave". Maybe that's how people feel after going through it (really drag'n). Anyway, I put a dragon on the cover just for fun, and found an interesting fire-breathing creature reference (Job 41: 18-20).

*"His sneezings flash forth light, and his eyes are like the eyelids of the dawn. Out of his mouth go flaming torches; sparks of fire leap forth. Out of his nostrils comes forth smoke, as from a boiling pot and burning rushes."*

A dragon perhaps? Dragon Cave is the main thrust of this issue, but I took up the remainder with an article I have been wrestling with for some time. This is an honest attempt at a descriptive science piece on tree cast pillars. I probably messed it up by delving into some speculations; but it is what it is. At least you get to see a lot of pictures of my new survey tape, which was a gift from Jim and Liz Wolff. They always appreciate it when someone else does cave maps.

**BB**

## TREE CAST PILLARS      By Bill Broeckel

**Abstract:** Lava cave pillars with tree casts inside them have previously been observed in the Pacific Northwest and Iceland. A small lava cave was recently discovered in Siskiyou County, CA with pillars containing tree casts. Shasta Area Grotto members surveyed the cave on June 16, 2007 with hand-held instruments closing a grand loop within 1-2% error. Additional survey was done on the surface over the cave to locate seven tree casts. Six of the seven tree casts correlated with pillars or pillar-like structures which had been identified inside the cave. The cave was named Tree Cast Pillar Cave. This cave was compared with two other nearby surface tubes (Four Pillars Cave and Spider Web Cave) to construct a hypothesis regarding the formation and degradation of tree cast pillars.



Figure 1. This tree cast (TC1) was close to the datum entrance to Tree Cast Pillar Cave. The fern cannot be seen in this view. TC1 is the deepest of the tree casts in the study and is actually deeper than the cave.

### Definitions:

**Tree Cast** A Lava Tree Mold (or Tree Cast) is "A cavity inside a lava flow formerly occupied by a tree engulfed by the flow" (Larson, 1993). (Fig. 1)

**Pillar** "A body of rock which divides a cave for a short distance". In addition, "most pillars in lava tubes are built around pieces or accumulations of breakdown" (Larson, 1993). Most but not all; trees might also do. Pillars are often scenic and offer welcome relief from the monotony of a long lava tube. They are vertically oriented, sometimes tilted, and roughly round or ellipsoid in section. Measuring pillars in caves is difficult. One approach is to determine average diameter by taping circumference and dividing by pi. (Fig. 6)

**Lava Tree** "A lava tree mold that projects above the surrounding surface" (Larson, 1993).

**Tree Cast Pillar** (or Tree Mold Column) A cave pillar containing a tree cast. (Fig. 4)

### Introduction:

On July 11, 2006, Ray Miller led a grotto survey trip to Jarbl Cave. Shade was sought for off-site parking, which led us to hike down the left-hand margin of the lava flow. We thus happened upon a new little cave area replete with surface tube entrances and tree casts. One inflated slab of smooth lava contained a number of tree casts several feet deep. Checking the cave underneath, we expected to find some circular tree cast skylights in the ceiling, like portholes to the sky. Overburden on the cave was only about a foot thick, so the tree casts were certainly deep enough to reach the cave. But we couldn't find any, not even one! What was going on here?

We scratched our heads for awhile, and eventually it dawned on us that the tree casts were all hiding themselves inside the pillars and near-pillars that characterized this otherwise very ordinary surface tube. Later we learned that tree cast pillars had also been seen in two lava caves up north of us (Larson, 2007), and there were two sites in Iceland (Halliday, 2007), but we were still fascinated to see it for ourselves in a local Siskiyou County cave.

### Grotto Project:

Over the next two years, we were able to get back enough to survey three of the surface tubes, and tie in the tree casts associated with Tree Cast Pillar Cave. Hand-held Sisteco compass and clinometer, and tape measure were used on the surveys. Our best cave mapper (Liz Wolff) did the instruments on the Tree Cast Pillar Cave survey, where the most precision was desired to tie in the tree casts properly. The photographs were taken on Sep. 9, 2008, on a special trip devoted to illustrating this article. A survey tape reel was used to scale the pictures. Like people, these reels actually come in different sizes. The one used for this article is 13 inches long and 9 inches wide.

(Fig. 2)



Figure 2. This pillar in Tree Cast Pillar Cave was associated with TC3. The pillar was perched on a ledge with an apron in front. The apron is divided by a cooling contraction crack.

### Setting:

Siskiyou County is home to a number of large cave-forming lava flows, one of which includes a major cave named Four Balcony Pit along the main conduit of its flow. This conduit features alternating segments of cave and open trench, with open trench predominant. A surge of lava flooded out of the main conduit somewhere above Four Balcony Pit, and ran for a short distance down the north side of the flow. The three caves described here are all found in this relatively shallow distributary. These caves form something of a sequence. Tree Cast Pillar Cave is the furthest down flow, and appears to be near the end of the distributary lava. Four Pillars Cave is intermediate in position, while Spider Web Cave is the furthest upflow and closest to the vigorous source of the overflow.

