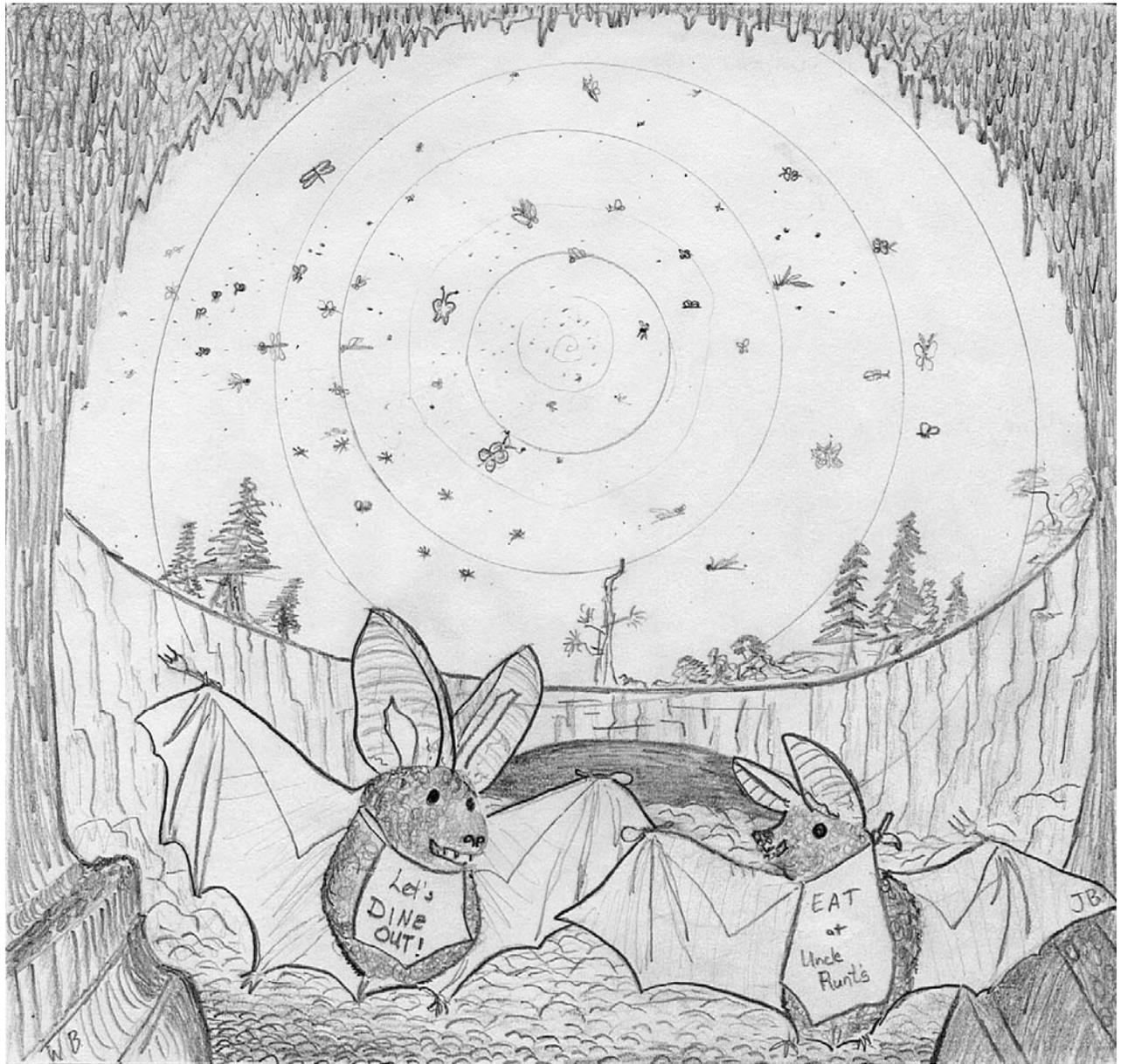


SAGRAG

MARCH – APRIL 1995

VOLUME 14 NUMBER 2



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SHASTA AREA GROTTTO OFFICERS – 1995

Chairman – Neils Smith (916) 254-6764
 Vice Chairman – Dick LaForge (707) 443-2626
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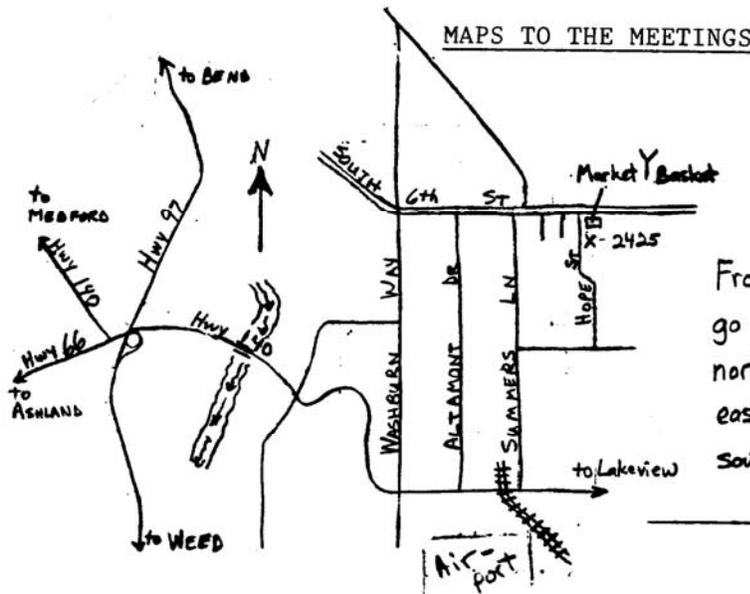
1995 MEMBERSHIP LIST - SHASTA AREA GROTTTO

<u>NAME</u>	<u>NSS#</u>	<u>PHONE</u>	<u>MAILING ADDRESS</u>
Bair, John	36127	(707)445-8137	POB 896, Arcata, CA 95521
Broeckel, Bighorn	31702	(916)842-3917	524 Annie St, Yreka, CA 96097-3015
Broeckel, Judy	31703	(916)842-3917	524 Annie St, Yreka, CA 96097-3015
Donovan, Julie	36128	(707)445-8137	POB 896, Arcata, CA 95521
Fitzpatrick, Bill	38363	(503)779-1201	747 Highland Dr #10, Medford, OR 97504
Fritzke, Mark	16064	(707)822-8566	POB 4836, Arcata, CA 95521
Gibson, Don	39584	(510)676-3749	POB 6093, Concord, CA 94524
Henderson, Albert	25329	(916)527-7513	14500 Kenney Ave, Red Bluff, CA 96080
Henderson, Phylis	25330	(916)527-7513	14500 Kenney Ave, Red Bluff, CA 96080
Jackson, Melanie	36899	(916)842-9714	POB 1603, Yreka, CA 96097
Kenney, Bill	33394	(503)883-2781	2425 Hope St, Klamath Falls, OR 97603
Kenney, Cheryl	36868	(503)883-2781	2425 Hope St, Klamath Falls, OR 97603
Kenney, Zane	36867	(503)883-2781	2425 Hope St, Klamath Falls, OR 97603
Kottinger, Jim	26621	(916)926-3975	1922 Highland Dr, Mt Shasta, CA 96067
LaForge, Dick	16560L	(707)443-2626	450 Redmond Rd, Eureka, CA 95501-9526
LaForge, Evan	27121	(707)443-2626	450 Redmond Rd, Eureka, CA 95501-9526
LaForge, Kathy	32171	(707)443-2626	450 Redmond Rd, Eureka, CA 95501-9526
LaForge, Seth	22157	(707)443-2626	450 Redmond Rd, Eureka, CA 95501-9526
McGahey, Bill	31128	(503)826-9272	18508 W Fk Evans Cr Rd, Rogue OR 97537
Miller, Ray	25724	(916)926-2440	POB 475, Mt Shasta, CA 96067
Molter, Joe	06531	(916)243-8924	20568 Bernard Way, Redding, CA 96003
Osbourne, Ron	36456	(503)855-9635	13469 Duggan Rd, Central Pt, OR 97502
Reel, Dorothy	31877	(800)426-8395	964 Little Val Rd, Roseburg, OR 97470
Reel, George	31876	(800)426-8395	964 Little Val Rd, Roseburg, OR 97470
Smith, Neils	23836	(916)254-6764	721155 Alexander Wy Standish CA 96128
Sutton, Ben		(602)294-1279	5111 S Cherry #3, Tucson, AZ. 85706
Willey, Denise		(916)926-1535	1222 Ramona Dr, Mt Shasta, CA 96067
Wolff, Jim	07572F	(916)964-3123	POB 865, McCloud, CA 96057
Wolff, Liz	11701F	(916)964-3123	POB 865, McCloud, CA 96057

