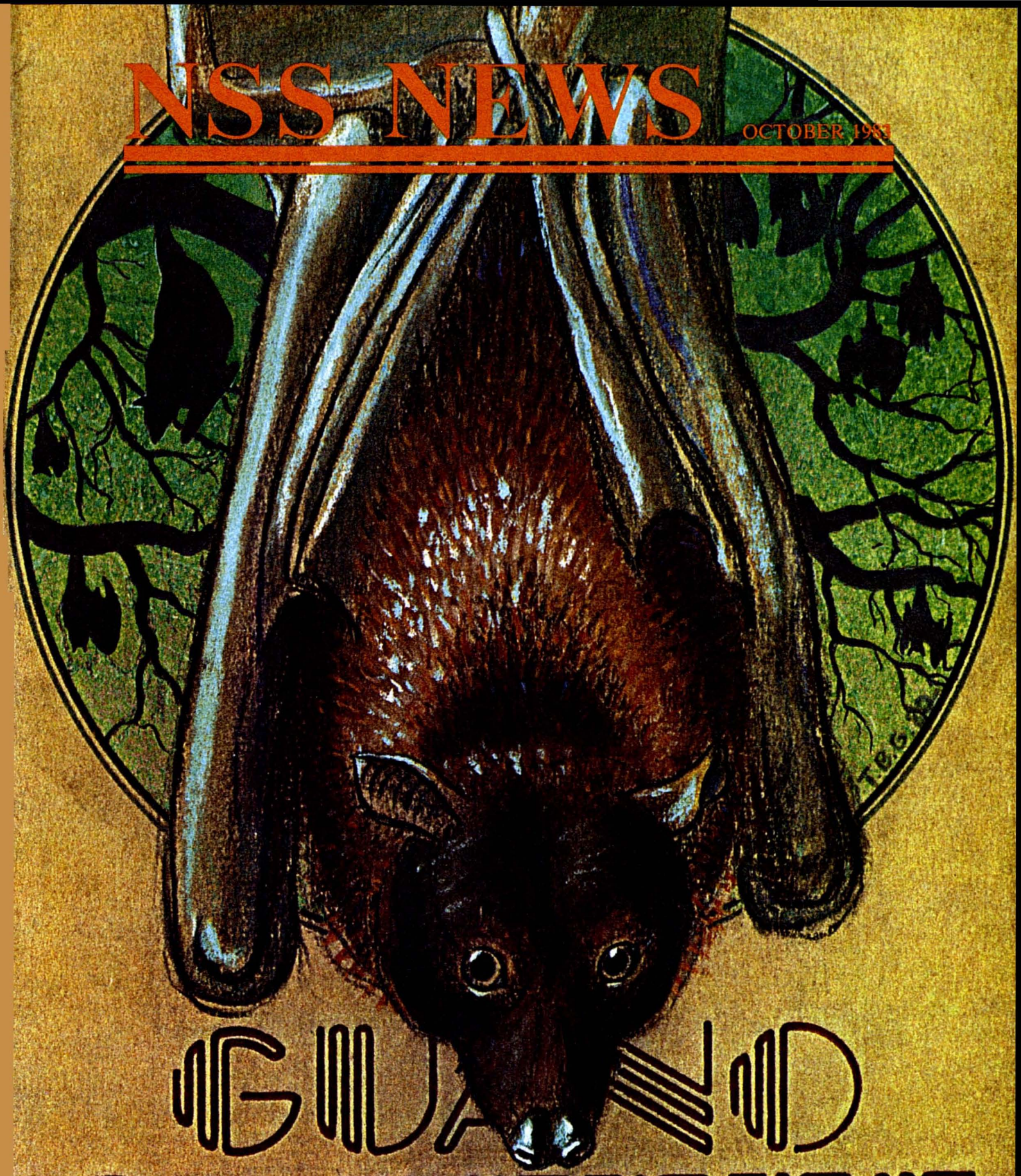
NSS NEWS
OCTOBER 1983



GRAND GAZETTE

VOL. 6 NO. 2

An Open Letter to the Caving Community

I hope these are not my last words, but I don't want to take any chances. Friends have disappeared from our community, through death or burnout, and I know most have left with deep emotions about cavers, caves and caving. Some were taken unexpectedly, others knew but never verbalized their feelings. Though it would frustrate me beyond measure to die in some dismal and unanticipated way such as an auto accident, it certainly is possible. So, still being as sound of mind and body as a caver ever is, I take typewriter keys in hand to try to express some feelings many of us have had, before I drift away too . . . Had I the talent, I would write a song or poem whose images and rhythms could speak with an intensity this simple prose lacks.

It's hard for me to imagine my world Before Caving. I know I was once completely unaware of wild caves. But that pre-existence seems so dull and flat . . . Caving has insinuated itself so intimately into my life that, like the alga joining with the fungus to create a lichen, caving has created of my life something qualitatively different.

A person needs to throw himself into something with intensity. Without this, life is mere existence. Some people find God. Some find lasting love. Some find all the intensity they need in their work. A lucky few are able to transmute that energy into music, or art, or poetry. I've dabbled in them all. Caving has been the only field that held me long enough to drain me of excess energy — and demand more, and make me steal from other parts of my life to find it.

Sometimes I reflect on this "magnificent obsession," filled with guilt because I'm not doing something more constructive with my time and energy. I've advanced very little in my career, squandered my hard-earned education, devoted precious little time to family. I'm no pillar of my residential community, which hardly knows I exist.

Despite such doubts, the obsession *is* magnificent. I've experienced in its thrall more than my human share of beauty, of delight, of joy, of challenge, of stimulation, of all the things that distinguish real life from mere existence. Caving has given me so much that, in the words of a song, it may be "a debt that can't be paid."

Like many cavers, I've worked for my grotto and other caving associations, for conservation and safety and other things that matter. I've served on committees, trained novices, picked up trash, surveyed and resurveyed, volunteered for lots of things I didn't have time for. But I haven't worked as hard or as long as some cavers, and I'm not sure whether doing even that would pay my debt. Maybe, as my church teachers used to tell me about God's love, it's worth so much that it can't possibly be earned; the best you can do is try very hard.

I don't believe in God anymore, so I can't thank Him or Her in my prayers for letting me be a part of the spelean world. I can't tell my feelings to this friend or that, or they think me a sentimental or a drunken fool. But I refuse to leave this world with my thanks shoved deep into a muddy pocket of my coveralls, so I fling my gratitude to you all together, and to the caves which, stony and cold as they are, just might have some spirit to accept my homage. I leave this world of mud and crystal, of power and delicacy, profoundly grateful for many things:

— For people who write and perform the songs that evoke treasured memories, honor our comrades and our caving grounds, tell our history, make us laugh at ourselves, express our wonder and our joy. Know that whatever pleasure it brings to you to create this music, it brings us listeners as much or more to hear it and to sing it again and again.

— For people who, month after month, in the face of broken presses, wretched budgets, sparse material and missed caving weekends, publish the newsletters that help keep us together. There is no such thing as a community without communication. And I doff my hardhat to you who lavish the time and effort to write the material. Your research, your writing skill, your inventive and sometimes wicked humor have astounded, informed and always delighted me. And to the photographers, who are awful to cave with but worth every cold, boring eon when their pictures appear. Like most of my friends, I have shelves and file drawers and cardboard boxes filled with grotto, regional, sectional and national newsletters, magazines from many countries, books old and new, *Speleo Digests,* symposia proceedings, guidebooks, state survey bulletins, etc., etc., etc. I have just enough experience to truly appreciate the effort and time required to produce even a fairly simple publication. If I can't be underground, the next best thing is to read about it or sing about it or look at pictures of it. You creators and purveyors will never know how much pleasure (and longing!) you've brought me over the years.

— For people I've barely met or don't know at all: people who brave boring meetings and frustrating speleopolitics to work with amazing dedi-

continues on page 254

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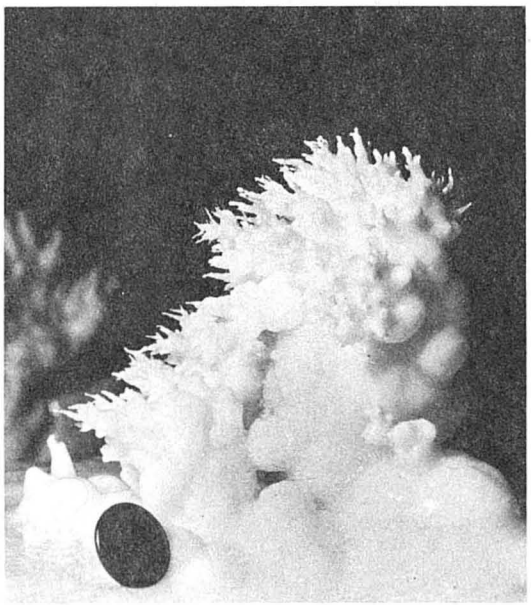
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NSS NEWS

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COVER: With this fine drawing, Annapolis Grotto's Britt Griswold won top honors for the second straight year in the Graphic Arts Salon. See a complete list of winners elsewhere in this issue.

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CONSERVATION NOTES

By Sharon Kautto
Wilderness Subcommittee Chairman

Wilderness — Several state wilderness bills have been introduced in Congress. In order to avoid a Roadless Area Review and Evaluation (RARE) III federal study, efforts are being made to resolve the wilderness question on a state by state basis. The Forest Service has been forced to make a RARE III study because of the October 1982 ruling by the Ninth Circuit Court of Appeal in California that found the environmental impact statement on which California's wilderness recommendations were based to be inadequate. Congress has acted on RARE II proposals for wilderness areas in several states. Many other proposals for wilderness areas are being considered by Congress. Most of these bills contain "sufficiency" and "release" provisions. The "sufficiency" language declares that the RARE II environmental impact statement is sufficient and immune from court challenges. The "release" provisions can vary from allowing the Forest Service to review the roadless areas in 10 years for wilderness consideration to forbidding the agency from ever again considering wilderness designation for the land, and releasing the area for all types of development. The release language determines how long any roadless area not given wilderness protection can be managed for other purposes before being evaluated again. The "soft release" mandates that the unprotected roadless lands need not be managed for wilderness uses during the first 10 to 15 years of forest planning. The "hard release" language forbids unprotected roadless areas from ever being considered for wilderness again. The status of many of the wilderness bills follows. Cavers from the various states can be contacted regarding any caves or limestone in the proposed wilderness areas. **Alabama** — The House passed HR2477 which made additions to the Sipsey Wilderness in the Bankhead National Forest. The bill was cosponsored by six Alabama representatives and was introduced by Rep. Ronnie Flippo. The bill's fate in the Senate was uncertain. Senators Jeremiah Denton and Howell Heflin had not decided whether to support the Sipsey additions. The National Forest Products Association opposed the legislation because of

continued on p. 266

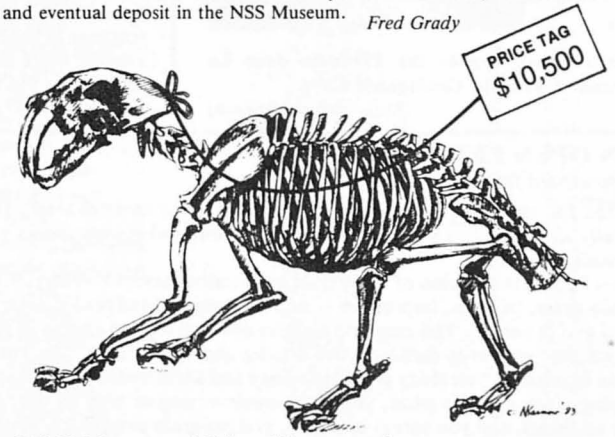
JOHN GUILDAY CAVE PRESERVE

VIRGIN PASSAGE IN HAMILTON CAVE. On July 30 Dave West led a dig through a partially clay-choked lead into virgin passage. The group — West, Bob Hoke, Cindy Keller and Harold Driscoll — surveyed 260 feet of mostly tight crawls. Fred Grady collected peccary teeth and foot bones in one of the dug sections.

