NSS NEWS

APRIL 1985

CALENDAR OF EVENTS

Send information on coming events to the *NSS News*—address listed in the Masthead.

April 19-21—MVOR Regional, Springfield, MO. For further information contact Kathy Rapp, GSS Box 3857, Springfield, MO 65808.

April 19-21—NCRC Central Region Basic Cave Rescue Orientation Course, Mammoth Cave National Park, Kentucky. $15.00 fee includes camping and noon meal on Saturday & Sunday. Contact Nancie Baker, 1625 North Gladstone Ave., Indianapolis, IN 46218, (317) 359-2815 (H), 243-4740 (W).

May 3-5—Spring VAR at Massanutten Caverns, Keezletown, VA. Contact Meredith Hall, 11 Locust Ave., Colonial Beach, VA 22443, (804) 224-9538.

May 11—The Spring Meeting of the North Country Region will be held in conjunction with the Michigan Interlakes Grotto Meeting at the home of Norma Peacock, 1712 Willowbrook Drive, Jenison, Michigan. Gypsum mines of the nearby Grand Rapids area might be available for touring prior to the meeting. Contact: Gary K. Soule, 224 South 7th Ave., Sturgeon Bay, Wisconsin 54235, (414) 743-6488.

May 24-27—Kentucky Speleofest, Meade County Fairgrounds, Brandenburg, KY.

May 25-27—Cave Diving Section Spring Workshop in Branford, FL at the Branford High School. Theme: technical skills and equipment care. Contact: Jack Eveans, Workshop Chairman, NSS/CDS, 2640 Beverly Rd., Winter Park, FL 32789.

June 15-22—1985 National Cave Rescue Commission Seminar will be held at Carter Cave State Resort Park, Olive Hill, KY. Contact: Jackie Barlow, Rt. 1, Box 221, Bland, VA 24315, (703) 688-4707.

June 23-29—1985 NSS Convention, Kentucky State University, Frankfort, KY. Contact: P.O. Box 5176, Cincinnati, OH 45205.

July 20-21— 985 Summer S.E.R.A. Cave Carnival at Goosepond Colony Campground, located 7 mi. south of Scottsboro, AL on Lake Guntersville. Campground has hookups, showers and playground. Contact: Birmingham Grotto, P.O. Box 55102, Birmingham, AL 35255 or call Myrna Jordan (205) 991-6415, after 6 p.m.

August 9-11—32nd Annual Indiana Cave Capers at the Lawrence County 4-H Fairgrounds at Bedford, IN. Preregistration is urged to assure a banquet ticket. Contact Central Indiana Grotto (C.I.G.), P.O. Box 153, Indianapolis, IN 46206.

Aug. 27-30—Geomorphological Symposium and Field Trips, Yogyakarta, Central Java, Indonesia. Organized by the Federation of Indonesian Speleological Activities (FINSPAC) or Himpunan Kegiatan Speleologi Indonesia (HIKESPI) and the Foundation of Indonesian Speleology or Yayasan Speleologi Indonesia. Contact: Robert K. T. Ko, President FINSPAC, P.O. Box 55, Bogor, Indonesia (0251-24673).

Aug. 29-Sept. 2—Old Timers Reunion. Alpine Shores, Elkins, W.Va.. For preregistration blanks or information contact Evelyn Bradshaw, registrar, 1732 Byron St., Alexandria, VA 22303, (703) 765-0669.

Aug. 1-7, 1986—International Congress of Speleology, Barcelona, Spain. Both pre- and post-Congress trips. For information, write 9e Congreso Internacional de Espeleologia, Apartado 343, 08080 Barcelona, SPAIN.

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Prices subject to change without notice.

Cave Rescue Operations and Management Seminar

The National Cave Rescue Commission (NCRC) Eighth National Cave Rescue Seminar will be held at Carter Caves State Resort Park, Olive Hill Kentucky, June 15-22, 1985. The seminar will present current and specialized techniques to those with a serious interest in cave rescue. It will include extensive classroom lectures and demonstrations and above and below ground fieldwork covering all phases of cliff, pit, and cave rescue.

The class is limited to 50 level one and 25 level two students. Level two students are those who have completed the NCRC basic level one course.

Topics to be covered include: underground environment, preplanning, management structure, logistics, response systems, caving first aid and equipment, patient treatment, communications, hypothermia, and patient transport.

All necessary equipment will be furnished except for personal horizontal and vertical caving equipment. Primitive camping is provided at the Park. Hot showers and toilet facilities are in an adjacent developed camping area. A food service plan is available and is strongly recommended.

Charges for the seminar are $75.00 before May 15 and $100.00 after May 15, NSS Members receive a $25.00 discount. The food service package costs $100.00, it begins with lunch the first day and concludes with breakfast on the final day.

For additional information or registration forms, contact the NCRC Seminar, Rt. 1, Box 221, Bland, VA 24315. Phone (703) 688-4707, evenings only.

Membership Slumps Slightly

A late-winter slump caused a 15 member decline last month, total membership is now 6173 with only a few months left in the current membership drive.

The Cave Diving Section continues to lead in I.O. competition with 34 new members; followed by the Huntsville Grotto, 26; Tidewater Grotto, 19; Colorado Grotto, 15; Nashville Grotto, 14; and Michigan Interlakes Grotto with 11.

NSS NEWS

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Deadlines: The NSS NEWS is published the last week of the month preceeding the date of the publication. Ads, articles and announcements should be submitted to the editors by the 20th of the previous month (e.g., July issue is mailed the last week in June, material should be submitted by May 20.)

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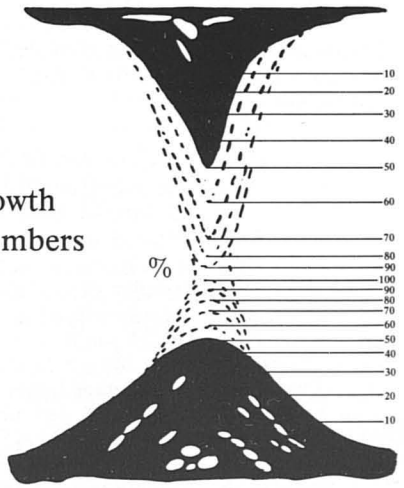
Flying Start for Endowment Fund

The *NSS News Photographic Endowment Fund* is off to a flying start with $331.16 already added to the $2000 initial donation. This figure includes only donations which passed through *NSS News* offices, we do not yet have information on donations sent directly to Huntsville.

Donors who contributed to the above amount include the Arizona Regional Association, Peter and Ann Bosted, Bill and Peri Frantz, Cindy Heazlit, Charlie and Jo Larson, Vance and Marjorie Nelson, Harry Smith, Jim Terry, and the Western Region. Their donations will go into a permanent endowment fund which will provide interest earnings to increase the number of full-color front covers and finance color printing of photo salon winners. An indirect benefit will be increased pages in the *News* funded by money no longer needed to pay for front cover printing.

To donate to this important fund, send your contribution to the NSS, Cave Ave, Huntsville, AL 35810. Be sure to specify that your contribution is for the *NSS News Photographic Endowment Fund.* Thanks...

Membership Growth
Goal: 1000 new members



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COVER: Vince Reed reflects over his current position in the Lurking Fear crawl which separates the nearer and further reaches of Bigfoot Cave in California. Taken by Dick LaForge during Speleocamp, 1984, on Kodachrome 64.

Letters

CORRECTIONS

I am writing to make a one-word correction in my letter re Alternate Shoulder Dislocation Reduction, as published in the February '85 *NSS News*.

The third paragraph should begin "The patient lies down on his *stomach* on a slab or rock or log..." Replace "back" with "stomach."

I apologize to you and your readers for what must have been a typing error in my letter to you.—*Mary Adamson, NSS 21734, Walnut Creek, California*

MEMBERS MANUAL CORRECTIONS AND ADDITIONS

The NCRC publishes a newsletter 3 times a year. For a subscription, send $2.00 to Peri Frantz, NCRC Editor, 16345 Englewood Ave., Los Gatos, CA 95030. Incident reports, information about training sessions, and other rescue-related matters can also be submitted to the editor for publication.

Can you tell me why our grotto (Mid-Hoosier Grotto) was the only grotto listed in the Members Manual without bold type? Also, you have never listed us under New NSS Grottos. We were chartered in 1983, G-296.—*Mark Well, NSS 23543, Chairman, Mid-Hoosier Grotto, Franklin, Indiana*

Ed: The Members' Manual is not produced by the NSS News staff, but we feel certain a typographical error caused your grotto to be listed in a medium face. Your grotto was chartered shortly before editing responsibilities were transferred to us. The announcement was undoubtedly lost during the transition period. Our apologies. We're not trying to pick on you. Honest!

Please make the following address change to the new Members Manual:

Kingston Saltpeter Cave Research Project
c/o Larry O. Blair
192 Sequoia Dr. NE
Marietta, GA 30060

The address published in the MM is that of a person who hasn't been associated with us for quite some time.—*Joel M. Sneed*

APPRECIATION TO ADVERTISERS

I was annoyed by the tactics that a particular advertiser recently used in the classifieds section. He implied that buying from him rather than from a "BIG AD" merchant saves you money. What he didn't say was that these "Big Ad" advertisers helped to support the NSS to the tune of over $9000 this year (this is equivalent to more than 400 memberships, without any of the expenses!). I urge all members to show appreciation to the "regular" big and small advertisers by supporting them and boycotting those that are too cheap to look beyond the profit margin of their advertising dollar.—*Keith Dunlap, NSS 19255L, W. Lafayette, Indiana*

Ed: In fairness to the advertiser, we must mention that he supported the News with large display ads for many years. We believe that philosophical differences and policy changes were what initially prompted him to drop his display advertisements. Advertising income includes payments received for both classified and display ads.

MORE ON BLASTING

There were several obvious oversights in Jerry Davis' hairsplitting effort to argue cave blasting out of existence. It just is not true that, "for every dig that opens up new passage, there is another passage closed by sedimentation," at least for water-born sediments in the time frame of cave exploration in the last few centuries. Upper level passages, for example, receive little sedimentation, but proportionately more digging. On the topic of microclimatology and ecosystems, it can be pointed out that opening of new caves and new entrances and completely filled passages increases the supply of habitat for bats, cave rats and some insects. I might add that I sometimes view conservationists as hung-up on the present conditions at the expense of future ones, no matter what the relative values.

If sediment digging is seen as the other side of the deposition coin, and as a relatively innocuous caver activity, then consider that blasting is on the same side of the coin as collapse and wall spall. Very little that is blasted couldn't fall loose with weathering and time. And wouldn't someone distinguish between blasting bedrock and blasting breakdown? Blasting is really a faster, albeit more expensive way to improve a passage.

Contrary to what Jerry Davis writes, the question of the use of explosives in caves does not need to be resolved. And it will not be resolved until exploration is no longer a part of caving.—*Joe Saunders, NSS 12497, Lansing, Michigan*

Jerry Davis' letter "To Blast or Not to Blast" makes good sense and comes close to the point with the question about cave exploration, "What's the hurry, anyway?" I've given much thought about the subject of blasting to make exploration easier or to open up caves that otherwise never would have been visited.

I think the question that we as individual cavers and the NSS as a group should be asking is not whether we should blast or not, but what is the goal of our exploration activities. Does an end justify the means in any particular instance or do our goals in exploration fit in with our philosophy of cave ethics?

Aside from dangers and problems associated with explosives pointed out in Jerry's letter, the final effect of the "exploration" effort may be more long-ranging than the explorers thought (at the time of exploration, it may have been impossible to anticipate those effects). A few non-caving examples of the ideas I'm talking about may help to illustrate. Most cavers I know have some familiarity with rock climbing and would be appalled at the idea of installing a set of stairs or even a bolt ladder up the North American Wall in Yosemite. This holds true even though they may have never been there and most do not have the capabilities or desires needed to make the climb as it now exists. They, myself included, get heartburn at the idea of humbling the mountain in order to make ascent available to the average individual who is in fact humbled by the mountain. I will probably never make that climb, but I would resent the attack that reduces its uniqueness to the point that I could ascend there with little effort.

Rock climbing techniques have evolved to a highly specialized art that can meet the challenges that years ago were only dreams. I believe that we are just beginning to realize a similar evolution in cave exploration techniques that will extend what were previously thought to be the physical limits of exploration.

Some may argue that they know what cavers' physical limits are; however, let's not forget how impossible the four-minute mile was before someone failed to recognize "the limit."

What is our goal in cave exploration? Is it our goal that we be *the first* to explore a cave, at all costs? Is it our goal that we get ourselves into all reaches of the cave to say that we've been to the end, even if we must humble the cave rather than ourselves? Will we break the rules of a management agency, an agreement with a cave owner, stalactites and stalagmites, just to get to that last crawlway?

If we can get into a cave and explore it without alteration, the cave retains its challenge and inspiration for those who follow. If we lack endurance and can't reach the end, should we blast and dig a second entrance so that our weak generation can be the first to reach that end? In doing so we have made a philosophical statement that the next generation will not be up to the challenge.

Roppel Cave lost some of its majesty as being the largest cave in the world accessible from a single entrance because our generation *must* explore the rest. I've never been to Roppel Cave, but I'm sure it is impressive;

and how many people rate their caving experience for any given mile of passage by how far it is from the entrance? It is a factor worth some consideration. Have we as a group failed here to recognize the abilities of the few or the next generation who could master the challenge?

Great Ex Cave in Wyoming had a very tight entrance before the use of explosives enlarged it. Through trips from upper entrance to Great Exit were made before the entrance was enlarged for greater ease of access and safety reasons. The entrance is still tight, and the cave still great, but it was humbled in a small way, and some of us don't have to exhale anymore to enter the cave.

How about digging into new previously unknown caves? Isn't that how Wind Cave in the Black Hills was opened up? Reed Cave, South Dakota was intersected by a quarry and would not have provided its great caving experience without blasting. Maybe blasting has its place in cave exploration.

What are our goals in cave exploration? Some of our past exploration philosophies appear to have been short-sighted. We cannot go back and change these mistakes, but we can consciously make decisions about caves that go beyond this generation and our personal egos. The decision we must continue to make is whether to humble the cave or to humble ourselves.—*Wayne Sutherland, NSS 12246, Buffalo, Wyoming*

Reading

***Karst Geomorphology of the Door Peninsula, Wisconsin.* University of Wisconsin-Milwaukee, Masters Thesis available from the Author: Carol J. Rosen, N50 W22366 Roberta Drive, Sussex, Wisconsin 53089; released on December 6, 1984. 119 pp, plus a plastic overlay map, softbound; $12.00 postpaid.**

Carol, in producing this thesis, worked under the direction and guidance of Professor Michael J. Day, NSS 18682. She sums up previous work done in Door County as well as presenting her own observations and findings through the use of charts, diagrams, and maps. Some of the areas covered in her report are karst distribution of soils, karst distribution and bedrock lithology, bedrock structure, karst distribution in relation to former lake levels, and karst distribution and glacial processes. Her morphometric analysis consists of site evaluations at three different locations in the county. Photos of both cave entrances and karst features illustrate her work.

