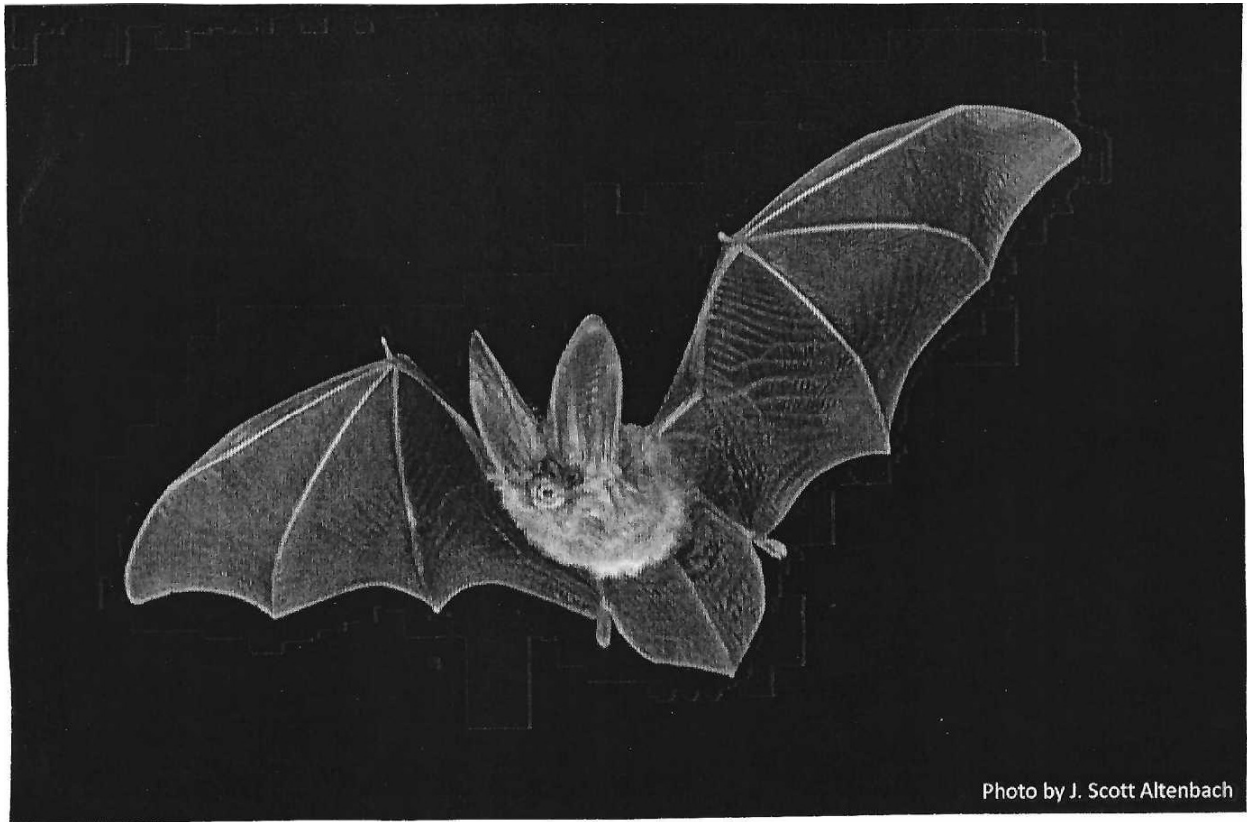


sag rag

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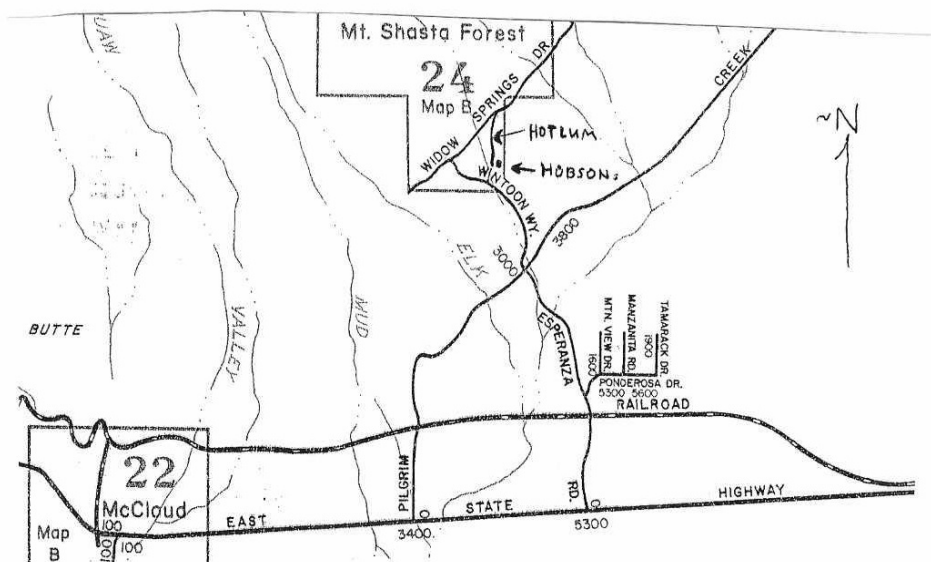


Inside: Bat Reminders and Grotto Cave Trips

The SAG RAG is published by the Shasta Area Grotto of the National Speleological Society. Grotto meetings are held at various sites or homes on the fourth Saturday of most months at 7:30 p.m. Meeting locations are announced in the SAG RAG, subject to changes by email. Membership dues are \$5 per year, due at the first of the year, and include SAG RAG subscription. Send dues to treasurer Melanie Jackson at 708 Yama St., Yreka CA 96097. Original material submitted for the SAG RAG, unless otherwise noted, is copyright to the SAG RAG. Within the caving community, such may be copied with credit given to the author and the SAG RAG. For use outside the cave community, please seek the permission of the author or editor first. Send material for publication, always welcomed for consideration, to Bighorn Broeckel, 2916 Deer Meadow Road, Yreka, CA 96097 or <caverbill@live.com>. Also check on the Shasta Area Grotto website.

CAVE CALENDAR 2022

Aug 27 SAG meeting 7:30 pm at Hobson's near McCloud.



Directions: If Pilgrim (N) is closed continue to Esperanza (NW) and cross Pilgrim onto Wintoon, then right on Hotlum to 4418.

SAG RAG SUMMARY

By Bighorn Broeckel