EXTINCT MUSK OX FROM NEW TROUT CAVE. Recently Dr. John Hall, a bat expert from Albright College in Reading, Pa., forwarded to Fred Grady a small collection of bones and teeth picked up in New Trout several years ago. Dr. Jerry McDonald of the Smithsonian Institution has identified among the specimens a large tooth from an extinct relative of the musk ox. It was only the second find of an extinct musk ox from West Virginia.

SALTPETER MINING ARTIFACT IN TROUT CAVE. During a recent dig in Trout Cave, Chuck Wilkinson found the remains of a bundle of faggots, consisting of two unburned faggots made from split wood and a binding of two pieces of bark tied at the ends in square knots. Presumably the bundle was brought into the cave and individual faggots were used as needed. The artifact was put into the custody of Ed Ricketts for study and eventual deposit in the NSS Museum.

Fred Grady



Only $10,500 to go and this critter — and the Trout Rock Caves — are ours lock, stock and barrel. Send your donation today to:

Ed Ricketts
6404 Caryhurst Dr.
Oxon Hill, MD 20744

INTERNATIONAL

RECENT DISCOVERIES RENEW INTEREST IN CANADA'S CASTLEGUARD CAVE

By Dave Crann

On April 1, 26 cavers from Alberta, Ontario and British Columbia met at a roadside parking lot in Banff National Park, Alberta, Canada. Donning cross-country skis and fully laden packs they skied 20 kilometers through forest, along a glacier and across alpine meadows to the entrance of Castleguard Cave.

This was to be the first official visit to the cave since April 1980, and only the 10th visit in the modern history of Castleguard (1967 onwards). Access to the cave had been granted by national park officials to the Alberta Speleological Society. Besides exploration, surveying and photography the expedition members undertook the field testing of a cave radio and general refurbishing of the cave's emergency depot and two camps, as well as scientific collection and observation.

An underground camp was established by eight cavers approximately seven kilometers from the entrance. From this camp two days of exploration and surveying netted more than a kilometer of new passage beyond two known leads. One lead required a bolt traverse around a 139-meter deep pit (La Grande Gueule) to a passage seen continuing on the other side of the drop. The second required direct aid up beside a 10-meter wall of loose boulders (Thompson's Terror) that had remained unvisited for 13 years. More leads now remain than were "cleaned up," and it is felt the potential for significant future discoveries is high.



Kevin Ecock crosses the 139-meter-deep La Grande Gueule in Castleguard Cave.
(Stein-Erik Lauritzen)

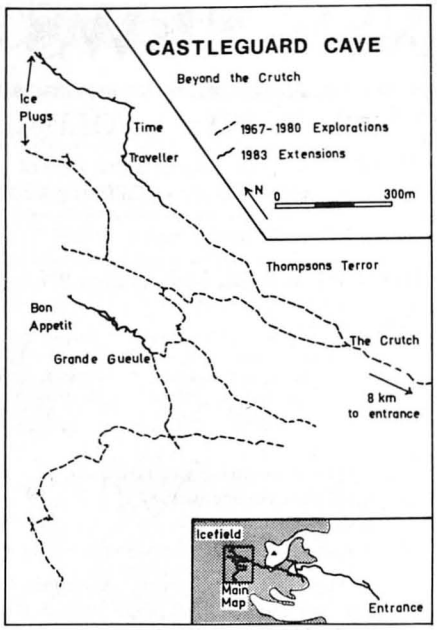
Testing of the cave radio proceeded about 1.5 kilometers into the cave. Although surface to cave voice communication was lost a short way in from the entrance, tonal communication remained fairly good throughout the test, as did cave to surface communication.

An impressive clean-up of both camps and the emergency depot was performed. Unidentifiable or ruined food and supplies were removed from the cave and inventories of remaining stocks were made.

The scientific collections (mainly biological) along with temperature and geomorphological observations pose questions that require future trips to provide answers. Most interesting was the discovery of mites about 10 kilometers from the entrance where the cave lies under the Columbia Icefield.

Castleguard Cave is now more than 16 kilometers long and has a depth of 310 meters. While in the cave the eight-man exploration party remained a self-contained unit. There was no immediate reliance on the other expedition members — a direct contrast to previous trips during which parties depended heavily upon "sherpas." The expedition would not have been possible however without support from members of the ASS who cached fuel, rope and carbide at the entrance two weeks prior to the expedition.

The first 1/2 to 3/4 kilometers of passage in Castleguard is known to flood during warm periods and as such the cave should be entered during winter only. It is hoped that on the basis of the success of this year's trip permission will be granted by park officials for a return trip to the cave late next winter.



Expedition Personnel:

Exploration/Science — Dave Crann, Kevin Ecock, Stein-Erik Lauritzen, John Pollock, Chris Pugsley, Eric von Vorkampff, Steve Worthington and Chas Yonge.

Clean-Up — Dave Chase, Ian Mackenzie, Bill McDonald and Jamie Thomson.

Cave Radio/Surface — Tom Barton, Pam Burns, Bill Davis, Dave Depledge, Ian Drummond, Don Kulak, Laird Kulak, Tich Morris, Duncan Morris, Don Mullins, Eric Neilsen, Ian Phillips, Peter Thompson and Cliff Wright.

NEWSLINE

By Jay Arnold

Roppel Cave was connected to the Mammoth Cave System on Sept. 10 by members of the Cave Research Foundation and the Central Kentucky Karst Coalition, CKKC member Jim Borden reports. The long-anticipated connection, which was made near the new Ferguson entrance to the Mammoth system, makes a cave totaling more than 290 miles, Borden says. He anticipates Mammoth will reach 300 miles by the end of 1983.

SPAIN TO HOLD 9TH CONGRESS

The Ninth International Congress of Speleology will be held July 15-21, 1985 in Jaca, a town in the Spanish Pyrenees. Rafael Larma will be the General Secretary of the Congress. Circulars and additional information may be obtained by writing: IX Congreso Internacional de Espeleologia, Apartado de Correos 5.077, Zaragoza SPAIN.

AN OPEN LETTER

continued from p. 252

cation for caves and the caving community. (If your motives aren't always *totally* altruistic . . . well, that's not important, and it only shows you're human.)

— For the inspiration of some truly high-caliber cavers I've met. You are really great, talented, impressive — and lots more adjectives I'd never have told you in person. You combine abilities and invest great energy in several directions: you write damned good articles and trip reports, you work for cave legislation, you study geomorphology and karst hydrology and speleobiology, you draw or paint, you write music or sing or play an instrument (or all three), and you survey and map, you program computers, you make beautiful photographs, you climb with grace and speed, you crawl tirelessly, you put yourself through the rigors of underground rescue practices, you dance till dawn and party with vigor, you joke and pun inventively and sometimes well, you work late nights as secretary of this or chairman of that, you edit books, and write papers, you design and build vertical gear or light systems or luxurious hot tubs, you teach others to cave safely and with respect . . . That any one person could bloom in so many directions is amazing. That there are so many of you in the rather small world of caving is very lucky. That several of you have been my friends and my caving companions is one of Oztotl's richest blessings.

As I sit here, an image forms of a soda straw I once saw, the hemisphere of water poised on its tip magnifying tiny, sharp crystals. As I watched, the droplet stretched, became more ovoid. It broke free, falling toward the shadowy blue-green pool below. Then, the most hauntingly beautiful sound in the world, a sound which can exist only in the echoing stillness of a cavern . . .

The memory of this moment fills me so, I almost cry. (But Real Cavers don't cry.)

It's enough, and more than enough. I have known it, and I have shared it wordlessly with some of the finest people in the world — the others who know that it's enough.

(Name withheld by request)

American Caving Accidents

1982

Steve Knutson-Editor
Lynne-Copy editor
Mike Sims-Proofreader

INTRODUCTION

This is the first of annual issues of the compilation of cave accident reports from the western hemisphere called **American Caving Accidents**. The previous issues under my editorship, 1976-1979, and 1980-1981 were in essence catch-up volumes made necessary by the demise of the publication for several years after 1975 and by the difficulty in getting the right combination of funding and publishing outlet. It was planned initially that annual issues should appear by about the middle of the year following the year covered. This is the first issue that will approximate that plan. It is hoped that timely appearances of accident reports will stimulate safer caving in at least some of the readership. Your continued support in sending reports, information and thoughtful criticism will be greatly appreciated. Whenever possible, include the **age** of those involved—this piece of data is most often left out. Send info on **any** accident or incident to:

Steve Knutson
505 Roosevelt Street
Oregon City, OR 97045
(503) 655-6609

It should be noted that I have changed the crude labeling of reports as "accident" or "incident" to a scheme less crude and hopefully statistically more meaningful. This sort of classification was suggested by another caver, to whose name I have lost reference. Sorry:

A — With **injury** and **evacuation** (or external aid to the victim)
B — With **evacuation** (or other aid)
C—With **injury**
D—**Without** injury or evacuation
E—SCUBA accident or incident

Thus A,B,C and major D were "accidents" and D plus minor C were "incidents."

In reading the analyses, please keep in mind that I am not trying to affix "blame" necessarily. Rather I am trying to suggest ways that the situation could have had a safer conclusion. Caving is, above all, a recreation and I believe that this recreation is obtained by a wilderness experience underground. For some it is sufficient to merely be in a cave to obtain that wilderness feeling. Others must risk life and limb to get the same feeling, the same recreation. We must not deny to others that which we ourselves seek through "standardization" of cave safety. To seek, to strive, even to personal destruction is part of the human spirit, and must not be lost. Still, no matter what level of caving one seeks, read these reports and you will come away with a greater safety awareness. If you disagree with the analyses, ignore them and provide your own.

I wish to apologize to some cavers for using the term "flashlight cavers" in a derogatory sense. I was referring to cavers who grab a flashlight as their only source of light and carry on in a cave until the light fails at which point they must be rescued. It has been rightly pointed out that some cavers, in caves requiring only walking, prefer powerful hand lanterns. Indeed, it is in fact easier to walk on irregular terrain with your light in your hand rather than on your helmet because of greater shadow definition.

There has also been comment about the use of cable ladders versus single rope techniques (SRT). I have my own preferences but basically the message must be that whatever method one prefers, you must master it and in using it, take no shortcuts.

INCIDENT CLASSIFICATION:

A - with injury and evacuation (or external aid to the victim)
B - with evacuation (or other aid
C - with injury (no evacuation)
D - without injury or evacuation
E - Scuba - accident or incident

CAVE	STATE	TYPE	DATE
Previously Unreported 1981			
Santa Cruz Sea Cave	California	B	4-22
Harry Hole Hole	Canada	A	7-13
Roppel Cave	Kentucky	D	December
1982			
Sloan's Valley Cave	Kentucky	B	1-2
Hennigh Cave	Pennsylvania	B	1-26
Patton Cave	W. Virginia	C	1-30
Sumidero Santa Elena	Puebla, Mexico	B	1-30
Post Office Cave System	California	A	3-7
Fisher Ridge Cave System	Kentucky	B	3-20
Haynes Cave	W. Virginia	C	3-26
Crooked Swamp Cave	N. Jersey	B	3-27
Nita Nanta	Oaxaca, Mexico	A	4-16
Buddy Penley's Cave	Virginia	A	4-17
Huccacove Cave	Colorado	B	4-26
Paul Penley Cave	Virginia	D	Spring
Sunnyside Cave	Pennsylvania	B	Spring
Ogle Cave	N. Mexico	D	5-16
The Cave	Belize	D	5-28
Leviathan Cave	Nevada	A	5-30
Parker's Pit	Indiana	A	6-12
Roppel Cave	Kentucky	A	6-12
Laurel Creek Cave	W. Virginia	B	6-13
Jansill Cave	N. Mexico	C	8-7
Roto Rooter Cave	California	D	8-14
Organ Cave	W. Virginia	D	8-14
Un-named, Water-filled Cave	Florida	A	8-24
Sullivan's Cave	Indiana	B	8-28
Binkley's Cave	Indiana	A	September
Your Cave	Alabama	C	9-11
Cueva de la Colindocia	Puerto Rico	B	10-3
Culverson Creek Cave	W. Virginia	C	10-3
Organ Cave	W. Virginia	B	10-4
Canadian Hole	W. Virginia	A	10-10
Grutas de Tolontongo	Hidalgo, Mexico	D	October
Park's Ranch Cave	N. Mexico	C	10-31
Snail Shell Cave	Tennessee	B	11-7
Green Valley Cave	Alabama	A	11-11
Friar's Hole System	W. Virginia	B	11-13
Vast Caverns	Alabama	A	11-13
Lisanby Cave	Kentucky	A	November
Huccacove Cave	Colorado	D	11-21
Un-named Pit	Oregon	D	11-27
Harman's Waterfall Cave	W. Virginia	B	11-28

Further Minor Incidents

Bear Plunge Pit	Tennessee	B	Aug.-81
Nunnally Mountain Cave	Indiana	C	April
Roppel Cave	Kentucky	D	6-12
Roppel Cave	Kentucky	D	6-12
Carcass Pit	Indiana	D	September
Indian Cave	Kentucky	D	11-24
Fisher Ridge	Kentucky	D	November

1981 REPORTS

B: Santa Cruz Sea Cave, California **April 22, 1981**

At around 3 p.m. on Wednesday, April 22, 1981, Ray Wilkerson(17), Mike Hopwood(17) and Ivin Torres(16) entered a 75 foot cave in a cliff adjacent to the ocean near Santa Cruz, California. One of them was supposed to remain above with a rope, but joined the other two. They explored around for awhile, then tried to get out. The tide had meanwhile started coming in and where they had waded in, it was now deep water and breakers. They could swim as far as the entrance but could get no purchase on the slippery rocks there. They retreated and began yelling for help.

