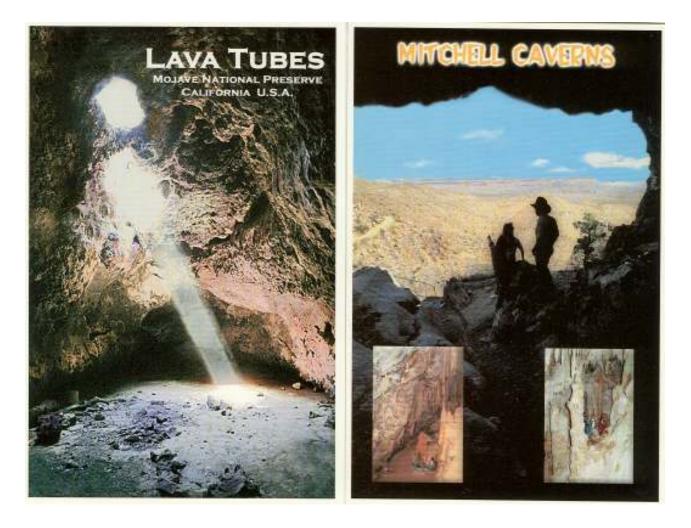
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4 July-Aug 2002

Celebrating 20 years: cave advocates in the Shasta Area since 1982.

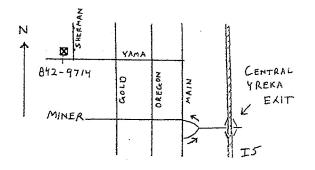


Cave the Mojave! The Desert Dog Troglodytes invite you to the 2002 Western Regional near 29 Palms on October 18-20. See page 10 for more information. Cover Postcards: purchased at Kramer Jet and reproduced here with permission from High Desert cave photographer G. Louis Vopalensky.

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 <htp://www.caves.org/grotto/sag>.

CAVERS CALENDAR 2002

Aug 29KMCTF Labor Day Speleocamp.Sept 9-1510th International Symposium on Volcanospeleology, Reykjavik, Iceland.Sept 13SAG meeting 7:30 pm at Melanie Jackson's in Yreka. (530) 842-9714.Oct 11 - ?KMCTF Columbus Day Speleocamp, with SAG non-meeting at campfire.Oct 19-20Western Regional c/o Desert Dog Troglodyte Grotto, near 29 Palms, CA.Aug 4-8, 2003NSS Convention in Porterville, CALIFORNIA. (408) 356-8506.



SAG RAG SUMMARY

(for convenience of CAL CAVER)

The July-Aug 2002 SAG RAG features Fleener Chimneys. The centerpiece is Bruce Roger's article with introductory material and a report on mineralogical studies completed on small samples taken from the cave in 1993. The article includes a copy of J.D. Howard's original map of Fleener Chimney, dated 1922. Added for comparison is Mike Sims' CRF re-map of 1992. Of course, Bighorn Bill could not resist a chance to add his two cents, and this all adds up to a clean sweep of Fleener Chimney. This SAG RAG also promotes the upcoming Western Regional, the new bat stamps soon available at the Post Office, and finally the SAG Chair creaks as Liz Wolff reports on the recent inventory of Pluto's Cave.

THE CHAIR CREAKS – Pluto's Cave Inventory By Liz Wolff

To benefit the Klamath National Forest's continuing efforts to understand and manage caves, Lava Beds and the Shasta Area Grotto met on Sunday August 11 to do an inventory of Pluto's Cave and its contents. The inventory went quickly and was finished in about six hours with 12 people to work different sections of the cave. SAG members Bill Broeckel, Melanie Jackson, Ray Miller, Matt Reece, Jim & Liz Wolff, and Russ Yoder took part in an effort headed by Lava Beds resource specialist Ben Miller and cave specialist Matt Reece. We worked in teams of two to inventory plants, insects, reptiles and animals in the sink areas, bat & bird roost and nest sites, guano scatters, rock formations, graffiti, historic paintings, etc in the cave. Each team had a specific section of the cave to work, and each team finished at about the same time. It was a monumental task, and more cave inventories are planned for other caves at later dates. SAG may or may not take part in them, but it will hopefully benefit the caves in the long run.