Researchers will appreciate the extensive reference listing at the end of the report. The plastic overlay map shows the distribution of karst features in the glaciated county. (Door County contains the two longest cave systems in Wisconsin—Horseshoe Bay Cave and Paradise Pit Cave.)

Local cavers assisting her with field work and potential karst site identification were Jim Countney and myself.

—Gary K. Soule

***Moravian Tales, Legends, and Myths, 1: The Tale of the Bad Macocha, and The Fable of the Underground Punkva River.* Karel B. Absolon [freely translated from materials collected by his grandmother, Karla Bufkova-Wankelova]. Czechoslovak Society of Arts and Sciences, Washington, D.C. [available from: Kabel Publishers, 11225 Huntsover Drive, Rockville, MD. 20852]; 1984. 39 pp. $16.00.**

Karel B. Absolon, MD, is a prominent Washington, D.C. area surgeon, born and reared in Czechoslovakia, whose hobby is translating and republishing the scientific works of his ancestors. The family hails from Moravia, where lies one of the world's pre-eminent karst areas; these works, consequently, often include references to the karst. *The NSS Bulletin* published a biography of Absolon's father, biospeleologist Karel Absolon, in 1977, on the centenary of his birth.

Karla Bufkova-Wankelova, the original compiler of the tales related in this book and in the seven others planned to follow it, was an ethnographer. Her stories are written for the enjoyment of children of all ages. Absolon's translation is flowing and idiomatic, and his book is lavishly illustrated with pen-and-ink sketches.

The review copy of the book, number 11 of a limited edition, is, however, rather an ambiguous production. It is the neatest job of xeroxing that I have ever seen, on the one hand, and it has a cheap, school-boy plastic binding (already broken when I received it), on the other. It contains only a single typing error, but the typeface chosen is difficult to read when capitals are used, and the lines are so closely spaced that they are difficult for the eye to separate.

The tragedy of the abyss and the myth of the subterranean palace are authentic, karst-related folklore. At 41¢/page, 'Moravian Tales' is no bargain, but you won't regret the price once you've read the book. And... this is just the sort of thing needed to get your own grandchildren interested in caving!

—James Hedges

***Vertical Caving.* Mike Meredith. Westmorland Gaszette, Kendal. 64 pp.**

This short, concise book explains how vertical caving is done by most cavers in Europe and, more particularly, in France. A lot of fundamentals are left out; however, enough basic information is given that the reader wonders why and for whom the book was written. On the last page of text Meredith states, "My intention is not to analyze all possible techniques, which requires a much thicker book, several of which already exist. I have proposed one good system, as a starting point, with which the reader can compare others...."

If you want to know how Mike Meredith does vertical caving, this is the book for you. It is clearly written and doesn't seem to contain any false or misleading information if the reader always bears in mind that this is just one possible system. Subject matter covered includes: ropes, anchoring, prussiking, abseiling, rigging, hauling and mini-rescues. Meredith uses a Frog system. It's interesting reading, but he didn't convince me to convert.

My only complaint with the book is the emphasis on placing bolts as both intermediate anchors and anchors at the top of a drop. I get the impression that archeologists hundreds of years from now are going to think vertical French caves were iron mines!

I recommend this book as supplemental and educational, but not as a comprehensive text as the title implies.

Barbara Anne am Ende

***Geologic Atlas (of) Winona County, Minnesota.* N.H. Balaban and B.M. Olsen [eds.]. Atlas C-2 of the Minnesota Geological Survey, 1633 Eustis Street, St. Paul, Minnesota; 1984. 8 sheets at 1:100,000. $8.00.**

This elaborate geologic atlas covers one of the core counties in the Upper Mississippi Valley karst/cave region. Winona is the second-most cavernous county in Minnesota, and, although it lies east of the principal karst belt, developed on the Galena limestone, a large area of karst is developed in the Prairie du Chien dolomites in the central part of the county. Five hundred and thirty-five individual sinkholes have been catalogued.

Individual atlas sheets depict: Data base of control points, bedrock geology, glacial drift and other regolith materials, hydrology, sinkhole probability, groundwater pollution susceptibility, well construction requirements, and geologic resources. Of these, the bedrock geology and sinkhole probability sheets will be of most interest to cavers.

The maps are nicely printed, and their accompanying texts are readable and accurate. Minnesota County Atlas 2 is invaluable for field and reference use. Other Minnesota counties in the karst/cave region will be similarly mapped, as soon as funds become available. The sooner, the better—I say!

—James Hedges

Plan a Convention Vacation

Pre- and Post-Convention Trips

Sloans Valley Area—Visit some of the largest and most diverse cave systems in Kentucky—Sloans Valley, Cave Creek and Sinking Valley—on a self-guided basis. These systems offer short scenic, serious marathon, and vertical trip opportunities. Rustic camping facilities are available at the Miami Valley Grotto Field House, located on top of the Sloans Valley system. Beautiful Lake Cumberland is also nearby for additional recreational activities. Reservation Contact: Doug Stecko, 149-A Delrose Apt., London, KY 40741 or phone (606) 528-5851.

Carter Caves Area—Experience the scenic caves of eastern Kentucky by visiting the many caves in Carter Caves State Park as well as many privately-owned caves in the area. John Tierney, State Park Naturalist, will provide excellent self-guided caving opportunities (including vertical trips) and commentary on the local caves. Commercial cave tours are also available at the State Park. Other recreational activities include hiking, swimming, nature programs, boating, fishing and horseback riding. Both camping and motel accommodations are available in the area. Reservation Contact: John Tierney, Carter Caves State Park, Olive Hill, KY 41164 or phone (606) 286-4411.

Marengo Caverns Area—Give yourself a first-hand opportunity to check out the famed Indiana karst by visiting Marengo Caverns and other caves in southern Indiana. Your hosts, Gordon Smith and Gary Roberson, will give *free* commercial cave tours to convention registrants and NSS members as well as providing information about open local caves which can be explored on a self-guided basis. Marengo also offers camping, horseback riding, swimming and canoeing. Pre-convention trips are recommended because this area is particularly popular over the 4th of July holiday which follows the convention. Reservation contact: Gary Roberson, P.O. Box 217, Marengo, IN 47140 or phone (812) 365-2705.

Glovers Cave—Visit this interesting 3-mile cave near Trenton in western Kentucky. The large (10' x 15') main trunk offers a pleasant trip for casual cavers while the more challenging side passages provide fun for more serious explorers. This cave was the site for the 1984 MVOR get-together. Primitive camping available near the cave. Reservation Contact: Dick Market, Route 3, Box 65A, Princeton, IN 47670 or phone (812) 385-8298.

If you are interested in a pre- and/or post-convention trip, please make a reservation with the reservation contact listed above. Reservations are necessary for participation.

Gala Festivities Planned

The traditional "Howdy Party" and Friday evening banquet at the NSS convention will feature southern hospitality this year. The Monday night "Howdy Party" will be a multi-entertainment event held at Government Plaza in the heart of Frankfort. A buffet style dinner will include regional specialties such as burgoo (a delicious Kentucky stew), western Kentucky-style pork, barbecued beans and corn. A special Appalachian arts and crafts show will be presented by Berea College featuring many of the works of the most outstanding Appalachian crafts people in the region. Music will be provided by a bluegrass group, "Ol' Blue," which Kentucky cavers have enjoyed at previous caving events. Plan for an evening of true Kentucky hospitality.

The Friday night banquet evening will feature the usual convention festivities including Roger Brucker as the keynote speaker. Brucker's entertaining storytelling will be sure to interest and delight all who attend the banquet. The meal will be catered by a leading Kentucky restauranteur featuring pepper steak, chicken, 3 vegetables, salad, beverage and dessert.

Plan Your Vacation Now Join Us in Kentucky in '85

Start planning your vacation around a trip to the 1985 NSS Convention in Frankfort, Kentucky. We can guarantee an enjoyable convention and lots to do on your way to and from Frankfort. Here's a sampling of the vacation possibilities that await you within 3-4 hours drive of central Kentucky.

From the North:
Cincinnati, Ohio

Cincinnati Zoo—One of the world's best zoos, including a special nocturnal exhibit featuring exotic bats from around the globe.

Cincinnati Natural History Museum—Features an excellent life-sized scale cavern with all the trimmings. Very realistic.

Riverfront Stadium—See the Cincinnati Reds and take a leisurely riverboat cruise.
Kentucky

Big Bone Lick Park—One of the major Pleistocene sites in the world.

Kentucky Horse Park—Excellent theme park dedicated to horses. For horse-lovers and everyone.

From the South:
Tennessee

Great Smoky Mountains National Park—One of the most popular and beautiful parks in the country. Catch the rhododendrons in full bloom in late June.
Kentucky

Lake Cumberland—Scenic lake country with over 1000 miles of shoreline. Camp, hike, fish or rent a luxurious houseboat and really see this part of Kentucky at its best.

Berea—Center for Appalachian crafts. Very high quality craft shops dot this quaint college town on the edge of the Bluegrass.

Shakertown—A restored Shaker village with exceptional charm. Visit for the day or stay overnight in actual Shaker buildings. Sample the excellent cooking in the restaurant.

From the East:
West Virginia

New and Gauley Rivers—Some of the best whitewater raft trips in the East.
Kentucky

Carter Caves State Park—A variety of commercial caves dot this state park which also offers hiking, swimming, boating and quality nature programs. Camping, cottages, and motel accommodations available.

Red River Gorge/Natural Bridge State Park—Outstanding gorge and natural bridges in the Daniel Boone National Forest. Wonderful hiking, canoeing and kayaking.

From the West:
Kentucky

Mammoth Cave National Park—The ultimate big-time cave with something for everyone—length, width, depth, history, beauty, and mystique.

Bardstown—My Old Kentucky Home State Park features antebellum Kentucky and Stephen Foster's story in an outdoor drama. Bourbon distillery tours also available.

38th International Salon of Speleological Photographic Art

Sponsored by the National Speleological Society
on exhibit June 23-28, 1985
NSS Convention, Frankfort, Kentucky

POLICY FOR ACCEPTANCE OF ENTRIES

1. **Definitions**—In order to avoid possible confusion, two terms used in this policy statement require definition. These terms are "acceptance for judging" and "acceptance for exhibition." All entries received are viewed by the Salon Committee to ensure that they are submitted in accordance with the general rules of the Salon and in compliance with the criteria set forth in Section 2 of this policy. The artistic or technical merits of each entry are not considered in this preliminary screening. All entries which pass this test are termed "accepted for judging." Those which do not pass are returned to the entrant. The entries accepted for judging are then viewed by a panel of judges selected by the Salon Committee. This judging is based only upon the criteria set forth in Section 3 of this policy. The judges select those entries to be exhibited at the NSS Convention. This selection constitutes "acceptance for exhibition" and is considered an award. All ribbon and medal winners are chosen from those entries accepted for exhibition.
2. **Criteria For Acceptance For Judging**
   - **A. General**
     1. The Salon Committee will promptly acknowledge receipt of all entries and will return all entries not accepted for judging with a letter of explanation and a refund of entry fees.
     2. The Salon Chairperson will assume the responsibility for all decisions relating to the acceptance of entries.
     3. The criteria set forth in this policy statement will be interpreted flexibly. In case of doubt, the Salon Committee will rule in favor of the entry.
   - **B. Safety**—Any entry judged to promote unsafe caving practices will not be accepted for judging. This does not preclude acceptance of entries where the intent is obviously educational or humorous.
   - **C. Conservation**—Any entry depicting practices which are flagrantly in violation of NSS Conservation Policy will not be accepted for judging.
   - **D. Recruitment**—Any entry which is obviously intended to be shown to general audiences for the purpose of caver recruitment will not be accepted for judging.
   - **E. Landowner Relations**—Any entry which depicts flagrant violation of landowner rights or which promotes practices which would be detrimental to good landowner relations shall not be accepted for judging.
   - **F. Relevance**—Entries which are not relevant to the theme of the Salon shall not be accepted for judging.
   - **G. Adherence To Salon Rules**—Entries which are not submitted in accordance with published Salon rules will not be accepted for judging.
3. **CRITERIA FOR JUDGING OF ACCEPTED ENTRIES**

GENERAL RULES

1. Closing Date—All entries must be postmarked no later than midnight, **April 30, 1985**
2. Eligibility—Open to all.
3. Subject Matter—Must be related to caves or caving.
4. Originality—All entries must be the original work of the entrant.
5. Repeat Entries—Entries which have been *accepted* for exhibition in previous NSS salons may not be resubmitted.
6. Awards—Acceptance for exhibition is considered an award. Ribbons will be awarded in all categories as follows:
MERIT AWARD—blue ribbon
HONORABLE MENTION—green ribbon
MEDALS will be awarded for best in the competition as follows: Best Color Slide, Best Color Print, Best Black and White Print, and Best Multi-Media Presentation.
7. Reproduction Rights—Participation in the Salon shall constitute automatic consent to the National Speleological Society to reproduce any material entered in the Salon, in NSS publications such as the *News* or *Bulletin*, without charge or notice, but with due credit to the entrant.
8. Shipment—Pack all entries in reusable material, enclosing return postage if entries are to be returned by mail after the convention. Be sure to include any special mailing instructions. Please indicate disposition of entries on entry blank. No responsibility for loss or damage will be assumed by the Society or its representatives. To avoid damage to corners, prints should be packaged between over-sized, *heavy* cardboard sheets. Use blank paper between prints to prevent surfaces from rubbing together. Receipts will be sent for all entries, and utmost care will be taken to return entries so designated at the earliest possible time. Award-winning entries will be returned as soon as duplication of these entries is completed.
9. Foreign Entries—Entries should be packed as noted in No. 8 above, and the package marked: "Photographs for exhibition only—To be returned to sender—May be opened for postal and customs inspection—Contents entitled to free entry under paragraph 1631, Tariff Act of 1930."
10. Address For Entries:
Karen M. Kastning
Dept. of Geology & Geophysics, U-45
University of Connecticut
Storrs, CT 06268
11. Notification of Winners—A complete list of awards and of entries accepted for exhibition will be sent to all entrants shortly after the Convention.
12. Judging—All entries will be judged at Storrs, Conn., or Sheridan, WY., by persons experienced in cave, nature and/or salon photography. Judging will be based on artistic and technical merit, caver appeal and impact. Humor will also be considered where appropriate.
13. Entry Fee—No fee is required for entries donated to the NSS photographic collection. $1.00 (U.S.) covers the entry of 1 through 4 prints and/or slides in any categories; add $1.00 for each additional 1 through 4 entries. Example: 9 through 12 entries would be $3.00. A story series group of slides is considered 1 entry and is limited to 10 slides. $3.00 covers the entry of 1 multi-media presentation in any category. (Note: include money for return postage if entries are not to be picked up at the convention). Make checks payable to the NSS Photo Salon.
14. Multiple Classifications—Any photograph may be entered in one or more of the classifications. For example, a slide may be entered as a color transparency, and black and white and/or color prints made from that slide may be entered in the appropriate print classifications.