Cover: Judy Broeckel helps out with this pencil sketch of hungry bats who are happy to hear that April has come at last. Ah! The buzzing of the bugs. The mosquitoes whine, and the bats dine. The moth wings beat, and the Plecotus bats eat. Judy says that neither the bats nor the insects are meant to resemble any Grotto members.

CAVING CALENDAR

- May 12, 1995 Shasta Area Grotto meeting at the home of Bill & Cheryl Kenney in Klamath Falls, OR. Meeting starts at 7:30 PM. Lava Beds?
- May 13-14, 1995 Park/Caver rescue information exchange at Sequoia-Kings Canyon National Park. More details appear later in the newsletter.
- June 9-10, 1995 Shasta Area Grotto Cave Camp at Hat Creek. Grotto meeting at about sundown on Friday night. Come early, stay late. Cave workbook available to all participants w1th an idea list including three unpublished and only partially completed cave maps.
- July 17-21, 1995 NSS convention at Blacksburg, Virginia.

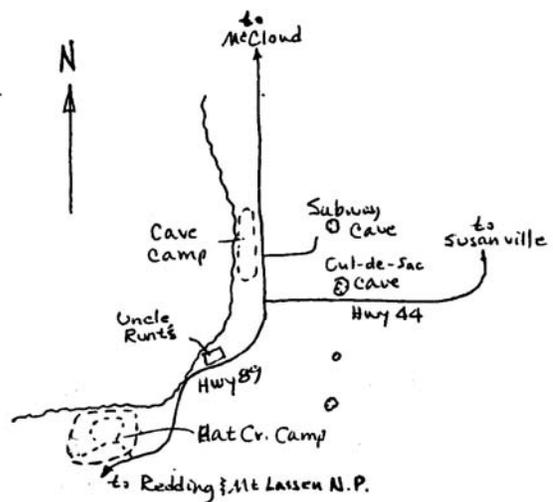


MAY 12, 1995
KLAMATH FALLS, OR

From Hwy 97 interchange, go east on 140 3.8 mi to Summers Ln north on Summers Ln. 2.3 mi. to S. 6th St. east on S. 6th St. 3 blocks to Hope St. south on Hope St. 4 houses to 2425.

JUNE 9-10, 1995
HAT CREEK CAVE CAMP

Try "Cave Campground" first. Neils will save some spots if he can. Second choice is Hat Creek Campground. If you can't find SAG, check the campground bulletin boards.





February 10, 1995 Shasta Area Grotto Meeting Minutes

Present: Jim & Bea Kottinger, Bill Kenney, Jim & Liz Wolff, Niels Smith, Ray Miller, Bill Fitzpatrick, Melanie Jackson, & Bill Broeckel.

Chairman, Niels Smith, called the meeting to order at 7:40 PM. The minutes were accepted as read. The treasurer's report showed a balance of \$457.93 before any dues that were received at this meeting.

Correspondence: The Western Region Cave Rescue Commission (WRCRC) has changed its name to the NCRC WRTC (Western Region Training Committee). WRTC announces a cave rescue seminar in association with Sequoia/Kings Canyon National Park. Tentative date is April 29-30, but is still subject to change.

Literature was received for the 1995 National Cave Management Symposium XII, Oct. 25-28 in Mitchell Indiana.

Jim Wolff mentioned Inter-Office Memos that talked about removing Significant Cave Names from USGS map quadrangles.

Old Business: None.

New Business: The March SAG meeting will be at the Wolff's. The April SAG meeting is tentatively planned for the coast at Laforge's or the Fritzke's. If we can't have the meeting at the coast the alternate place will be at Bill and Cheryl Kenney's in Klamath Falls.

January 20, 1995 Bill Broeckel, Liz Wolff, and Niels Smith met with McCloud Head Ranger, Bob Hammond and presented him with a 20 page Cave Management Proposal. Jim Wolff has staff meeting notes from one week later in which Bob mentioned progressing with caves and cave management. It was decided to wait and see if Bob Hammond asks for more information or help.

Ray Miller mentioned that the Mt. Shasta Chamber of Commerce wanted a list of cave names to publish for interested tourists. He gave them some names of caves on public property, eg., Shasta Caverns, Samwel etc. The grotto did not have any they wanted to sacrifice.

John Roth of Oregon Caves suggested the last weekend of Feb. 25-26 there is a possibility of a survey or restoration trip at Oregon Caves.

Trips suggested for the grotto by Niels Smith were possibly Oregon (Bend), Washington, Idaho, or Eastern Nevada. After discussion any trips regarding these areas were tabled.

Bill Fitzpatrick the chairman for the SOG gave a brief outline of some trips on their calendar that maybe some SAG members might be interested in. Some were: With the possibility of a land exchange there will be mapping, cleaning, exploration and documentation of the Marble Mt. Cave in Grants Pass every weekend beginning in March. A Scorpion Cave follow up of photo stations. A trip to a well cared for mine in Ashland. A dig at Ice Box Cave in the Butte Falls Ranger District.

A Kangaroo Karst walk. A trip to the coast north of Brookings to Boardman Sea Park that has lots of sea caves. Possible climbing practice at Lime Rock.

A barbecue/picnic on the Rogue River, strictly for fun with no caving. An equipment sale. SOG members volunteer to help with BLM Cave Patrols and have privileges to use vehicles for doing cave management work and filing reports. Bill gave us this information to see if we could plan any joint grotto get togethers.

The meeting was adjourned at 8:36 PM.

A slide show followed the meeting. It was on all the preliminary work of designing the rebreather units and training the cavers who would become the divers that use them. These are the units and caver/divers that went on the Bill Stone Huautla expedition in Oaxaca, Mexico to push the unknown depths of Sistema Huautla.

March 10, 1995 Shasta Area Grotto Meeting Minutes Summary

The meeting was called to order at 7:50 PM. Present were Jim and Liz Wolff hosting the meeting at their home in McCloud, Bill and Cheryl Kenney, Ray Miller, Neils Smith, Denise Willey, Don Gibson, Jim Kottinger, Steve Dagitz, and Bill Broeckel.

No minutes from last meeting, with Melanie in Mexico. (Entire February minutes published in this issue of the SAG RAG).

Treasurer's report: Starting \$451.93, new total \$559.33.

Correspondence: Internal report disk returned from NSS. Jim W. shared his communications with Oregon Caves guides and other interested parties regarding restoration issues. George & Dorothy Reel send greetings. Jim K. reports that Dorothy will be taking her last cancer treatment soon. Heartfelt response from those present, wishing Dorothy the best.