SHASTA AREA GROTTO MEETING

August 9, 2002

The meeting was called to order at 8:01 pm at the Broeckel's home in Yreka. Present were Jim & Liz Wolff, Ray Miller, Melanie Jackson, Arley, Sharon, and Brianna Kisling, and Bill & Judy Broeckel. Minutes were accepted as corrected. Treasurer's report: August balance is \$671.47. SAG RAG report: next RAG due the end of August. Bruce Roger's Fleener Chimneys article is being reviewed by Resource at Lava Beds.

Correspondence: A packet from the Tongass Cave Project asked for signatures and return before 8/14 or email the names. This was passed around and signed. Melanie said she would mail and Liz may also e-mail. Umpqua NF questionnaire was sent regarding people use in Mowich Cave. Basically it stated that people needed to stay out due to the presence of a year round bat population. We suggested they keep the gate closed. Letter received from the Western Region regarding 2003 NSS Convention planning in Porterville. The Desert Dog Troglodytes are hosting the Western Region meeting and sent an invitation/registration. Received NSS e-mail asking that if you have any first hand knowledge of caving in Kentucky please write to Keith Weiland. Liz sent a letter to Peter VanSusteren about the register in Roadside Complex. Mother Lode Grotto has been sending exchange newsletters.

Old Business: SAG/SAR can do rope training at the So. Co. SAR building in Mt. Shasta on any non-SAR training weekend (2nd Sat of month) if we have a SAR person there to make sure the building is locked when done. If SAG members sign up as Disaster Relief Personnel through SAR they can be covered by insurance when rope training at the SAR building without having to be full fledged SAR members. They would then be a resource for SAR if needed. Arley Kisling suggested Catwalk or Worthless Cave could be used for an outdoor SAG/SAR rope training. Unless the FS in McCloud gives permission we cannot use the McCloud Upper Falls. Bill B. says regarding Knutson's proposed MOU that a couple of comments have come back and now we will ask Juan de la Fuente to have the Supervisor sign it. Ray Miller asks if SAG still needs a GPS or not. The grotto responded that we don't need to have one now because enough members have their own so we will wait until later. Jim Wolff needs to sift and disperse a can of carbide that belongs to the grotto. Arley Kisling volunteered to help.

New Business: Sunday Aug. 11th Ben Miller from Lava Beds will arrive between 10-11 am to do a cave inventory of Pluto's Cave and asks for grotto members to also help. Plan on doing Sunday and Monday. A secure index file: Ray Miller has a non-secure file with information that can be given out to anyone and a secure file that has exact locations by either quad topo maps or alphabetical by cave names. The grotto should decide the Who, where, when, how, and why of who should have it and that, he feels, should be handled by the chairman. We all agreed.

Trip Reports: Ray M. and Liz W. GPS'ed the Freudian Complex, but still have many left to get GPS coordinates for. Jim Wolff has been CRF caving with Ben Miller at Lava Beds two times. While on family vacation, Bill B. found a small boulder cave in Sequoia/Kings Canyon National Park. Another day, Bill and his boys surveyed Upper Katelma, Lost Boys, and Teaspoon Cave, nearly 1,000 feet of total survey for the day.

Trips and Meetings: Marble Mtns trip Aug. 17-20. Jim Wolff and Ben Miller will be there. Labor Day Weekend Speleocamp in the Marbles Sept. 1st. Sept. 13th SAG meeting at Melanie's in Yreka. Oct. 11 Speleocamp in the Marbles, SAG non-meeting. Nov. 9 Coast ??? TBA

The meeting adjourned at 9:28 pm.