PHOTOGRAPHIC PRINTS

Note: All General Rules Apply

1. **Classifications**—
   1. Monochrome prints
   2. Color prints
2. **Format**—*Any size* between 8 x 10 and 16 x 20 inches (20cm x 25cm and 40cm x 50cm) is acceptable; however, large prints allow greater impact. Prints must be mounted. Mounting board size should be in proportion to the print size. Foreign entries may be sent unmounted. The following data must appear on the back of each entry: name and address of the contributor, title and print number to conform to the entry form. Color prints must be an accepted photographic process; state on back what process was used. The title should be placed on the front of the mount directly under the lower left of the print in lettering not to exceed 6mm (¼-inch) high. The name of the contributor should be placed on the front of the mount directly under the lower right of the print in lettering not to exceed 6mm (¼-inch) high. Full-size prints which have no border for lettering should be entered with a card giving the above information. Although not required, the name of the cave in which the photograph was made may appear on the front of the print with the required information.

COLOR TRANSPARENCIES

Note: All General Rules Apply

1. **Classification** All slides must be entered in one of the following seven categories:
   3-A Story Series: A group of ten or fewer slides which tell a story. This category is judged with the captions read to the judges. Each group of slides is considered as one entry for determining entry fee.
   3-B Close-Up: Any slide where lens-to-subject distance is 2 feet or less. A scale object may be used.
   3-C Single Flash: Any slide using a single flash for lighting.
   3-D Multiple Flash: Any slide using multiple flashes for lighting.
   3-E Natural Light: Any slide using natural light with or without auxiliary flash.
   3-F Experimental: Any slide lit or processed in a non-standard manner.
   3-G Humor: Any slide of a humorous nature should be entered here.
2. **Format** Color transparencies shall be mounted for projection in 2 x 2 (5cm x 5cm) mounts of 35mm, 828 Bantam, or Superslides. Cropping of slides is permitted and is encouraged when photographic composition would be enhanced. A spot must be placed in the lower left corner of the slide mount as it is viewed by the naked eye. All slides must contain the entry number corresponding to the entry form, the category code from Section 1, above, and the name of the contributor.
3. **Personal Photograph** All entrants in the slide categories are requested to provide one transparency of themselves (in caving clothes, if possible) for use during the awards presentation. Although this slide will not be judged, it should be of good technical quality.

MULTI-MEDIA PRESENTATIONS

Note: All General Rules Apply
(see note below for submission of materials).

1. **Classifications**
   5-I Multiple image slide program with sound.
   6-M Monochrome movie with sound.
   7-M Monochrome movie without sound.
   6-C Color movie with sound.
   7-C Color movie without sound.
2. **Format**
   Slide Programs Entries should be specialized, multi-projected, slide shows with audio accompaniment. Presentations may be by a group or an individual, and must be self-contained. All equipment must be provided by the entrant unless prior arrangements can be made for use of standard equipment. Tape cassettes are preferred over reel-to-reel tapes. Entrants should be prepared to make two presentations: 1) at the judging (to be held early during the convention week), and 2) at the Photo Salon, if their entry is selected as the Best Multi-Media Presentation. Judging criteria, in addition to those listed in Rule 12, are the show's continuity and its audio/visual compatibility. Title and credits may be included where appropriate.
   Movies 16mm or Super 8mm may be submitted. Super 8mm films may have magnetic sound track; 16mm sound movies *must* have optical sound track. Entrant's name and address, title and print number conforming to entry form must appear on movie leaders, and leaders must be marked as to head and tail. Title and credits may appear in an appropriate manner at the beginning and end of the film. All Super 8mm movies will be projected at 18 f.p.s. and 16mm films at 24 f.p.s. unless clearly marked otherwise. These categories will be judged at the convention.
3. **Submission of Materials** Entry data and fees must be mailed by the closing deadline. However, multi-media presentations should *not* be mailed, but should be brought to the convention. Please indicate length of program on the entry blank.

8th Annual NSS Cartographic Salon

The 8th Annual NSS Cartographic Salon will be held during the NSS Convention in Frankfort, Kentucky, June 23-28, 1985.

GENERAL RULES

Eligibility—Maps must be graphic portrayals of natural caves, caverns, sinkholes, pits, etc. There is no restriction on the method of preparation or presentation. Maps may be (1) drafted by hand, with or without drafting aids, (2) artistically rendered, or (3) plotted or drafted by computer software and hardware. Maps having previously received awards are ineligible, but new cartographic renditions of older surveys are permissible. Convention registration is not required. All entries must be the original work of the persons submitting the map. Each contributor is limited to no more than four entries.

Format—Either originals or reproductions may be submitted, including printed copies, bluelines, blue prints, xerox copies, photoreductions, computer outputs or other forms. It is suggested that copies be submitted to avoid possible damage or loss of originals. Maps may be entered as a series of sheets (for example, if the map is too large for one sheet, or if separate sheets show plan and profile views). Maps may show one cave, more than one cave, or they may represent only a part of a cave.

Submission and Return of Maps—Submissions may be either by mail or in person. Entries not donated to the NSS must be claimed in person following the awards and prior to the close of the Convention. All unclaimed entries will become the property of the National Speleological Society. No responsibility for loss or damage will be assumed by the Society or its representatives. Please notify the Cartography Salon Chairman as to the total *length* of the cave(s) or part of cave portrayed on each map, in either kilometers, miles or feet.

Closing Dates—Entries must either be received by mail no later than June 15, 1985, or submitted directly at the registration desk at Convention headquarters no later than 12:00 noon on June 24, 1985.

Entry fee—One dollar (U.S.) per map, payable at the time of submission of map.

Awards—Ribbons will be awarded to the winner of each map category, and to those receiving honorable mention. An engraved plaque will be awarded to the overall Salon winner.

Reproduction Rights—Participation in the Salon shall constitute automatic consent to the National Speleological Society to reproduce any material entered in the Salon in NSS publications, including the *News* and *Bulletin*, without charge or notice, but with due credit to the cartographers. Artists and/or draftsmen shall retain all other copyrights and/or other reproduction rights.

Categories—Cave maps fall most naturally and easily into categories according to cave length.

(a) less than 0.5 kilometer
(b) 0.5 to 1 km
(c) 1 to 3 km
(d) 3 to 5 km
(e) 5 to 10 km
(f) more than 10 km

Awards may or may not be given in each category, depending on whether, in the judges' opinion, award-quality maps have been submitted. In the event that too few entries are received in any particular length category, categories may be combined prior to judging. Special categories (for example: computer-generated maps) may be created if enough entries are submitted.

In addition, all entries may be eligible for the following awards:

(g) most effective unconventional or experimental portrayal
(h) clearest portrayal of complex passage interrelationships
(i) best portrayal of the cave in relation to its surrounding topography, geology, etc., and
(j) overall Salon winner.

Judging Criteria—The major criteria are listed below. They may seem rather subjective, but judges of previous map salons found that they could be applied easily and consistently. All criteria are given approximately equal weight.

(a) Visual impact
(b) Balance (no crowding or unnecessary blank space)
(c) Graphic harmony (effective choice of line widths, lettering, etc.)
(d) Drafting skill (including effective use of any drafting aids)
(e) Completeness (essential items are north arrow, scale, title, key to unconventional symbols; other information, such as date, names of mappers and cartographer, is recommended).
(f) Precision in portraying details and character of the cave. Quality of reproduction of printed maps is not a criterion, unless details are masked by poor quality. A profile is not necessary if the character of the cave can be portrayed adequately without one.

Maps will be judged at the Convention by experienced cave cartographers and/or professional draftsmen or cartographers.

Address for Entries—

Ernst H. Kastning, Chairman
NSS Cartography Salon
Dept. of Geology and Geophysics, U-45
University of Connecticut
Storrs, CT 06268

Instructions for Entry Blank

1. This form is being used for both the Cartographic and Photographic Salons.
2. Number your entries consecutively (maximum of 4 allowed). Place this number in the Entry Column *and* on the reverse of the map.
3. Place the name of the cave(s) in the Title column.
4. Place the category (by length or as a special category) in the Category column.
5. If you wish to retrieve your maps at the Convention, place a "no" in the Donated to NSS column. Otherwise, place a "yes."
6. Enter the total Entry Fee ($1.00 U.S. per map) at the bottom of the form.

ENTRY BLANK FOR PHOTOGRAPHIC OR CARTOGRAPHIC SALON

(Print or type, please)
NAME _____
ADDRESS _____
_____ COUNTRY _____

OFFICE USE ONLY

Entry Number	Title	Classification/ Category	Donated to NSS?	

For additional entries, duplicate this form or write Salon Chairperson for extra copies.

Entry Fee _____
Return Postage _____
SPECIAL SHIPPING INSTRUCTIONS: TOTAL ENCLOSED _____

Marble Mountains Majesty

By Steve Knutson

A caver's playground, an abundance of sinks—the Marble Mountains as viewed from the top of Black Marble Mountain. Bigfoot Cave is left center of plateau. Super Sink Cave is in foreground. Upstairs-Downstairs Cave begins in sink, cuts through the large ridge, and exits in the cliffs on far side. Photo by Dave Bunnell.

History

In July of 1974 Wayne Walent and I hiked to a beautiful glacial cirque called Marble Valley in the Marble Mountain Wilderness of northern California. To our surprise and delight the marble sections of the cirque were heavily karstified. We soon found some small caves and left with visions of more discoveries.

Wayne couldn't return for some time, so I recruited Jim Nieland for another weekend scouting expedition. This trip turned up a sizable cave which we named Streamway for its borehole stream passage. This type passage is unusual for the far west but, as we gradually discovered, not for Marble Valley.

On a second trip to Streamway, we decided that a larger cave might be under a major lineation on the far side of the valley. The following day, Jim and Libby Nieland, Wayne Walent, and I went there and discovered an entrance to the cave that later became known as Bigfoot. This valley was the find of a caver's lifetime!

Soon more caves turned up, all of them with difficult access. Every entrance we found was either a pit or a nasty crawl, and all proved to be forbiddingly cold, with 37° air and 34° water temperatures. Persistent breezes added to the discomfort.

That first season was deceptive—it did not rain from the time we started caving until the snows fell in November. We did fine with long underwear, wool sweaters and coveralls, but the weather would not be that kind again. A more typical season would see the beginning of serious caving in mid-July with the melting of the last of the 15-ft winter snow pack. The caving season usually ended in October with the coming of continuous bad weather and the first winter snows.

The winter snowfall and regular summer storms tend to keep the caves wet. The storms come in from the coast, only 40 miles away, making conditions miserable both in the caves and on the surface. Occasionally, a solid month of dry weather will lower the wetness of the caves quite nicely. But the occasional rain or snow storm usually keeps things interesting. We soon realized that wetsuits would be necessary for most serious efforts.

On one occasion, Tom Houck and I went into the Illusion for some mapping. A dry phreatic area was the logical objective because of a constant rain drizzle outside. On heading out we found that the main passage stream had increased at least five-fold during our 6-hour trip and the Lurking Fear crawlway to the lower part of the cave was completely full. Luckily, our way out was in large passage, but we would have had great difficulties if we had gone down-cave.

Bigfoot quickly grew longer and deeper as we explored the descending mainstream passage which seemed to terminate in impenetrable breakdown at the end of a large room. But on July 26, 1975, Steve Johnson and I pushed a major extension that Howard Hurtt, Mike Sims, Luther Perry and I had aid-climbed into on the 4th. This brought the depth of the cave to -1070 feet. On August 4, 1976, Dick LaForge and Dave Walker moved rocks in a sucking lead near the bottom to enter another extension, pushing the depth to -1115 feet. Finally on September 7, 1977, Dave Cowan and I dug a hole in the ceiling of the passage at the bottom of 890-ft deep Meatgrinder Cave and entered the Lair of the Ice Worm in Bigfoot, making it the deepest cave in the U.S. at -1205 feet. This broke the record held for over 20 years by Neff's Canyon Cave in Utah.

During the following years we pushed lateral leads and greatly added to the length and complexity of Bigfoot. The Illusion area proved to be unique as well as extensive. It leads off the bottom of Meatgrinder, away from the main cave and under a major surface drainage divide. Its dry, silent passages with little air movement had seen almost no modification by water and contained formations of gypsum and aragonite—in all, a great contrast to the rest of the cave. After the 1983 season, Bigfoot had reached 48,800 ft (9.25 miles) total traverse, easily the longest cave west of the Continental Divide.

We found many other caves in the valley, but none could rival Bigfoot. Even so, they yielded enough blowing, wet crawlways and schist-walled streamways so that lists of the 20 longest and deepest limestone caves in California find half their entries to be from Marble Valley. At the end of the 1984 season we had mapped over 16 miles of alpine cave.

Marble Valley

The main karst area is in the southern half of the east-facing cirque valley, but the dip of the marble is to the southeast. This allows Bigfoot to follow the 15-20° dip until it nears the south side of the valley where it turns to the northeast along the strike at a lesser gradient toward the only two known resurgences.

The Canyon Creek valley descends more steeply below the lip of the cirque and the marble is soon left as an exposed bed in cliffs and benches along the south side, in front of the adjacent cirque of Sky High Valley. The dip is still to the southeast in this area, so caves follow the trend set at higher elevations, going strike, now more or less parallel to Canyon Creek. Bigfoot ends in the broader marble above the lip, but a series of caves extends along Canyon Creek below the lip of Sky High Valley.