Here goes a summery summary. June – good. July – good until the end. August – watch out. Monsoon welcome, I think. Covid summer surge might finally subside, soon? Monkeypox! War. Economics. The list goes on and on, but caving remains just below the surface, offering some “sanity” in the face of excessive chaos. For example, Mark Fritzke, coming back from the nearly dead, tells me he recently declined dessert, so that he “could still fit”. There you go, some hope like a blast of cave air through a hole not quite too small. Sanity.

This issue features some of the promised articles covering two recent grotto trips and some considerations about bats. With so many distractions these days, I for one find I need to refresh these perspectives respecting our friends the bats. They have certainly been in the caves longer than us, lucky little bug-eaters.

BB

Apr 23, 2022 Shasta Area Grotto Meeting

The meeting was called to order at 7:29 pm at Steve's in McCloud.

Present were: Steve Hobson presiding, Bill and Judy Broeckel, Logan Hellein, Melanie Jackson, CJ and Kit McKinley, Dave Smith, Jim and Liz Wolff, and guest Tessa Richards.

Minutes from the March 2022 meeting were accepted as corrected.

TREASURER'S REPORT: The current bank balance is \$475.94 plus \$116.00 petty cash.
Total = \$591.94 after sending \$650.00 to NSS for a display case.

WEBSITE AND E-RAG: E-Rag is up to date.