Respectfully submitted, Melanie Jackson

MJ



THE FINER POINTS OF FLEENERS CHIMNEYS

By Bruce Rogers, Regular Fellow

(This article with maps is published with permission from Resource Management at Lava Beds National Monument.)

BACKGROUND

Old Sam Fleener knew a good thing when he saw it and homesteaded land at the margin of Tulelake, just south of the Oregon Border. It was 1889 and Sam busied himself earning a living for his family tilling the rich lakeside soil for potatoes, barley, and onions. Among his acquaintances was a slightly eccentric miller named J.D. Howard. Now J.D. had a penchant for exploring subterranean caverns in the lava beds to the south, way up on Medicine Lake Mountain. Some high faluting scientist had told everyone that the mountain was a volcano and a pretty recent one at that. Once in awhile, Sam and his family would venture up into the lava beds to see what new caverns and such that J.D. had found. Sam was particularly pleased when J.D. named one of the biggest, deepest miniature volcanoes after him, Fleener Chimney.

Lava Beds National Monument is filled with recent volcanic landforms, some, indeed, only formed yesterday. Among these are the Fleeners Chimneys. Located along the western edge of the Park, they mark the upwelling of lava along one of the several nearly vertical faults that formed the series of steep cliffs culminating in Gillem's Bluff. These faults mark the western edge of the Great Basin that extends west from the Wasatch Range at Salt Lake City, Utah. The Great Basin is one of three physiographic provinces that join at the Lava Beds, the others being the Cascade Range and the Sierra Nevada and Klamath Mountains.

Over the years visitors to Lava Beds had picked up nearly every loose pebble and chucked it into the Chimneys to satisfy their curiosity as to the depth of these volcanic features. To most visitors, the Chimneys appeared to be a collection of shallow pits perhaps 3 or 4 m deep that had a convenient picnic ground. Rumors of a deep cave filtered throughout the Park Service and caving community, however, but only tantalizing hints of "some cave" could be seen in these shallow pits. Back in 1992, a motley crew from CRF and other Grottos undertook to clean out Fleeners Chimneys in Lava Beds National Monument. After a serious look, even the most enthusiastic wondered if they'd been suckered into digging in a cinder pile.

However, deep within the archives building at the Monument (nicknamed the Beer Cooler for its attached heating and cooling unit) is a profile of Fleeners Chimney drawn by none other than ol' J.D. Howard himself. Gary Hathaway, former long-time Head Interpretive Ranger at the Park, had also interviewed an elderly resident of the Klamath Falls area about Fleeners Chimneys. She recounted how, as a small girl, she watched local cowboys tie a kerosene lantern on a lariat, then lower it down the pit. The viewers would lower the lamp for nearly the full length of the rope to light up the Chimney's interior. She also admonished Gary for having filled in "her" pit! Of course, nearly everyone thought that the recollections of a 93-year-old were probably suspect. Little did we all know.

THE DIG

The work was given Park Service blessings and proceeded with a great deal of excitement. The throat of the Chimney was thinly veneered with a fragile crust of lava and the surrounding "bedrock" was barely consolidated cinders. Thus, if one accidentally broke into the crust, one was likely to be partly buried in cinder cascades. Eventually, many, many, many buckets of rubble later, the Chimney was cleared and was surveyed. Amazingly, its profile was almost a direct ringer to the profile tucked away in the NPS archives for so long.

During February 13th of 1993, Janet Sowers and Bob Martin collected some interesting crystals and "stuff" from the lower parts of the Chimney and gave them to me to identify. The following list is what we found (the FC numbers were assigned just to identify the samples).