Old Business: Oregon Caves restoration trip report. Rescue committee re-named, with Mark Fritzke appointed chairman of training and rescue. Ray Miller appointed conservation chair. Jim Wolff appointed chairman of membership and chairman for our relations with Friends of Oregon Caves. Jim Wolff also reports that Forest Glen Marble Caves have been nominated.

New Business: Ray Miller is requesting that all cavers be sure to notify the BLM regarding any bat reports from BLM sites. The BLM has a current interest in bats. Bill B. reports counting 22 bats in Double Door Cave. The May meeting was assigned to the Kenney home in Klamath Falls. The June meeting will be a cave camp at Hat Creek.

The meeting was adjourned at 8:26 PM. Minute notes were respectfully submitted by Bill Kenney, standing in for Melanie Jackson.

SAG (general) MTG – 4/8/95 – held at Fritzke's

Meeting held during dinner. It wasn't called to order at 6 pm. Present: Mark Fritzke & Linda Villatore, Dick & Kathy LaForge, Jim & Liz Wolff, John Bair & Julie Donovan, Bill Fitzpatrick.

Liz read the notes of the latest NCRC meeting from the Western Region's Cave Rescue Coordinator.

Jim got a card from National Cave Nomination Clearinghouse for some recent nominations that he sent in. He's only nominating the caves on the FS's Shasta/Trinity NF recreation map, presently sold to the public.

- Discussion over the Pros and Cons of contacting FS about caves.
- Agreement (between Mark and Jim) to be more proactively involved with land management activities
- Jim suggested getting the FS to implement more holistic land (cave) management attitudes.
- Pros and cons of nominating some caves. Consensus was that some degree of secrecy will remain, until we can be assured of proper management.

Jim passed around the cave implementation process that he received from Jim Nieland recently. The cover letter says that the 1st round of nominations, the checks and balances period is extended until August 1st, then it will be the responsibility of your local Forest Supervisor to oversee the process.

Dick talked about his self-rescue in Patrick's Point Cave. (See last SAG RAG.)

Bill F. passed around SOG LOG newsletters to everyone.

Mark is giving a rope practice for SOG on May 6th if weather is ok, if not the 13th. To be held at Lime Rock, near Kerby, OR. We are invited and will bring Grotto rope (and you must bring your own personal gear).

John Bair's (Caving?) Agricultural Hint carbide + gophers! He proceeded to tell how to wipe out an entire backyard population of gophers, by using carbide and water. Carbide found locally is verry spendy tho.

Mark discussed mock rescue plans to set up a haul system to haul a weighted SKED up the Discovery entrance drops in Bigfoot this summer. Anchor points will be looked at. Natural anchors will be used as much as possible. He thinks that maybe a separate trip to think over the rigging might be a good idea; might try re-directionals. There will be at least one attendant with stretcher. The mock rescue will likely happen during Sept or Oct (or both) SpeleoCamps.

Mark wants to go to the yearly NCRC training but needs \$ sponsor to help him there. Motion was made and 2nd that Grotto nominate Mark to Western Region for next NCRC training.

Mtg. adjourned at 9:47pm (due to lack of interest and attendance!)

Many thanks go to Mark and Linda for their hospitality, the fine food and great weather!

RESPECTFULLY SUBMITTED by Jim Wolff – "acting" secretary

HISTOPLASMOSIS

By B. Broeckel, MD

Histoplasma capsulatum is a dimorphic fungus pathogenic to humans. "Pathogenic" means that it can make you sick. "Dimorphic" means that this fungus occurs in two different forms. The mycelial form is found in nature, and produces spores that are small enough to be inhaled into the deepest recesses of the human lung. At our body temperature, these spores can grow into the yeast form of the fungus, and cause a fungal pneumonia.

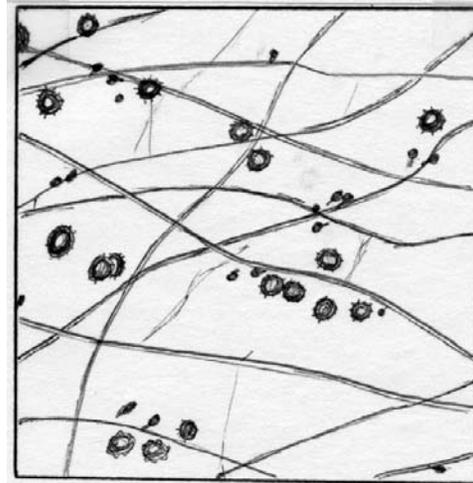
Some people will not feel very well when this fungus starts growing in their lungs. The more spores you breath in, the more fungus grows, and the worse you feel. Fortunately, the immune system gets busy, and cleans out the fungus after some days, using macrophages ("big eater" cells). The immune system learns quickly and can remember what to do. It can keep a person from getting histoplasmosis again. Immune systems are good about that.

50% of cases are asymptomatic. 45% have symptoms, but are able to cure themselves spontaneously. 5% have more trouble and need treatment. People with immune system problems (such as AIDS) or chronic lung disease may become seriously ill with histoplasmosis. For example, if the macrophages are not functioning properly, the fungus might survive inside the macrophage. The cell might then transport the disease to other parts of the body. Disseminated histoplasmosis is a dreaded and deadly complication.

"Histo" is found world-wide, more in some places than others. In the U.S., the Mississippi and Ohio River valleys are famous in this regard. Cavers can often pick up the disease by breathing air in caves that contain large amounts of bird or bat droppings. Caves in Mexico and Central America are well known for this risk. The caves of Texas may now be added to your mental list.

Yaa Hoo! Howdy Doody, y'all
cow-

cowpoke cavers. Histoplasmosis is the caver's ticket into the epidemiological big time. None less than the CDC (Centers for Disease Control) in Atlanta, GA is investigating the "histo" cases from last summer's NSS convention in Texas. They want a caver data base. That is a great value to us, particularly in the event of a future disease epidemic of some kind within the caving community. It will also help make the conclusions drawn about the relationship between histoplasmosis and caving more valid. You can help. If you haven't already filled out the questionnaire and sent it in, do it now. Even if you didn't go to Texas, you ought to fill one out. You can find the questionnaire by looking at the centerfold position in the Jan. 95 NSS News, right next to the neat picture of Julie Donovan in Lechuguilla Cave!



Microscopic view X 52 - Stained fungal culture of Histoplasma capsulatum hyphae with big spores and little spores, dignostic for "Histo". The little spores can penetrate the tiniest lung crawlways!

Park/Caver Rescue Information Exchange Sequoia/Kings Canyon National Park

The new date is the weekend of May 13-14, 1995. (The park rangers were not available on the old date.) There will be a classroom sessions on Saturday and a practical session on Sunday. We encourage you attend Saturday, even if you are not able to participate Sunday.

Rescue Information Exchange

Saturday, May 13: 9:00 AM to 12 Noon and 1:00 PM to 4:00 PM
Wolverton, Sequoia/Kings Canyon National Park

Everyone Welcome! General Topics to be covered are:

- Park caves and the potential for rescue
- The National Cave Rescue Commission (NCRC)
- Cave conservation during rescues
- Technical issues in cave Search and Rescue (SAR)
- Park Incident Commands System and infrastructure
- Park resources for cave SAR
- Questions and Answers and general discussion

Wolverton is between Lodgepole and the General Sherman Tree. If coming from the North, take Hwy 180 from Fresno. Just inside the Park, make a right on the Generals Hwy. Turn left to Wolverton about 1.5 miles past Lodgepole. If coming from the south take Hwy 198 from Visalia. Turn right to Wolverton about .5 mile past the General Sherman Tree.