SAG RAG REPORT: The next issue will focus on Hat Creek, and will have a piece on Nancy Cave by Bruce Rogers. We have a request for an article on cave policies with respect to protecting Townsends Bats.

LISTSERV REPORT: No changes

2022 SAG CALENDAR:

May21 Meeting 7:30 pm at LABE, with most of Sat. set aside for to prepare for the June 10th rescue training weekend (We will be camping; the Research Center will not be available.) We are planning on driving up from Jim & Liz's 8 am on Sat.

Fri. June 10 to Sun. June 12 LABE, Cave rescue training with Siskiyou SAR and LABE staff (RSVP: Research Center has been reserved, with a \$5 per night charge).

Fri. June 24 to Sun. June 26 We will be at Stufflebeams in Lewiston, Meeting Sat. at 7:30 pm. Caving in the Hat Creek area and possibly DeLoma or Hall City Cave.

Sat. July 23 Meeting at 7:30 at Bill and Judy Broeckel's. Activities TBD.

Sat. Aug. 27 Meeting at 7:30 at Steve's in McCloud. Activities TBD.

Friday Sept. 2 through Wed. Sept. 7 Marbles trip with mules. The round trip cost for the mules is \$200 including tip, with a limit of 75 lbs. of gear per person. If you want to ride in on a horse that is extra. Steve will make a deposit to the packers and collect the money from those of you planning on having your gear packed in. Let Steve know ASAP to reserve a mule. We will likely camp in the meadow below the springs the first day or two.

Sat. Sept. 24 Meeting 7:30 pm. at Wolffs', with a birthday or two. Activities TBD.

Sat. Oct. 29 Meeting at Melanie's in Yreka. Activities TBD.

Sat. Dec. 3 Meeting at 7:30 at Bill and Judy's, with cookies.

continued

NEW BUSINESS:

For the 2024 national conference we will need new people on board if we are to help out.

SAG/SAR Lava Beds training is being arranged by Sharon and Thorne Bertrand. Plans will be firmed up at the May 21 meeting.

Dick LaForge phoned in an update on Mark Fritzke. He is at home and in physical and occupational therapy and getting back some ability to move his arms and legs. Still a long haul.

TRIP REPORTS

Most of us on hand were at Battle Creek Cave Saturday, learning not to trust cave ladders, and with two of us needing assistance ascending the drop: Logan being new at vertical work and me with sloppy gear arrangement and exhausted after forgetting to have lunch. Kind of a first for the easiest vertical cave in the state.

The meeting was adjourned at 9:30 pm.

David Smith, SAG Secretary

DS

Townsend's big eared Bats

Liz Wolff, Bruce Rogers, Katrina Smith

Townsend's big eared bats (*Corynorhinus townsendii*, or "Corys") are found throughout western North America, and are a species of special concern to state and federal agencies.

Management focuses on conservation of this at-risk species. While White Nose Syndrome (WNS), a deadly fungal disease, is prevalent in eastern US bats and has decimated bat populations there, it does not seem to affect the Corys. (More on WNS at the end of the article).