The main trend of caves begins in pits at least 6600 feet above sea level and extends through Bigfoot (6400 to 5200 ft), Trail Junction, Sinking Stream, Upstream and Dry Stream (5000 ft), and down to the

Ernie Garza and Dave Walker provide scale to the Breathing Entrance of the Meatgrinder Section of Bigfoot Cave. Photo by Dick LaForge.

resurgences, one at about 4800 ft and the other at 4300 ft. Parallel and south of lower Bigfoot are Corkscrew and Brokedown Palace Caves, which appear to join the main drainage near Upstream Cave.

There may be more than one drainage system on the south side of Canyon Creek. The first stream in Sinking Stream and the main stream in Dry Stream have been dye traced to the resurgence at 4800 ft. Dye dumped in the Terminal Room of Bigfoot was not detected at that resurgence; it may have reappeared at the lower resurgence where it would be difficult to detect because the resurgence is in the bed of Canyon Creek.

As shown in the Little Black Peak profile, there is an interesting juxtaposition of caves at the lower end of Bigfoot. The entrance to Trail Junction Cave is above and about 100 ft south of the end of Bigfoot; the cave descends quickly to a crawlway containing a major stream. This quickly sumps, both up and downstream, but is obviously not a continuation of Bigfoot since it is 80 ft higher than the Bigfoot sump. It may flow into Sinking Stream Cave, about 400 ft away at an appropriate level.

Air flow is most interesting in these caves. Air flows strongly up a short dome near the end of Bigfoot, through a slot a bit too small for human passage. In Trail Junction it flows up a lead near the sump, the lead being 8 ft wide where flowstone closes it down to 6 in high. In Sinking Stream Cave strong air flow comes down out of a tall dome at the back of the cave. It is possible that these flows might be interconnected. If so, hard work would be needed to force the connection.

Coming in from the south is the system of Corkscrew and Brokedown Palace. These descend from their entrances to the same schist interbed with Corkscrew upstream from Brokedown Palace, both several hundred feet higher than the parallel, northeast-trending Bigfoot. But this interbed disappears partway down Brokedown Palace and this cave then descends to join the main trend and must end fairly close to Sinking Stream or Upstream Cave in the gradually descending system.

Black Mountain

The north side of Marble Valley is dominated by the schist caprock of Black Mountain. The underlying limestone has been separated from that in the southern part of the valley by glacial down-cutting to the underlying schist. Just below the caprock on Black Mountain's south slope is a closed glacial depression about a hundred yards across that we have named "Super Sink."

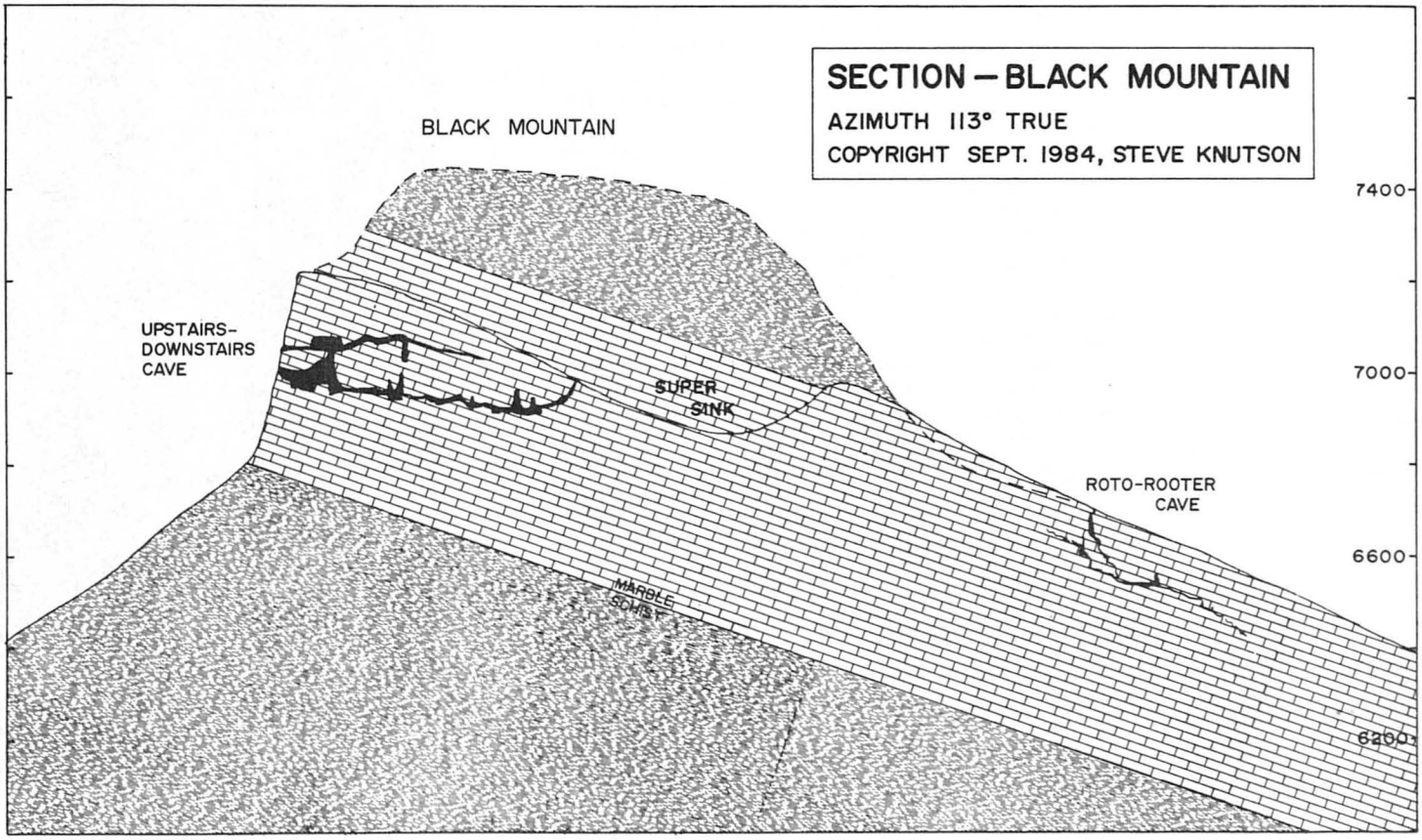
The integrated drainage from solutionally-opened joints and small sinks in the floor of Super Sink could have produced a major cave on the southeast side of the mountain. The marble extends from over 7200 to 5200 ft elevation in a continuous dip-slope—a perfect situation for a deep cave. A deep cave may also have formed in the drainage from the glacier/snowfield which was situated on the north side of the caprock during the last glacial age. It drained to the southeast under the caprock and down the east side of the mountain.

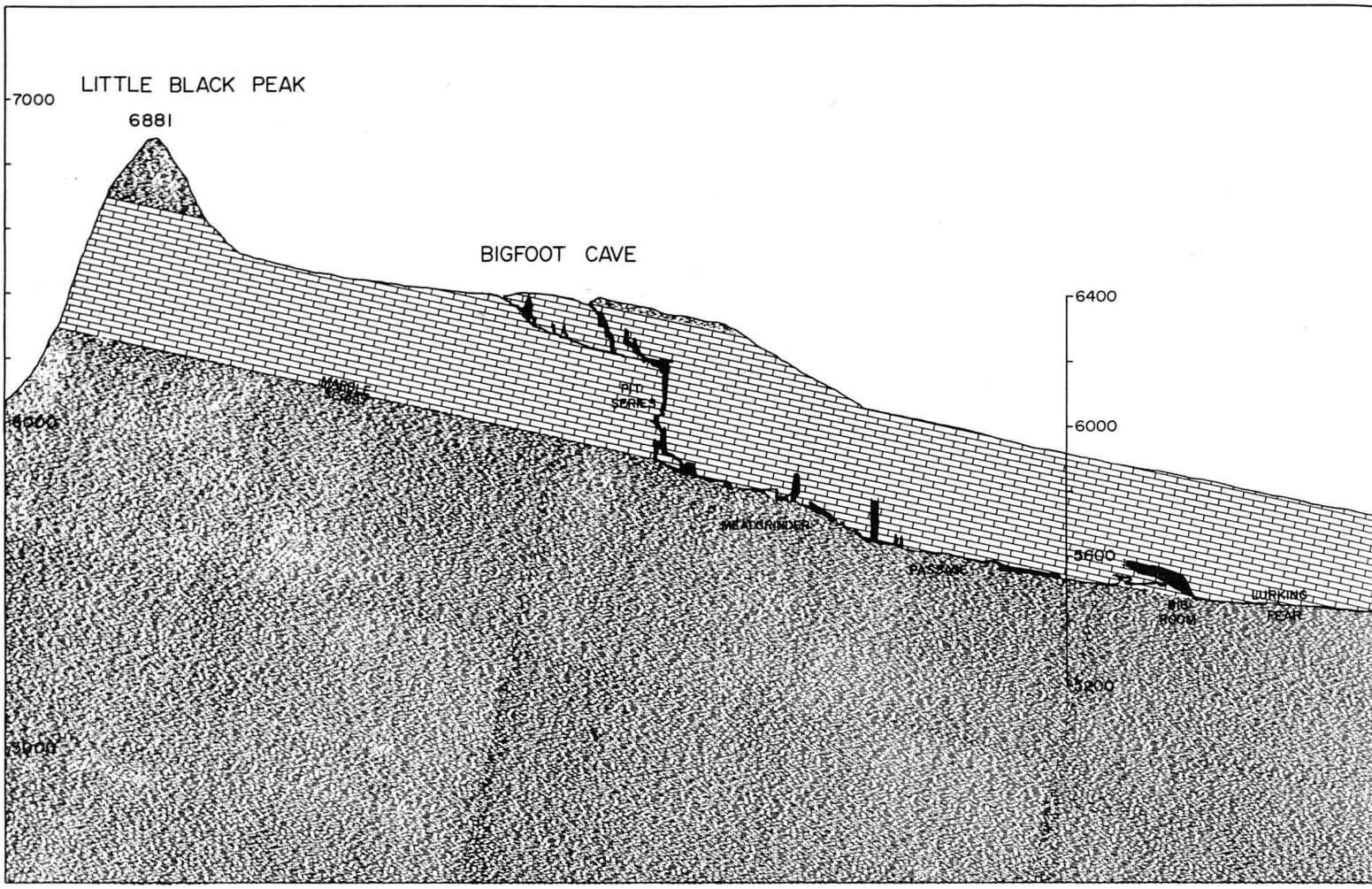
Though the potential is apparent, Black Mountain is higher, steeper, has more soil, is tree-covered, and has seen less surface scouting than the southern part of Marble Valley. Also, the surface is less karstified, giving fewer sinks and fewer chances for an open entrance to caves that may be there. As a result, fewer caves are known. The main one is half-mile-long Upstairs-Downstairs, extending from the western side of Super Sink through the cliff face overlooking the Elk Valley cirque on the west side of Black Mountain. A little below Super Sink on the east side are Roto-Rooter and Crystal Drano Caves, closely associated. Below them is nothing but potential.

The 1984 Plan

The 1984 season was typical of the previous nine. We had use of a Forest Service shed in Marble Valley. In a bin where there was once grain for pack animals, we now keep food, ropes and caving equipment. In mid-June I hiked the 5 miles to the grain shed and left food and some of my personal gear. There was plenty of snow, but it was disappearing sooner than usual and the caving season could start a bit early.

But what should be the objectives? Since this was to be the 10th season and Bigfoot stood at 9.25 miles—surely it would be appropriate to try to reach 10 miles. But high on the slopes of Black Mountain on the north side of the valley stood Roto Rooter and Crystal Drano Caves. These had been discovered a few years before by Eric Popov





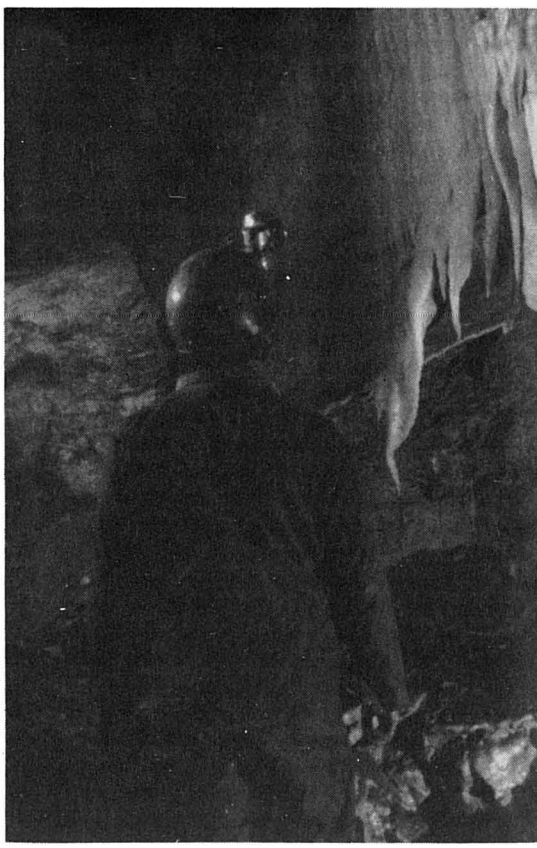
and Paul Greaves. Crystal Drano seemed to have been pushed to a conclusion, but Roto-Rooter was reportedly still going. Jim Wolff and I mapped the first 300 ft side leads in 1981. Peter Bosted, Dean Kenty, Dave Cowan and Claude Smith had pushed another 100 ft of tight stream crawl to a "main" stream passage which they mapped for a bit both upstream and downstream. Obviously, this should be another objective though no one seemed very enthusiastic about going back into it.

This year the snow was nearly gone by the July 4th weekend. A quick check showed that Bigfoot had an open crevice between the sink wall and the snow plug. Since Roto-Rooter is higher, it was still too wet for exploration. On July 6th, Mark Fritzke, Scott Linn, Dave Walker and I entered Bigfoot and went out into the Illusion area. Near the end, where it splits into several levels, we mopped up leads, hoping something would head off into the unknown.

