

HAPPY BAT NIGHT
HAVE A SWEET ONE

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 2001

- Oct 26 SAG meeting 7:30 pm at Melanie Jackson's in Yreka. (530) 842-9714.
- Oct 29-31 Sand Cave gating project. Contact Jim Stout at Goosenest Ranger District.
- Nov 10 Evening SAG meeting at LaForge residence in Eureka. (707) 443-2626.
- Dec 14 SAG meeting 7:30 pm at Melanie Jackson's in Yreka. (530) 842-9714.

CHAIRMANS CORNER – REGION 5 CAVE MANAGEMENT By Liz Wolff

John Chatoian, USFS R5 geologist, asks:

What are the issues the grotto has with the upcoming cave management plan? What do we want to see written into it, and what left out.

The FS idea at this point is to write a separate plan for the lavas in the east and the marble and limestones in the west. The lavas of the Klamath, Lassen, Shasta-T, and Modoc will be considered as a unit and written in cooperation with Kelly Fuhrmann of the Lava Beds, as the first step (personally, I think it should cover all caves, with sub-sections for lavas & limes – what do YOU think?). THIS cave management plan is to be a pilot plan for all of USFS region 5, and they are getting close to actually writing it. It will consider access, scientific study of biota etc, archaeology, gating, recreation, and anything else we may want to see in it. It must be done right.

John Chatoian will be here in December to talk to a small group of us and discuss the cavers' issues. We will talk about these subjects, and any others you come up with, at the Oct 26 and Nov 10 grotto meetings in Yreka and in Eureka. This is your chance to have some input into the matter. If you won't/can't be at either of the grotto meetings and have anything to add, email me before 3 pm Friday Oct 26 or Thursday Nov 8, to have your say included. We can have a huge impact on this: Get your word in NOW! Have an impact on the FS before the writing of the plan! In time, this will impact ALL USFS owned caves in California.

Liz Wolff, SAG chair

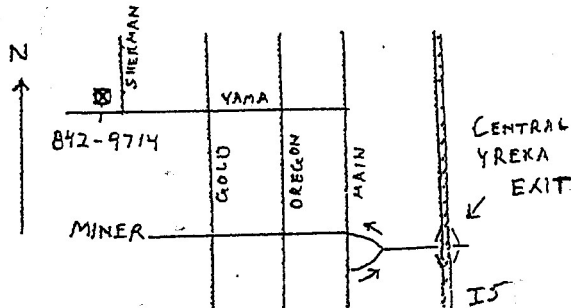
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NOTES FROM BIGHORN

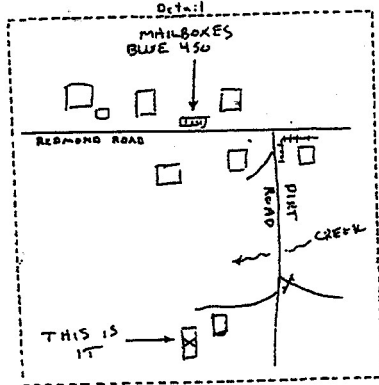
By B. Broeckel

This issue is another rush job, because some of the things on the calendar needed to get announced. Chairman Wolff offers insight on some cave management planning which is happening currently, as in "speak now or forever hold your peace." Then the gates on the Shasta Valley lava tubes are in the name of bat conservation. To this we added an interesting blurb on archeology site etiquette from NOLS and the BLM (off the internet from Capital Reef). Did you know that all of the caves are archeology sites? That's one point of view. Caves also contain resources other than archeological, so that makes caves even more sensitive and valuable than regular archeology sites, and deserving of more care and protection. So we added some thoughts about cave entrances, and there you have it. It looks a cave conservation issue of the SAG RAG. We can't just survey unsurveyed caves all the time. There is also this matter of SAVING THE CAVES. It doesn't just happen, so thanks everyone for all the thought and work going on right now in the best interest of the caves.

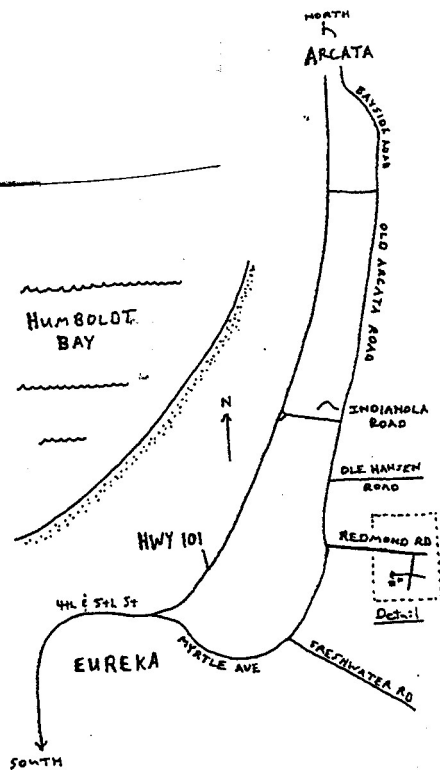
BB



Maps to Meetings



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SHASTA AREA GROTTO MEETING SEPTEMBER 21, 2001

The meeting was called to order at 7:30pm. at Ray Miller's home in Mt. Shasta.