### Tree Cast Pillar Cave:

Besides pillars, this cave is further characterized by high ledges with just a few inches of airspace between ledge and ceiling. A larger central area has been drained away leaving about 3-ft of passage height and a relatively enjoyable through trip on hands-and-knees. This extends for about 100-ft from the datum entrance to the mint-smelling Pennyroyal Entrance. Some of the tree cast pillars (TC1, TC2, TC3, and TC5) are up on the ledges. Not only is it impossible to go completely around these pillars, but sometimes it is difficult to tell if the low passage actually continues all the way around the back. In some cases we could work it out by shining lights or observing the play from the various leaks of daylight into the cave.

(Fig. 5)

(Fig. 14)

One pillar (TC4) was well out into the main passage and could be more fully inspected. Daylight coming down through the tree cast was detected through the cracks in the part of the pillar that was crumbling. TC6 was the "outcast tree cast", inaccessible from inside the cave. For all we know, it too may be in a pillar, perhaps surrounded by another cave or a vug. TC7 was the best and most respectable tree cast pillar that we saw. It had nice straight and vertical sides, no waist-line, and a curb along the floor. After we saw this one, we ran back outside to search for a corresponding tree cast. We beat the bushes for a bit, and finally found it hiding under a thick shrub.

(Fig. 4)

(Fig. 16)

Tree Cast Pillar Cave is underneath a slightly elevated slab of smooth lava. There were at least four usable entrances. Bees, ants, millipedes, and crickets were everywhere: Small mammals had stockpiled pinecones at one blind end. No bats were seen. Total passage length was 136 ft.

Table 1. Measurements of tree casts at Tree Cast Pillar Cave

<u>Tree Cast</u>	<u>Diameter</u>	<u>Depth*</u>	<u>Comment</u>
TC1	1.0 ft	6.5 ft	Fern inside
TC2	1.5 ft	5.5 ft	
TC3	2.0 ft	5.5 ft	
TC4	0.8 ft	2.5 ft	Charcoal inside
TC5	2.0 ft	4.5 ft	
TC6	1.5 ft	1.5 ft	Bush inside
TC7	1.5 ft	1.0 ft	Dead bush on top

\* Depth measured from surface level to debris cone at bottom

Table 2. Selected legend for maps of the three caves

Symbol	Explanation
○	Tree cast, designated as "TC" and a number
TL	Too Low, cave passage is too low
TT	Too tight, cave passage is too narrow
③	Cave passage height in feet
△	Survey datum point



Figure 3. Small diameter TC4 seen from the surface. The two lengths of charred wood were found inside the tree cast. These probably fell into TC4 during a modern-day forest fire.



Figure 4. The TC4 pillar in Tree Cast Pillar Cave was further out in the main passage. It was uniquely tilted and broken, with daylight from the tree cast visible through the cracks between the broken rock fragments. Curbing was more highly developed around the base of this interesting pillar. Here even a small tree was able to effect a major and elaborate feature inside the cave.