At first there was no one to hear them, but at around 6.30 p.m. a UCSC student, Jim Tessier, chanced by, saw the trapped cavers' shoes on the rocks below West Cliff Drive, knew the dangerous cave was there and took a look. Hearing their cries, he ran to a fire alarm box and summoned help.

Firemen arrived quickly, lowered a chain ladder and coaxed the victims up. The tide, still coming in, had almost covered the entrance.

REFERENCE: Mark Bergstrom "Three Rescued in SC" **Santa Cruz Sentinel** Thursday, April 23, 1981, p 1.

ANALYSIS: Entering a cave in the face of a sure flood, in this case the tide, is foolish. THe lure of adventure is strong especially for the young.

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A: Harry Hole Hole, British Columbia, Canada **July 13, 1981**

In the afternoon of Monday, July 13, 1981 Dean Peak(15) and two companions of similar age were caving in Harry Hole Hole, a cave near Hankin Point not far from Coal Harbour on Vancouver Island, British Columbia, Canada. Peak was free climbing at a waterfall when a handhold broke causing him to fall 25 feet to the bottom.

One companion exited the 150 feet of passage, mostly crawlway, to get help while the other descended and waited with the victim, who had suffered at least a six inch gash on the side of his head, and was unable to do the climb necessary to get out of the cave.

At Coal Harbour a single rescuer was obtained, Murray Reusch but when he was brought back to the scene, the rope he had proved too short—additional help and equipment would obviously be needed. Reusch descended and waited with the victim.

Calls went to the local ambulance service, the RCMP, and the mine rescue team from Island Copper. Jim Pelletier, an experienced caver was captain of the latter which arrived at the cave entrance at 8 p.m. Monday evening. Those at the bottom of the shaft had for some time been soaking wet from the spray of the waterfall and the victim was becoming hypothermic.

Apparently a rope was rigged, the victim was fitted with Gibbs ascenders and with a safety line (belay?) allowed to ascend the waterfall under his own power. He also had to do the 150 feet of crawling to the entrance since there was insufficient room to carry him. At the entrance he was transported in a basket litter down the steep slope to the shore of Rupert Arm.

REFERENCE: Anon. "Mine Rescue Team Lifts Boy from Hankin Pt. Cave" **North Island Gazette** (Port Hardy, B.C.) 16:48 Wednesday, July 15, 1981 p 1, 8.

ANALYSIS: The cavers were poorly equipped and lacked experience. The lack of a helmet-mounted light may have contributed to the fall. Without a helmet the victim was lucky not to have suffered worse head injuries. The use of running shoes also could have made climbing more difficult.

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D: Roppel Cave, Kentucky **December, 1981**

On a Sunday night in December, 1981 Win Wright, Carol Trexler, Ben Keller, Philip Balister, and Bill Koerschner arrived at the Roppel Cave fieldhouse near Mammoth Cave National Park in central Kentucky. There they encountered Tom Miller, who was spending a week at the fieldhouse. The weather was cold with freezing rain.

The following morning Miller entered first, on a solo recon and the group entered an hour later, as heavy rain began. Both went in the new Weller Entrance.

The group became lost looking for their survey objective and spent hours in a maze area. Once on the route the effect of the rains was made obvious at the Lower Black River where "Foaming torrents of muddy ice water gushed in from every available side passage." At the climb up into the BWOB Passage, now a waterfall, they encountered Miller. They climbed an alternate route and Miller headed out.

At Fairyland they found their path blocked by a sump. They began their retreat. About 1/2 hour from the Weller Entrance they ran into a wet and possibly worried Tom Miller who reported the Weller Entrance to be sumped. This was not good. The group had been on the go for 12 hours and was getting tired. They would now have to head for the Main Entrance, four hours away, and find the bypass to the 35 foot drop which had been freeclimbed before by others.

When they reached Coalition Chasm, they found two 70 foot waterfalls plunging down. Wright began making up a prussik rig while others looked for the bypass. In an hour of exploring various levels they arrived at the top of the rope. Miller headed for the entrance to try that climb while the rest tried to contact those below over the roar of the falls. Miller climbed the entrance drop and lowered a cable ladder. Vertical gear was obtained at the fieldhouse and everyone was soon out.

REFERENCE: Bill Koerschner "The Great Roppel Debacle" **Tech Troglodyte** Winter, 1982 pp 73-75.

ANALYSIS: The group felt that without Miller's report on the Weller Entrance, they might have been too tired to make it out. Miller reportedly admitted that without the groups' knowledge of the Coalition Chasm bypass, they might not have gotten out.

1982 REPORTS

B: Sloan's Valley Cave, Kentucky **January 2, 1982**

On January 2, 1982, a group of three returned from a trip into Sloan's Valley Cave in Pulaski County, Kentucky, to find rain clouds moving in. They went back to the Fieldhouse. At 8 p.m. it started to rain.

The sign-out showed three inexperienced cavers had entered Left Cave at 6:30 p.m. and were thus not expected out until 2 a.m. Left Cave was known to flood, but only under very heavy rain conditions. The rain volume gradually increased. At 9 p.m. the usually dry streambed north of the Fieldhouse had become a raging river.

A group headed for Left Cave at that point to get the cavers out if possible. The cave was found not yet to be in flood and the group in question was quickly found.

The rain continued through the night and stopped the next morning. Evidence indicated a 15 foot rise and the Duckunder, dry before, was sumped shut.

REFERENCE: Fred Anderson "The Sloan's Valley Flood" **The Cave Crickett Gazette** 7:2 February, 1982 pp 16-17.

ANALYSIS: This shows the importance of signing out or leaving a note, but even inexperienced cavers should have the sense to keep out of caves in bad weather.

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B: Hennigh Cave, Pennsylvania **January 26, 1982**

At 2 p.m. on Tuesday, January 26, Gary Kuhn, a juvenile caver, part of a school caving trip, became trapped in the entrance of Hennigh Cave near Park Forest Junior High School near University Park, Pennsylvania. The campus patrol called Will White at the University and at 3:30 p.m. he got a few cavers to investigate. Meanwhile a school bus driver had involved himself and the Spring Mills Fire Dept. had been called.

Hennigh Cave has two entrances, one a steep-sided sink 8 feet deep with a 20 foot free drop at the bottom, and the other a small, steeply sloping crawl to the bottom of the 20 foot drop.

When the cave rescuers arrived, they found Kuhn in the sink with the school bus driver positioned between him and the 20 foot drop. The two were tied together with a one inch manila rope also attached to a tree. One caver from the university climbed into the sink with a belay. He untied the manila rope and tied a haul line to Kuhn with an "equalizing harness." At 4:30 p.m. Kuhn was hauled out followed by the bus driver. Kuhn was cold but uninjured.

REFERENCES: 1) Art Petit "The Great Hennigh Cave Rescue" **Nittany Grotto News** 29:1 Winter, 1981 pp 3-4.

2) Laurie Fedon "Boy Rescued from Cave" **Centre Daily Times** (State College, PA) Thursday, January 28, 1982

ANALYSIS: Not much of an emergency. Kuhn was 5 feet tall weighing 250 pounds—this may have been why he was unable to make the ascent.

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C: Patton Cave, West Virginia **January 30, 1982**

On January 30, a group of eight cavers was in Patton Cave, Monroe County, West Virginia. At the Football Room they got ready to do the 30 foot drop. Fred Grady (33) felt a call to nature. Looking about, he found what he thought was an ideal place, near the main passage up on a ledge. As he stood up to rearrange his coveralls, he fell off the ledge. This was a drop of only 5 feet and though his chest struck some rocks, he was only momentarily stunned and soon rejoined the rest of the party.

Seven hours later, on leaving the cave, he started to feel some discomfort. An

x-ray showed he had only bruised ribs.
REFERENCES: 1) Fred Grady "Accident in Patton Cave" **The Potomac Caver** 25:3 March, 1982 p 37.
2) Fred Grady **Personal Communication** December 10, 1982.
ANALYSIS: No comment.

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B: Sumidero Santa Elena, Puebla, Mexico **January 30, 1982**

At about 2 p.m. on Saturday, January 30, 1982 a group of three cavers entered Sumidero Santa Elena, adjacent to the town of Xochitlan in Puebla, Mexico. They were Warren Anderson (late 20's), Bill Liebman (early 30's) and Dave Walker (early 30's), part of a group of nine cavers exploring this cave which was expected to connect to a resurgence cave three kilometers away. The sumidero had been explored a little over two km from the entrance, past 24 short roped drops (waterfalls) and 22 swims. When the exploration had begun, on January 12, stream flow monitoring at the entrance showed six cfs entering. Past drop 8 there are two tributaries which approximately double the main flow. On the 30th, with dry weather since the 12th, the entrance flow had dropped to two cfs.

THe group proceeded past drop 24, to drop 25 and on to drop 26 where they turned back. Moving steadily, they passed through the series of spouting waterfalls (16-19) above drop 20 where one must negotiate an aid climb on the way down cave to reach the first ledge past drop 15. If you continue down-cave without doing the aid climb you quickly reach a cul-de-sac—a sure death-trap in a flood. With Anderson in the lead, they continued up cave, doubtless relieved at having passed through the section without ledges. At drop 14 Anderson ascended and began recarbiding, waiting for the others. Suddenly, at about 1 a.m., there was a surge of water noise. Thinking his ears were playing tricks, Anderson focussed his electric on the nearby falls, in time to see a surge of foul, brown water. Walker and Liebman, approaching drop 14 through chest deep water were caught. Walker pushed off, thrashed his way to the rope and quickly made it up. Liebman held on to the wall while Walker and Anderson jumped over to a ledge above him and lowered a long Jumar sling. Liebman was pulled up.

The ledge they were on was spacious so they settled in to see what would happen. The flow increased until the very walls were vibrating.

At about midnight there had occurred a torrential rain, which lasted for about 45 minutes, dumping 4 cm. The flow at the entrance had quickly swelled to some 20 cfs, then began to subside. The 20 cfs probably meant 40-50 cfs past drop eight where tributaries normally doubled the entrance flow. Those on the surface were alarmed but could do nothing. By dawn Sunday the flow was down to 7 cfs. At 8 p.m. Sunday no one had appeared so a group of three gathered medical and rigging supples and headed in. The group was found at around 10 p.m., still on their ledge. Everyone was out by 2 a.m.
REFERENCE: Steve Knutson "Sumidero Santa Elena" **NSS News** 40:9 September, 1982 pp 236-245.
ANALYSIS: In the Xochitlan area, the weather is very changeable. The day of the entrapment there was no visibly threatening weather. Since then a program of keeping temperature/pressure records had yielded a pattern which probably would have predicted the storm causing the entrapment. Also, it was expected that there would be some warning signs in the cave before a flood hit. There were none. The cavers are lucky they were not caught below drop 16.