Present were: Jim & Liz Wolff, Bill Broeckel, Melanie Jackson, Bill & Cheryl Kenney, Jim Kottinger, Kelly Fuhrmann, Matt Reece, and guest speaker Peter Van Susteren.

Sept. balance \$807.46.

Correspondence: Rec'd an EA report from the BLM in Alturas about reclaiming a half mile of road and an old camping area South of Fall River Mills that is in the area of Big and Popcorn Caves.

Old Business: Oregon Wild Cave Tours has closed. Sand Cave date for gating has been changed again and a date rec'd from Jim Stout of Oct. 27(Saturday) suggested. Liz will check to be sure they want to do it on this date. Our problem is if we have enough welders. Regarding Popcorn cave – Big Cave has a large colony of Townsend LongEared Bats so there is a possibility that the cave may need to be gated; however, Ray Miller suggested we hold off a couple of years to see how the bats do. If we do gate this cave we might possibly help with welders and volunteers, but would need help with lodging. Jim & Liz Wolff attended the Western Regional meeting on Technology and Caving at Berkley-Toulome Meadows. Very few motions were brought up. Science and conservation areas have grant money available. It was reported that the Under the Earth Day was not very successful this year with only a couple of grottos participating. The Cal Caver will try to be issued every 3 months. The Western Regional donated \$120 dollars to the Lava Beds Research Center. The LBRS of which Janet Sowers is the head has met with a hold up on the production of the architectural plans. Since they were not finished this summer the ground breaking probably won't take place this fall.

New Business: Peter Van Susteren of the F.S (McCloud District) spoke to the grotto at length about the plans for the Shasta/Trinity Forest Region 5 meetings to take place the week of Oct. 2-4. The meeting in Alturas with the tribal liaisons for the native Americans has been canceled at the time of the grotto meeting as far as they know. They will try to hold the meeting anyway. Peter's normal job with the FS is watershed restoration, minerals and forest management of timber sales. Thus coordinating and trying to take action in actively managing caves in relation to the cave protection act is new to him. This is why he wants our input on Oct. 3& 4 with the people in the FS that are above our district. They planned a review of the Cave Protection Act. He also let us know that Kelly Fuhrmann who works at the Lava Beds has been hired (for one month) to help deal with the cave issues, regarding tours, reclamation, law enforcement and vandalism which is old news to the grotto, but new to the higher ups in FS management. Peter wants the grotto to host a tour to raise our issues and to say what we want the higher ups to know about the needs of the caves. Areas he mentioned we visit were Jot Dean, Roadside Complex, and Bat Cave for sure and any others that we think are important to illustrate our issues. Then in McCloud on Thurs. the 4th of Oct. there would be a review of the objectives of the meetings with current issues and strategies to gain a direction for regional policy and where it is going and to hope for some kind of a group consensus. Regarding the Cave Management Tour – Bat cave still has no interpretive signs in the 5 years since the gate has been placed there. Do we want to take them to Bobcat, Rudy Tooty and 3 Level Caves? The 20th SAG Anniversary is coming up In March 2002. Liz wants a list of all past members with updated names and addresses as we can find them so that the people can be notified of any activities we may plan to get everyone together. The grotto is open to any ideas you may have for an anniversary get together.

The meeting was adjourned at 9:50 pm.

Respectfully Submitted,
Melanie Jackson

MJ

BARNUM GATE AFTER TWO YEARS By B. Broeckel

The Barnum Cave gate was put up on September 14-15, 1999. Now two years later I would like to report on the cave and the status of the gate. This is a popular and well known party cave. The entrance is easily reached by automobile, definitely a drive-up cave. The short bit of dirt road leading from the highway to the entrance has also been gated, but I have never seen this gate closed or locked. So the cave gate would seem to be at risk.

Nevertheless, the gate has remained in good condition for the first two years.

Some factors are working in its favor. The explanatory sign provides some reasonable justification for the gate that most people can accept (it is for the bats). The closure is only seasonal, so that the party people are not locked out completely all the time. The gate design and construction are formidable and effective. Early results on the number of hibernating bats have been encouraging.