Participants are invited to a potluck supper Saturday night. Bring something to share.

In Cave Practical Session.

Sunday, May 14: 8:00 AM to 3:00 PM
Crystal Cave, Sequoia National Park

ATTENDANCE LIMITED AND BY APPLICATION ONLY. The attendance will be limited to 10 park rangers, 8 cavers, and 2 people from the San Bernardino SAR Team (California's only cave rescue team). Those who wish to participate in the Sunday session must return the application below. Preference will be given to cavers with NCRC or other rescue experience. Preference will also be given to having representatives from as many grottos as possible. Those people accepted will be notified by telephone.

Camping: Friday night camp on your own. Grant Grove or Potwisha are suggested locations.

Those attending Sunday's session (and accompaniers) may camp Saturday night at the Crystal Cave parking lot. To minimize the impact, in-vehicle camping is preferred.

Questions may be directed to:

Joel Despain, Cave Specialist
Ash Mountain Ranger Station
Sequoia National Park
Three Rivers, CA 93217

(209) 565-3717

Peri Frantz
16345 Englewood Ave.
Los Gatos CA 95032

(408) 356-8506

Peri_Frantz@quickmail.apple.com.

**Park/Caver Rescue Information Exchange
Sequoia/Kings Canyon National Park
Application Form**

Name: -----

Address: -----

Telephone: -----

NCRC Training: [Yes][No] When: _____ What level: _____

Other rescue training/experience:

Affiliations (Grotto, NSS, CRF, SAR, etc.): -----

List major caving areas:

- I wish to attend: Saturday only
- Saturday and Sunday
- Saturday only if accepted Sunday

N.B. If you want to participate Sunday, you must also attend Saturday.

If you want to participate in the Sunday Practical Session you MUST return this application.
If you only plan to attend Saturday, please return this application to help us with planning.

Return Application by May 3, 1995, to

Joel Despain, Cave Specialist
Ash Mountain Ranger Station
Sequoia National Park
Three Rivers, CA 93217
(209) 565-3717

EQUALITY CARRIED TOO FAR by Ray Miller

As an understanding male I will go along with the bulk of the current push for equality by women. I really can't see why a woman should be so unreasonable as to expect equal pay for equal work, but if her job, child care, house cleaning and shopping seem to be a bit much I don't mind doing the dishes once a week. What the heck. I can wait an extra half hour for a beer and the game on TV.

But while reading my copy of Discover Magazine I found a most disturbing report, and it involves our fuzzy little buddies, the bats. I certainly hope the report is buried in the darkest recesses of biological data never to surface again, or females of the human species might formulate ideas which will require monumental defensive strategies by us boy types.

Last year in Malaysia ten male Dayak fruit bats were captured alive and found to have mammary glands distended with milk. Just pause to consider the implications, men. Human males also have all the equipment to produce milk, but due to the intervention of a kind and understanding God the proper hormones for mammary development and lactation were given only to women. Now I think it perfectly reasonable for us men to awaken Mommy when Baby screams the need for a pre-dawn toddy (primarily this allows us to quickly return to our own much needed sleep), but our involvement with infant care should not extend beyond stepping around that plastic bag of soiled Pampers.

Fair warning, guys. Watch that next martini your wife serves. The gin might be laced with hormones that will lead directly from your cocktail to Baby's cocktail.

EDITORIAL

Ray Miller let me borrow his book "Rabies in Bats" by Danny A. Brass, 1994. I hope Ray doesn't mind me keeping it so long. So far the book is a very thorough review of the world literature on the topic. I'm about half way through now. Here are a few of the many interesting items. Monoclonal antibody analysis has revolutionized research on Rabies virus populations in various species. In our area the most commonly reported rabid wild animal is the skunk. In the U.S. the most common reported rabid domestic animal is the cat. Back at the colony, well fed vampire bats can share portions of their meal with other fellow bats who missed their meals for one reason or another. A fossil vampire bat was found in Potter Creek Cave. This last item is a sad one: hundreds, even thousands of caves in Brazil have been destroyed by dynamite in an effort to decrease vampire bat rabies in the local cattle industry. More later on the 2nd half, thanks to Ray M.

Calling all cave poets, please submit poems to the SAG RAG. The poems that Dick has included in the Newsletter Review have been so enjoyable, I was thinking that a SAG RAG poetry issue would be nice. If everyone submits at least one poem, I promise you a most unique issue! To qualify for this assignment, you must have been in at least one cave. "There once was a caver named _____." Go ahead, don't be afraid!

Say, have you seen this Earth II show on TV? Don't waste your time for this, but have you noticed all the caving these people do? Really, they should form a grotto, and pick up some basic safety procedure. The other night, I got thinking about this question: If another intelligent life form has previously visited a cave, does that mean it is not a virgin cave? Someone help me here, I'm sure I'm lost in space, just like the SAG RAG. You know, I used to watch that show too, years ago.

Enough already, just go get busy on those poems now please.

NEWSLETTER REVIEW 4/95

by Dick LaForge

This is the first Newsletter Review going out to the Southern Oregon Grotto newsletter as well as the Shasta Area Grotto Sag Rag. (Sog Rog?) I am flattered that Bill Fitzpatrick thinks this stuff is worth printing, or at least thinks if it's good enough for SAG it's good enough for SOG. I do try to include material of interest to our region.

An introduction to you SOGGERS: I started caving in 1963 at the age of 18, in West Virginia. I caved in the East until 1967 when I moved to California and since that time have caved in all the Western states and also in Mexico. My specialty is photography, particularly stereo photography, and am probably the only caver in the US currently doing it. Recently I have been involved with cave mineralogy and cave mineral/geological surveys.

How is your caving year shaping up? Going to the convention? The Marbles? This is an exciting time of the year, with all that snowmelt and rain trickling down cracks in the ground to increase the size of our caves! I can almost hear the clinks of carabiners as you are all reviewing and organizing your equipment in preparation for caving as soon as (or possibly before) the caves dry out. I know many of you in the Southern Oregon Grotto are going to educate yourselves on the Nylon Highway this year, with the teaching help of Mark Fritzke. Now this is real fun! After more than 20 years of vertical caving I am still totally thrilled by every slide down the rope into a black hole. And with good equipment, calmness, and practice it is plenty safe too. Without these items it can be too exciting for your health. I urge you to read the NSS accident reports, compiled by Steve Knutson, and analyze the ways cavers get into trouble with ropes. The 1993 report just came out, as you have noticed.

On the March 11/12 weekend several of us joined the Southern Oregon Grotto (SOG) in a visit to the usually sealed Marble Mountain Cave near Grants Pass. It is small but has some very pretty areas. Unfortunately the upper parts have been thoroughly trashed by mineral collectors allowed access by a previous owner. It was once extremely beautiful, and none of us liked looking at the damage. No this did not happen in the old mining days when people didn't know any better, it was in the late 1980s. It was, and still is, private property, and the National Cave Protection Act does not apply to private property. Makes you think about the current Republican clamor about "private property rights". The current owner is trying to get the USFS to trade land for the land the cave is on, so it can be preserved and so he won't have to deal with it. Let's hope that happens. It's still a nice cave with some very nice formations in the lower parts especially.

I CAN'T WAIT DEPARTMENT

From Science News. March 25, 1995. "Reporting in the Feb. 16 Nature, Noboru Oyama, a chemist at the Tokyo University of Agriculture and Technology, and his colleagues describe a new type of rechargeable lithium battery with a peak energy density 50% greater than the best commercially available lithium batteries.

Specifically, the new battery operates with an energy density of 600 watt-hours per kilogram, compared to 400 for standard lithium cells. Performance tests show that the new battery holds up well in continued use. Even after 100 rechargings, it retained 80 to 90% of its original capacity.