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A: Post Office Cave System, California **March 7, 1982**

On March 7, 1982 a group of cavers obtained a permit at Lava Beds National Monument to enter undeveloped caves beyond Post Office Cave in the Post Office Cave System. Caves in the Monument are named as the portion of a system around a certain entrance. The entrance to Post Office Cave had collapsed and a sign had been placed in the passage leading to other parts of the system indicating that that "cave" was closed.

The cavers entered the Silver Cave entrance to the system, proceeded past the Post Office Cave closure sign and through a very low, tight crawl into the main Post Office Cave. In trying to reach a lower level, one of the group fell receiving multiple minor contusions and lacerations.

At around 1 p.m. Park Service personnel responded to a request for help but arrived at the tight crawl into Post Office Cave as the victim was emerging. He had been assisted to that point by members of his own group. He was taken to Monument Headquarters for first-aid and released.
REFERENCE: Dennis Schram, James Sleznich, Richard Jones "Case Incident Record" USDI, NPS, Lava Beds National Monument **Unpublished Reports** March 10, 1982 4 pp.
ANALYSIS: The accident party had proper equipment for rappelling but were reportedly using it incorrectly, or not at all, at the time of the accident. It is felt by the Park Service personnel that the incident would have become more serious if the victim had not been able to negotiate the tight crawl himself. This might have necessitated removal of the Post Office Entrance collapse.

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B: Fisher Ridge System, Kentucky **March 20, 1982**

On the morning of Saturday, March 20, the group of cavers at the Toohey Ridge Fieldhouse formed up into three parties with various objectives in the Fisher Ridge Cave near Mammoth Cave National Park in central Kentucky. Two groups would use the Splash Entrance. Joe Saunders was leading Lou Simpson, Doug Stecko, Tom Patterson and Bill Allendorf on their first Fisher Ridge trip. The second included Peter Quick, Dan Crowl and Bruce Worthman. The third group was Larry Bean, Fred Anderson and Barb Shaeffer using the Historic Entrance.

The Historic Entrance group exited at 11 p.m. and noted in so doing that the Forecaster Dome water flow had greatly increased over what they had seen on the way in. They debated whether or not to leave the Historic Route drops rigged in case the Splash Entrance should sump. They decided to leave only the entrance ladder rigged. When one of them checked the Fieldhouse they found Joe Saunders and Tom Patterson who had just exited a sumping Splash Entrance. The Historic drops were soon rerigged. Meanwhile Bill Allendorf, who had also gotten out Splash, had stayed at that entrance to warn those remaining not to try the virtual, but not quite, sump.

Joe Saunders' group had split up into groups of two and three and, the group of three was mapping when they noticed the air flow stop. This had to mean that the Splash Entrance had sumped. Since this was the only well known route to that group, they stashed the mapping gear and headed out. Pressure Dome normally dry, was now flowing a torrent so they hurried on. At the lead the other faction of their original group was doing they left a note. The three knew the Historic Route so communication here was important.

At the Splash Entrance crawl series the three made it through with a minimum three inches of air space and 15-20 feet of 4-6 inches, there was voice contact all the way out. Outside they persuaded Allendorf to wait there to keep the other two, Simpson and Stecko from taking the chances they had. Some time later a storm hit and Splash was inundated by a three foot wall of water.

Meanwhile Simpson and Stecko had found the note and proceeded toward the entrance. There they found the extra gear left by the others was gone so they assumed them to be out. Suddenly there was a roar of water as the storm hit and the entrance crawl completely sumped. Climbing onto a six foot ledge they tried a crawlway but found it to dead-end, with water now flowing down it from the way the had come! They retraced their path to the "main" passage. They were now confused and blundered about in deep water before recognizing the correct passage away from the flooding. Soon they slowed their panicked flight and made their way back into Fisher Avenue. They did not know the Historic Route and so debated the proper course of action. First they wrung out their wet clothes, putting them back on, covered by their two emergency plastic bags. They had one carbide lamp without a tip but fired it up anyway for warmth. They still feared flooding and were nervous about trying to sleep.

At 3 a.m. lights approached from the north. This was Quick, Crowl and Worthman, who knew the Historic Route. The combined group exited the Historic Entrance a 10 a.m.
REFERENCES: 1) BIll Allendorf, Barb Shaeffer and Lou Simpson "Trapped in Fisher Ridge" **The Cave Cricket Gazette** 7:3 April, 1982 pp 27-31.
2) Joe Saunders "More on the Fisher Ridge Flood" **Ibid.** p 38.
3) Bruce Worthman "22 Hours in Fisher Ridge" **Ibid.** p 37.
ANALYSIS: It was overcast when the Splash groups entered but no rain or lightning were evident and the forecast called for clearing by evening. The Splash was at normal level. It had been used previously 15 times, but never in the rain. Later observation showed it to be passable 30 hours after sumping and back to normal 1 1/2 days after that.

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C: Haynes Cave, West Virginia **March 26, 1982**

On March 26, 1982 Mark Johnsson and Pat Maurice entered Haynes Cave in Monroe County, West Virginia. On the previous day they had finished a survey of the cave and had returned to obtain geological data. After six hours in the cave they were on the "lower level" about 50 feet south of the entrance.

Johnsson proceeded up an easy ten foot climb, which he had done twice before. At the top the "ceiling and/ or wall failed." One large block shifted, temporarily pinning Johnsson's chest against the top of the climb. A second block (3x2x1 foot) bounded down the drop striking Maurice, who was ten feet laterally from the bottom. The rock hit her on the right side, knocking her to the ground and causing cuts and contusions. Johnsson freed himself and the two left the cave under their own power. A hospital examination revealed no broken bones or major injuries.
REFERENCE: Mark Johnsson **Accident Report** Undated 1 p.
ANALYSIS: Johnsson relates that this is the second such incident in Haynes Cave—in '77 a rock fell breaking the toe of a caver. He points out that the gypsum in the cave is constantly forming in joints, exerting pressure and causing blocks to loosen. This is true of any gypsum area in any cave.

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B: Crooked Swamp Cave, New Jersey **March 27, 1982**

On Saturday, March 27, a group of boy scouts of Troop 116 of Millstone Township visited Crooked Swamp Cave in Sussex County, New Jersey. Their caving leader was Jim Ewin, a caver of 30 years experience, but Ewin was suffering from a bad cold and did not enter the cave. The bus driver and overall scout leader was Don Weltner (48) a New Jersey State Trooper. Weltner's caving experience was very limited—the only cave he was known to have visited before this trip was Shofer's Cave near Kurtztown, Pennsylvania. He was reported to be in excellent physical condition and was of average size—5 foot 11 inches, 160 pounds.

The group first looked at maps of the cave, discussing parts of the system, including "difficult areas or places to avoid." All but Ewin spent the morning in small groups, exploring the constricted passages. Two other adults accompanied the group but they had no caving experience. The 16 scouts ranged in age from 11 to 16 and about half had previous experience in Shofer's Cave.

Weltner was wearing a long-sleeved shirt and pants with rubber-soled boots. His helmet had a chin strap but no mounted light. His main light source was a hand-held flashlight.

The Crooked Swamp Cave has seven entrances but one is not enterable. It is basically "a horizontal network of passages a few feet below the six base entrances and fifteen feet below the sinkhole entrance." There is 1250 feet of surveyed passage, principally low crawlway with some very high but narrow vertical fissures. The traverse between some entrances is very difficult or impossible. Passage walls are very irregular with jagged projections. The cave is normally 55-57 degrees but its shallow nature and air movement coupled with cool weather and cold nights rendered it cooler at the time of the accident.

Lunch was eaten outside and at that time it was proposed to have a "manhunt" in the cave during the afternoon, with ice cream as the prize. Accordingly, three scouts went in first, in an entrance of their choice to get "lost" and evade the others. After ten minutes the others began the pursuit. Weltner with his two sons and another scout went in an entrance just south of Tree Root Cave, a part of the cave system that was connected on the map by dotted lines. Weltner was aware of this but tried to force the connection anyway. At perhaps 3 p.m. (the time is uncertain since Weltner first would not admit he was stuck) Weltner entered a narrow, body-sized crevice, with a small ledge making it wider at the top. He apparently slipped off this ledge and became wedged in the bottom of the keyhole.

At that point the passage is only a couple feet high and 7-8 inches wide below the ledge. Weltner's head was downslope from his feet. For the coming rescue attempt, it was difficult to reach his feet and impossible to reach his head, except for a **very** small person, from the Tree Root Cave side.

Shortly after 3 p.m. all but Weltner's group had grown cold and left the cave. An adult, waiting on the surface entered at 3:20 and learned that the victim was stuck. A rope was obtained and one end looped around Weltner's feet. Pulling had no effect. At 4:50 one scout braced the victim's feet and he was able to move **forward** 9 to 12 inches, until his pants crotch snagged. The victim was already slipping into hypothermia as his speech had become slurred.

It was thought to lever him up to free him but no suitable board could be found. From 4:45 to 5:30, outside rescuers were contacted, including the Blue Ridge Rescue Squad and NCRC. The Rescue Squad notified the New Jersey State Police who were naturally very concerned and came in force.

At 7:30 p.m. Weltner had become somewhat incoherent and it was recommended that heat was needed. From that point, numerous attempts to warm the victim were made but none were successful. These included hot water bottles, gel packs (chemical heat), a sheet soaked in hot water, a portable electric heater, and a portable hot-air generator for telephone work in manholes.

By 1 a.m. Sunday, it became clear "that all attempts to stabilize Weltner's condition by application of heat had not arrested his slide into hypothermia." Yet another attempt at pulling him back yielded no result and at 3 a.m. there was no sign of life from the victim. At 6 a.m. a rescuer was able to get close enough to detect residual body heat at mid-thigh.

At 6 a.m. it was decided that ordinary extraction would not work and the go-ahead was given to use "extraordinary" means. This led to a 20 foot shaft being drilled to intercept the cave two feet from Weltner. Twelve hours later, it was found that the shaft intercepting the cave has missed the correct spot by 10-12 feet. From about 6:30 p.m. Sunday to midnight on Monday/Tuesday cavers worked to enlarge the passage from the shaft to Weltner. A jackhammer, hydraulic rock splitter, and explosives were used. Finally, early Monday evening, a harness was fitted around Weltner's chest and he was moved two feet toward the shaft. He could not be moved further, however, and at midnight it was decided to remove the victim by quarrying.

Quarrying commenced at 2 a.m. The work involved blasting, backhoe work and drilling and Weltner received a number of post-mortem injuries in the process. His body was recovered at 11:40 p.m. Tuesday.

REFERENCES: (Newspaper references are representative, not complete) 1) AP "Scout Leader Trapped in Cave, Feared Dead" **Philadelphia Enquirer** Monday, March 29, 1982 pp 1-A, 8-A.

2) AP "Efforts to Save Spelunker Fail" **The Patriot** (Harrisburg, PA) Monday, March 29, 1982 pp 1,2.

3) Anon. "Hopes Dim for Trooper In Cave" **Tulsa World** Monday, March 29, 1982 p A 14.

4) Editor "Rescue Crews Try New Tactics in Cave" **The Atlanta Journal** March 30, 1982.

5) Jim Norman and Sam Rosensohn"Breakthrough, but Hopes Fade for Cop in Cave" **New York Post** Tuesday, March 30, 1982 p 3.

6)AP "Blasting Tried to Free Trooper" **The Oregonian** (Portland, OR) Wednesday, March 31, 1982 p A 11.

7) AP "Body of N.J. Trooper Removed from Crevice" **Philadelphia Enquirer** Thursday, April 1, 1982.

8) Bob Matusik **Personal Communication** April 3, 1982.

9) Ed. "New Jersey Tragedy" **D.C. Speleograph** April, 1982.

10) Ed. "Trapped Scoutmaster Dies of Hypothermia" **The Potomac Caver** 25:4 April, 1982 p 53.

11) Warren Hall "Letter to the Editor" **D.C. Speleograph** June, 1982 pp 17-18 (also Editor's reply).

12) Editorial Untitled **Northeastern Caver** Spring, 1982 pp 38-40.

13) Editor "Untitled Rescue Report" **Speleothemes** July-August, 1982 10 pp.