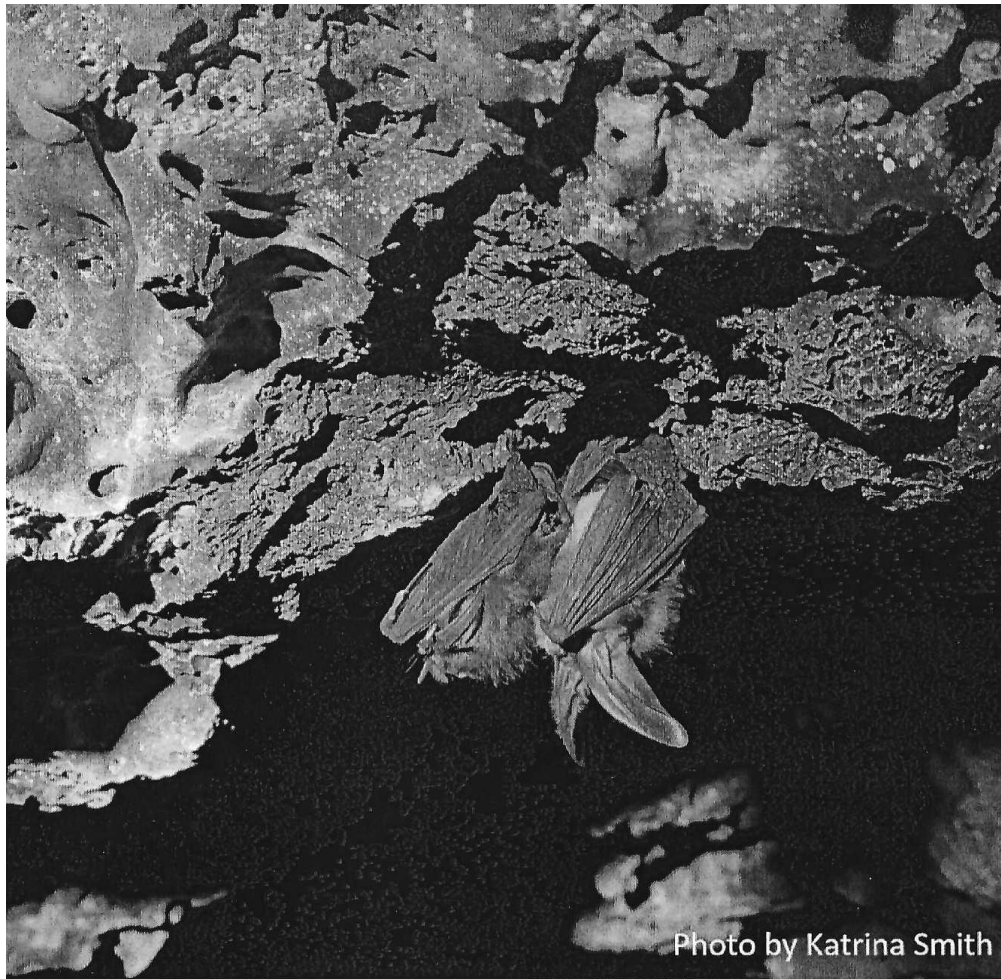
• General info & Habitat

Corys are about the size of a small lemon, medium brown furred, with enormous dark brown ears as long as their bodies. The ears may be folded back along the body or rolled during sleep. Their wingspan is about 10 inches and the bones in their wings are visible, thus their order, *Chiroptera* or 'hand wing.' Most Corys live about 16 years. Other bat species living in our caves include Mexican free-tailed bats, big brown bats and little brown bats.

Corys hunt using echolocation, their calls are generally of low intensity and short duration. They feed in the brush and the low canopy outside their cave dwellings. Their preferred food is moths that inhabit the roost area. A scattering of moth wings and guano on the cave floor indicates a feeding station. Their guano is distinctive, the size of a rice grain, golden brown and crumbly with indigestible insect parts, narrow and pointed at one end.

Roosts are commonly found in limestone or lava caves or mines located in brushy and forested lands with water available within a mile or so of their roosts. Generally these bats roost in plain sight making them more susceptible to disturbance; they do not squeeze into cracks as some bat species do. Their roost loyalty is phenomenal, returning to the same cave yearly, even when it is compromised by visitation or alterations. They are curious, sometimes flying by and "inspecting" visitors entering their roosts.

continued



Please, don't disturb bats with noise or photo flashes, they will appreciate the courtesy!

- **Life cycle**

Corys hibernate to survive the winter, gathering in winter colonies in mid to late September. Hibernacula are located far from cave entrances in areas with stable temperatures and humidity. The bats are able to lower their body temperature to near the ambient temperature of the roost. Sometimes found hanging singly, Corys may clump tightly together during hibernation to prevent freezing. If ice crystals form in their blood, they will die. Disturbance of winter roosts causes bats to burn stored body fat which sustains them through hibernation, and may lead to their deaths before spring. Please do not enter a known winter roost mid-September to early April.