REAL SCIENCE

FC-1: Tiny, clear crystals growing on walls and in pockets in walls near the rubble choke at the end of the Upper North Passage. Sample includes scattered, fine, volcanic sand grains approximately 0.5 mm. in diameter. Sugary aggregates of clear to white crystals approximately 0.1 mm. in diameter. Crystals cleave easily under moderate pressure yielding good, flat glassy cleavages, mostly at approximately right angles. The hardness is low – perhaps 2: it will barely groove paper. No salty, bitter, or cooling taste thus ruling out halite, mirabilite, thenardite, or epsomite. Crystals soluble in tap water. Crystals have no reaction to room temperature 10% HCI (hydrochloric acid). Some crystals have poor terminations of p pinacoids: as well as triclinic M, n, t, & b. Crystals appear to be stubby **Gypsum** crystals, slightly rounded by water solution. These crystal crusts are very similar to gypsum crusts on the roof of Tichner's Cave and in Heppe's Grotto.

FC-2: White to cream colored botyryoidal crusts up to 0.5 cm thick found on walls of Upper North Passage. Very small – 0.1 mm. diameter – clear, glassy crystals showing extreme corrosion-induced skeletonization. Crusts desegregate easily under fingernail pressure. Their cleavage, hardness, taste, and water/HCl reactions similar to sample FC-1. Some orange staining from terra rosa soils. **Gypsum**. Appears very similar to gypsum crusts on the roof of Tichner's Cave and in Heppe's Grotto.

FC-3: Coralloids from entry area of Upper North Passage: Typical stalked "broccoli" type of cave coral approximately 0.5 to 1.2 cm long. Stalk is mostly light gray to pale tan in color. The end of each branch is capped with dead white mushroom of more crystalline material. Broken stalk surfaces are slightly greasy in luster and have slight conchoidal fracture. Sparse brownish thin growth rings and center core are more crystalline and react to HCl with vigor. Stalk has no reaction to tap water or 10% HCl. Mushroom caps are composed of tiny trigonal crystals that vigorously effervesce in HCl. Crystals are pitted from ground water (?) corrosion. No salty, bitter, or cooling taste of either portion of coralloid thus ruling out halite, mirabilite, thenardite, or epsomite. The stalk is composed of **Cristobalite**, as are most other cave coralloids in the Monument's caves. Caps and brownish rings and cores are **Calcite**, probably with very little magnesium as is typical for most Monument calcites. These cave coralloids are interesting because one can see the differing mineralogical growth banding which some investigators have ascribed to either seasonal or long-term climatic variations in ground water chemistry.

FC-4: Acicular crystals from floor of south end of Lower South Passage, Sample mixed with a large amount of pack rat and mouse scat and shredded bark, vegetal material, and unidentifiable organic debris. Large amount of fine to medium volcanic sand cemented with rounded, clear, glassy crystals approximately 0.5 mm. in diameter. Hardness of crystals low – perhaps 2: will barely groove paper. No salty, bitter, or cooling taste thus ruling out halite, mirabilite, thenardite, or epsomite. Soluble in tap water. Crystals have no reaction to room temperature 10% HCI. Several extremely acicular crystals approximately 0.005 mm. in diameter and 2 mm. long have chisel-shaped terminations which appear to be paired monoclinic p pinacoids. Crystals appear to be **Gypsum**.

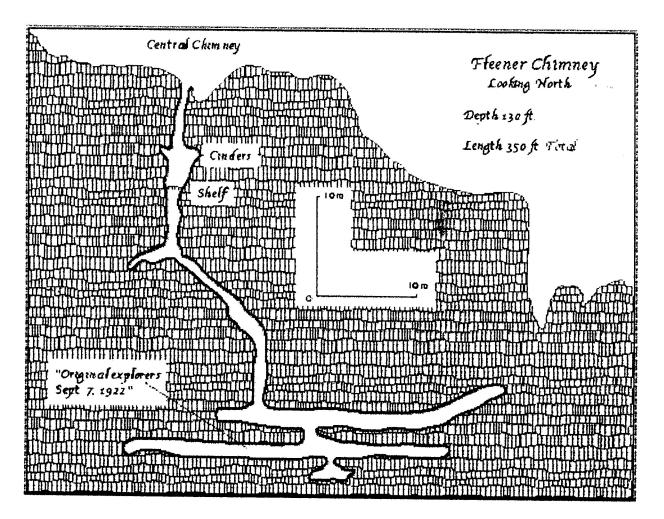
FC-5: Punky, porous white chunk of material on floor of Lower South Passage. Large centimeters-thick chunk consists of very small (ca. 0.05 mm. diameter) clear, white, and pinkish-white crystals. Moderate pressure will disaggregate grains from each other. Moderate pressure with fingernail will deeply groove mass. Hardness of crystals low – perhaps 2: will barely groove paper. No salty, bitter, or cooling taste thus ruling out halite, mirabilite, thenardite, or epsomite. Soluble in tap water. Crystals have no reaction to room temperature 10% HCI. Material appears to be a massive **Gypsum** crust.