14) Warren Hall "The Crooked Swamp Cave Incident" **Northeastern Caver** 14:1 January, 1983 pp 3-19 (Also, in slightly edited form in **NSS News** 41:5 May, 1983 pp 144-149).

15) Richard F. Dalton et al. "Crooked Swamp Caves # 2-3-7" **Caves of New Jersey** Bulletin 70 New Jersey Dept. of Environmental Protection, Bureau of Geology and Topography June, 1976 pp 20-23.

ANALYSIS: When Weltner's body was finally removed, it was reported that a "piece of rock behind Weltner's right hip had acted as a keystone, thwarting efforts to move him." Even when quarrying removed the cave from 3/4 of his body a come-along was required to completely free him. It is obvious in hind-sight that all the attempts to pull him back from his entrapment were futile. At the same time, though some efforts were made to warm the victim, none were successful, and it seems from the reports that getting the victim free was foremost in people's minds. And why shouldn't it be? Yet it must be recognized that there are some rescue situations which are better served by **maintaining** the victim, then effecting his evacuation or extraction when the means are obtained or discovered. Thus, if at first Weltner's rescuers had decided that keeping him warm was to be the primary objective, and the means had been thus obtained—perhaps a very effecient forced hot air blower—Weltner might still be alive. This, of course, is hindsight and not meant to belittle the efforts of rescuers, merely to suggest procedures for the future.

The responsibility for this accident rests squarely on Weltner himself. He is characterized as venturesome and "daring." "In a cave he couldn't get his fill and tackled small passages or difficult spots without apparent fear or hesitation." Besides this, Jim Ewin suggests the following to have contributed to the situation: 1) The challange of the game of hide and seek they had devised, 2) a desire to redeem himself for having failed to get through a small passage that morning, 3) the impassable nature of the crawl, which he may have forgotten or been misled about by voices ahead, and 4) the great danger of tight passages, of which he was unaware.

To these I certainly agree. Indeed, the whole thrust of their outing was wrong, teaching the young scouts and potentially future cavers to be daring—that caves are places to play games in—instead of teaching them caution and good judgement. As with climbing, in caving one must learn one's limits. Forcing a tight passage may be heroic and noteworthy, but it can also be fatal. What goes in doesn't necessarily come back out.

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A: Nita Nanta, Oaxaca, Mexico **April 16, 1982**

In April of 1982 a group of 17 cavers was on the Huautla Plateau working on Sistema Huautla, a group of vertically-oriented, very deep caves, which are hydrologically, and in some cases physically, connected.

On Friday, April 16, six members of the expedition left to return to the United States. At 5 a.m. five entered Nita Nashi for a one day push from the surface. Four, Ed Holladay, Mark Minton, Doug Powell (late 20's) and Lisa Wilk were to break camp at -600 meters in Nita Nanta and return to the surface that day. This left two on the surface.

At about 11:30 a.m. Minton and Wilk started out followed by Powell and Holladay. Past the "blasted area," a tight place where they had to unpack and pass gear through, Powell took the lead.

At the 22nd drop, leading to the Narrows, he chose to free climb, with a single Jumar on the rope, sliding it along as he climbed, for a safety. At 5 p.m., partway up, Powell had a handhold for his left hand above his head when his foothold(s) broke. The safety sling was not quite tight and his weight plus that of his camp duffel (at least 30 lbs) came suddenly on his left arm, dislocating his left shoulder. There was no immediate pain so he lowered himself to a ledge and called for Holladay. Holladay arrived and made two unsuccessful attempts to reset the shoulder. When Wilk and Minton arrived they moved back down two narrow drops

to a somewhat wider place, some 6Wx12Lx10H, and set up a bivouac at about -330m on the stream-gravel floor. Further attempts to reset the shoulder were unsuccessful. Sleeping bags were set up on a space blanket and ensolite pads, with the cave stream flowing through the gravel under the space blanket. Wilk was left with Powell while Minton and Holladay headed for the surface.

Two hours later, on the surface, they found only Mike Doe, Ted Wilson and Allejandro Villagomez, an experienced caver from Mexico City. Several days worth of food, a stove and stove fuel were packed up and transported to the bivouac by Doe and Villagomez, arriving early Saturday morning.

Powell's shoulder had begun to hurt badly and he was unable to sleep. Some relief was gained through occasional massaging of the shoulder by Wilk. When the first surface relief arrived, Codeine was administered but did not entirely relieve the pain. Doe had a book that showed how to reset a dislocation but two or three attempts were unsuccessful. Then Doe stayed with the victim while Villagomez and Wilk headed out.

The crew from Nita Nashi had exited and were briefed on the situation by the others. Since Powell's condition was stable, they got some rest to be ready if manpower was needed for an evacuation. Minton and others took the expedition bus to Huautla to get additional pain killers and a doctor's instructions on how to reset the shoulder.

Saturday afternoon Holladay and Wilson took additional drugs and food and stove fuel to the bivouac. Powell's morale was by now a little low. His left knee, which he noticed as feeling sore the day before, was now red and swollen, extremely painful to the slightest touch. Vallium was injected for the shoulder and two hours later they attempted to reset it with no success. Holliday and Doe then exited the cave leaving Wilson with Powell. Vallium was injected every 12 hours and this allowed some sleep.

Meanwhile plans were made in case Powell could not make it out under his own power—calls were made to the United States to establish a rescue liaison and a call was made to Mexico City which would produce a doctor the following morning.

On Sunday afternoon Hans Bodenheimer, Mike McWhirter and Scott Davis proceeded in to the bivouac. Bodenheimer had been present at a previous occasion when Powell had dislocated the same shoulder and had it reset. When they arrived, muscle relaxants and antibiotics were administered. After two hours, with Bodenheimer and McWhirter in the proper positions and exerting all their strength, two attempts were made before the shoulder reset with a loud "pop." Only a dull ache remained. After a meal, however, chills set in and it became obvious that the infected knee was a serious problem, though the victim was now able to sleep.

On Monday the doctor, Artur Pareja Reyes, accompanied by Villagomez and Wilk, headed in to treat the infected leg. Four other Mexican cavers, two from the police and two from ISSSTE (Fire Department) had also arrived but were kept with the surface crew. Pain killers were administered, the arm and leg immobilized with heavy bandaging, and the victim started out under his own power with some assistance from his companions.

After four hours and six drops the heavily medicated Powell needed to sleep, so another bivouac was set up and eight hours of sleep obtained, at least by Powell. Fortunately the drops above the accident bivouac were well suited to the Texas method that Powell was forced to use, having only one usable arm and leg. He reached the surface at about 6 p.m. on Tuesday, April 20. The normal three hour trip had taken 14 hours.

REFERENCES: 1) Doug Powell **Personal Communication** May, 1982 6 pp
2) Bill Steele **Personal Communication** May 15, 1982 2 pp.
3) Scott Davis **Personal Communication** Undated 2 pp.
4) Chris Kerr "Nanta Rescue" **Speleotype** 15:2 1982 pp 21-27.
5) Editor Untitled **Texas Caver** June, 1982 p 55.

ANALYSIS: This sort of accident could happen to anyone but Powell might be more prone to shoulder dislocations since he had suffered one previously. If one has a disability that can recur "spontaneously" one might be careful to avoid situations that could lead to its recurrence. In this case, using his ascending rig instead of free-climbing should have prevented the accident. Carrying a load could lead to a shoulder dislocation in anyone if they are forced to hold with one hand when footholds break.

It is fortunate that Powell could leave under his own power—the consensus seems to be that an evacuation from this cave, with it's many tight places, would have been very difficult and time-consuming.

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A: Buddy Penley's Cave, Virginia **April 17, 1982**

At about 1 p.m. on Saturday, April 17, four cavers entered Buddy Penley's Cave in Bland County, Virginia. These were Bill Kelly, Mike Moore, Pete Sauvigne (31) and Bob Ulfers (20), from Virginia Polytechnic Institute. Sauvigue was by far the most experienced and was playing the role of leader.

They proceeded down the 120 foot pit, the 30 foot cable ladder drop and the Crossover Pit. After exploring a bit, looking for a connection to Newberry's Cave, they started out. The trip in had taken four hours. At the 120 foot pit the noise of the waterfall had about doubled but they had planned for this (rain was expected) by rigging that drop so that one could get off at a constriction 90 feet up and serve as a relayer of communications as the rest came up.

Sauvigne asked Moore to go up and fill this role. At about 5:15 p.m. he had reached the constriction and moved up over the edge and to the left to rig into the excess of the 200 foot rope used to rig the drop. At that point a 30 pound rock fell, presumably dislodged by Moore although he didn't notice such an occurrence. Below, Sauvigne was at the rope helping Ulfers put on his vertical rig. The rock, "the size of a football," struck a blow to Ulfers' helmet, then to Sauvigne's arms and finally Ulfers' foot. Ulfers' helmet was knocked off by the blow and when Ulfers fell to the floor he struck his head, suffering further head and neck injuries. Both of Sauvigne's arms were broken and Ulfers was knocked unconscious.

Sauvigne yelled for Moore to get help. Moore communicated that he would and took off. Toward the entrance the cave is complex and Moore had to take his time and several times chose wrong at a junction, retracing his steps after reaching a dead-end. His carbide lamp went out at one point, but was not difficult to relight. He reached the entrance about an hour and a half after the accident. Calls to the VPI Cave Club and NCRC got the rescue started.

Meanwhile Kelly, who had been nearby, recharging his lamp, took charge of the injured cavers. Ulfer's neck injuries kept them from moving him. In the drafts at the bottom of the drop hypothermia became a problem. Ulfers was unconscious for about 10 minutes—when he came to he experienced nausea and rolled over a bit to vomit. Kelly took this opportunity to put some insulation under him. Using plastic bags and carbide lamps he then kept Ulfers as warm as possible. Both Sauvigne and Ulfers were in great pain. They passed the time in theological discussion.

At 9:15 p.m. the first of the rescuers arrived at the cave. At 9:30 a group entered to bring medical supplies/expertise and a sleeping bag to the victims. Then a team entered to lay phone line. By 10:40 p.m. a phone line was set up to the accident site.

After an initial examination, Ulfers appeared to have a scalp laceration, but no skull fracture; the shoulder pain seemed to indicate a broken clavical. He complained of pain in his left side and shoulder. His pupils were equal and reactive. Sauvigne was cold and appeared to have fractures of both forearms.

While the victims were treated, the pit was rerigged for hauling and to bypass a narrow crawlway just above the pit. In the process it was found that the new rig site was somewhat unstable so there was some rock-fall danger.

The medical team with the victims called for a special, flexible backboard, a KED, for Ulfers. This went down the drop at about midnight. At 12:43 a.m. Kelly was sent up the 120 foot drop. Meanwhile the best route to the entrance had been chosen and rigging was going on along this.

At 4:20 a.m. Ulfers was brought up the 120. After being checked by the med techs he was transported to the entrance by a variety of caver-rescuers. He reached the entrance at 6:35 a.m. Sauvigne was being hauled up the 12 at that time and was transported to the entrance shortly after.

Ulfers was flown to a hospital where he was listed in serious condition with a depressed skull fracture, two hairline fractures of the cervical spine and a broken foot. Sauvigue was found to have an open fracture of the left forearm and a compound fracture of the right forearm.

REFERENCES: 1)Pete Sauvigne **Personal Communication** August 30, 1982.
2) Robert Rubin "Two Injured Cave Explorers Rescued From Bland Cavern" **Roanoke Times** April 19, 1982 pp A-1, 8.
3) Caroline Kane "Two Rescued From Bland Cave" **Virginian Leader** (Pearisburg, Virginia) April 21, 1982 pp 1, 12.
4) Chris Peacock "Saved" **Roanoke Times** April 28, 1982.
5) Detlef Ulfers "Accident in Buddy Penley Cave" **The Potomac Caver** 25:5 May, 1982 p 71.
6) Betty Moss "Rescue" **Bat Times** 2:1 p 12.
7) Editor "Buddy Penley Rescue" **Tech Troglodyte** Spring, 1982 pp 113-118, 122-124.
8) Robert Logan "Cave Rescue" Letter to Editor **Roanoke Times** Monday April 26, 1982 p A-6.