The key to the new battery lies in a “composite organic cathode”, based on a mixture of dimercaptan and polyaniline. “The use of organic materials has attracted interest,” the scientists say, because they combine high energy densities “with low weight and good mechanical strength.”

By the time this battery is available to us at reasonable cost I will be too old and feeble to carry around the regular kind! So this might extend my caving career.

MORE ON BATTERIES

Meanwhile here in the Present some new rechargeable batteries are not getting such good reviews. An article by Consumers Reports in our local newspaper describes two recharging systems for alkaline batteries. You have surely seen these advertised and wondered if they are worthwhile for caving. Unfortunately, they are not.

There are the Renewal batteries and charger made by Rayovac, in AA, AAA, C, and D sizes. They come fully charged, and you recharge them after their first use. In their first use, “AA Renewals performed about as well as the lowest-scoring conventional alkaline batteries. Renewal C and D batteries lasted only about half as long as conventional alkalines. Each subsequent recharging shrank and Renewals’ life. By the 25th use, the batteries . . . were lasting only a fraction of their original time. Several D-size Renewal batteries died for good after fewer than 25 uses.” In their first uses, however, these batteries do have more capacity than the same sized NiCad’s.

These might be useful if you don’t mind buying the charger (\$30) and go on a lot of short cave trips where you don’t mind the small recharge capacity which is also uncertain. The D cells cost about \$3 each, probably more cost-effective than regular alkalines. And Rayovac says the capacity of C and D Renewals is being increased about 25%. Improvements might eventually make this kind of battery worthwhile, but for now NiCads are better as they can be recharged many more times with more predictable results, though it is certainly easy to ruin them by improper recharging and storage.

Then there is the Buddy L Super Charger, sold in discount stores and over TV. It is supposed to work on ordinary alkaline cells. In short, Forget It.

NEWSLETTERS

The March 1995 issue of The Explorer (S CAL) shows a photo of Bill Farr caving with 3-month old Brian Christopher. Inside is Brian’s story of his first caving trip, as told to his mom, Carol Vesely. Carol is the Western Regional LEARN representative. LEARN stands for Lechuguilla Education and Research Network, which coordinates caving in Lechuguilla Cave. Carol and Bill are serious lifelong cavers and are showing you that kids and caving can go together.

Next, I offer for reprint The Discovery of the Mother Lode, by Rich Sundquist (another of those caving dads – he and wife Midori packed their new kid Forrest up to the Marbles at age 6 months (? don’t know exactly, but less than the 1 year of age that my kids started caving there.) It is from the Valley Caver, Winter 94 (Mother Lode Grotto). This gives you some idea of what it is like to explore and map in Lechuguilla Cave, New Mexico. (You all know that).

I have to apologize again for subjecting you to Lech news from time to time. The fact is that it is the most exciting cave project, and the most exciting cave, in the West and probably the USA right now. (But Wind and Jewel Caves in S. Dakota are going well also.) The darker side is that access is quite difficult except for people who already have quite a bit of experience there. This is LEARN and Carlsbad Caverns NP policy – the cave is so large and complex that only experienced people can really know where the leads are and how to get to them. Not to mention the techniques for camping underground for 2-5 days at a time. Plus extremely demanding mapping standards. Each LEARN expedition includes a small number of newcomers, who are chosen by lot from the LEARN members who apply for trips. Many are left out in the cold, or hot as it more usually is in SE New Mexico, and frustrations, while understandable, can become extreme. As illustration to this, I offer The Further Adventures of Randy Rogers. Cave Cadet. from the Feb. 95 issue of The Explorer. Though it sounds exaggerated, every word is true, I swear.

Next for reprinting is a page of knot diagrams from the Devil's Advocate (Diablo Grotto). They are rope ascending knots that all vertical-type cavers should know. The one on the left is the one I made out of the end of the rope to get out of the hole I had rappelled into and forgot the ascending gear as reported in the last Review. Even if you usually use mechanical ascenders, which really are superior, you should know how to tie and use these knots.

Finally, I offer you some wit and wisdom that is being passed around in the newsletters, so why not this one too?

YOU MIGHT BE A REAL CAVER IF

Your cave gear is worth more than your car.
You have ever worn cave boots to a wedding.
You had to use rope to get to a wedding.
Your compass cost more than your wedding.
Your dog has an NSS number.

The rest were pretty lame, so think up some good ones and send them in on a post card!

GOOD CAVING!

REPRINT REPRINT REPRINT REPRINT

From the Valley Caver, Winter 94, pages 23-25, 27

THE DISCOVERY OF THE MOTHER LODE

by Rich Sundquist

The October 1994 LEARN expedition surveyed 6570 feet (1.24 miles). As a part of this expedition, I had the opportunity to join Donald Davis, Dennis Worthington, and Dave Worthington on a six day trip in the Western Borehole where we pushed leads along the south perimeter of the Western Branch of the cave. Dennis, who as most of you know was a Mother Lode caver until this spring when he moved to Colorado Springs, celebrated his birthday while underground; Dave is an experienced caver from Wyoming (and incidentally is no relation to Dennis); and Donald, our trip leader, is a self-taught cave-scientist of some renown who has been involved in the exploration of Lechuguilla since the beginning. We made a very amicable team, although initially I was somewhat concerned when Donald mentioned that he didn't consider "fun" to play a role in his caving, and he went on to describe caving's more esoteric and intellectual rewards.

On October 15th we entered the cave and, after three or four hours, reached Deep Sea camp at roughly 1000 feet beneath the desert. This is the main camp for exploration of the Western Branch (one of the three major arms of the cave). On the 16th we headed west in the Western Borehole. This impressive horizontal passage is typically 100+ feet wide and continues for more than half a mile. Along the passage are major gypsum deposits including some large gypsum stalagmites (the Three Amigos), and one area contains raft cones to ten feet tall. In contrast to the proverbial "strolling borehole" of the Western Borehole, the last few hundred feet of our route were a crawl in a corrosion residue ("gorilla shit") coated scuzz-hole.

Our goal was to push leads near the Wild West. The first hole Donald checked opened into steeply ascending virgin passage averaging eight feet wide and six feet tall. This led to a room which contains much flowstone many formations and noticeable ascending air. We followed the air until we were filtered out by cemented breakdown in a tall fissure. We left with 503.1 feet surveyed for the day. Leads remain.

On the 17th we opted to take a break from the corrosion residue to check a reported lead in upper South Winds--an area which was discovered by Donald and Ron Delano in April. The main portion of South Winds is a large near-vertical rift over 400 feet tall. Massive, steep, and unstable breakdown is piled against one wall for the entire 400 foot vertical extent, and in places the blocks virtually jam the passage where they span from wall to wall. Much of the breakdown is huge and lightly cemented by gypsum which allows the rocks to maintain a steep angle of repose while making it quite difficult to analyze the stability of the rock piles. The top of South Winds is plugged by breakdown, with an intriguing broken stalagmite section three feet in diameter

and six feet long in the terminal breakdown. While Donald looked downslope for the lead noted in the lead list, I became fascinated by the origin of the stalagmite which, as Donald noted in his published account of the original South Winds explorations, was "obviously from some sizeable room higher up." I eventually was able to cram myself through an eight inch crack in the breakdown which opened into a room that initially appeared to be fifty feet or so in diameter and twenty feet tall; but as I looked downslope it became apparent that this was a much larger space. I was looking down a large steep rift--undoubtedly the top of South Winds. Disappointment! But when I shouted down to Dennis and Dave, I got no answer. It really was a new room--it was "The Mother Lode"--the source of the stalagmite "float." And upslope, the cave was bigger still. My light was consumed by darkness.