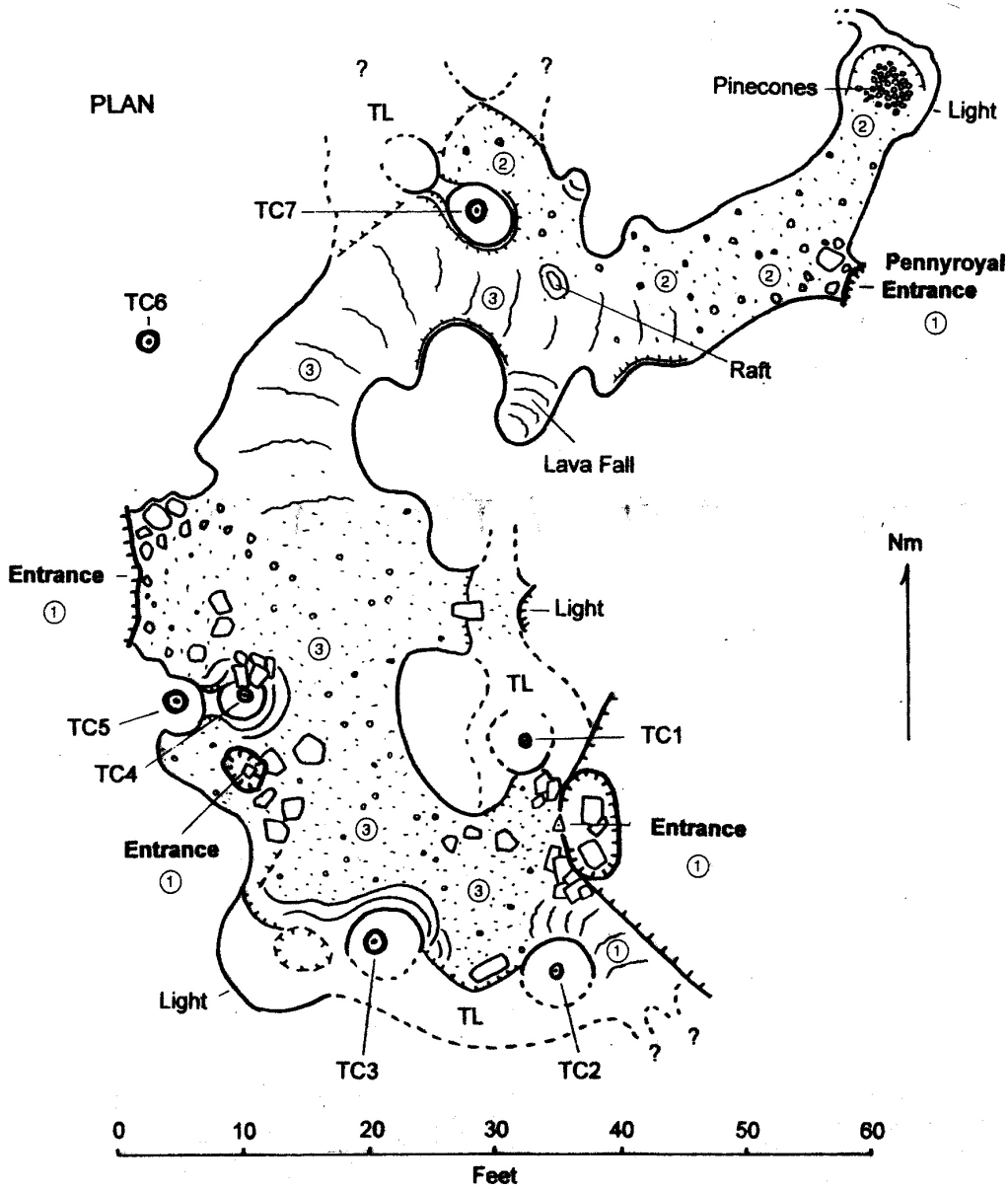
# Tree Cast Pillar Cave

SISKIYOU COUNTY

CALIFORNIA

Length: 136 feet

Depth: 4 feet



Tape/instrument survey: 6-19-07 Shasta Area Grotto, National Speleological Society  
Four Pit Surface Tube Project: Bill Broeckel, Ray Miller, Jim Wolff, and Liz Wolff.  
Cartography/Copyright 2008: Bill Broeckel

Map: Tree Cast Pillar Cave  
(Fig. 5)

#### Four Pillars Cave:

This small surface tube has over 100 ft of surveyed belly-crawling cave passage, because we ran survey shots around all the pillars except the largest one (it was too low to get all the way around it). This excessive survey method, along with the centrally located cave entrance, makes the cave seem shorter than the measured 114 ft. Although this cave is only a short ways upflow from the first cave, tree casts were not found to be associated with any of the four pillars. The slab of breakdown that fell from the 2x3 ft skylight entrance partially sank into the floor, leaving a thin raft as a rugged welcome mat for those desperado cavers feeling a need to enter these crawls, which can be done as infinity loops.

(Fig. 8)



Figure 6. This shows the first pillar immediately left (east) Four Pillars Cave. The pillar is viewed from near the entrance. As with all the pillars in Four Pillars Cave, no corresponding tree casts were found on the surface.