FC-6: Several centimeter-long fragment of white to cream-colored botyryoidal crust from ceilings and walls of passage at base of entrance pit. Majority of material is sugary in texture and opaque. Sparse glassy, flat cleavages are present in the mass. A thin (approximately mm.-thick) band of clear crystals is present along the middle of the coralloid shell. Most surfaces of the crystals are severely corroded to an irregular skeletonized texture. Hardness of individual crystals low – perhaps 2: will barely groove paper. No salty, bitter, or cooling taste thus ruling out halite, mirabilite, thenardite, or epsomite. Soluble in tap water. Crystals have no reaction to room temperature 10% HCI. Crust appears to be **Gypsum**. This material is not only very similar to the pinkish crusts in Tichner's Cave, but interesting in that it shows crystallographic banding and a large, smoothly contoured botyryoidal shape unlike most other irregular gypsum crusts in the Monument's caves we have looked at.

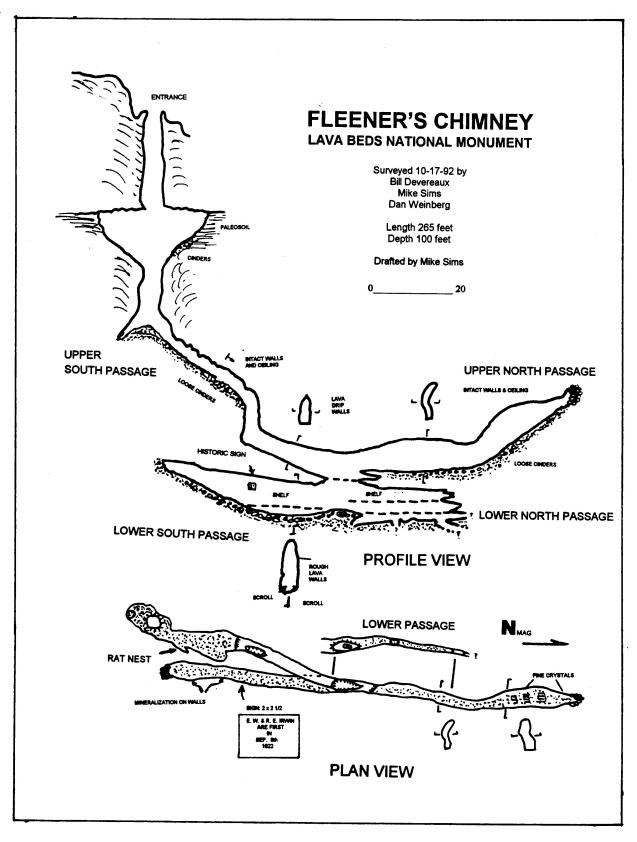
Due to various technical problems these samples were not identified by x-ray diffraction (the standard nearly bomb proof identification method). However, it appears that the crystal morphology, texture, color, setting, and so forth of them are so similar to known samples collected in other caves of the Monument and those found in lava tubes in New Mexico's El Malpais National Monument that we can be pretty certain of their identity.