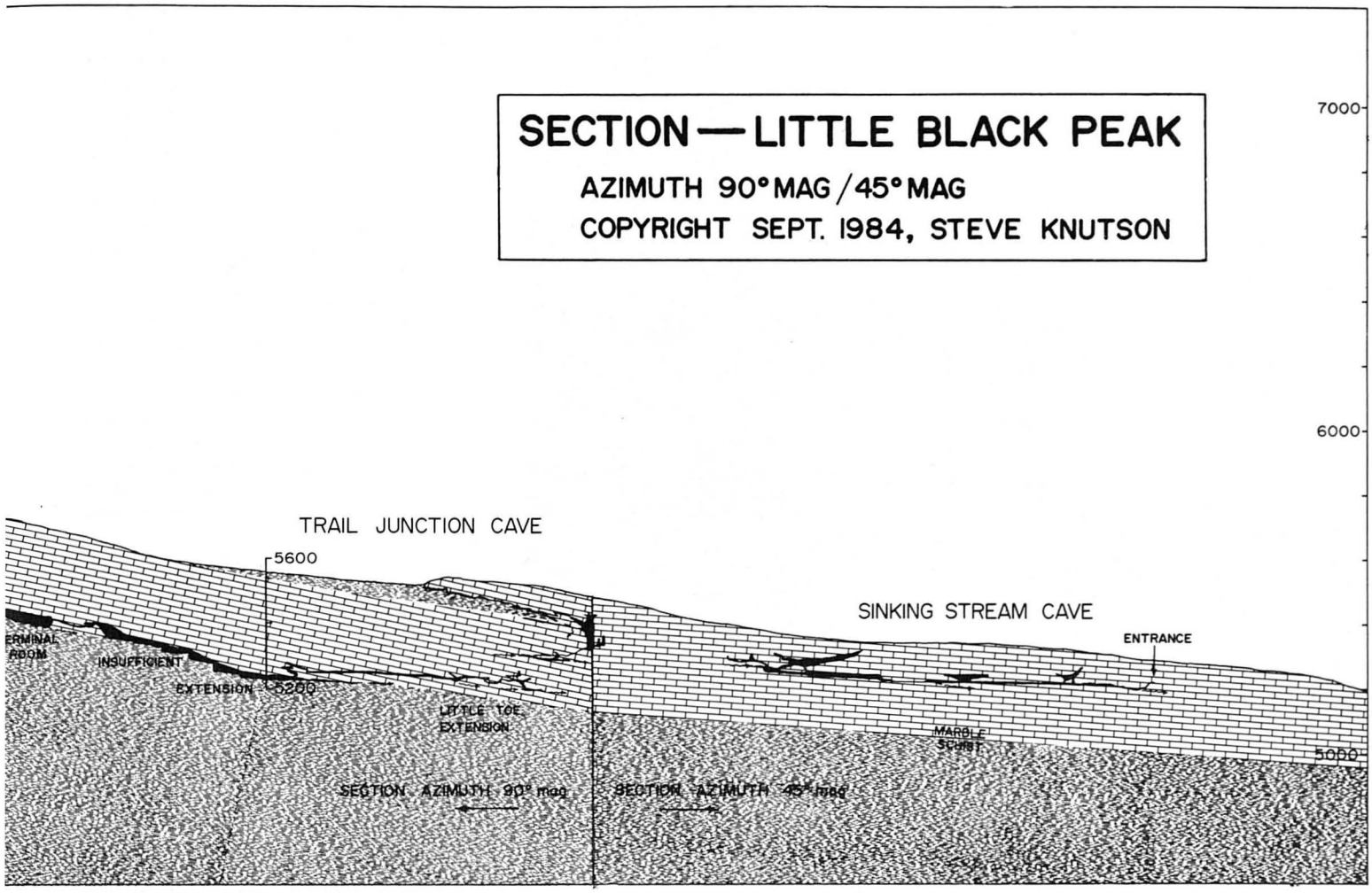
Everything ended except the last lead which was off the Wounded Knee crawl. We left the lead at a junction after accumulating 788 ft of survey. On the 21st, Arley Kisling and I returned to continue with this lead, but when we arrived at the end of the previous survey, Arley became ill, apparently the aftermath of a bout with the flu. Fortunately, he was able to make it out.

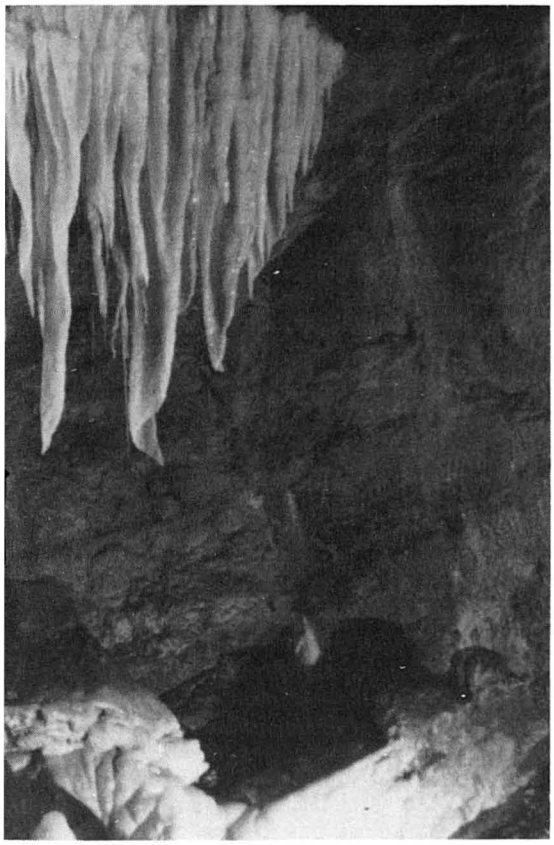
By early August Roto-Rooter was dry enough for a push. On the 4th, Scott Linn and I saw why no one liked the area. It took an hour to travel the few hundred feet to the stream passage found by Bosted and party. The new stream passage was mostly crawlway. We turned upstream where the continuation looked reasonable in the survey notes. Wrong. The upstream crawl quickly led to a tight squeeze, then a 2-level complex which we mapped but could not pass, we finally reached a blowing lead blocked by a rock. We then proceeded downstream to where the previous survey had ended and saw why—they had taken a dry upper level cutaround then reentered the stream where it is 4 ft wide but only 10 in high.

There was strong air flow, so I made sure my wetsuit was zipped up, and wormed onward. Ten feet along it sucked down to 8 inches and was partly blocked by a rock which I had to move while ice water ran merrily into my suit. Invigggorating! Shortly after the constriction, the passage started to open up—10 inches, then 12 and suddenly I could sit up at the edge of a 10-ft waterfall with walking passage below! I quickly climbed down this drop and down another just beyond into 50 ft of open, sloping passage. This was exciting, but ahead I could see the passage closed down to a crawl space with water shooting down it.



Vince Reed pauses to admire pristine draperies Meatgrinder Section of Bigfoot Cave. Photo by Dick





and flowstone in the Hall of the Ancients in the aForge.

We had already had our fill for the day, so I turned back and we exited.

On August 18th Dave Walker and I returned to push this promising lead. Scott was obligated elsewhere, but he didn't miss much—it only went another 50 ft to a breakdown blockage that took both the air and the water. But the potential remains....

Speleocamp

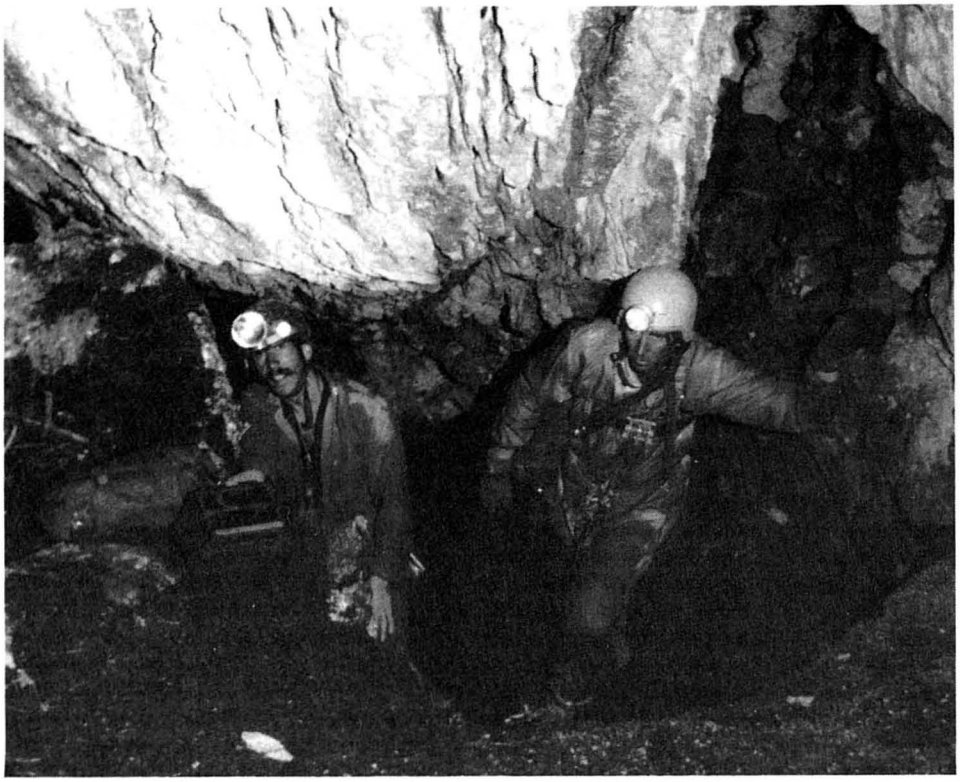
The next effort would not be until Speleocamp, the annual gathering of cavers in Marble Valley during the week following Labor Day weekend. The objective would now be Bigfoot.

On Sunday, September 2, the first arrivals meshed in a two-pronged assault on the Wounded Knee. Carol Vesely, Bill Farr, Dave Walker and I pushed the crawl leads while Dave Bunnell and Peter and Ann Bosted explored a nearby fractured fissure drop. The fissure unfortunately led to known passage so that group, after mapping 95 feet, did some photography and left. The crawl crew was somewhat more successful, getting 450 feet in the growing maze, a lot of it 5-10 ft shots. They did not leave the known cave, but the crawls still had possibilities.

Recent surface surveying had shown that Slipstream Cave, about 1000 ft long and 200 ft deep, ended in breakdown only 50 to 100 feet from a similarly blocked large passage near the Hall of the Ancients in lower Bigfoot. On September 3rd, Peter, Carol and Bill entered Slipstream while Dick LaForge, Vince Reed and Ron Schwarz tried from the Bigfoot side. Alas, neither group could hear, much less find, the other...and the wind blowing through the boulders is still the only thing connecting the two caves.

On Wednesday the 4th we mounted the biggest effort ever in Bigfoot, with three mapping crews working independently. Dave Walker, John DeBoer, Scott Linn, Dick LaForge, Ernie Garza, and Bruce Hagen entered the Meatgrinder entrance and worked their way down to the pit series where a lead traversed airily above the 125-ft pit and on to a virgin pit. Meanwhile, two other groups headed for the Chthulu Room to push leads there.

Near the Chthulu Room, Dave Cowan, Larry Rollins, and Don Dunn worked on a lead across a tricky pit traverse while Michelle Richardson, Stan Bissel, and Steve Knutson mapped a lead not far away. This proved to be an easy crawl with a beautiful stream of white, crystalline flowstone cascading down the floor. The other group had less luck because of slick mud on a climb and a lack of rope, but together we got over 400 feet. The virgin pit in the Meatgrinder Passage proved superior, however, as it dropped 60 feet to multiple leads.



With expressions of tired satisfaction, Vince Reed and Ron Schwartz exit Bigfoot Cave *late* at night.

One of these led to a second pit for which they had insufficient rope, but they were able to map over 800 feet of new traverse.

On Thursday we rested and added the survey totals—we "only" needed another 1450 feet to make 10 miles. We decided to continue for our goal, even though it meant a return to the two areas we knew would produce—Wounded Knee and the New Pit Series. I didn't want to go back to Wounded Knee, but no one else present knew the way. On Friday Dave Cowan, Bruce Hagen, John Blum, and I swore to get at least 750 feet effectively attack the crawl leads. Getting footage was tough—nothing went very far before ending or looping back. At one point we reconnected with known passage through a lead we had earlier tried to push and left as being too small. About midnight Blum and I headed out, not having heard anything of the other two for many hours. (half the amount needed) and rappelled into the cave. Similarly sworn, Dave Walker, Dick LaForge, John DeBoer and Scott Linn headed up to the Meatgrinder Entrance.

At the Wounded Knee we split up to more

We found no note at an appointed place, but were sure Bruce and Dave must be out. They were not, however, difficulties finding the route out had delayed them. They finally exited at dawn after nearly running out of carbide. We did get our 750 feet, but the New Pit Series crew had aborted after losing their survey tape down a crevice!

Saturday morning, as we sat around in post-trip numbness, the 10-mile goal seemed to be postponed, perhaps even unreachable.

Walker had injured his knee and couldn't cave. DeBoer had to hike out to fulfill a work commitment on Sunday. But lo! My eyes perceived Linn and LaForge muddling their gear together and heading for the cave...such devotion! Late that night they returned to present those of us still at the campfire with 770 feet of survey and the tale of yet another pit, too deep for their remaining 100 feet of rope! How about that...!