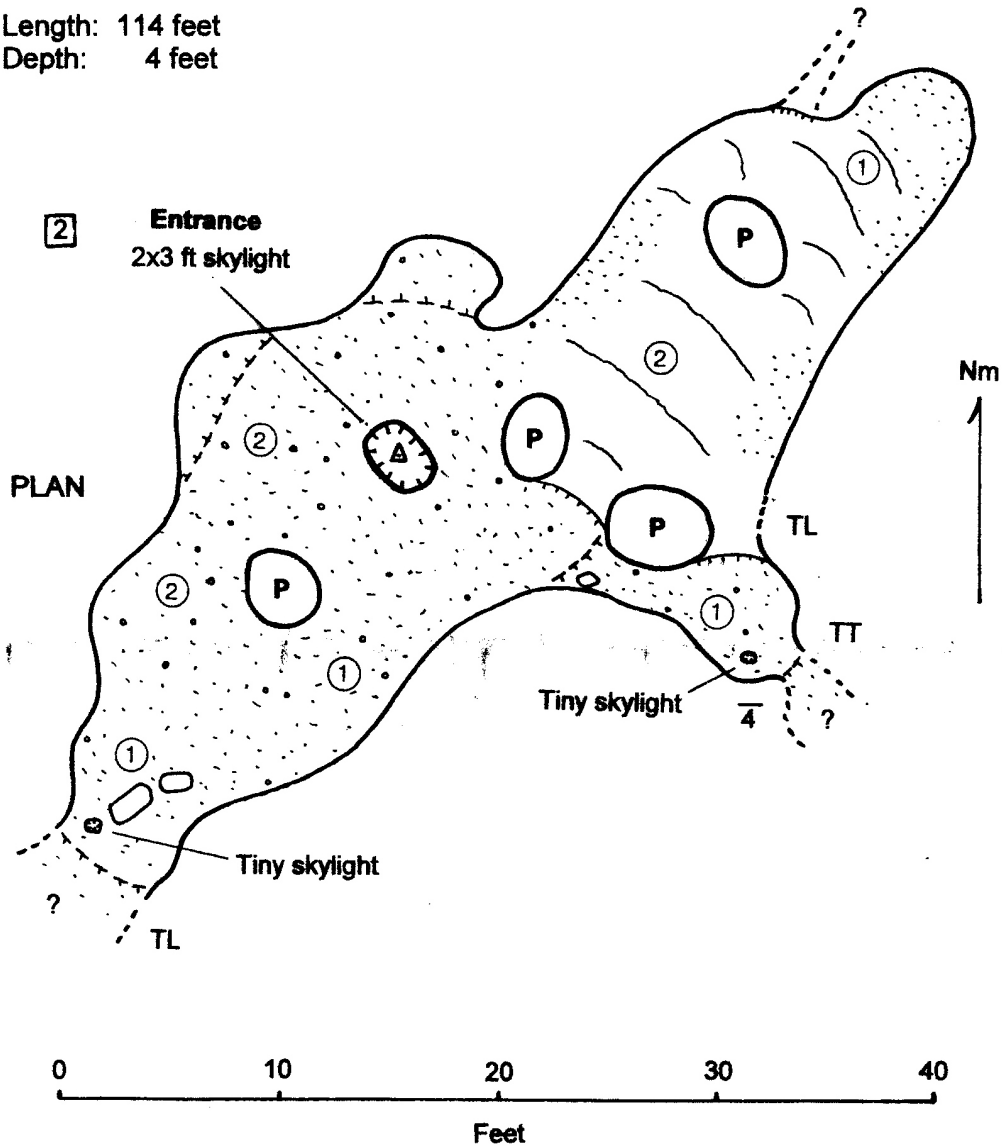


Figure 7. The only entrance to Four Pillars Cave is a skylight, rectangular in shape, and measures about 2 by 3 feet. The overburden is quite thin. The "welcome mat" feature under the skylight is not readily visible in this photo.

# Four Pillars Cave

SISKIYOU COUNTY CALIFORNIA

Length: 114 feet  
Depth: 4 feet



Tape and instrument survey 11-27-07 by Shasta Area Grotto, NSS.  
4Pit Surface Tube Project: Bill Broeckel, Ray Miller, Jim & Liz Wolff.  
Cartography/Copyright 2008: Bill Broeckel. ("P" indicates pillar).

Map: Four Pillars Cave  
(Fig. 8)

### Spider Web Cave:

This is yet another surface lava tube cave, a little further upflow from the first two caves. It contains no pillars, but near the 4x4 ft entrance, there are a number of lava bulges or rounded pendants drooping down which, for lack of a better term in our heads, we called "ceiling blobs". The main passage is a wide and pleasant hands-and-knees crawl, with many smaller side passages available, some of which were not thoroughly explored due to excessive spiders and their webs. Thus the cave was named Spider Web Cave. This cave is very near the surface and has many tiny cracks and holes that allow outside air to blow through. In the summer it can feel like an oven in this cave. On a September evening visit, two bats were observed flying around in the back room. Total surveyed passage was 286 ft, and more survey could be done in this cave, already the longest of the three described here.