The moral of this story is never believing every rumor of the Big Cave out behind somewhere. However, never discount it either for it may just prove to be true and hold little gem-like treasures to delight the eye.

BR



Map: Fleener Chimney



Map: Fleener Chimney

FLEENER CHIMNEYS By Bill Broeckel

Geology of Fleener Chimneys

Once again please note that William Halliday writes "Only two are known to open into anything much below, however, and most volcanic vents don't 'go'." (Halliday, 1982). Rather gleefully I have enjoyed finding local examples that at least go a little ways. But I have to admit, in those that I have seen, mostly they don't go anywhere. Fleener Chimney is one of the best local exceptions to the rule.

Fleener Chimneys (Plural) would be a group of spatter cones (Larson, 1990) or spatter vents (Donnelly-Nolan, Champion, 1987) on a NNE alignment at a point where the Gillem Fault is making a slight curve to the northeast. The last part of the eruptions at Fleener Chimneys produced a lava classified as a "shelly pahoehoe". Waters, Donnelly-Nolan, & Rogers explain this term as lava which "congeals where large hollow lava blisters 3 ft or more in diameter have formed below a thin crust of erupting volatile-rich lava. These large lava blisters flow out, flatten, and override one another." (Waters, Donnelly-Nolan, & Rogers, 1990).

The Fleener Chimneys eruption is well known for producing the prominent Aa lava flow that extends about three miles north along the base of Gillem Bluff. This is the Devils Homestead Flow. This flow covers portions of the Mammoth Crater (Pleistocene) Basalt, and probably blocked up many fine caves. You win some, you lose some.

The "Devils Homestead Basalt has been characterized as "middle or even early Holocene," covering an area of 4.3 square kilometers with a volume of under .05 cubic kilometers. A sample of the basalt showed 51% silica, which is just under the <53% threshold for forming lava tubes. (Donnelly-Nolan, Champion, 1987). Further technical description of the basalt is given.

History of Fleener Chimneys

J.D. Howard named the chimneys. Howard's caving career in Lava Beds started in the year 1917. It is said that Fleener Chimneys were the first cave entrances he saw in the Monument area. That day he must have traveled along the old road that runs along the top of Gillems Bluff, and passed by Sam Fleener's place about six miles north of the chimneys. Sam must have treated J.D. well, and perhaps told him to visit the chimneys, for it was to honor Sam that Howard thought of the name. (Gudde, 1969). Thus, the Lava Beds caving fever that burned so hot in Howard's heart for so many years was first kindled at Fleener Chimneys. The

Geographic Board made the name "Fleener Chimneys" official in December, 1948. (Gudde, 1969).

Fleener Chimney (singular) is sometimes used to refer to the one chimney that has the most cave underneath. J.D. Howard actually produced a large map showing a profile of the chimney (see previous). Note the inscription "Original explorers Sept 7. 1922." It is also illuminating to compare Howard's profile with the one done by CRF (Cave Research Foundation) in 1992. I think it matches up quite well.

Fleener Chimneys have a: long history as a popular tour spot in Lava Beds. It remains to this day as a geological interpretive site. By the late 1950s, some did not know or remember that Howard explored and mapped the cave. "No one has explored the volcanic necks of Fleener Chimneys, although some years ago a lanterncarrying line was dropped down one 18 inch gas orifice nearly 100 feet before obstructions were encountered." (Knox. 1959). Also, Fleener Chimneys are not included in Halliday's list for Siskiyou County. (Halliday, 1962).

Charlie Larson elaborates further: "The pits used to be over 100 feet deep but, incredible as it may seem, apparently the deepest has been about half-filled with rocks dropped in by visitors, curious about its depth. Volunteers are laboring to restore the original depth, so please limit your curiosity to shining a light into the chimney and don't drop rocks into it." (Larson, 1990). Larson also includes additional historical information.