Mating occurs in the fall as hibernation is beginning. Sperm is stored inside the females' body until hibernation ends and enough food is available to support the mothers and next generation of bats. Females absorb the sperm, self-impregnate, and begin to form maternity colonies in mid-April in caves with relatively warmer ambient temperatures. The pups, about 1/3 the mothers' body weight at birth, are born live mid to late June, and are nursed by their mothers for about two months. They learn to fly and hunt to gain enough body fat in the few warm months to prepare for the next hibernation period. Males roost singly in caves, avoiding maternity colonies. Disturbance of maternity colonies mid-April to mid-August, usually found clustered near warmer

continued

cave entrances, may cause females to abort the fetuses, drop their pups, or to totally abandon the maternity roost, possibly leading to the death of the baby bats, an entire bat generation. When entering a cave in spring or early summer, look for clumps of bats as this indicates a maternity colony, and if seen, exit the cave immediately.

As the pups grow, mothers and pups fly together exhibiting “paired flight” from late July to mid-September. In that time the young learn to maneuver through their cave home, perfect the use of echolocation, avoid predators, identify preferred food species, how to catch and eat them, and store body fat; all to survive the coming winter. Volant (flying, hunting) bat pups are not as vulnerable to disturbance during this period in the maternity cycle.

When the weather begins to cool, becoming more fall-like, the bats begin to gather in their winter colonies to begin the cycle over again. If you enter a cave in the winter or summer, watch for clumps of bats, an indication of a hibernaculum or a maternity colony in that cave, and if seen, exit the cave. Fall is the best time (for the bats) for you to visit a cave normally used by bats; it causes the least disturbance.

• Reporting

Report bat sightings to Shasta Area Grotto members Liz Wolff (ringbat1@gmail.com, caver), Tom Rickman (torn.rickman@usda.gov, wildlife biologist), Katrina Smith (smith.katrina.j@gmail.com, wildlife biologist), or Bruce Rogers, Western Bat Working Group (bwrogers@dslextrreme, caver). Report cave name; general location; approximately how many bats were seen either singles, flying, or in clumps of 10 or more; date and time of day of sighting. This detailed information will assist the grotto and bat biologists in conserving these important creatures.

• White Nose Syndrome

White Nose Syndrome (WNS) is a bat disease caused by a fungus found in caves and mines and can be carried on the bats' skin. It appears from studies done in the eastern US that Carys are resistant to the White Nose Fungus that has decimated mine and cave-dwelling hibernators in the eastern US and Canada; the fungus has been found in several northern California counties, but the disease has not shown up here, yet. Western bat species that could/would be affected include: little brown bats, Yuma myotis, fringed myotis, long-legged myotis, western long-eared bat and big brown bats. Non-hibernators seem to be spared the syndrome. The main spreaders of the disease appear to be the bats themselves, but to ensure you do not become part of the disease loop, decontaminate your caving gear following cave trips, including your boots, caving equipment, cameras, and clothing.

For the latest WNS spread map, decontamination procedures, and info see <https://www.whitenosesyndrome.org> .

• Simple WNS decontamination steps include:

Step 1:

- Remove mud & debris using soap and water (Dawn dish soap and Woolite detergent are effective)

Step 2:

- For submersible equipment: submerge in HOT (131 F / 55 C) water for 5 minutes
- Non-submersible equipment: spray thoroughly with 70% isopropyl alcohol

Step 3:

- Let dry, and go caving!

LW BR KS



FIRST MONTANA CASE OF WHITE-NOSE SYNDROME DETECTED IN FALLON COUNTY BAT

Apr 23, 2021 3:09 PM

MILES CITY – A myotis bat, found dead in Fallon County in southeastern Montana, has been confirmed positive for white-nose syndrome.