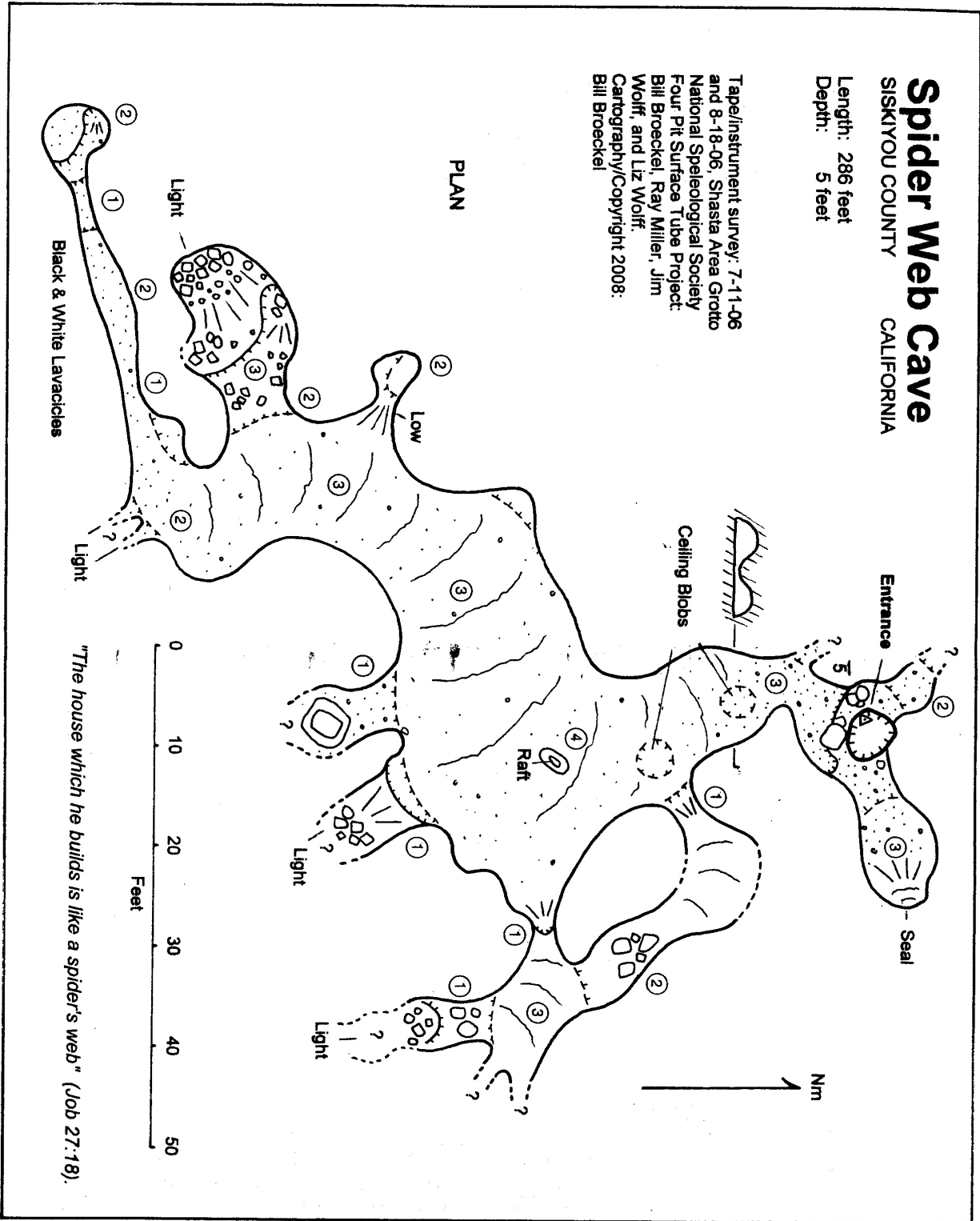
(Fig. 11)



Figure 9. This shows the first of the "ceiling blobs" in Spider Web Cave. The blob very nearly touches the relatively smooth and flat floor surface



Figure 10. This 4x4 semi-triangular entrance is the only way into Spider Web



Map: Spider Web Cave (Fig. 11)

## Discussion:

Tree casts are not uncommonly found in lava flows, which may or may not bear regular lava tubes. The basic concept of a tree cast is simple. The lava flows around the tree trunk and solidifies. The tree burns up or otherwise disappears, leaving a tree-trunk shaped hole in the lava. Sometimes tree bark texture is preserved on the cast surfaces.

If the lava flow is very hot, fresh, fast, aggressive, and energetic, it might quickly destroy a tree without leaving a cast or any trace whatsoever. Features seen in the three caves described might describe a step-wise progression between tree cast preservation and total tree obliteration, in a case where lava tubes are involved underneath the surface of the flow.

In Tree Cast Pillar Cave, down at the end of the flow, the sluggish lava formed the tree casts, and then was still mobile enough to drain out from around the tree casts, and leave the interesting pillars for cavers to enjoy finding later on.

(Fig. 4)

At Four Pillars Cave, closer to the source of the distributary flow, lava was able to drain away from the pillars, and maybe also somehow fill in any tree casts that might have been associated with those pillars. Might it be possible for trees to cause pillars in caves without leaving tree casts as evidence?

(Fig. 6)

Finally, even further upflow in Spider Web Cave, those "ceiling blobs" could be the nubbins left of tree cast pillars, with not only the tree casts filled in, but also the continued flow of hot lava and gases eroding away the lower portions of the pillars. Thus, it may be that trees also play a role in the origin of "ceiling blobs".

(Fig. 9)

Lava Trees have been described and photographed (Larson, 1993). In this case, tree casts are formed, then lava recedes away from around the casts, and they are left standing on the surface like trees, in fact, in some ways like the very trees they had previously encased. Tree cast pillars are the underground version of the lava tree scenario. The variable and specialized conditions within an actively forming lava tube may cause the Tree Cast Pillar to be highly modified, degraded, or destroyed entirely.

Since tree cast pillars don't seem to show up just anywhere, it will be interesting to see what corroborating or confounding findings might be observable at the other locations where these particular kinds of pillars have formed or are in the process of formation.