Personal Experiences at Fleener Chimneys

In November of 1989, I found two of the Fleener Chimneys already rigged. At the chimney which is now gated, I decided to use the rope as a handline. After all, this would be a "chimney climb" right? Ho ho ho. Well, I hadn't gone very far at all when I noticed that this cave was getting really *vertical*. With a rare flicker of common sense, I managed to extricate myself before something awful happened, and I was able to go on with my life. But I remembered the warm breath of the cave, and often wondered what it looked like down there.

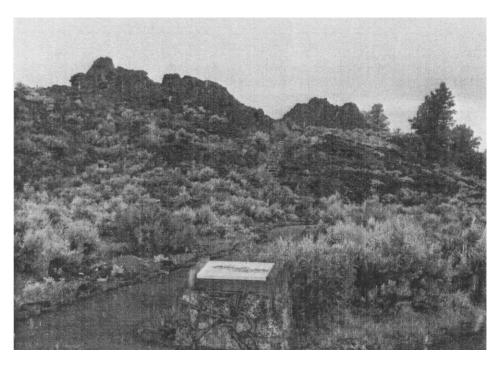
Some time later I was visiting with Gary Hathaway, and he showed me the original J.D. Howard map. He asked me to find the cave. When I finally got back to do it with vertical gear, a ranger told me that CRF had already figured everything out. Rats! My assignment was cancelled, I had waited too long. Looking back now, I doubt if I would have moved all of those rocks anyway. This must have been after 1992, after the work was done and the gate was placed. So I still haven't been down the chimney.

In 1995, the Speleograph was promoting a Regional event to be held at Lava Beds: "Fleener's Chimneys are a vent feature which are fascinating to visit. The cavers recently re-opened, re-mapped, gated, and photographed this remarkable feature for the park." (Larson, 1995). Firsthand accounts of this process conducted by CRF in the early 1990s are on file at Lava Beds. Currently, Fleener Chimneys continue to be a popular scenic stop, and the deepest chimney remains gated to this day. As for myself: I have joined up with CRF, and am watching for my chance. I figure that sooner or later, CRF will need to do another clean-up trip into the chimney to remove the inevitable rocks, coins, and garbage that people will toss in. If I can be on this trip, I'll get to see the cave and Fleener will be cleaner, after a little chimney sweeping. Organized caving is a wonderful thing. BB

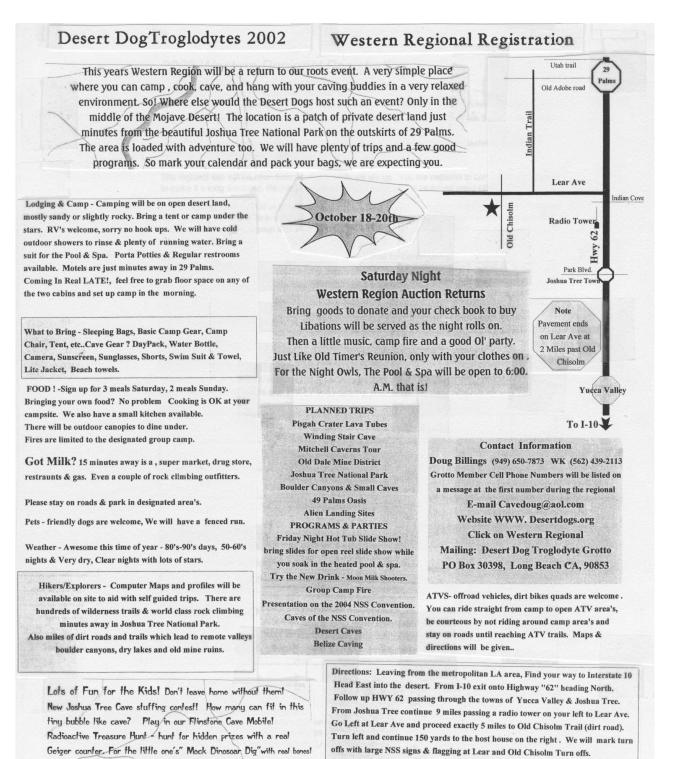
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Recent photo of the Fleener Chimneys interpretive site by B. Broeckel.