We surveyed through the breakdown squeeze with Dennis and Dave reading instruments, me sketching, and Donald pulling lead tape. When Donald emerged from the rubble and climbed into the Mother Lode to set EIM7 as our first station in the main chamber, he began giggling and babbling as he gazed at the enormous black echoing passage heading both upslope and down--leaving some doubt about his earlier statement that caving wasn't "fun." We finally calmed Donald down and got back to surveying. We pushed the "smallest" passage first: downslope along a silent undecorated hall seventy feet wide and twenty feet tall. We named it "High Aim" in deference to the EIM survey designation and the fact that we had worked our way so high up in the cave. Descending at a twenty-five degree slope into blackness, High Aim looked like the borehole to the center of the Earth. In fact, it ended at a small gypsum-lined pit after just 341 feet of survey. Gypsum flowers occur nearby. Two days later we descended the thirty-foot pit to find the "Zonker Maze"--so named because a rock at the bottom of the drop resembles the Doonesbury character Zonker and because cavers who push this area will get zonked by the knee-macerating crawls and squeezes of this three-dimensional boneyard complex. Many of the walls are covered by large popcorn and aragonite, and in one section the popcorn is a glistening light yellow. Deeper in the maze the aragonite increases in size and is strongly directional, and our final survey station is at a collection of delicate and directional one foot aragonite bushes. We surveyed 309 feet of challenging passage in the Zonker Maze and only quit because we ran out of time.

On the 18th we pushed upslope from EIM7 into the Mother Lode proper. Gazing upslope toward echoing blackness, one sees a river of a red and brown stone cascading down the left hand side of the passage, and at the apparent crest, large stalagmites are barely discernable against the coal black background. I videotaped Donald and Dennis' first footsteps in the virgin room as they pulled the first of several nearly 100-foot survey shots. "The Mother Lode" is a dome room up to 250 feet wide, 400 feet long, and we estimated a ceiling height of from 150 to 200 feet--making it one of the largest known rooms in Lechuguilla. The central portion of the room

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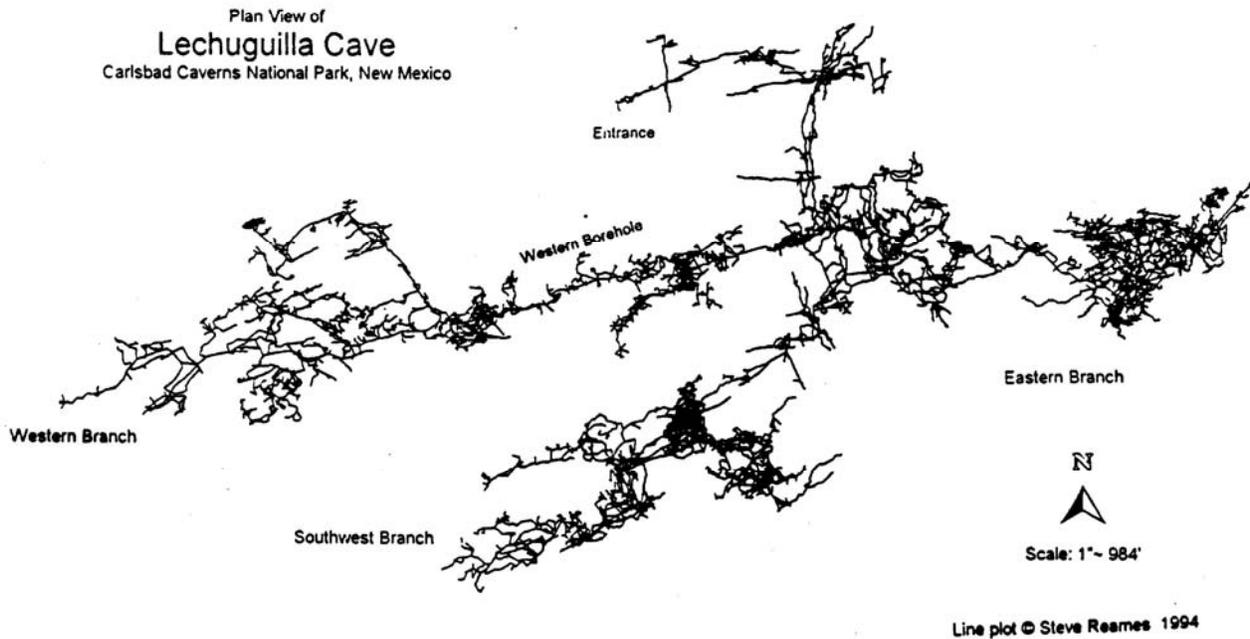
(beneath the dome) contains massive flowstone mounds including a forest of stalagmites--"The Petrified Forrest." These stalagmites are of two kinds: massive fifty-foot tall by ten foot diameter blobs--typically of shining brown, red, or cream-colored flowstone; or the more ghostly and delicate "guad-like" totems which are white and reach thirty feet in height. Several small gours occur at the base of the largest stalagmites, but most of the pools are either dry or only partially filled. About seventy feet up the dome an impure quartz-rich layer in the backreef limestone has caused stalactites (to twenty feet long) to ring the entire dome. Beyond the dome few formations occur and corrosion residue covers much of the floor. Through this less picturesque zone our survey proceeded downhill both geographically and figuratively. We ended at ET13 at the only lead out of the room--a tight vertical corrosion residue-coated crack requiring rope and small bodies. Total survey for the day was 1029.1 feet; total footage for the Mother Lode and vicinity was 1875.2 feet; and the total for all areas surveyed was 2379 feet. Yes, we exited with smiles on our faces! (Footages include the 195' noted below).

I returned to ET13 two days later with Rob Gillespie and Paul Rozal (on a 24-hour trip from the entrance). The crack connected to known cave after 195 feet at IA9 just off the Western Borehole. This would be a much easier way to reach The Mother Lode (and avoid the 400 foot climb through the South Winds breakdown) except the crack is less than eight inches wide, very grabby, and undercut on all sides, so the

ascent is not possible for most cavers.