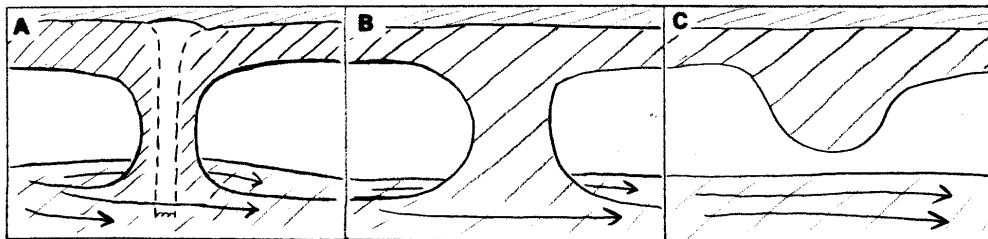


Figure 12. One possible sequence of tree cast pillar degradation in an active lava tube. (A) diagram of a fully formed tree cast pillar; (B) surging lava has filled the tree cast by pouring in from above or by penetrating through the pillar; (C) the lower part of the pillar has been eroded away by rushing lava, leaving a rounded bulge hanging down from the ceiling. Note that in the absence of (B), (C) might still seal a tree cast from below.

Summary: At Tree Cast Pillar Cave, we have a fascinating look at macrobiology teamed up with a catastrophic speleogenic process to produce a relatively uncommon cave feature we have called "tree cast pillars". We have further suggested that some "filled cast pillars" and even some "ceiling blobs" might also originate with trees getting in the way of cave-forming lava

*"Oh little tree, be careful where you grow, to bask in summer sunshine, to dance in rain and snow; for if the earth might chance to vent, up near that rocky knob, you might end up remembered as a pillar or a blob."*

**BB**

References:

Larson, C., 1993, An Illustrated Glossary of Lava Tube Features, Western Speleological Survey Bulletin No. 87, pp. 10 and 12. Note that a version of this was also included in the Yreka NSS Convention Guidebook in 1990.

Larson, C., 2007, personal communication.

Halliday, W., 2007, personal communication.



Figure 13. This shows the second "ceiling blob" in Spider Web Cave. This one features a visible "core" at the apex where a central cavity may have been filled in by a different kind of lava. Note that gently undulating ceilings are common in surface tubes, and that a strict definition of what exactly counts as a "ceiling blob" would be somewhat difficult.



Figure 14. The Pennyroyal Entrance to Tree Cast Pillar Cave. Pine needles and scent of mint soften the experience of actually using this low entrance.



Figure 15. This tree cast near the road measured 2 ft across and 4 ft deep and contained a beer can.



Figure 16. TC7 was the best pillar in Tree Cast Pillar Cave. A small curb stands at the base and a lava raft can be seen in the near ground. The coarse lavacicle ceiling was typical for these three caves.



## Addendum:

Here is some e-mail content referenced above for 2007.

- 6-20-07 "Liz (Wolff) and Bill Broeckel mapped a cave yesterday that had several tree casts as pillars in the cave, and the casts did not connect to the cave passages below, but were inside the many pillars dotted around the cave - a very rare find indeed! ... Have you ever heard of such a thing? ... Thanks! Jim Wolff
- 6-21-07 "At least two lava tube caves in the Mt. St. Helens Cave Basalt harbor several tree-mold columns: In 1986, Clyde Senger found and named Three Pillars Cave, a lava tube cave intersected by several tree molds which were exposed in the cave as pillars, or columns. Scotts Cave, recently mapped by Garry Petrie and others, also contains similar columns." Charlie Larson
- 6-21-07 Good discussion all around. And in Iceland, there are a coupla (sic) places where there are similar-appearing pillars that formed along steam tracks where the lava overflowed a marsh. The principal differences are that (1) instead of bark imprints in the central cavities, there are irregular spatter deposits and (2) some are beneath overhangs but most are out in the open. The localities are Dimmuborgir (a well-known feature near Lake Myvatn) and Littludimmuborgir, close to Reykjavik." Bill Halliday



Figure 17. Another one of the tree casts at Tree Cast Pillar Cave, probably TC2, and the author/photographer's right boot from a pair recently acquired at a thrift shop in Medford, OR. Like most boots, new or used, these will last less than a year on the lava flows, but cost very little.

**MINUTES FROM SAG MEETING July 25, 2008**

JULY SAG MEETING SAG meeting location: Melanie Jackson's home, Yreka, CA - July 25, 2008. Attendees: Members Steve Hobson, Dave Smith, Melanie Jackson, Ray Miller, Jim and Liz Wolff, Bill and Judy Broeckel.

Meeting called to order by Chairman Jim Wolff at 7:55pm. The old minutes were read by Steve Hobson. Treasurer's report: \$418.64 bank statement minus \$36.00 NSS web site minus \$50.00 NSS donation minus \$25.00 stop payment on original NSS check (has not been charged yet) = \$307.64, plus \$177.87 petty cash minus \$28.30 SAG RAG = \$149.57. \$457.21 Total SAG worth. SAG RAG Report: Del Lorna Cave was sent out. The next issue will be the Dragon Cave Issue. It is a big important cave. Web Site Report: None. Database Report: Ray is concerned about the validity of the data. When Liz field-checked the database locations she found more wrong than right. Take photos of the entrance and pertinent location information. The Datum needs to be added to the database along with any other notes. Current information is in UTM. Datum is in NAD27. It can store other information also; like conservation data...