Not that everything has been lava roses at Barnum Cave. The cave has been shot at and continues to bear some rough usage. Evidence of shooting with a 22, and later with a shotgun, was found on the ground at the entrance. Bullet ping marks were found on the gate, but so far the angle iron has withstood this treatment. On two other trips to check on the gate, we hauled armloads of firewood out of the entrance.

There have been two summer trips with school kids to clean up Barnum Cave, on July 18, 2000, and again on Aug 25, 2001. The summer "open" season has made these trips convenient and easy to arrange. On both trips about two small garbage bags of trash were removed. The general impression is that the cave still accumulates trash, but not as much as we saw before the cave was gated.

Once we were there at the entrance when a group of non-descript young people drove up in a car. When they saw that we were there, they decided to drive off without even stopping long enough to talk with us. They made some obscene gestures at us as they drove off. I'm not sure what was going on exactly, but we figured that they didn't like it that we were there.

The bats, on the other hand, seem to be adjusting to the gate, and are using Barnum Cave as a more secure and less disturbed hibernaculum. Early reports seem to indicate that encouraging numbers of bats are present on the counts which have been done. It will be interesting to get some follow-up bat data from the biologists, and to see how things continue to go on the integrity of the gate. The very accessibility which allowed the cave to be so heavily vandalized also makes it easy to check on the gate. We have been doing gate checks about once a month now without going much out of our way to do so.

It has been two years, and so far so good for Barnum Cave and its gate.

SAND CAVE GATES PROJECT **OCT 29-31, 2001** By B. Broeckel

Cavers are invited to come on out and help gate another Shasta Valley lava tube on Monday, Tuesday, and Wednesday next week. Jim Stout of the Goosenest Ranger District is leading this project to install two gates on Sand Cave. The only entrance to the cave is a skylight and gates are planned to protect passages both upflow and downflow from the entrance. The purpose of these gates will be to set aside cave habitat for bat maternity colony formation. Bats are known to have value in pest control for the nearby agricultural community of Big Springs. Bats are already known to be using the cave as a maternity site.

Much like Barnum Cave, Sand Cave is subjected to heavy local recreational use, and to the abuse of cave vandalism. Like Barnum, the gates on Sand Cave will be used to subject the cave to a seasonal closure. Since the Barnum gate protects the bat hibernation, and the Sand gates will protect the bat maternity, the seasonal closures for the two caves will be offset. Most of the time, one cave will be closed for the bats, while the other cave is left open to the general public. This appears to be a fortuitously equitable arrangement for all involved parties. There is something intellectually pleasing about the concept as a whole. The entrances to the two caves are only a couple hundred feet apart. It may be that the same bats that give birth in Sand Cave spend winters in Barnum.

So come on out and help make sure Sand Cave gets some gates as good as the one in Barnum Cave. Those gating days will be working days for many of the cavers, but even a site visit will help encourage the Forest Service work crew. I'm hoping to stop by long enough to get some pictures, so watch for a more detailed review article on Sand Cave in a future SAG RAG. **BB**

ARPA: Cultural Site Etiquette

Today, the single largest problem cultural resource managers face is unintentional damage caused by visitors. Sadly, impacts occur even where visitors consistently practice minimum-impact techniques. Therefore, when visiting archeological and historical sites, minimum-impact techniques are a requirement. **There can be no compromise in protecting these fragile and priceless resources.**

Archaeological sites are protected by the Antiquities Protection Act of 1906 and the Archaeological Resources Protection Act of 1979 (ARPA). The 1979 Act provides stiffer penalties, plus a reward for information that leads to a conviction. Please notify rangers if you discover any illegal activity.

- Keep in mind that not entering a site and viewing it from a distance will reduce the impact a site receives. People may say, "It's just a couple of us and it's just this one time," but there may be thousands of people saying the same thing.
- STOP, LOOK and THINK before entering a cultural site. Try to locate the midden area (the trash pile), so you can avoid walking on it. Middens contain important archaeological artifacts and information. They are extremely fragile and walking over them will cause damage.
- If a trail has been built across a site, stay on it. Foot traffic, especially on the midden, causes erosion that may undermine the walls of structures above. This is the most severe type of impact caused by continual visits to a site.
- When you see "thousands" of potsherds and other artifacts, leave them. If each visitor took just one artifact, there would soon be none left.
- Do not camp in or near cultural sites. It is illegal to do so.
- Moving rocks and tree branches to climb to high places destroys site integrity. Avoid touching plaster walls.
- Enjoy rock art by viewing, sketching, and photographing it. NEVER chalk, trace, or otherwise touch rock art. Any kind of direct contact causes these ancient figures to disintegrate.
- Creating modern "rock art" is known as vandalism and is punishable by law.
- Never build fires in alcoves, even alcoves that don't seem to contain archaeological remains. Sites may not be obvious.
- Climbing on roofs and walls can destroy in a moment what has lasted for centuries.
- Cultural sites are places of ancestral importance to American Indians and should be treated with respect.