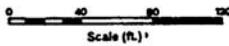
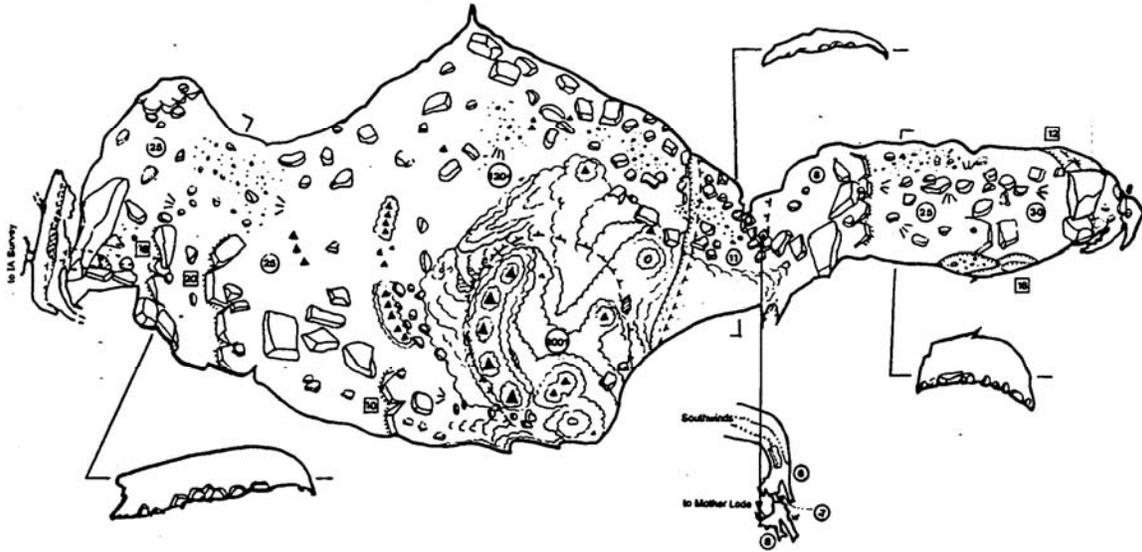
An interesting footnote involves an article which Donald wrote several years ago on the "Cave Dilation Theory" of speleogenesis. In a nutshell, Donald theorized that caves and cave passages dilate according to the thoughts of the cavers who first explore them--sort of a "believe and you shall receive" system. Donald may have written Cave Dilation with tongue in cheek, but much evidence for this mechanism of speleogenesis exists, and the Mother Lode may provide the latest and perhaps best evidence. Consider the following extract from the October 1994 LEARN Network News in which Donald predicted the existence of the Mother Lode prior to its discovery; "The air may be moving up the I/IA/EYWB surveys, going higher into the breakdown than we have yet explored, and turning laterally both east and west through an unknown upper level, then descending into South Winds and the End of the Trail dome. If so, then IA and upper Widowmaker, where the breakdown is still not thoroughly investigated, may provide the best opportunity to find a way up into that mysterious level . . . from which the big stalagmite fragment found its way down into upper South Winds." Donald seems to be practicing Cave Dilation with considerable skill. With abilities like that, maybe Donald can just dream up the rest of the cave, draft a map, and save all those torn clothes, spent batteries, and macerated knees. Ah . . . but then he'd miss so much fun!

[The author would like to thank Paul Greaves for his assistance converting video footage into the still photos appearing with this article. Also thanks to Steve Reames for the use of his map of Lech.]



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Plan



THE MOTHER LODE

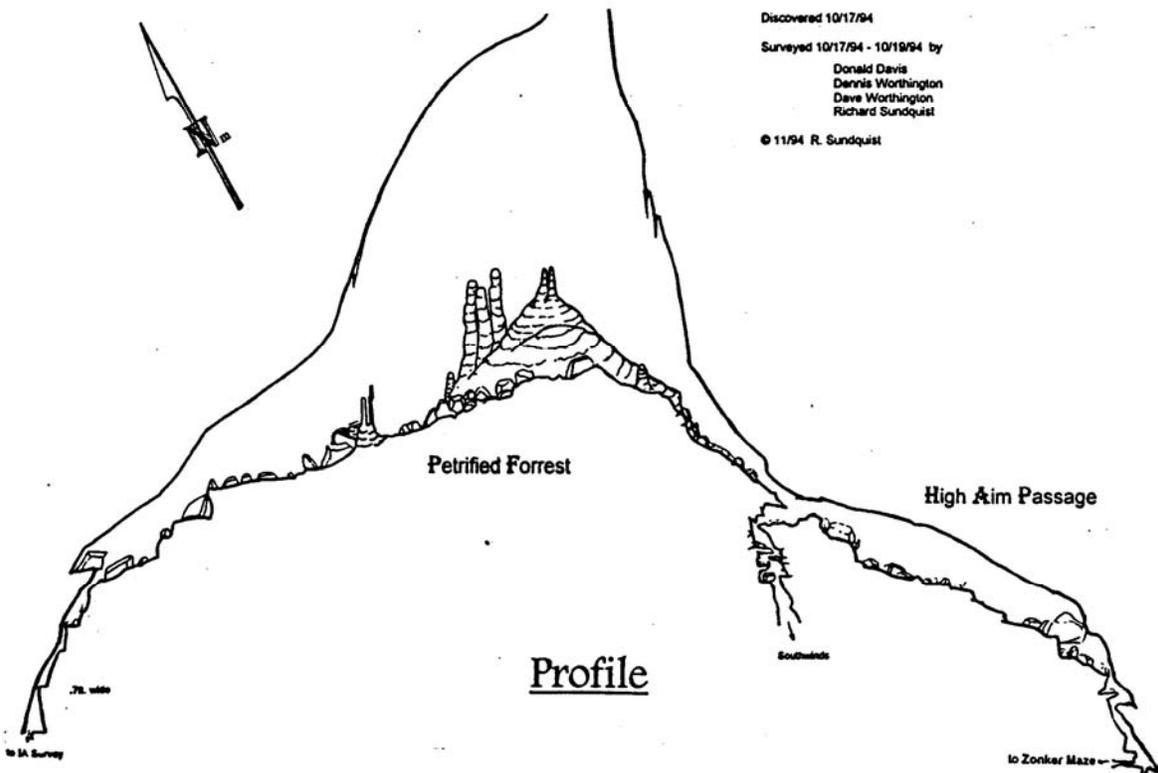
Lechuguilla Cave
Carlsbad Caverns National Park, New Mexico

Discovered 10/17/94

Surveyed 10/17/94 - 10/19/94 by

Donald Davis
Dennis Worthington
Dave Worthington
Richard Sundquist

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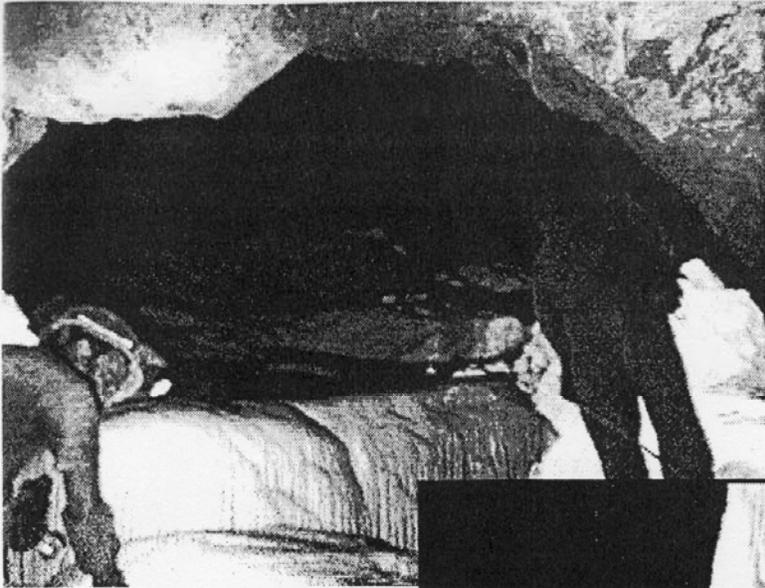