ANALYSIS: There was a good deal of useful comment about this accident in the caver press. Sauvigne admits to being "impatient to exit the cave" such that he helped Ulfers rig in 1) while someone was still climbing above, and 2) directly in the rockfall path, where he had experienced rockfall before. Apparently they could have rigged in at a spot sheltered from rockfall.

Ulfers points out that your helmet does not provide complete safety from rockfall. Certainly it saved his life—the MSA Comfo-cap experienced a collapsed suspension but the shell was intact. Still, the helmet was knocked from his head allowing further injuries when he struck the ground. Helmets should not come off in the process of an accident, and one should change or modify the chinstrap accordingly.

Moss suggests that the presence of Kelly as an additional party member, able to stay with the victims and offer assistance, may have saved them from succumbing to hypothermia.

In all, a good example of the power of a simple rockfall to wreak havoc, and of the necessity of a good caver-manned rescue network. For me, at least, it is easy to think of times I've braved rockfall just to speed things up a little.

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B: Huccacove Cave, Colorado **April 26, 1982**

At 10 a.m. on Saturday, April 26, a group of four or five entered Huccacove Cave, near Cave of the Winds in Colorado. Some distance into the cave an argument commenced. James May (21) became angry and told the others to leave him—he would find his own way out! He had "three flashlights with extra batteries and (was) dressed in a shirt and jeans, kneepads and sneakers." He had, thus, no food, water or extra clothes. His companions took his request seriously and left.

On Sunday he had not appeared so they re-entered the cave and after some time, spied his light. They called out but May's response was to turn his light out. THey left the cave at about 6 p.m. Two of the party were injured in a fall down the steep slope outside and required the assistance of El Paso Search and Rescue. None of the group told the rescue personnel of their crazed companion, still in the cave. May's mother, however, heard of this accident, realized her son was missing and informed the El Paso Sheriff's department.

At about midnight, Sunday night, two Search and Rescue personnel, the manager of Cave of the Winds, and four cavers from the Air Force Academy entered the cave to find May. Only the Cave of the Winds manager had been in the cave before. In five hours they searched all the cave on the map they possessed without finding the victim.

At around noon on Monday, Barney Foster, who had heard of the situation on the TV news, entered the cave to continue the search. He knew the cave well and planned to check the upper rear portion which had not been searched. Search and Rescue would not pursue the matter with him since May was known to disappear for two or three days at a time but always turned up. No other cavers were available.

Foster proceeded through a slot ("Steve tried and died") at the back, across a crevice (leading to the lower area of the cave, already checked) and up into a series of tight squeezes to the upper part of the cave. At the first of these squeezes he found a flashlight. Past two small rooms he entered a room with large breakdown blocks. Here he heard a cough, yelled, got a response and crawled into another room where he found May, lying on the floor. May had burned everything but his pants and sneakers to keep warm, and was covered with bruises and scrapes. Foster gave him an energy bar and some water and they left the cave. May had been lost in the cave for 54 hours.

REFERENCES: 1) Editor "Notes and News" **Caving in the Rockies** May-June, 1982 p 34.

2)Barney Foster "Rescue in Huccacove Cave" **Caving in the Rockies** July-October, 1982 pp 47-48.

ANALYSIS: Foster reports that May was drinking on the way to the cave. Certainly his reported behavior was very bizarre. When found he was somewhat irrational and surely hypothermiated. Perhaps he went from the irrationality of drinking directly to the irrationality of hypothermia and never had the sense to contact his would-be rescuers. He told Foster of "dreaming of climbing over a stone slab roof of a house and the police were chasing him."

There is now better awareness of the necessities of cave rescue by the Search and Rescue personnel at El Paso and better coordination with cavers. May owes his life to Foster's dedication.

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D: Paul Penley Cave, Virginia **Spring, 1982**

In Paul Penley Cave a promising lead was a dome/pit beyond the tight Fender Bender. The dome/pit is intersected by the entering passage and has a stream cascading down. A couple of attempts got a bolt ladder part way up above the belayer but the waterfall lead was on the opposite side and still above. In the spring of 1982 a light set of scaling poles was constructed and brought to the site by five cavers. This was set up with it's bottom anchored to the top of the bolt ladder and it's top over the lip of the waterfall above. A cable ladder had been attached to the top before erection and ascent was then possible.

With a belay running back through the 'biners on the bolts, Ed Devine climbed out and up the cable ladder, soaked from the waterfall, but still warm from his exertions and a "garbage bag undershirt" he was wearing. He made it up the 15 foot climb quickly and checked for continuation. A high canyon passage led on but the loose rock slope above the falls was very treacherous. Undoing his belay, he headed on, finding some good leads.

Back at the dome he looked about for a permanent anchor for his descent and future ascents. There was nothing! The walls were crumbly and the floor was loose rocks that kept sliding down and over the edge as he walked on it. He would have to descend with no upper belay—a slip would produce a 30 foot fall, hopefully held at that point by his belayer.

He was about 10 feet down when the shower of water doused his carbide lamp. He scrounged through his pack and found his flashlight, then got a few steps further before the flashlight slipped from his grasp and was lost into the darkness below. His third source, a Tekna-lite tied to his equipment sling now refused to work.

The cold shower and his exertions were draining his strength fast. He tried to reascend but found his belay to be tangled in the ladder. His boots, with speed lacing hooks, tended to get caught in the cables of the ladder. He was cold and confused. He yelled for light—he had to rescue himself, he knew that much. Seconds passed.

A light suddenly shone upwards from a companion who had hung out over the edge in a difficult spot to illuminate him. He got the rigging and his boots untangled, his companion burned through a parachute cord equipment-passing line which was tangled and he was suddenly free to descend. Almost at the bottom, his strength failed and he fell free, but was pulled up to the passage by his companions, where he collapsed, exhausted and numb, shivering uncontrollably. He shortly recovered and the party was able to leave the cave without further incident.

REFERENCE: Ed Devine "Diddly does the Undone Dome" **Tech Troglodyte** (VPI Grotto) Winter, 1983 pp 40-46.

ANALYSIS: Surely here we are getting down to the very essence of what adventurous sport caving is all about. A classic situation which any hardcore might hope experience in his caving life. However, for those of more pedestrian inclination we can suggest that a wetsuit, electric headlamp and boots without speed lacing hooks would have eliminated some of the excitement. Also, the vertical set-up, though it accomplished the job, was complicated, with scaling pole, belay line, cable ladder and parachute cord equipment line all going to the top, available for tangling.

Even with better equipment, however, don't underestimate the heat(life)-sapping power of water, even in spray form. A climb like this is very serious caving.

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B: Sunnyside Cave, Pennsylvania **Spring, 1982**

In the Spring of 1982 a Cornell Outing Club group including Dan Gasteiger, Melanie Hayes and Lon Kissinger was exploring in Sunnyside Cave, Centre County, Pennsylvania.

At about 8:30 p.m., while exiting the cave, Kissinger found he could not ascend the cable ladder past the tight spot on the first drop. His companions tried to help him but soon realized they were too few and too tired. They "made the victim warm," gave him their extra food, and left to seek help.

John Coraor of the Nittany Grotto was called and he organized one rescue team while Will White was called to standby, organizing a second team. The initial team left for the cave at 10:30 p.m. and arrived on the scene at 11:30.

One rescuer descended the ladder already in place (on belay) while another remained above the squeeze to rig a second ladder with rungs "slightly offset" from the first to enable the victim to take short steps while going through the tight place. The victim started up but found, at the squeeze, that variation in rung spacing made them even at that point. They then resorted to brute force, with the rescuer above pulling and the one below pushing and giving footholds. The victim was out by 1:30 a.m.

REFERENCE: Editor "Cave Rescue in Sunnyside Cave, Bellefonte, Centre County, PA" **Nittany Grotto News** 29:2 Spring, 1982 pp 24-25.

ANALYSIS: It was pointed out that Sunnyside Cave is a poor choice for cavers not experienced in negotiating narrow places on a cable ladder. With any vertical technique, know it well and it will serve you well. I also feel that groups should have some knowledge of self-rescue and be able to work their way out of simple difficulties like this.

The call out was on a Friday night and difficulty was experienced in contacting rescuers.

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D: Ogle Cave, New Mexico **May 16, 1982**

On Saturday, May 16, 1982 five cavers entered Ogle Cave in Carlsbad Cavern National Park in New Mexico. After four hours of exploring, they began to ascend the 185 foot entrance drop. The second caver going up, Terry Hill (25), was 75 feet from the surface and 35 feet above a sloping ledge that interrupts the drop, when a rock dislodged from a point 20-30 below. The rock, estimated to be "between 60-70 lbs" and "the size of a car tire," struck the ledge and broke into several pieces which showered on those below. Everyone dove for shelter and no one was hit. The rope was checked by Hill for damage and there was no further incident.

REFERENCE: William Bentley "Incident, New Mexico, Ogle Cave" **Unpublished Report** April, 1983 1 p.

ANALYSIS: The rope had been anchored for convenience to an old donkey engine bolted to the bedrock near the pit. The wall down to the ledge at this point "is exfoliating and in spots (is) unstable and loose." The group recognized that the rope should be rigged at some other point to avoid this part of the drop. Areas of loose rock should always be avoided. If any other anchor point was available, the first man down should have asked for the rope to be re-rigged, assuming he did not already know of the rotten wall.

On ascent, if a rock is dislodged and may have damaged the rope below a caver, the safer thing to do is to pull the rope up, inspecting it (as was done here), or rappel back down, watching for rope damage, rather than make those below ascend

at their own risk.

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D: The Cave, Belize **May 28, 1982**

On May 27, 1982, while on a caving trip to Belize, Tom Miller and Logan McNatt traveled from Blue Creek, a small Indian village, to the even smaller village of Santa Elena. From that point they packed for an extended stay and walked the two hours to The Cave. They had been to this cave once before, entering for 250 meters to a drop into a huge room. The entrance is a river sumidero but in May the river was sinking two miles upstream.

They set up a camp inside the entrance and slept the rest of the night.

The following day, Friday, May 28, they awoke to the start of very heavy rains. Feeling this was no big deal they began mapping the cave.

At the drop, they rigged cable ladders, needing 45 feet. The room proved to be some 200 feet across and 100 feet high. A small lake lay below the drop with a small tributary stream coming out of one wall. Unfortunately they could find no productive way to continue. One lead produced a climb-up to another entrance and a high-level bypass back to the drop into the big room. They descended this a second time, determined to find a good continuation. There was plenty of evidence, large logs and rounded rocks, to indicate this room sometimes flooded, as much as 30-40 feet above the floor.

Leaving their cave packs under the drop they headed around the lake to check the tributary. As they did this they heard a "strange roaring sound," which was soft enough to be attributed to a "change in acoustics" but 15 seconds later it changed to a rumble, then "a most horrendous **Crash-boom**!" The result was deafening and the room seemed to shake. Obviously the river bed was in flood and climbing out was now impossible.

In 30 seconds they had scrambled to the lead that allowed a climb-up to the additional entrance they had found earlier, and were soon out. Back at the original entrance, their camp was gone, taken by the fast, brown waters.

Two days later they returned and recovered some of their gear.

REFERENCE: Logan McNatt "Grim Fairy Tales" **The Texas Caver** 27:4 1982 pp 67-69, 72, 83.

ANALYSIS: In Mexico/Central America the rainy season begins in May or June. On May 28 it should be expected. To explore a river sumidero (even a dry one) after obvious rain had begun is taking a terrible risk. The cavers were lucky to have found a second entrance just prior to the flood.

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A: Leviathan Cave, Nevada **May 30, 1982**

On Memorial Day Weekend in 1982, a group of six, Bob Richards, Pete Shifflett, Keith Sinn, Chuck Whitney, Ed Moody and Curt Wheeler set out to visit Leviathan Cave, high on the side of Worthington Mtn. in Nevada. At about 9 a.m. on Sunday, May 30, they began the hike from their camp up to the large entrance. This hike included a 30 foot pitch on which some desire a belay.

The group arrived at the entrance between 12:30 and 1 p.m. and ate lunch before entering. A 50 foot rope was rigged on the entrance drop, a 30 foot climbable pitch.