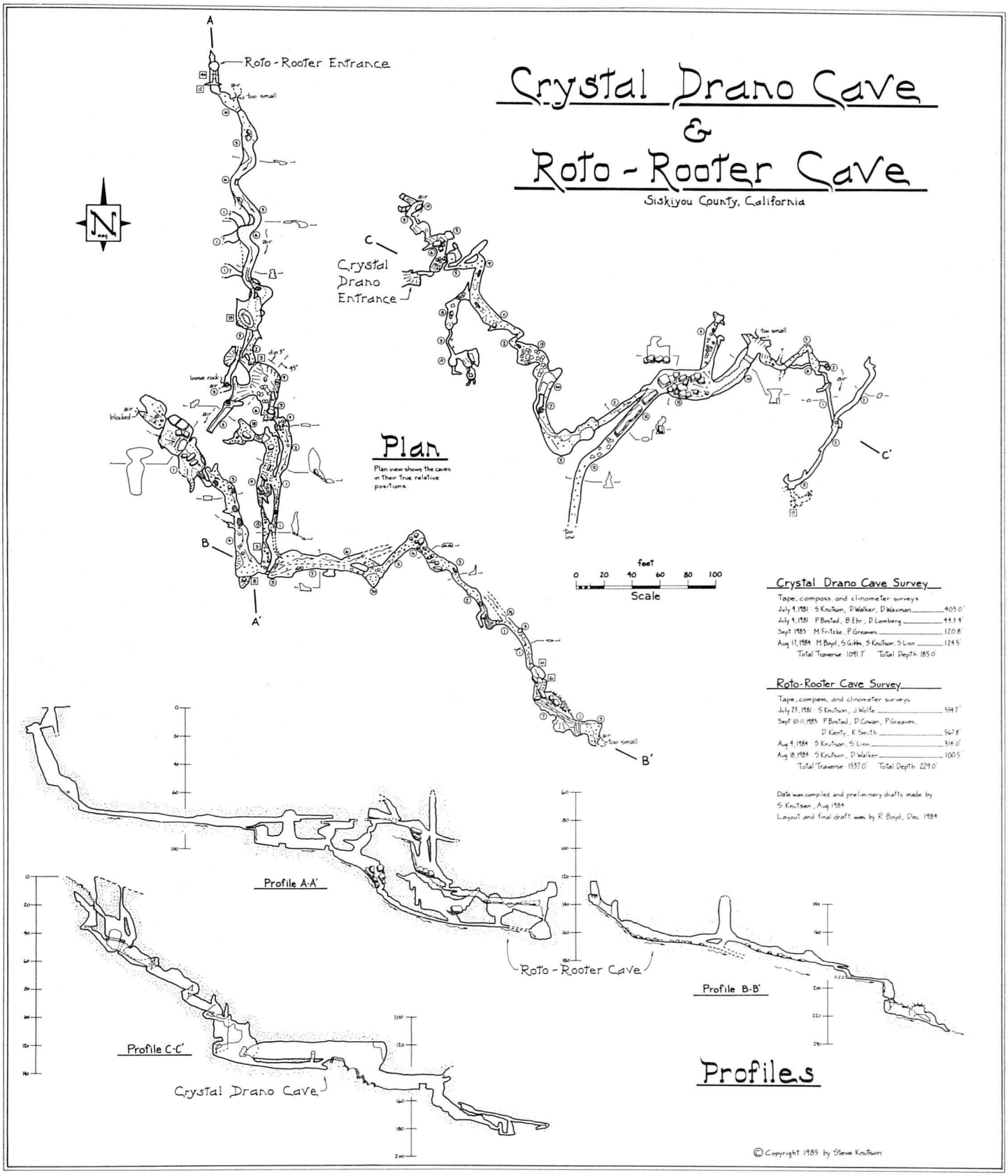
We didn't make it back into Bigfoot that season. Thinking back over the past decade, things haven't really changed much—there are still leads, still a virgin pit in Meatgrinder, still crawl leads beckoning in the Wounded Knee...and if only we could find something going on Black Mountain....

The 10 miles in Bigfoot and 16 mile total in Marble Valley don't sound like much by Eastern standards, but in terms of difficulty, access and environment, in terms of the dedication and effort required, a mile of alpine cave like Bigfoot equals at least 5 miles of Eastern cave like Mammoth. And don't forget...the next longest cave is 1500 miles away....

In our relations and cave inventory work with the Forest Service, we are organized as the *Klamath Mountains Conservation Task Force*. For information on Klamath Mountains caves contact: Mike Sims; Director,, KMCTF, 505 Roosevelt

Big passage in Bigfoot—just up from the Big Room. Photo by Dave Bunnell.

Dave Walker prepares to traverse the top of a newly-discovered pit in the Meatgrinder Section. Photo by Dick LaForge.



St, Oregon City, OR 97045.

Project Participants

There has been a constant turnover in cavers active in Marble Valley. This turnover was caused by factors such as travel requirements, the hike in, caving difficulty, caving season shortness, and the normal evolution of one's caving life. The following cavers were caving in Marble Valley at or near the beginning, and are still caving there: Dave Cowan, Mark Fritzke, Steve Knutson, Dick LaForge, Mike Sims, Vern Smith and Dave Walker. Many have come and gone: Mike Barnes, Jon Burkig, Ken Byrd, Lynn Clark, Bill Devereaux, Bernie Dunn, Bob Ehr, Gregor Erickson, Jack Espinal, Paul Greaves, Mike Hodgson, Warren Hoemann, Tom Houck, Steve Johnson, Dan Jordan, Steve Jordan, Dean Kenty, Pat Kimmerling, Dave Mischke, Donna Mroczkowski, Melody Naiditch, Jim Nieland, Libby Nieland, Luther Perry, Eric Popov, Todd Rasmussen, Lynne Sims, Eric

Canyon passage formed in blue marble in Drystream Cave. Photo by Dave Bunnell.

Storrs, Wayne Walent, and Derald Yancey. Newcomers who are involved in the present caving scene are: John Blum, Peter Bosted, Dave Bunnell, John DeBoer, Don Denbo, Bill Farr, Bruce Hagen, Roger Jones, Arley Kisling, Scott Linn, Claude Smith, Carol Vesely, Jim Wolff and Liz Wolff.

Please note that the preceeding listing includes, to the best of my knowledge, everyone who made at least two serious caving trips. Many more have been caving only once or in small caves or have done surface scouting. To all of them goes the credit for what has been revealed in Marble Valley.

40/25 Years Ago

By Dave Hughes, NSS 14550

40 Years Ago

In the April 1945 *NSS Newsletter*, Harvey Templeton reports on a trip to Higgenbotham Cave (now Cumberland Caverns) in Central Tennessee. Harvey exclaims that he and two other explorers examined an immense room which they estimate to be 1800 ft long, 10 ft high, and at least, 100 ft wide.

Similarly, in Pennsylvania, two instructors from Bryn Mawr College along with bat specialist, Charles Mohr, led a coed trip to Mifflin County. During this outing, girls from the college got a chance to explore Lime Sink Caves, Maitland Cave and Aitken Cave while collecting data and observing bats.

Finally, it is announced that Betty Yoe has been named the secretary-treasurer of the recently organized, Cleveland Grotto. These cave enthusiasts volunteer their services for any NSS projects, including help with future issues of the *NSS Newsletter*.

25 Years Ago

The April 1960 *NSS News* encourages members to attend the impending convention in Carlsbad, New Mexico. To this end, photos are included of the entrance to Carlsbad Caverns and of both the "Monarch" and the "Clansman" formations in New Cave. New Cave is situated high above Slaughter Canyon and was used during the filming of the movie, "King Solomon's Mines." The April installment also contains an early trial at a "Table of Contents," and it is hoped that this will prevent thumbing completely through each issue at year's end.

The NSS Visual Aid Program is summarized and members can arrange to borrow the seven available shows. These include: "Caves Beyond," "Caving Techniques," "Cass Cave," "Speleothems," "Caves of Puerto Rico,", "Guachero Cave," and "Russell Cave."

Russ Gurnee makes some interesting comments on Warm River Cave, Virginia, and likens this cavern to a gravity-fed, hot-water heating system. In any event, the 2100-ft long cave features water temperatures as high as 83° and cavers are cautioned to explore with care to avoid heat exhaustion.

Finally, Bill Garrison describes an assault on the Doodlebug Hole-Blowing Cave System in northern Alabama. Over a period of two days, explorers from both the Huntsville and the Nittany Grottoes converged on the site and rigged the Doodlebug entrance drop with twelve, 30 ft cable ladders. Many people went in the horizontal, Blowing Cave entrance while Jack Allen descended the cable ladders to the bottom. Francis McKinney then climbed partway down the ladders, but was turned around by shouts from Jack. The next day Bob Estes descended the ladders and Bill Garrison rappelled the drop. Terry Tarkington also headed down the ladders, but like Francis the day before, was intercepted by the others on the way out. After Doodlebug, the cavers visited Tumbling Rock Cave and Cumberland Caverns to wrap up the intense Christmas week expedition.

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Caver Musicians Wanted for Giant Jam at the NSS Convention

We are trying to put together a group of good musicians who are accustomed to playing amplified, for a big jam session on the night of the NSS Auction (Tuesday evening). Since the music interests of cavers are diverse, we would like to get together two different "bands:" one to play rhythm and blues, old and new rock n' roll; and another to play bluegrass and folk. We need drummers, bass players, guitar pickers, mandolins, fiddles, saxophones, banjos, harps, electric pianos—you name it. We know there are some talented folks out there, so don't be shy. Let's boogie down the house, caver style! If you are interested in playing, send a letter stating the instrument(s) you'd like to play and the type of music preferred, to: Albert Ogden, 1017 Sycamore St., San Marcos, TX 78666, or call 512-396-4873 (home), 245-2329 (office).

Dyas Digest

by Mike Dyas

Writing for the NSS Survey & Cartography Section's Fall 1984 *Compass and Tape*, Bill Mixon dwells on the shortcomings of "electronic tapemeasures" for use in mapping caves. A possibility not yet tried: a transmitter which simultaneously emits bursts of light and high-frequency sound, picked up by a receiver (at the target station) programmed to compare differences in elapsed travel time and thus calculate distances. Bill points out that such a rangefinder wouldn't be able to estimate ceiling heights—and that all such devices are apparently vulnerable to jamming by flying bats!...John Ganter begins a series on lettering cave maps; since few people have the artistry required to letter by hand satisfactorily, some mechanical assistance is usually needed—as a minimum, a typewriter for simple newsletter maps. A more all-around help is a "KROY" lettering machine, which is essentially a jumbo label-maker. The smallest model costs only about $200, while professional types interface with micro-computers. John suggests bearing in mind to what degree the finished map may eventually be reduced and also avoiding very ornate print styles.

Wittenberg University Speleological Society (Ohio) marks its fifth anniversary with the April 1984 *Pholeos*, featuring a map and description by Donna D'Angelo of semi-commercialized **"X" Cave**, in Carter Caves State Park, Kentucky. With approximately 225 meters of passage, the cave is developed along two criss-crossing joints; so that the map comes out in roughly the shape of an elongated letter "X," with an entrance at each corner. The cave contains an interesting domepit complex and a fair amount of speleothem decoration...Also included is Tom Keller's map and write-up of **Cedar Fork Cave**, in southern Ohio's Adams County. Relatively large for the state at 210 meters, the cave is developed in dolomite.

Fort Knox Grotto (John Morehead, Doug Hocking) has added about 800 meters this year to the map of 4.9-km **Blisset's Cave** (Breckenridge Co., Ky.). Blisset's overlies **"Screaming Colon" Cave** about 825 m., but a connection has so far proved elusive. FKG is also checking caves in western Meade County in preparation for the 1985 Kentucky Speleofest; of particular interest is a complex maze. Information from the December 1984 *Lowcrawler*.

Louisville Grotto's September 1984 *Karst Window* offers a map and commentary by Angelo George for **Big Mouth Cave**, in west-central Kentucky's Grayson County. Although formed in Pennsylvanian conglomerate, Big Mouth is more than a typical shelter cave—it's some 75 meters in extent and evidently resulted in part from solution of calcite cement in the bedrock. The cave is also of historic or folklore interest, with many legends of buried treasure, murder victims, and so forth. A dwarf who once lived nearby is supposed to have explored far beyond the pinch where the cave "ends;" and "Doc" Brown, a local desperado in the 19th century, reputedly hid out in the cave...Philip DiBlasi and Ron Wilson plan to co-direct an inventory of cave sites in several counties adjoining Louisville, with emphasis on paleontological and archeological potential. The Silurian-Devonian limestones of the region have been comparatively neglected by cavers, and known caves are small. Several significant bone caves have been located in Bullitt County, just south of Louisville.

During the past Labor Day SWR meet, Bruce Baker and Andy Belski pushed a near sump in the **Park's Ranch Cave System** (Eddy Co., New Mexico). A "rank sulphur pool" with minimal air space led to an estimated 300-odd meters of passage and another entrance to the gypsum complex, now figured to be at least 3.3 km. in extent; this according to the Sept.-Oct. 1984 *Southwestern* (Region) *Cavers*...The August "Goat Roast" was pretty well swamped, especially in the McKittrick Hill cave area, says Lee Skinner. Just about every highway in the Carlsbad area was under water for a time...A trip to **Mudgett's Cave** the next month had some "interesting" moments just getting there, due to flood aftermath and "guano ash" in the entrance zone, according to Carol Belski. The purpose was to experiment with glueing back broken formations, and some lessons were learned...Dwight Deal and other SWR cavers were frustrated after volunteering to help the Lincoln National Forest gate caves in the same time frame, when projects were called off at the last moment due to drizzly weather. Dave Belski backs up Dwight's complaints to LNF officials, who they feel are taking volunteers too much for granted.

The November 1984 *Potomac* (Speleo. Club) *Caver* briefly summarizes two recent caving mishaps. There was a December fatality in **Cass Cave** (West Va.), not unlike one several years ago. An Ohio spelunker apparently tried to climb "Suicide Falls" while fatigued and succumbed to hypothermia (For additional information see February *News*). A few weeks earlier, a man fell in **Breathing Cave** (Virginia) and had to be evacuated by the local rescue squad. The owner, Mr. Joseph Lockridge, is said to be considering closing the popular cave (not for the first time), and Fred Grady urges would-be visitors to check in with him routinely.

May 1984 witnessed a massive downpour across much of Kentucky—what rural people sometimes call a "trash mover." Mike Johnson analyzes the storm's effects on the caves of Pulaski County in Dayton Area Speleo. Society's Aug.-Sept. *Johnhouse News*. Although rainfall wasn't exceptionally heavy—about 15 centimeters--it fell uniformly over a wide area, and the ground was already saturated. Johnson has never witnessed such flood impact on caves in his 15 years of frequenting the locality. In **Wells Cave**, water clearly ran through many

KARST FIELD STUDIES at MAMMOTH CAVE

Speleology	June 2-8	Mr. Roger W. Brucker
Cave Ecology	June 9-15	Dr. Thomas Kane
Karst Geology	June 9-15	Dr. Arthur N. Palmer
Historical Geography of Mammoth Cave	June 16-22	Dr. Stanley D. Sides
Cave Archaeology	June 16-22	Dr. Patty Jo Watson
Advanced Cave Exploration and Surveying Techniques	June 30-July 6	Staff
Karst Geomorphology	June 30-July 6	Dr. Richard Powell

Western Kentucky University through its Center for Cave and Karst Studies in cooperation with Mammoth Cave National Park offers a series of one-week summer courses focusing on caves and karst landscapes.

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sections which have "always" been dusty dry; and the story was much the same in nearby **Coral Cave System**. One 45-meter high canyon in Coral was evidently filled almost to the ceiling. Wells and Coral reminded Mike of the **Sloan's Valley** and **Cave Creek Systems** in southern Pulaski County, which flood much more often (owing to proximity with Lake Cumberland). He figures it'll be quite awhile before the caves recover from the 1984 event.