Correspondence The 2008 Western Region Level-II NCRC class is at California Caverns Sept. 27-Oct.4. NSS Conservation Network - Bill B. is hooked in. Thank-you from Ken Siegrist for the BLM Public Lands Day. Jim sent him some waypoints and shepherded some new cavers. They added 33 new caves and have many new projects. Dave sent the pdf stuff to Jim. Jim sent it to the website. Abigail Alvarez contacted Jim about cave locations. She is doing a research project on crickets. Jim told her to pound sand. Not really. He said he could not help her.

Old Business Rope practice - will be tomorrow. Ed Bobrow is an official member. Melanie, Dave, and Steve had dinner at the Black Bear. Wayne C. has a new Email address (Speleoman @att.net). Steve and Melanie found patches. No more T-shirts. Museum goes dark Jan-Mar. Liz said leave it in place. Liz will present officer duties at the next meeting?

New Business Meetings: June 27th Hat Creek campout cancelled due to fires. July 25th at Melanie's house in Yreka. Rope training weekend. Aug 22nd at Jim and Liz Wolff's in McCloud. Cave mapping. Sept 19th at Steve Hobson's house in Redding. Limestone cave trip. Oct 24th at LaForge's house in Eureka. Nov - no meeting. Dec 5th -? The Cliffs were evacuated due to the fires that are burning up everything. Vern sent photos to the news. Their house is OK!!!!!!!!!!!!!! We need to notify everyone when we go on cave trips... They might want to go... Rope training will be at Catwalk Cave. It is about 1/4 mile hike to the cave and about 1 hour drive from Jim's house. Bruce Rogers wants us to find the mythical Cave of the Flying Blue Tubas.

Trip Reports Liz and Jim went to Barnum Cave to check the bats and the gates. One of the new uprights was partially cut through and it had been paint-balled. Jim and Liz helped with the CRF project at Lava Beds. They finished the survey of Bypass Cave; surveyed over to the Coronary Cave; thus making the Coronary Bypass. They looked for three little caves that Bruce Rogers lost. They are still lost. Found and surveyed another cave that has lava bells. Went to the Despoiled Caves. Ate lots of food... Bill B. went to a major lava flow. He found a Big Lipped Cave, and Odyssey Cave; there was cold air and bats. He also found a sinkhole with a 200+ ft cave; he found a pirate balloon in it; Pirate Party Cave. Bill B. went to the marble caves, but he did not get to his objectives. He was busy helping some inexperienced kids. He took them to Skunk Hollow Cave. He got a cool flag for his troubles. Steve and Brad went to a long limestone cave. It was very interesting. The map does not appear correct.

Meeting adjourned at 9:45 pm. Shasta Area Grotto Secretary/Treasurer, Steve Hobson

**SH**

**MINUTES FROM SAG MEETING Aug. 22, 2008**

**AUG. SAG MEETING** SAG meeting location: Jim and Liz Wolff's, McCloud, CA - Aug. 22, 2008. Attendees: Members Steve Hobson, Dave Smith, Melanie Jackson, Neils Smith, Vern and Linda Clift, Ed and Virginia Bobrow, Ray Miller, Bill Broeckel, Jim and Liz Wolff.

Meeting called to order by Chairman Jim Wolff at 8:00pm. The July minutes were read by Steve Hobson and approved as corrected. Treasurer's report: \$332.64 in bank plus \$149.57 petty cash equals \$482.21 total SAG worth. \$6.00 Thomas Kiler dues. SAG RAG Report: Bill is still working on the Dragon Cave issue and wants to do an issue on ice caves. He still needs trip reports. Web Site Report: Logon pages are updated. Things are working well. Robert is moving around a lot and is having a great time. He would still like to have photos with captions. Database Report: Ray received information on Francis' Folly from Liz W. He also received information on four new caves and some other stuff from Bill B. Museum Report: Leave it alone, unless they want it out.

Correspondence The 2008 Western Region Level-II NCRC class is at California Caverns Sept. 27-Oct.4. Dick and Kathy LaForge will host the Oct. Meeting. Lynn Fielding sent some information on the Western Region meeting. Dixie Pierson is a bat specialist doing research in the Siskiyou and Shasta County areas. They saw a pulse of bats on a ridge, which means there is an entrance there. They happened to be living in a house across the street from the Wolffs. Wayne and Melanie were contacted by Frank at an outdoor store. We sent him some information. He was a prior member of the NSS.