At about 1:10 p.m. Ed Moody (37) stood up, fainted and fell down this pitch, landing face down. Wheeler and Shifflett down climbed at once to Moody. He appeared to be unconscious and was having trouble breathing. Sinn and Whitney had the most medical training so they elected to stay with the victim while two of the other three went for help. At about 1:25, Moody regained consciousness, complaining of extreme pain in his back and having a wheeziness in his breathing.

At 1:55 the two arrived at camp and left to get help. At a ranch they found no one and continued on to the town of Rachel, a few trailers and a Bar and Grill. The owners of the Bar and Grill had a phone number for a helicopter rescue service called "Flight for Life," which was quickly mobilized. At the cave, Moody appeared to be dying.

At 4:45 p.m. a chopper arrived, rearranged personnel and headed for the mountain at 4:50. At the cave entrance the chopper was unable to land, because of the excess weight. A nurse, Marshall and medical/rescue supplies, including a litter, were disembarked while hovering at the entrance and the chopper headed for a nearby mine to refuel for the hop to Las Vegas.

Moody was put in the litter, pulled up the 30 foot pitch and given an IV and oxygen. Everything was readied for the pick-up. At 6:45 the chopper hovered while the victim was placed aboard. Within minutes he was at a Las Vegas hospital.

Moody spent the following two days in the Critical Care Unit having suffered a ruptured spleen, a punctured lung and seven cracked ribs.

REFERENCES: 1) Bob Richards "Flight for Life" **The Explorer** (So Cal Grotto) August, 1982 pp 129-133.

2) Ed Moody "And Now a Word from the Victim" **ibid.** p 133.

3) Ed Moody **Personal Communication** December 14, 1982.

ANALYSIS: Moody was wearing his hard hat for the hike and suffered no head injuries in his fall. The fainting spell was due to the hike up to 8,000 feet, squatting down and abruptly standing up. Moody has recovered and resumed caving, minus his spleen.

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A: Parker's Pit, Indiana **June 12, 1982**

On Saturday, June 12, a group of Windy City Grotto cavers visited Parker's Pit, Harrison County, Indiana, arriving at 11 a.m. This was the annual novice vertical trip, with Parker's the objective because of the drizzle, Parker's having a more secure lip than the original objective, Jug Hole.

Bob Paterno rigged the low side of Parker's, a 105 foot drop with 330 feet of PMI. This ran to the right of a six inch diameter tree at the lip and back 50 feet to the rig point, a tree. A rope pad was rigged to a Jumar on the main line about five feet from the lip. There was insufficient webbing to rig the pad to a tree.

At the top, everyone was getting their rappel rigs on while Ralph Earlandson, the most experienced, was helping a novice to construct a climbing system. Greg Valent, the third experienced vertical caver, headed for Borden's Pit, 300 feet away, to rig it.

Ted Hartman (32) got his gear on, and went to the rope. He pulled the rope up four or five feet, to get below the Jumar, and applied a rack, using all five bars. While doing this he did not at any time inform Earlandson, the only really experienced one left on top, that he was getting ready to descend.

As he tried to back down the slope toward the lip, he had trouble getting the rope to move through the rack. Bill Watts, who was watching, suggested removing a bar. This was done but he was still struggling back toward the lip, feeding rope through the rack. At the lip, he jammed the bars up, readjusted the pad, and stepped down to a ledge three feet below the lip. It was now 11:30 a.m.

Leaning back at a 30 degree angle, he tugged on the rack with both hands, spreading the bars. Suddenly his feet slipped off the ledge precipitating him into an uncontrolled descent. Watts saw the fall and yelled "Belay!"

On the bottom, Paterno "heard something" then the "zip" of the fall. He grabbed for the rope, and started to pull in slack. The rope became tight in his hands at the same time as Hartman hit the bottom.

The victim came to rest with the rack supporting the upper part of his body about ten inches above the floor. There was no movement. His eyes stared straight ahead. Paterno ran to him, held up his head and called to him. After a minute Hartman groaned; after five minutes he became coherent and tried to sit up. Paterno stopped him and checked for "motor control" in all four extremities. Then he helped him out of the fall line.

To get a better opinion on injuries, Paterno yelled to to those above to send Watts, a CPR, down. Watts came down and checked the victim who appeared to be OK except that he was in pain and felt cold. They covered him with a plastic bag and positioned him in contact with Watts. Paterno ascended at 11:50 a.m.

Greg Valent ran to the nearest house and called NCRC. Earlandson descended with water, a sweater and another plastic bag. The victim was covered, with a carbide lamp for a heat source. At 12:20 p.m. a sleeping bag, first-aid kit and blanket was sent down. The sleeping bag was placed under him, the blanket over him and the sweater served as a pillow. Meanwhile the victim's breathing was short, painful and labored, with pulse fluctuating between 60 and 100. Otherwise he was stable.

At 1:15 the police arrived and were informed of the victim's condition and need for a litter. A rope meanwhile was rigged for hauling. The litter arrived at 2 p.m. A police radio was sent down also, to aid communications.

The lift began with the victim assuming a vertical position as soon as he cleared the floor. This caused intolerable chest pain and he was lowered again. However, he steeled himself and when ready, was raised to the lip three feet at a time, apparently using the available manpower. Paterno ascended a fixed line with the victim to watch his condition and maneuver the litter.

At the lip a rigid stretcher was eased under Hartman and used to lever him over the lip. He was immediately given oxygen since it was obvious he was having trouble breathing. He was carried to an ambulance and thus to a hospital. He had two fractured ribs but no other injuries.

REFERENCE: Editor "Accident Report" **The Windy City Speleonews** 22:8 August, 1982 pp 60-62.

ANALYSIS: A grotto committee looked into the accident, offering the following. The rib injuries apparently were caused by striking a ledge 30 feet down—the only bruises were to the rib cage. If is felt that the fall was arrested just before the bottom, either by Paterno's bottom belay or by the rack jamming. All Hartman remembers is "going fast, trying to jam up the bars, with both hands on the rack" before losing consciousness. The bottom belay might have been completely effective if Hartman had communicated the start of his rappel.

The accident, of course, resulted from Hartman's faulty rappel technique. One should never take the braking hand off the rope unless you have tied off the rappel—either around your leg or around the rack. Still, the start of a rappel is sometimes very tricky and it is easy to forget and release the braking hand while maneuvering

Novices should be supervised but absolute control is impossible. Really, it is the novice who should make sure he is supervised.

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A: Roppel Cave, Kentucky **June 12, 1982**

At 11 a.m. on June 12, 1982, Kevin Bruno, Danny Dible, Greg McNamera and Dave Black entered Roppel Cave, near Mammoth Cave National Park in Kentucky. At about 3 a.m. (13th), after ten hours of surveying below the Rift, they headed out.

At the ascent of the Rift, a deep canyon that cuts across Yahoo Avenue, Black was last. This ascent involves a 20 and a 46 foot drop, permanently rigged with a single piece of PMI. All four made it up the 20, Black finding that the upper ascender knot of his 3-knot rig was grabbing, causing him to have to force it up. This cased some fraying but at the top, all three strands of the 5/16th Goldline were still intact. Before starting up the 46 he retied the frayed ascender knot so that the worn place would not abraid further.

The first three proceeded up the 46 and to the dry spot about 500 feet further on. Black went up. As he tried to cross the upper lip, however, the frayed sling broke. As he grabbed the rope to keep himself upright, the other two knots released, and he fell "at nearly freefall speed" back down the rope. Black let go of the rope and wrapped his legs around it, slightly decreasing his speed. The other two knots then either abraided or melted off the rope and he fell free, landing on the bedrock shelf between drops in a three inch pool of water.

The force of the fall had been taken mainly by his heels and buttocks. After a minute or so he moved out of the water onto a mud bank. He could discover no obviously broken bones but it was very painful to put weight on his heels.

His lamp and eyeglasses had been knocked off so he got out a flashlight and located the missing items. The lamp had to be reassembled but was finally got going. After more than half and hour the others returned and lowered a climbing rig. With this Black made it up the drop. It was so painful for Black to put weight on his heels that he had to crawl much of the walking passage to the entrance. The two miles took four hours; they emerged at 11 a.m. Sunday (13th). Black's injuries proved to be only bruises.

REFERENCES: 1) Dave Black **Personal Communication** May 12, 1983 2 p.
2) Dave Black **Trip Report—Roppel Cave** unpublished undated 3 p.

ANALYSIS: Obviously Black's vertical rig was inadequate. A vertical rig must continue to support the caver if one of it's components fails. Even if the slippage of the bottom two knots was due to some action of Black's, such panic reflexes should have no effect on a proper rig.

The main point here, I feel, is that parties should pay close attention to the last man in line, especially at a point where a serious accident may occur, like a vertical drop. The last man has no one still coming to help him if he gets in trouble, as others in a strung-out party would. In this case, if Black had sustained a serious cut, he could easily have bled to death before the others got tired of waiting and returned. A rule in caving should be: Always keep track of the person behind you. If everyone in a party is doing this, the party is "together." A lack of togetherness is a common occurrence in caving parties.

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B: Laurel Creek Cave, West Virginia **June 12, 1982**

At about 2 p.m. on Saturday, June 12, a group of three cavers from Maryland entered Laurel Creek Cave in Monroe County, W. Virginia. Some time later the entrance passage, a stream inlet, flooded trapping the three. They had parked their car directly outside and when that area became flooded, Bob Roles, the owner of the cave, called the Monroe County Sheriff. On Saturday night the Sheriff called Bob Liebman who mobilized a force of cavers. It was obvious, however, that nothing could be done until Sunday morning when the water level would have dropped.

Though the main entrance to the cave is a stream inlet, the nearby Hilltop Entrance affords access to the main passage a little downstream. A trip into this between 10:30 and noon on Sunday showed things well-flooded. Meanwhile the rain had stopped and the top of the trapped cavers' car appeared. The water level was falling rapidly so a push for the Theater Room, where they hoped the trapped cavers to be, was readied. Three cavers with wetsuits would be sent downstream with lifelines and a boat would be taken in as far as possible in case the victims were trying to come out.

The cavers' car had emerged and been towed away. From the gear inside it was deduced that at least one of them must be experienced.

A phone line from the Hilltop Entrance was laid to the the furthest downstream dry point. As the wetsuit cavers readied for a 6:25 p.m. push, voice contact was made with at least one victim in the cave. Everyone was elated.

On the the first attempt the push crew ran out of rope short of the Theater Room. When rope was relayed downstream to them, the wetsuiters moved on, through a foot of air space into the Theater Room where the trapped cavers were indeed waiting. They were all tired but otherwise not injured or disabled. They had panicked when they found the water to be up but calmed down when one of the group fell into neck-deep water.

Now each was fitted with a life-vest, and alternating rescuer-victim, they hauled themselves back up the fixed lines. All three were out under their own power by 9:05 p.m. They had been in the cave about 31 hours.

REFERENCES: 1) Patty Daw "Laurel Creek Cave" **The Carabiner Wrap-up** 8:6 August, 1982 pp 5-6.
2) George Dasher "More Notes on the Subject" **ibid.** pp 6, 12-14.

ANALYSIS: It is not clear how the weather looked when the group entered the cave. Dasher states that the water rose fast. Perhaps the rain was from an unexpected thunder storm. Most entrapments could probably be avoided if the weather forecasts were religiously heeded, however. Apparently it is lucky they were not in the lower levels of the cave. The group showed good sense in waiting for the flood to subside.

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C: Jansill Cave, New Mexico **August 7, 1982**

Five cavers were in Jansill Cave, Chavez County, New Mexico on August 7, 1982. As they proceeded down through an area of "crumbly" breakdown, two rocks fell striking Bill Goodall (32) on his hard hat and foot. Goodall suffered a broken bone in the top of one foot but had only a sore shoulder and neck muscles to show for the blow to the head. No evacuation was required.

REFERENCES: 1) Dave Belski "Trip Reports—Jansill Cave" **Southwestern Caver** Nov.-Dec., 1982.
2) Carol Belski **Personal Communication** July 6, 1983.

ANALYSIS: No one saw or heard one rock fall. A warning was yelled for the other and Goodall moved but was struck anyway. The cavers feel the vibrations from their travel through the breakdown must have caused the rock fall. An alternate route has since been found.