The Nov.-Dec. 1984 *Southwestern* (Region) *Cavers* contains a detailed account of the recent accident in **Cave of the Madonna** involving an Abilene (Texas) Area Grotto party. According to Winston Whitt, his brother, Horace, was first to descend the 87-meter drop on Nov. 4th, noticing a loose formation on a ledge about 20 m. down. Horace decided not to kick it down due to his "cave conservationist nature." It was this same object which was dislodged when Winston rappelled past the ledge while Horace was incompletely clear at the base. In dodging the missile, Horace tripped and broke an arm; fortunately, his sturdy helmet suspension prevented head injuries. Carlsbad area cavers, assisted by an Army helicopter, performed the evacuation...Additional features: "Speleogenesis of Carlsbad Caverns," by Carol Hill—an abstract of a larger paper postulating the role of upseeping hydrogen sulfide in cave formation in the Guadalupe Mountains (with gypsum as a by-product) and illustrated by stages of the process in evidence today...And a retrospective by Dave Belski of Southwestern Region meeting and officers since its 1962 inception.

Steve Knutson's resume in the **California Caver**, Vol. XXXIV, No. 4, indicates that total passage explored in Marble Valley in the past 10 years stands at approximately 27 kilometers *(Ed. see related article elsewhere in this issue)*. Cave photographers frustrated with in-cave results may learn a lesson or two from Dave Bunnell: all's not necessarily lost if initial prints are unsatisfactory. Processors can often upgrade underexposed slides. Faults caused by bits of dirt (such as may find their way into the camera while changing film in cave) can be opaqued with India ink and reproduced without a trace. Misaligned shots can be restraightened in the frame up to a point...Liz Wolff recaps finding the past several years in the **Powder Hill (Bobcat) Lavatube System** near northern California's Mount Shasta. We have some 3 kilometers of not-quite-connected passage here. Liz adds that, "There are more caves out there, low, crawly and sticky; and we'll gladly show you where they are, just don't ask us to go with you."

Greater Cincinnati Grotto's December 1984 *Electric Caver* has an interesting article by Debbie Vore on hibernation, specifically as practiced by cave bats. There's reason to believe that some species aren't completely inactive all winter and may even arouse to feed on milder winter days (when insects can be more numerous than one would suppose). Bats seem to spend much of the late fall and early spring in an intermediate state more properly referred to as "torpor," rather than deep hibernation. There are also indications that torpid bats may move from time to time, depending on weather fluctuations and how near they are to cave entrances. In any case, the strategies of bats for coping with winter clearly involve delicate and poorly understood factors—all the more reason for cavers to avoid disturbing them.

University of Virginia Grotto's *Cavalier Caver*, Vol. XVIII, No. 1, features Ron Simmons' account of Spring 1984 progress in **Windy Run Cave** (Randolph Co., West Virginia). The trip was par for the course—unanticipated delays and assorted foulups—but Dick Graham pushed an unlikely hole at the fourth drop which produced "some of the best passage in the cave," adding another 365 meters to the map. Ron's prescription for finding new cave was proved again: just leave your pack behind.

Recent scaling pole assaults in central Kentucky's **Fisher Ridge Cave System** have yielded meager results. Since repeated frustrations discourage volunteers willing to tote the necessary implements, Keith Ortiz concluded that a careful assessment of potential "pole leads" was in order. His thinking appears in Detroit Urban Grotto's December 1984 *DUG Scoops*, with Keith hastening to point out that his findings apply specifically to the Mammoth Cave region's geology. Ortiz' main points are: (1) take for granted that at least 75% of high leads spotted will turn out to be blind... (2) leads atop domes near the sandstone cap almost always come from miserably tight canyons of little extent... (3) remember that most passage in central Kentucky is found at certain predictable levels and also tends to follow a distinct axis (e.g., strike or fracture)... (4) occasionally, a dome may intersect *two* dominant levels; openings seen midway up opposite walls may be particularly promising... (5) a large waterfall emerging from a conspicuous void is a good omen... (6) a dome deep in the cave, well below caprock, can yield fortuitous connections between levels. In the case of Fisher Ridge, Ortiz reminds us that most exploration has been from the highest potential levels downward, reducing chances for productive pole leads. He recommends that prospective high leads be inspected with a strong spotlight, being wary of deceptive black chert "holes;" a helium balloon might be useful as well in judging perspective. Keith also considers the use of poles for bridging levels interrupted by floor pits, although alternative levels tend to be available in such places... Complementing Ortiz' analysis are thoughts by scaling pole expert Ed Devine, with a look back at high leads he has first or second-hand knowledge of. Although Ed has led several recent FRCS pole trips, most of his experience has been in the Virginias, where different geological factors apply. Yet, only one of Devine's multiple efforts has paid off big: "Diddley's Dome" in **Paul Penley Cave** (Bland Co., Va.). One of Ed's frustrations has been that supposed pole climbs sometimes turn out to be free-climbable—so he urges that a skilled climber evaluate the site before resorting to poles (or bolts). He also reminds pole climbers to always bring a bolt kit and expendable line; and believes it best to "follow the rock climber philosophy that considers the climb itself...as the most important thing." Devine's proposed motto: "Show me your hole, I'll show you my pole!"...Joe Saunders, although not claiming to be a vertical hero, gets in his two cents worth in a "Floyd's Column" inspired by a recent *Newsweek* feature concerning contemporary rockclimbing. Saunders is struck by comparisons—and differences—between climbing and caving ethics. Rock climbers, running low on "virgin" routes, have become increasingly preoccupied with their "style." The current trend eschews cliff-defacing hardware in favor of climbing essentially solo, with no aid whatsoever. However, "clean" cavers seem to be motivated by a ready audience, and rescue (or body recovery) is simple in most cases, should they fall. By contrast, the solo caver proceeds unobserved; his or her only documentation may be some sort of map brought back. And of course, rescue is by no means a safe assumption for the solo caver. Saunders' ironic bottom line: "Whereas the frontiers of climbing involve less and less hardware, the frontiers of caving are said by some (see 'High Tech Caving' by Bill Stone in the *Texas Caver*) to be calling for more hardware."...Dan Crowl wraps up the issue on a note of frustration, putting together his monthly FRCS summary: lack of detailed and timely reporting. He understands that a party managed something like 300 meters of odds and ends on a 35-hour holiday weekend marathon in November.

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Society

Southeast Gets Recruiting Help

The NSS Membership Committee is pleased to announce that Cheyenne Sweatman has joined its ranks and will be assisting the society and its chapters in their efforts to recruit cavers into grotto and society membership. Cheyenne will be responsible for the area of Alabama, Florida, Georgia, Tennessee, Mississippi, and Louisiana. His address is 927 Myrtle St., Roswell, GA 30075; his phone is 404/587-1089. Please feel free to contact him concerning any problems you might have in grotto or NSS membership recruitment.

John Baz-Dresch
NSS Membership Chairman

Candidates Sought for Key Offices

The Executive Search Committee is appointed by the directors to seek and recommend candidates for NSS officers. The directors will be electing the executive and administrative vice-presidents for the following year during their meeting at the convention. Prospective candidates or anyone wishing to suggest a qualified candidate should contact the committee no later than May 15. The chairman is Rane Curl, Department of Chemical Engineering, University of Michigan, Ann Arbor, Michigan 48109, home phone (313) 995-2678. Chuck Hempel, Bob Liebman, and Evelyn Bradshaw are also on the committee.

—Bill Mixon

New Internal Organizations

The NSS Has chartered the following new internal organizations:

Barbara Underground Grotto, G-311
c/o Donald Dolan (Secretary)
668 Willow Glen Road
Santa Barbara, CA 93105

Alan Willhite chairs the new grotto. Other officers are Stanley Conston, Vice-Chairman; Donald Dolan, Secretary; and Gordon Fulks, Treasurer. The base membership area is the South Coast area of California (incorporating San Luis Obispo, Santa Barbara, and Ventura counties).

Andrews University Area Grotto, G-312
[A Student Grotto]
c/o Keith Calkins
610 North Main St.
Berrien Springs, MI 49103

The Chairman is Jonathan Gennick. Other officers are Wayne Alvarez, Vice-Chairman; Mark Clayton, Treasurer; and Keith Calkins, Secretary/Editor. This grew out of several informal caving groups that had sprung into life in 1983 and 1984 on the campus of Andrews University.

Conservation Committee

The Conservation Committee Chairman is retiring from his position effective 31 May. The Executive Vice-President is now taking applications to fill the vacancy. The Conservation Committee is the primary agent of the society in its efforts to promote the protection and preservation of our national spelean resources. The chairman of this committee will be expected to donate large amounts of time to actively and aggressively pursue the goals of cave conservation through education, research and legislation. The chairman must be able to coordinate the various divisions, subcommittees and task forces under his/her department. The chairman of the Conservation Committee reports directly to the Executive Vice-President, keeping him informed on the various conservation topics. Any member interested in this challenging position, please send a resume to the John P. Scheltens, Executive Vice-President, 303 North River Street, Hot Springs, South Dakota 57747, by 15 May 1985.

Land Owner Relations Committee

A new committee chairman is being sought for the Land Owners Relations Committee. Landowner relations is one of the most delicate problems cavers face. Most caves, public or private, are on somebody else's land. The national Landowner Relations Committee seeks to sensitize the membership by publishing regular articles in the *NSS News* and by developing brochures and instructional classes that fit into the overall cave management theme. Please send resumes by May 15th to John P. Scheltens, Executive Vice-President, 303 North River Street, Hot Springs, South Dakota 57747.

ADDRESS CHANGES

send to:
NSS Office
Cave Avenue
Huntsville, AL 35810

News and Notes

Show Cave Report

Congratulations to Marengo Cave owners, Gary Roberson and Gordon Smith. On December 3, 1984, Marengo Cave Park, Indiana, was designated a National Natural Landmark by Secretary of the Interior William Clark.

Clark stated that Marengo Cave is a textbook example of a cave in the mature stage of development. It is the most profusely decorated cave known in the Interior Lowlands with speleothems of the highest quality. The cave has an extensive and continuous history of research and protective custody since 1883!

While on the subject of show caves, Roy Davis of Cumberland Caverns, Tennessee, reports on work he has done recently at both Lincoln Caverns near Huntingdon, Pennsylvania, and at Ruby Falls, Chattanooga, Tennessee.

At Lincoln Caverns Davis worked on a tunnel connecting the main cave with nearby Whisper Rocks, a separate cave that has been shown in connection with Lincoln Caverns. The new tunnel will provide a much easier tour route.

At Ruby Falls, Roy and associates are widening the cave passageway from the elevator shaft to the lighted cave map. In addition to a more spacious cave, the result will be less tourist congestion near the elevator.

If any NSS members are interested in operating a fine show cave, now is the time. Cascade Caverns in Texas, Los World Caverns in West Virginia, and Onyx Cave in Pennsylvania, are all for sale.

—Gary K. Soule, NSS 11198LF

NSS News Trivia

The January, 1985, NSS Members Manual was the 508th *NSS News* issue to come out since the beginning of the NSS. Not counting some smaller, assorted inserts, we have had 7880 pages of printed material and a total of 3685 photos! Of those photos, 97 were full-color and 22 were duotones.

In preparing a massive index, I have discovered that 41 U.S. states and 43 countries have had caves photographs in the *NSS News*. The final article will be far too massive for the *NSS News*, but will get published. Analytical charts and comments will be incorporated into the text.

It is possible to follow many long time NSS members entire photographic life from youth to adult in *NSS News* photos. The research implications are enormous, particularly in regards to the forthcoming 50-Year History of the NSS.

By Gary Soule, NSS 11198LF

THE STC COLUMN

Safety and Techniques Committee Members:
Larry Caldwell
Bill Cuddington
R.E. Whittemore
Steven Hudson-Advisor

Chairman:
Mike Fischesser
North Carolina Outward Bound School
121 N. Sterling St.
Morganton, NC 28665
704-437-6124

"Safety Through Knowledge, Awareness and Attitude"

Nutritional Considerations During Rescue

By Elaine Hackerman, NSS 9048LF

Reviewed by the STC and members of the health care team (including two MD's) at Kripalu Center for Health and Yoga, Lenox, MA 01240.

When I read the *American Caving Accidents* account of the October 2, 1983 entrapment and subsequent death of Robert Scott, age 36, in Dreibelbis Cave, Pennsylvania, I realized that the average caver has insufficient information about nutrition and stress as they relate to cave rescue victims.

Victims usually experience fear when lost or trapped underground; fear is intensified when the victim is extremely uncomfortable or is in pain. Stress is triggered by things such as new situations, continuing uncertainty, discomfort, and feelings of not being in control. Fear, anxiety, anger, and helplessness create stress and fatigue which alert the adrenal glands to produce adrenalin and noradrenalin. These substances enter the bloodstream enabling the body to fight or attempt flight to protect itself. Digestion slows down. The liver releases stored sugar to the blood. The blood vessels in the skin and internal organs constrict so the extra blood can go to muscles. The heart speeds up and arteries constrict heightening blood pressure. Continuing high blood pressure stresses not only the heart, but also other vital structures. When stress and fatigue continue, the adrenal glands are unable to function at full capacity. However, they must continue functioning for life to be sustained.

The body has priorities in the use of its energy. Stress receives the first priority. If there is still energy remaining, it is available for mental and physical work. Any remaining energy is then available for digestion, and finally elimination.

When the digestive system is functioning, the following foods that take the least to the most energy to digest: clear vegetable broth, fruit and vegetables cooked then uncooked, unprocessed starches, and, finally, protein including dairy products. Other foods require even more energy to digest causing additional strain on the digestive track. Oil/fat is one of the hardest "foods" to digest, and it taxes the functioning of the liver. Many spicy foods are also difficult to digest. Keep in mind that undigested food becomes toxins causing gas and possibly worse conditions.

In Scott's situation, his chest was restricted for 29 hours. He was under severe stress and became angry and aggressive. His digestive system was, at best, impaired. During the rescue he was given broth, doughnuts (sugar), coffee (caffeine) and hot dogs (protein and fat).

The physical condition of the victim and the circumstances at the rescue should have dictated the foods provided to him. Clear, warm vegetable broth is the ideal food; it is easily digested, has relatively no stimulants, provides warmth, and gives additional liquid to the body. A broth made from boiled chopped/grated potatoes and carrots (potassium broth) is excellent in replacing lost potassium and increasing the victim's usable energy. Other soups could be made with whole grains, especially brown rice and/or millet, when sustained energy is needed. Cooked vegetables can be blended into a soup. No quick energy foods/drinks are appropriate during a rescue. Quick energy foods such as sugar, honey, chocolate, and dried fruits cause spurts of energy followed by *unpredictable* drops in the blood sugar level. Low blood sugar may cause a loss of clarity in thinking, possibly resulting in poor judgment, poor coordination, mental agitation, and a lack of energy and stamina—in other words, additional problems in exiting a cave. Caffeine (for quick energy) stimulates the entire body and even decaffinated coffee has 3% caffeine (plus additional chemicals), so it too contributes as an artificial stimulant.