GPS cords - Lear & HWY 62 - 34 08 05/ 116 09 02 Rock hounding trips and more! Stink Bug Races ! stinky idea? Oh' did we mention the guest house has a game room.

GPS Cords Lear & Old Chisolm. - 34 12 28/ 116 09 07

2002 Western Regional Registration

- Pre-registration deadline is September 1st.
- We will refund cancellations until October 1st.
- Meal program is optional and is only available during pre-regristration (Vegetarian meals available upon request)

Registration cost is \$15.00 for Adults and \$7.50 for Children under 12. Children 5 and under are free. There will an adittional \$5.00 fee for registration after September 1st.

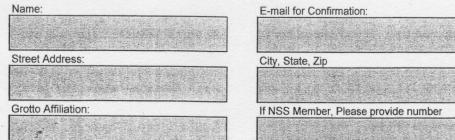
Regional T-Shirts are really cool and are based upon our mascot "Slim the Skeleton Caver"! Pre-order shirts for best price and size selection.

Confirmations will be sent by e-mail, snail mail if no e-mail is listed.

The regional site will be open from Thursday while we set up . You are welcome to come early if you want to make it a long weekend. Recreation abounds! Volunteers will not be turned away either!

Special needs or requests? Let us know, we'll do our best to accommodate. If there are certain trips you are interested in please let us know in advance to make the best arrangements possible. A Winding Stair trip is pending enough interest, it is about 2 hours from the regional and will require pre-registration with the State park. This is an advanced vertical.

Fill Me Out Now!



Registration Cost is \$15.00 per Adult, \$7.50 for Children 12 and under

Meals are \$25.00 for adults and \$15.00 for Children (Includes 3 meals Saturday and 2 on Sunday)

Name:	Meals (Y or N)	Regular or vegi	Adult or Child	Total
		the last	Sub-Total	
o help us prepare facilities please	circle one of the fr	ollowing:		
Required •	Camping RV		sewhere	
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\$12.00 EA, XXL \$15.00 EA				
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Please return this form to: DDT Gro	otto			

Western Regional Registration P.O. Box 30398 Long Beach, CA 90853

POST OFFICE PLANS STAMPS FEATURING BATS 8-13-02 WASHINGTON (AP)

Holy stamp collecting Batman! America's flying mammals are about to be featured on postage.

Four stamps illustrated with bats found in the United States will go on sale Sept. 13, the post office said Tuesday. First day ceremonies will be held at Austin, Texas' famous Congress Avenue Bridge, which houses the largest urban bat colony in the world.

Some 1.5 million bats emerge each evening at dusk to devour insects. The stamp ceremony has been scheduled for 7 p.m. so the bats will be included.

The 37-cent stamps will go on sale nationwide the following day.

Though feared by some people, bats perform a useful service by eating millions of pounds of insects, including mosquitoes and many farm pests. They also pollinate desert plants and disperse seeds. Featured on the stamps are:

* The red bat, found throughout much of North America. The red bat is solitary, roosting alone in dense foliage. When it hangs upside down by one foot, its predators may be fooled by its resemblance to a dead leaf.

* The pallid bat is found in western North America, where its pale, sandy color allows it to blend with its desert surroundings.

* The spotted bat, which lives in the western United States, British Columbia and Mexico where the staple of its diet is believed to be moths. Its ears, the largest of any bat on the continent, measure nearly two inches.

* The leaf-nosed bat, a resident primarily of caves or abandoned mines in Southern California, Nevada, Arizona and northern Mexico. Its large ears allow it to hear the extremely faint sounds of insects such as grasshoppers and caterpillars walking amid dense foliage, and its large eyes provide excellent night vision.

SAG RAG 2916 Deer Mdws Rd Yreka CA 96097

STAMP

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TO:

Remove Staple For Inspection