Courtesy of the National Outdoor Leadership School (NOLS) and the Bureau of Land Management.

THE CAVE ENTRANCE

By B. Broeckel

The transitional zone between the outside world and the dark interior of the cave is an important and delicate spot. Much of the traffic in and out of the cave goes through the entrance. The cave reveals itself at the entrance, and there are many different kinds of entrances, in terms of size, shape, visibility, accessibility, and so on. Today let's think about cave entrances. If we think about entrances, maybe we can take better care of them.

For the purposes of cave survey, we tend to define the beginning of the cave at the deepest indentation of the dripline. This becomes a reference point for survey data coming out of the cave, as well as a connection point for surface representations. For vertical entrances, the beginning point is generally established at the low point along the circumference of the pit. So we see that survey defines the entrance, or the beginning of the cave, as a point in space and time. (Adaptations may be required due to local circumstances unique to that entrance).

The cave entrance must also be understood in broader terms. Inside the cave, the entrance has a range of influence that includes the familiar "twilight zone" and an even larger "zone of temperature instability." Less considered is the mirror image zone of influence the cave exerts on the outside world. For example, this would be a zone of temperature and humidity modification extending outwardly from the entrance. This should all be considered as part of the totality of the phenomena we call "cave entrances."

The plant and animal communities both inside and outside the cave entrance can be used as a rough index to potency and durability of these microclimate effects. Researchers have shown that these effects extend further than might be expected, in some cases up to a quarter mile from the entrance. This is particularly true with caves that often blow air, or periodically exhale.

Within the entrance, the cave will stabilize the temperature and humidity gradients even more, depending on the particular arrangements. In general, that deeper you go, the more stable it becomes. The cave exerts other effects as well, such as increased shading and protection from the extremes of the elements. One current theory has it that caves provide a safe haven in the universe, and that from this womb of the caves, life itself springs forth. What we see now are modified environments so dramatic that a specialized biology is sustained quite distinct from that present in the surrounding areas. For example, plants may survive in cave entrances as relicts or island groups far isolated from other instances of that species, separated in terms of time as well as distance.

Deeper into the cave, plant life becomes dwarfed or inhibited by light deprivation, until the "green line" is crossed, and direct chlorophyll based systems are no longer apparent. Individual plants such as mosses near the green line seem especially fragile and subject to damage from passing cavers. If not repeated or extensive, this damage may be reversible with time. In some cases we have seen damaged plants at the entrances regenerated.

After you visit a number of caves, start comparing the entrance areas of well known caves with those of less frequently visited ones. The run down cave will look bare and dusty, while the less traveled cave will show lush gradations of vegetation. There is a tendency at the entrance to any cave to feel that the cave really hasn't started yet, not until the dark zone is reached. So we might not yet be in the mindset of careful caving. But we have seen that the zone of influence may have already been breached a quarter of a mile back along the route to the cave. We must realize that the entrance area is also a unique and extremely sensitive part of the cave. Let us vow to be more careful with cave entrances.

Each cave has its own setting and requirements. When possible, the caving portion of the trip can be staged a short distance from the entrance, perhaps in a shaded and durable spot. Our approach to the entrance can be conducted in a way that avoids drawing attention to the cave. Once all is made ready, the group can gingerly move through the entrance area, so as not to disturb things. The more experienced caver might go through first, and talk about the loose rock or vulnerable plant or animal. The following cavers can do their best to reproduce or improve upon the course taken by the first.

There is a tendency to be careful going in, only to blunder clumsily on the way out, when we might be tired or anxious to be outside. However, the careful entry process can be repeated on the way out, and the cave entrances will stay in better shape. When there are adverse weather conditions outside, the caving can alternatively be staged inside the cave, say just beyond the green line, with equal care still taken while passing through the entrance area. Necessary adaptations will be required for vertical, small, or awkward entrances. Some simply may not bear much caver traffic, and might be avoided for the sake of the entrance conditions alone.

If we can improve our approach to the cave entrance, a conservative tone will be set for the whole trip, and the fragile entrance zones will be subjected to less wear and tear. I have room for improvement in this area, maybe we can all think about it and do a little better. Remember, the entrance is part of the cave. Now that I think about it, every cave that I've ever been in has had at least one entrance. **BB**

SAG RAG

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