When providing food to the rescue victim, the best guideline to follow is to provide wholesome, nutritious, easily digestable food which is free of additives. This type of food helps promote clearer thinking, sustained energy, and emotional stability with minimal stress on the body. When the meals are kept light during the five or more hours prior to exiting, the digestive track is clear and does not require energy. Water sipped, as needed, will help the kidneys and colon to continue to function, keeping toxins from accumulating and lessening additional stress to the body. All foods should be chewed well and eaten/drunk slowly to allow a chance for complete digestion. A victim on a litter may need salt to replace sodium lost in sweating. A pinned/stuck victim may need less salt if only minimal sweating is occuring. Vegetables contain sodium, so little or no salt is needed when they are given. Excess salt and restricted physical activity may cause body fluid retention, which additionally stresses the body.

Rescuers need TLC too. They should eat wisely, they too are under stress, their digestion is sluggish, and they need energy in muscles rather than in the digestive track. Diet is especially important when rescuers exit for sleep or rest before reentering for another shift. The body will rest better if given foods that it can digest easily. Overeating causes the body to digest and absorb what it can, and then puts a strain on both body and emotions as they try to cope with the toxins formed by the excess food.

I hope that these thoughts will rouse interest in this facet of rescue and help rescuers use good judgement in feeding themselves and the victim.

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Camera Angles

By James Jasek, NSS 7248F

Widen Your View

There are many times when the coverage of my camera lens was not wide enough for the photo I wanted, and simply switching to a wider angle lens does not always solve the problem. The very wide angle lenses, like a 21mm or Fish-eye, have problems with distortion, and they pack so much detail into the small 35mm frame that the image size is very small. A better way to get more coverage is to shoot a panoramic view for a photograph with a wide, undistorted field of view and a large image.

You could shoot a panoramic photograph with one of the special cameras made for this purpose, but they are expensive and, for the most part, unsuitable for cave photography. A simpler approach is to take a panoramic with your own camera equipment by shooting a series of pictures across the subject and splicing them together. Even though the idea of shooting a panoramic is simple, there are many difficulties you will encounter when you try to shoot one of these pictures. Your goal is to shoot overlapping pictures that can be spliced together to form one continuous-looking photograph; perfectly matching each frame is a serious problem.

Two basic methods that can be used to shoot a panoramic view: one is to handhold the camera; the other is to use a tripod to steady the camera. In a pinch, where no tripod is handy, a very successful panoramic can be made by handholding your camera. Before the photo is taken, carefully study the scene and pick out distinct objects that are all about the same height, such as tree tops, the edge of a Sotano, or formations. Then use these objects for vertical alignment as you look through the viewfinder. This will produce a photograph that is level, and should splice together easily. Each frame should overlap the last by one-quarter of the frame as you look through the viewfinder.

The most accurate way to take a panoramic view is to tripod mount the camera. I carry a small bubble level and level the tripod through 360° before I lock the camera in place. With the camera leveled, you may find that some important parts of the scene are out of the viewfinder. The only way to include them is to change the height of the tripod or switch to a wider angle lens. You must not tilt the camera on the tripod to include other sections of the scene,or your final print will not be level. Before you set up the tripod, look through the viewfinder and pan the camera around the scene to see what will be included in your picture area. You can then set the tripod to the desired height and know in advance what lens will produce the desired effect. Each frame should overlap the last by one-quarter to insure a perfect match.

Another problem is maintaining an event print density from one frame to the next for a continuous-looking photograph. A perfectly matched panoramic view can be ruined by tone variation at each splice. It is easier to control print tones in outdoor photographs shot in sunlight than in ones shot in the cave. Underground photographs are shot with artificial light, and the exposures are calculated on flash distances with each frame in the panoramic view having a different flash distance. This creates an exposure problem that is not easy to overcome. Panoramic shots in the cave require careful attention to the exposure of each individual frame. The ideal pivot point for shooting a panoramic is directly under the lens rather than under the camera body, and ideally a flash above the camera should produce an even exposure. A flash directly over the camera creates flat lighting which is the most undesirable type of illumination for cave photographs. Flat lighting evenly illuminates major subjects but gives little contrast. Shadows cast on the wall from flat lighting are impossible to splice together. I have had the best overall success by using side lighting and casting all the shadows in the same direction.

The cave panoramics I shoot are on 120 roll film with twelve frames to cover the entire view. I expose each frame by standing the same distance from the subject with side lighting to create shadows that have been easier to join together. To help hide the splices, I try to overlap each frame in a neutral area that is void of important features. When the camera was mounted on a tripod, the final prints have spliced together accurately enough at the tops and bottoms so that only small amounts of the picture area were lost when it was trimmed.

Once I have finished photographs, I begin the tedious process of splicing each print together and mounting it for a completed panoramic view. First I lay out the entire set of pictures in the correct order. I usually start at the far left and work my way to the right. I take the first two photographs, determine where they will match, then and cut the first print using a straight-edge and an X-acto knife. I make each cut perpendicular to the top and bottom of the print to produce a splice that is pleasing to the eye. This also ensures that the final print runs in a straight line. If the prints are cut crooked, the final view could angle uphill on one end and downhill on the other. When the final print has been trimmed square, I have lost a lot of the actual print area. I am very careful as I pick up a print to trim. If I trim the wrong print, the entire set is ruined.

Next I place the first trimmed print over the untrimmed second print, locate the exact match position, hold the prints firmly down, and cut a notch at the top and bottom of the second print directly alongside of the first print. I then remove the first print, place a straight-edge on top of the second print, line the straight-edge with the notches and make the cut. This will perfectly match the two pictures together. I repeat the above steps until the entire set has been trimmed.

My next step is to find a suitable surface for mounting the finished photographs. At times a panoramic can be up to 7 feet long; using an easily-cut material is a must. Such a material is Foam-core which can be cut with an X-acto knife to produce a rigid mounting surface. It is sold in art stores in 40 x 60-inch sheets and costs less than $9.

To mount the prints, I place all of them on the board and measure the size I need to cut. I cut the board larger than I actually need. I then trace around the edge of each print for positioning.

I use a white water-based paste for mounting the prints. I put some paste in a shallow dish and dilute it with a small quantity of water. I apply the paste to the back of each print with a narrow paint brush by placing the print face down on newspaper and applying the paste with even strokes starting in the center of the print and working out past the edge. Never stroke back over an edge because paste will run onto the face of the print. Watered down paste sticks immediately so I make certain of the position before I put the print down. I will have only a split second to move the print when I put it down.

I start with the center picture and work

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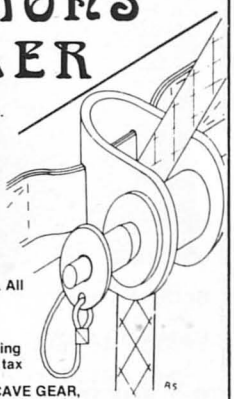

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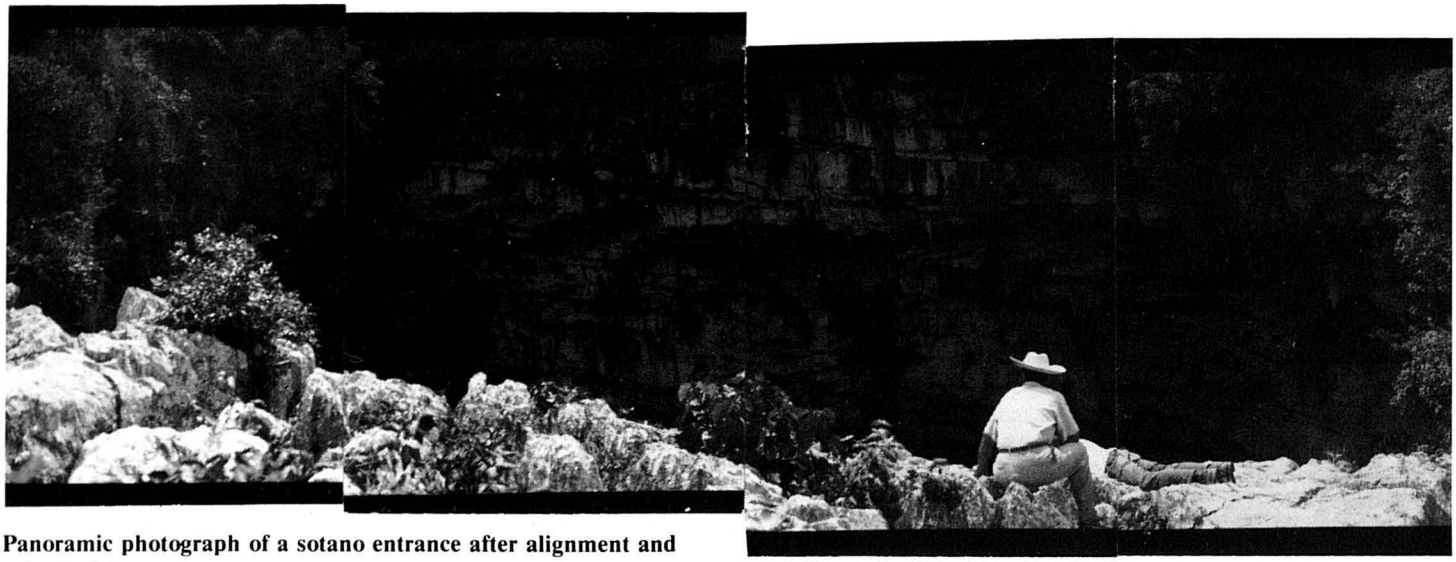

Panoramic photograph of a sotano entrance after alignment and prior to trim.

my way toward each end. After the first print has been pasted down, I position the second along the matching edge making certain the rest of the print does not come in contact with the mounting surface. When I am certain of the match and have good close contact, I roll the rest of the print down. I Keep a soft, dry cloth handy to gently rub each print down. The rag should be clean and dust-free to keep from scratching the surface of the print. Once the print is firmly down, I lay a thin sheet of paper over the print and do all additional rubbing through the paper. I keep a damp rag handy to wipe off any paste on the front of the print and to keep my fingers clean. It is very important to keep the fingertips free of paste, or I soon have fingerprints everywhere. When the entire set of prints has been mounted, I turn it face-down and stack heavy books on top of the board until it is totally dry. Once the print is dry, I trim the entire print to create one continuous panoramic view.

When you do your panoramic views, consider adding a frame for a finishing touch that helps create a professional-looking work of art that can be displayed with pride.

Trimmed and ready for mounting, this panoramic view incorporates cavers in each frame and demonstrates difficulty of lighting control underground.

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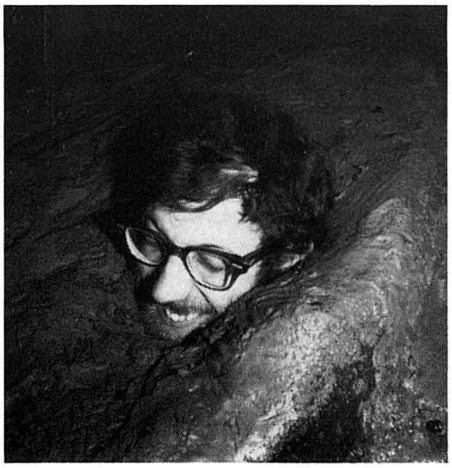
Caption Contest Winner

Congratulations go to Dean Walker of Albuquerque, New Mexico, for his winning contribution to our Caption Contest. His caption, "Ah, a nice cold mug of mud, with a head on it," was given a boisterous winning vote by the Western Region of the NSS during their SpeleoSeminar held in February. Dean receives a $25.00 gift certificate from L&S Sports for his creativity. Some of the other captions that also won favor were: "Caver found after speed-rappelling accident," "Jaques, ze Calypso, she's gone!" "I wonder when that Kaopectate is going to start working," and "If you think I look funny, you should see the expression of the face of the guy whose shoulders I'm standing on!"



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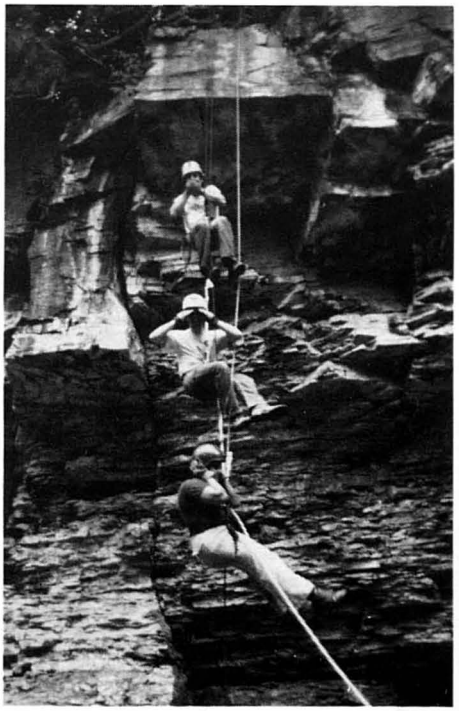

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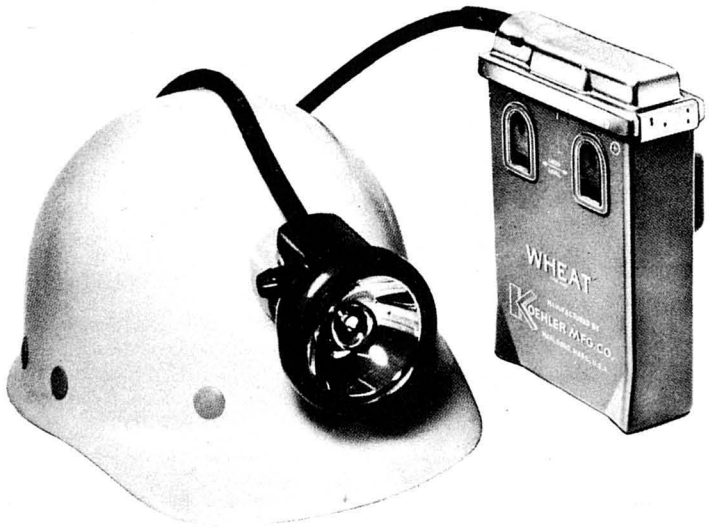

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