The bat was sent to the U.S. Geological Survey National Wildlife Health Center in Madison, Wisc., for analysis. It tested positive for *Pseudogymnoascus destructans* (Pd), the fungus that causes white-nose syndrome (WNS) in bats. A pathologist also confirmed characteristic WNS lesions in the skin of the bat.

Biologists with Fish, Wildlife & Parks have been closely monitoring for WNS in recent years as part of an effort to track the impacts of the disease once it arrives, but this is the first case detected in Montana. Bat droppings and environmental samples collected in six eastern Montana counties last summer tested positive for the Pd fungus; however, presence of the fungus does not necessarily confirm the presence of the disease. Also last year, WNS was detected just across the border in North Dakota.

WNS has killed millions of bats in North America since 2006. A powdery white fungus grows on the skin of hibernating bats, often on the face – hence the name “white nose.” The fungus causes irritation and dehydration, causing bats to arouse early from hibernation and to exhaust fat stores they need to survive the winter.

WNS has now been confirmed in 36 states and seven Canadian provinces. It can wipe out entire colonies of bats and has caused dramatic population declines in eastern states. WNS is not known to affect humans, pets, livestock or other wildlife.

“Bats provide important services in protecting crops and timber from flying insect pests,” said Kristina Smucker, nongame wildlife bureau chief for Montana FWP. “Bats also eat tons of mosquitoes each year, meaning they play a role in reducing the spread of some mosquito-borne diseases. Like we do for all wildlife, we are doing what we can to keep bat populations healthy.”

In 2020, FWP temporarily prohibited the capture of all live bats due to unknown risks of COVID-19-infected humans inadvertently transferring the virus to bats. While some sampling of live bats has resumed in 2021, particularly to survey for Pd and WNS, biologists are taking recommended precautions to minimize any risk of COVID-19 spillover to bats. In many places, to substitute for sampling of live bats, biologists have been collecting bat droppings or environmental swabs at roosts to sample for Pd and to look for any bat mortalities that might be attributable to WNS. They visit known roost areas, including the undersides of bridges.

State and federal agencies are asking for help to monitor the spread of this disease. Anyone seeing a dead or sick bat, or group of bats, should not handle them, but rather call a local FWP office for further guidance.

“Like other wildlife, bats may get sick or die for a variety of reasons,” said Emily Almborg, disease ecologist for Montana FWP. “We are particularly interested in investigating clusters of dead bats or bats that are found dead during the winter or early spring.”

For more information, visit <https://www.whitenosesyndrome.org/> (<https://www.whitenosesyndrome.org/>).

-fwp-

UNOFFICIAL MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS RELEASE

(cave name withheld?) LOL

GROTTO TRIP April 2022
By Jim Wolff

jim <eyemustdigtreasure.2@gmail.com>
Mon 4/25/2022

It has been quite a while since Claude Smith, myself and (sorry, forgot his name) mapped this cave in 1981. We named a group of two caves, for simple reasons from where they are located, but later named this one McCloud Reservoir Cave, mainly everyone else was calling it that anyway ...!

I had only had a couple trips there since then, but this trip, I remembered the details of the cave well enough to direct some of the traffic that day cavers all over the place ...!

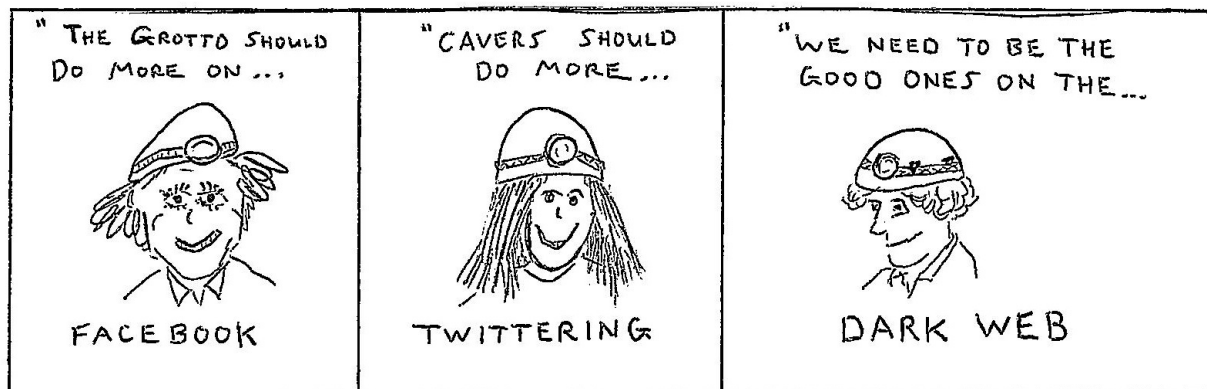
We all had a great time even though a few things commonly reappeared during the trip: like slip/falls: gear and gear management. Difficulty on rope too, as most everyone had issues on the rope AND the darn ladder ...! Fun, just add **mud** ...!