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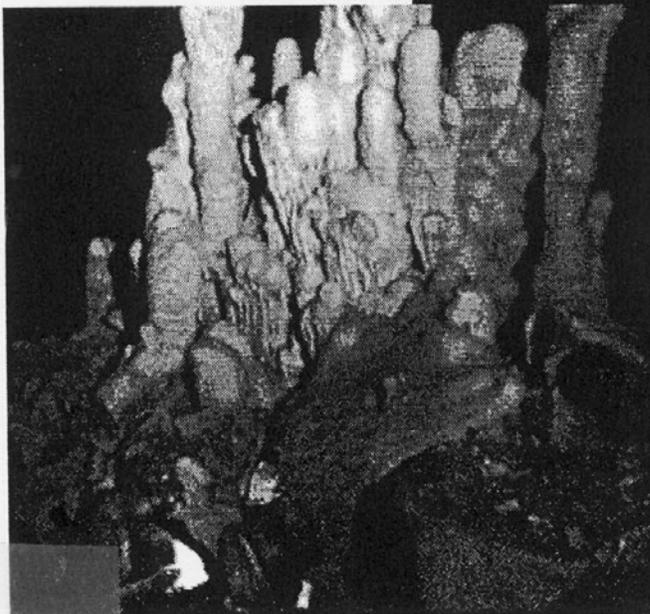
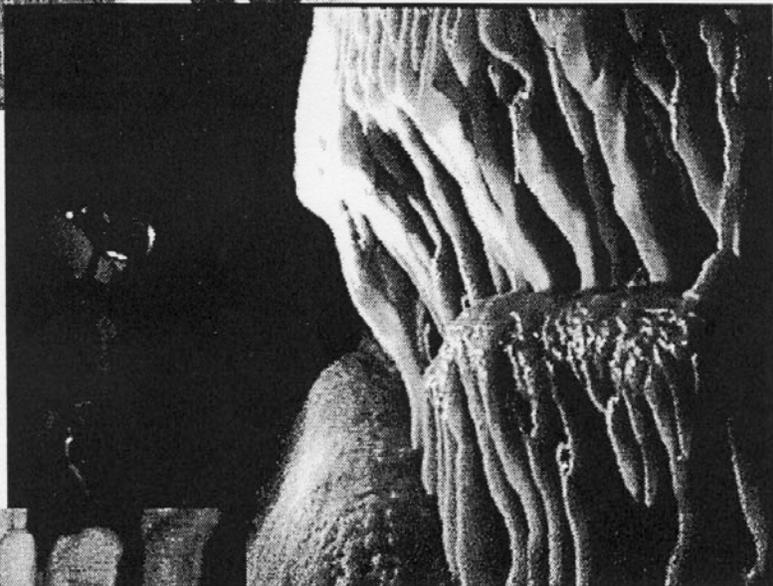
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Scenes from the Mother Lode

Donald Davis (pulling tape)
and Dennis Worthington climb
the virgin slope leading to the
Mother Lode.

Draperies at the base
of a stalagmite in the
Petrified Forrest.



Rich Sundquist and Dennis
Worthington surveying in
the Mother Lode.

REPRINT from VALLEY CAVER
Winter 94

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From The Explorer, February 1995, page 27

The Further Adventures of Randy Rogers--Cave Cadet

Dear Mom and Dad,

Thanks for the money and the clean laundry. Now we can close the window. Blackie, Irving and I are getting ready for the Speleo Olympics, trying out some new stuff. I guess we're the first freshman team ever to enter the survey competition so don't expect too much. I'll write more about that later.

We took a field trip to Carlsbad Caverns two weeks ago. Boy, that underground restaurant was neat! A food cart turned over when a waiter tried to serve a party of tourists and WOW!, did they look surprised when he spilled the pasta primavera and chablis all over the floor! They had to close down the restaurant. The newspaper guys came and everything! We heard later that there was a big deal there just after we left. It must have been really exciting! Here's an excerpt from the newspaper article that came out the next day in the El Paso Times:

A spokesman for Carlsbad Caverns National Park confirmed that over 20 illegal cavers were shot and killed yesterday after a massive food spill which closed the restaurant. The spill, involving over 300 pounds of pasta, occurred in Chez Moolah, the restaurant and bar located 800 feet underground in the Caverns. The dead cavers were identified as leftovers from expeditions in the 1980's to Lechugilla Cave, one of many caves under park jurisdiction.

Sources say that it took rangers more than an hour to shoot all of the starving cavers that had been secretly living in areas of the cave adjoining the restaurant and surviving on food scraps.

"They're a real problem!" said Ronal Kerbo, Western Region Cave Specialist. "Ever since they ran out of cave in Lechugilla, the little pests hide in here when we close Carlsbad at night. Tourists drop food when they eat and these critters live on the scraps. They come out at night to feed and to try to connect Carlsbad to Lechugilla from this end. Last night they smelled the food and came out all at once.

"We don't like to kill them" continued Kerbo "but they get used to feeding on scraps and lose their fear of humans. They forget how to forage for themselves. In the winter when tourism goes down, they starve if we don't shoot them. We've tried traps everywhere but cavers are smart and they're mean. One of them even chewed off his own hand to escape a trap. It wasn't pretty." Kerbo explained, "Besides, it's a real bitch when they starve to death in some obscure corner and start to rot. It takes hundreds of man hours to find and dispose of them. It's good that we could get most of them quickly...better for us, better for them."

An investigation is pending. Similar eradication measures are being considered for caves in California, Rhode Island and Washington D.C."

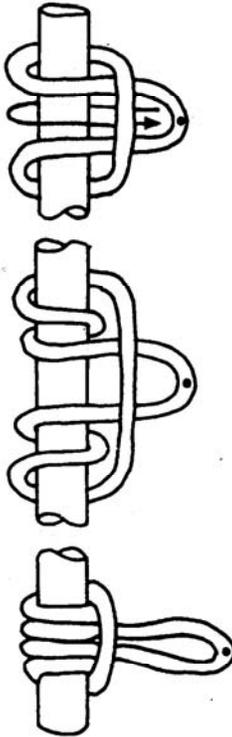
Well mom and dad, that's all that's new here. I hope things are as interesting at home. Blackie and Irving say "Hello".

Your son,
Randy

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From *Devil's Advocate*, Vol. 27, no. 3, March 1994, page 33**Diablo Grotto Knot-of-the-Month—April 1995**

(Please bring this page to grotto meeting)

Prusik Knot and Helical Knot**Prusik Knot**

This knot and the Helical are the knots of choice for knot prusiking. But they're also good for tying into a fixed line for safety or self belay. (Never use them for a rappel self-belay).

First make a prusik loop in a smaller diameter cord than the main line using a Grapevine Knot.

Place the loop over the line, then bring it back through itself. This is a Cinch Knot.

Next bring the loop back through a second time. This is the standard or four-loop Prusik.

On wet or muddy ropes a third wrap or six-loop version may be needed.

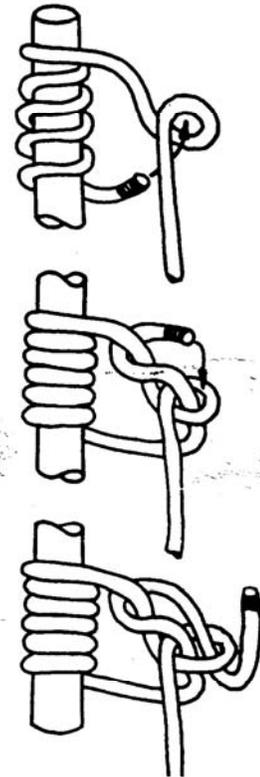
Helical or Ascender Knot

Though it's harder to tie, the Helical is preferred by many knot prusiking fans.. For general use, the Prusik knot is likely enough.

Why? It's a lot easier to release and slide up the line. Just don't press down on the top—it may slip.

The number of wraps is critical. Begin with two to four and change as necessary. To tie off the loop, a version of the Bowline is used.

Adjust the amount of slack between tie off and line to be between two or three fingers worth.

**Summary of Basic Caving Knots**

The Five Most Essential Caving Knots—

Figure 8, Bowline, Grapevine, Water, Prusik. Also Figure 9

- **Tying ends:**
Sling: Water knot.
Perlön: Grapevine.
Main Lines: Fig 8 Bend,
two Bowlines.
- **Hauling gear:**
Bowline.
Figure 8 Loop.
- **Tying in for a belay:**
Bowline or Figure 8 Loop
clipped to seat harness.
Bowline on coil around waist.
- **Rigging:**
Wrap-Around/Tensionless.
Bowline or Mountaineering
Bowline.
- **Figure 8 Loop.**
Figure 9 Loop.
- **Prusiking or tying in to a fixed line:**
Prusik Knot.
Helical Knot.

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Remove Staple For Inspection