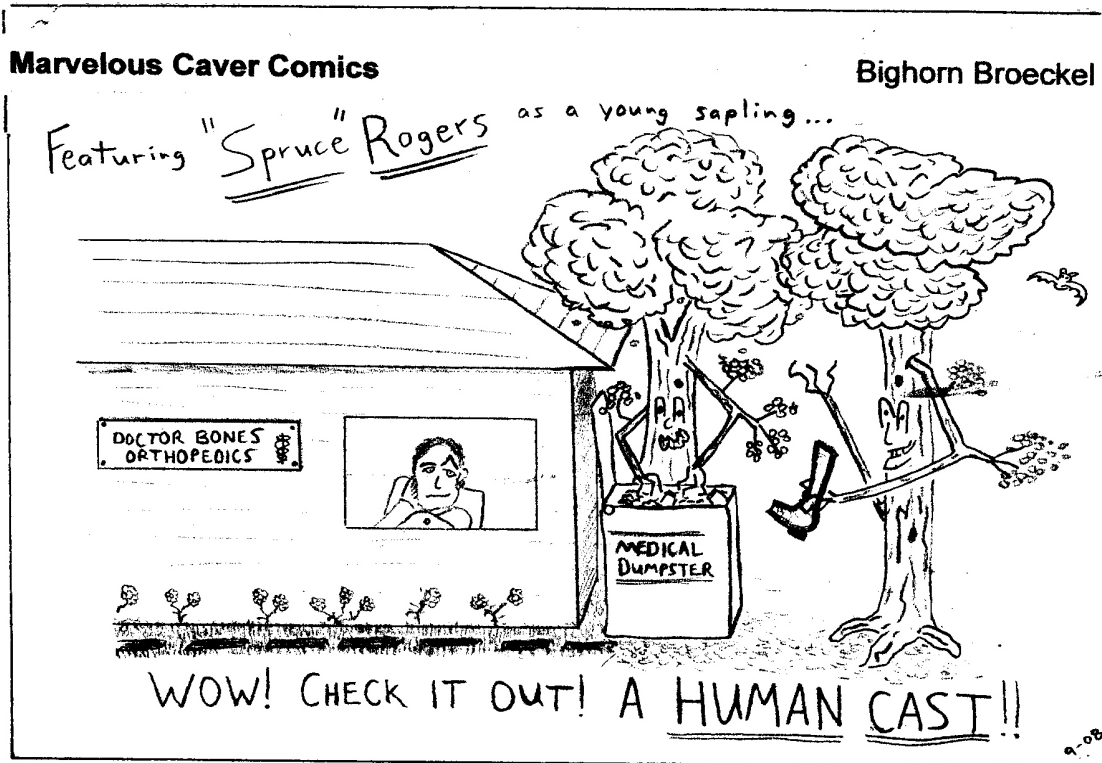
Old Business On the weekend of Sept. 12-14th, Vale BLM will host another Public Lands Day at Jordan Craters and Clark's Butte Lava Flows. It should be fun. T-shirts and a BBQ will be provided Saturday evening. The last event was lots of fun. Jim Wolff plans on attending this one too. Sand Cave is full of trash again, the same OJ bottles as before. The surface is eroding underneath the barrier and is draining into the cave. Maybe the sheriff can get prints off the OJ bottles.

New Business Meetings: Sept. 19th at the Hobson's in Redding. The plan is to go to a long limestone cave on Saturday, but it might be closed. Oct. 24th at the LaForge's house in Eureka. Nov. no meeting, but Steve Hobson has a work project in a limestone cave Nov. 8-9. Dec 5th, a Christmas party with cookies, maybe at Dave's house. He will check with his wife. June 2009: Eagle Lake?? The potential September cave is closed due to fires. Vern, Linda, and Steve will check their sources of information on the availability for the Sept. 19th meeting. There will be a new chief ranger at Junction City, starting on Sept. 2nd. If the cave is closed we will go to Deanna-Lynn Cave. Tomorrow's cave trip is survey school. On Oct. 8-9, Liz will be doing a slide show presentation and taking kids to Barnum Cave. No news from the Conservation Network. Neils has been roaming around some lava flows. The Forest service supposedly sealed some ice cave entrances around a certain mountain and he would like to have a grotto trip there. The area looks good for cave hunting and of course finding. One cave was in an old NSS Bulletin in the 1940s or 1950s. Watch for a future campout. Bruce Rogers wants us to find the mythical Cave of the Flying Blue Tuba. Project under discussion.

Trip Reports Bill B. went to Pirate Party Cave with his daughter and they surveyed about. Vern and Linda went exploring around Shasta County lava tubes. They found several while they were looking for the Ice Caves. One might be Double Door Cave. They also discovered that the 2nd tree from the Lassen Viewing Point has cell phone service. Bill Devereaux and Ed Bobrow went to Black Ice Cave. It only had a little ice, but they found a hole with a lot more. Liz, Melanie, and Wayne went to the Roman Bath Cave. There were lots of ice formations and ice on the floor. Liz Russ, Vick, Lilia, and son Jesse toured the Ice Falls Cave...They surveyed Little Ice Cave and toured Looping Route Cave. They also stopped by Shelter Cave. Melanie and Wayne went to Francis' Folly Cave. There was a little ice in it.

Meeting adjourned at 9:20 pm. Shasta Area Grotto Secretary/Treasurer, Steve Hobson

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**THE MISSION STATEMENT OF THE SHASTA AREA GROTTO**

The Shasta Area Grotto is a conservation organization devoted to the protection and study of caves and their contents.

**SPECIAL  Dragon CAVE ISSUE**

SAG RAG  
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Yreka CA 96097

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TO:

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