Viewed as a training time trip, we had a cable ladder(!) and a 10 mil rappel rope to go up and down on, and Steve had some other exercises planned for us to do too, but they never happened. Too bad, I would love to see those happen someday ...

Anyway with all the bumps, bruises and mud, everybody made it out of the cave safely. We can now freely admit that we ALL learned a LOT from the experience! Thanks go to everyone, for helping each other, and for someone suggesting the cave...!

We all had **fun**!

JW



GROTTO TRIP July 2022 By Sharon Bertrand

WATER CAVES SUMMARY of July caving trip 7/23/22

Ten of us, one as young as 10 years of age, headed off in 90+ degree weather to explore parts of the Water Cave System, which is somewhere off Hwy 49. So grateful Bill Broeckel chose this cave as it was naturally air conditioned! Bill brought his 2 inch log notebook, which included photos, drawings, maps, and newsletters – some with poetry of caving. There were 54 caves he had visited in the water cave system; although he said there are many more! Dave made sure to log our GPS locations and keep us safe and well stocked with extra gloves, Gatorade etc ...

We hiked in to find several cave openings, and we entered at least 3 – although it seems like more when you go in and out. I don't know this area so I can't name the places where we entered, but on the map given to us by Liz Wolff, it says strange things like "silver room", "orange barrel" or "burnt stick" as markers. I am guessing the "burnt stick" is the torch stick that Bill found, probably from early cave explorers as it looked like a milled piece of wood with the end dipped in pitch and lit on fire, during those pre-flashlight days.

Sometimes a couple cavers went off on tangents to explore other interesting areas. On one end of the cave where Kit and granddaughter crawled through, they saw 1-2 inch golden tips on the lavacicles ... not to be confused with the icicles we saw where there were hidden ice blocks. There were interesting walls that looked like wrinkled hippopotamus skin, and of course all the interesting wrinkles and crinkles and bubbles that form in lava tubes. I'm sure there are technical names for all these formations that I just don't know. Kit found a "horseshoe" formation that happens when a lava bubble pops. There was one slide down area where a big rock fell down into a big room, but fortunately everyone knew to stand clear. Bill and Kit made us some nice stairs steps, so we didn't have to slide down and cause another avalanche. There are always sections of loose rocks. Bill measured the height of the big room at about 35 feet high.

My favorite part was crawling by an open window to the right side and then up to a room lit up by what looked like a string of party lights. It was the reflection of headlights onto a row of water droplets and probably some bacteria mixed in that made it look so sparkly! Photos don't do it justice, but Thorne took some nice ones; he was our photographer for the day. When I asked what this area is called, CJ stated:

"It's CJ's room; I could stay here all day." We all agreed. It was nice and cool, with water droplets spraying our face. We turned off our headlights to see darkness as Bill told us "dark jokes". HAHAAH!

Sharon Bertrand

SB

**"It was possible on such a night to become as disoriented as a
man without a torch in a cave"**

Snow falling on Cedars By David Guterson p. 394



SAG RAG
2916 Deer Mdws Rd
Yreka CA 96097

STAMP

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