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D: Roto Rooter Cave, California **August 14, 1982**

On August 14, 1982 Arley Kisling and Jim Wolff made a trip into Roto Rooter Cave, in the Marble Mountains of Siskiyou County, California to check out the water level in the Sleaze Squeeze, a wet crawl near the furthest point of exploration, some 500 feet from the entrance pit.

Kisling, having not been in the cave before, thought he would check the crawl first. Since he didn't have a wetsuit, the two agreed he would be the determiner as to whether or not they should continue. Kisling sized up the situation and determined that it wasn't all that wet and proceeded down the crawl. Presently he came to a point where the down-sloping passage reaches a pool of water, 6-8 inches deep with 12-16 inches of air space above which allows the caver a chance to stay out of the water. While bridging across the pool, Kisling's cave pack became submerged in the pool and a great explosion occurred, knocking him out of his position above the pool and into the water. His lamp was extinguished.

Wolff was some distance behind, so in the dark Kisling had to grope in his pack for his second source of light, an electric head lamp. The explosion had broken the lens to the light, but luckily, not the bulb. However, the battery pack was badly damaged as well, with a broken latch and hinge. Still in the dark, Kisling found the four batteries and assembled the pack by wrapping the power cord around it to hold things together. This was all done before Wolff could get to Kisling with extra light.

Kisling was pretty shaken by the incident and with soaking clothes, imminent hypothermia in the 37 degree cave and a now-questionable sources of light. They decided to make their exit.

REFERENCE: Jim Wolff **Personal Communication** September 28, 1982.

ANALYSIS: As Wolff suggests, 'spent" carbide should not be in a container where water can get at it. Since it is usually still producing gas, it cannot be put in something water tight, But should be kept in something that will allow further gas to slowly escape. As Wolff says, "One should always be aware of the potential bomb we carry around—how many times have you peeked into your cave pack for something and used your carbide lamp for the search?"

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D: Organ Cave, West Virginia **August 14, 1982**

On Saturday August 14, Janet McCormick, Larry Lilly, Wes Thorne and George Dasher (30) entered Organ Cave, in W. Virginia, through the main, commercial entrance, and proceeded to the Cyclop's Passage about an hour and a half, and one drop, into the cave.

They went up the Cyclop's Passage taking a few pictures. After 30 minutes travel, it appeared the passage dimensions were decreasing. They were after photos of the largest possible passage so they turned back retracing their steps through 20-30 foot high and wide trunk.

Dasher was bringing up the rear at one point, moving over the floor of breakdown and came to a short, six-foot climb-down. The top was a small rock slab that somehow didn't look stable enough to support him. The nearest alternative, he saw was twenty feet away—to far over "tedious" breakdown. The others had climbed down on the opposite side of the passage.

Dasher knelt and tested the block, then lowered a leg over the drop and

retested—it seemed secure. Swinging his body over the drop he found "the rock stayed in place for about a second, then abruptly came loose."

Dasher went over backwards, the 200 pound slab right behind. Fortunately he was precipitated out far enough that the rock fell not on him, but between his feet. Unfortunately he bounced, continuing over another drop, backwards. This was frightening since he didn't know the depth of this drop. It proved to be only five feet, Dasher landing on his helmet, feet in the air. Only his tripod was damaged.

REFERENCE: George Dasher **Personal Communication** August 16, 1982.

ANALYSIS: Breakdown to be used as an anchor for ropes or for the sole hand-hold in a climb must be forcefully tested at all angles. Part of the blame here must be placed on the rest of the group, however, since the last man in line will tend to feel rushed if no other group member stays with him. He will thus tend to take chances.

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A: Un-named Water-filled Cave, Florida **August 24, 1982**

On August 24, 1982, members of the Florida State University swim team were practicing in two water-filled sinkholes in Leon County, Florida. A 20 foot underwater tunnel links the two water holes. Kenneth Alan Eric Spence (19) swam through this tunnel twice. On a third attempt he drowned.

REFERENCE: AP "A Man Drowns Attempting to Get Through Tunnel" **The Patriot** (Harrisburg, PA) Thursday, August 26, 1982.

ANALYSIS: According to the swim team captain the sinkhole "is a place where veteran swim team members play a trick on newcomers. They disappear into the small hole in the ground and reappear in another hole." That is, this foolishness was being promoted by veteran members of the swim team, who must therefore take partial responsibility.

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B: Sullivan's Cave, Indiana **August 28, 1982**

On August 28, 1982, a group of six experienced cavers entered Sullivan's Cave in Indiana. They "penetrated to nearly the rise of the Sullivan River when one of the group displayed signs of advanced hypothermia." Three of them went for help when the victim refused to proceed. The State Police were called and they called NCRC, who alerted Bloomington and Central Indiana Grotto members. The Bloomington cavers answered the call accompanied by an EMT, with CIG on stand-by. The victim was reached and given aid. He eventually left the cave under his own power.

REFERENCE: Jane Miller "Minutes, September Meeting" **CIG Newsletter** October, 1982 p 98.

ANALYSIS: It may not apply to this situation, but be aware that a victim of hypothermia, if he is in an environment where he will continue to lose body heat while moving may be better off to stop. Movement for a hypothermia victim no longer produces much body heat and may use up the last of the victim's energy, causing death.

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A: Binkley's Cave Indiana **September, 1982**

In September of 1982 three cavers were touring Binkley's Cave in Indiana. After some time they took a breather, all three sitting on a large breakdown slab. When they got up, the slab, weighing some 4-500 pounds, "slipped about 1 1/2 feet," trapping the foot of one caver, Cynthia Cain. The other two cavers were just able to move the rock to free Cain. The foot was bruised and had a tear between two toes but was not sufficiently injured to prevent her from continuing.

REFERENCE: Tom De Camp **Michiana Caver** (N. Indiana Grotto) October, 1982 pp 150-152.

ANALYSIS: Breakdown should always be considered potentially unstable.

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C: Your Cave, Alabama **September 11, 1982**

On September 11 a group of cavers were on the way to My Cave on West Point Mountain in Alabama, when they encountered a new entrance, since named "Your Cave." Just inside is a slope with unstable talus. John Van Swearingen IV (38) began climbing down, attempting to clear the slope of loose rock for the safety of those to follow. Suddenly a large (500 lb) boulder moved, momentarily pinning his right hand. The hand was mashed and bloody so the group exited the cave, walked to the vehicle and proceeded to a hospital where the victim displaced numerous "victims" of a civil defense drill.

REFERENCES: 1) John Van Swearingen III "A Typical, Normal Cave Trip" **Huntsville Grotto Newsletter** 23:10 October, 1982 p 76.

2] John Van Swearingen III **Personal Communication** July, 1983.

ANALYSIS: The entrance areas of caves are often very unstable due to weathering. The victim was certainly correct in trying to clear the slope. Watch out in those virgin caves.

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B: Cueva de la Colindoncia, Puerto Rico **October 3, 1982**

On Sunday, October 3, 1982, a group of five cavers entered Cueva de la Colindoncia in Puerto Rico. An additional person stayed outside while the rest did the 50 m entrance rappel. They checked leads and explored for awhile, then made ready to leave. The rope ended in a tangle in space—one of the cavers had earlier had the person above pull up some gear. Luckily the man outside was still waiting and let the rope down again without a tangle.

When Mayu Gattas got out her gear, which she had borrowed from a caver not present, she discovered she didn't know how to put on the 3-Gibbs rig. Her companions offered advice and help which proved ineffective. The rest then ascended, set up a hauling system and pulled Gattas up.

REFERENCE: Joe Troester "Cueva de la Colindoncia" **Unpublished Report** October 4, 1982 4 p.

ANALYSIS: The entrance is a free drop except for a ledge, 15 m down. Rope will often tangle if thrown all at once. One should not vertical cave without practicing, especially if you are using someone else's gear.

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C: Culverson Creek Cave, West Virginia **October 3, 1982**

On Saturday, October 3, 1982, two cavers were exploring in Culverson Creek Cave in W. Virginia. At a vertical pitch a 25 foot cable ladder had been rigged. One caver (early 30's) attempted the climb without a belay. Ten feet up she was unable to hold on and fell, fortunately suffering only minor injuries. They were able to exit the cave without further incident.

REFERENCES: 1) George Dasher "West Virginia Caving Accidents" **The West Virginia Caver** December, 1982 p 9.

2) George Dasher **Personal Communications** December 10, 16, 31, 1982.

ANALYSIS: The cavers were reportedly very experienced. Still, cable ladders are so deceptive—they look easy but, since one is not really attached, when something happens or one's arms give out, it is only the belay that can save you...and cavers will invariably climb cable ladders without a belay. Given human psychology, I believe SRT to be the safer way to negotiate vertical drops. In any case, a vertical technique will not serve you well unless you practice it, perfect it, and don't take short-cuts when you go to use it.

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B: Organ Cave, West Virginia **October 4, 1982**

On Sunday, October 4, 1982, eight cavers (late teens) entered the Lipps Entrance of Organ Cave in West Virginia. They explored into Hell's Fissure for a ways, then returned upstream, wandering into the Maze. At this point, most of their flashlights failed. There were no back-up lights so two of the group took the two still-working lights and continued. This pair proceeded through the Maze, down Skid Row, up Jones Canyon, through The Breezeway, Left-Hand Passage, Handley Room, Handley's Silo and to the Sand Floor Room. Then they returned to the register in the Handley Room to wait for help.

Eventually they were missed, and help was summoned. Sunday night Jerry Kyle was notified and he and two other volunteers entered the cave and quickly located the group of six, in the Maze as they expected. The group had only one working light—a cigarette lighter. One member was diabetic and a bit woozy but was able to exit without assistance, with the others.

The three rescuers searched a bit for the remaining two, then exited and called for more manpower. A bit later, four returned to the Lipps area to continue the search there while four more went in the main commercial entrance to search the Organ-Lipps connection. The latter group soon found the still missing two, who had burned the register for warmth. They were out by 10 a.m. Monday morning.

REFERENCES: 1) George Dasher "West Virginia Caving Accidents" **The West Virginia Caver** December, 1982 pp 9-10.

2) George Dasher **Personal Communications** December 10, 16, 31, 1982.

ANALYSIS: Additional manpower was standing by to expand the search if necessary. To wander about a cave with inadequate reserves of light until one becomes stranded is extremely thoughtless. Whether one is new to caves or not, it should be obvious that back-up lights are necessary.

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A: Canadian Hole, West Virginia **October 10, 1982**

On Saturday, October 10, 1982, a group of experienced cavers was exploring in the Canadian Hole portion of the Friar's Hole System in West Virginia. In the Rocky Horror Streamway, a loose boulder rolled or fell on one caver's leg, badly bruising it. With the assistance of the party, the injured caver was able to do the "two hours of crawling and waterfall climbs" necessary to exit the cave.

REFERENCES: 1) George Dasher "West Virginia Caving Accidents" **The West Virginia Caver** December, 1982 p 10.

2) George Dasher **Personal Communications** December 10, 16, 31, 1982.
ANALYSIS: According to Dasher, this section of the cave is wet and cold to the extent that a party must accomplish self-rescue of an injured member or else such victim will run a high risk of succumbing to hypothermia.

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D: Grutas de Tolontongo, Hidalgo, Mexico **October, 1982**

Grutas de Tolontongo is a thermal resurgence cave of unknown extent located about 40 km NE of Ixmiquilpan, Hidalgo, Mexico, north of Mexico City. In October Allejandro Villagomez (23) a very capable, experienced caver entered the cave alone to take a brief look. There is heavy water flow, perhaps 10-20 CFS, but due to the heat, Villagomez did not wear a wetsuit.

About 40 meters in is a waterfall less than a meter in height. Villagomez made his way up to this falls along the left-hand wall, in a swim but using handholds against the current. At the falls, where he intended to climb up he was suddenly sucked into the plunge of the water where the currents were all circulating back into the falls at the surface. He tried to swim away but could not. To breathe he was forced to spring from the bottom of the plunge pool to the surface; there he would grab a breath, be sucked down and repeat the process. On the third spring, he came up in the falls and got only water to breathe. At that point he was sure he would die. What could he do? Then, with lungs bursting with the desire to breathe, and held under by the currents, his thrashing efforts carried him free, and he popped to the surface. He then made his way out of the pool.
REFERENCE: Alejandro Villagomez **Personal Communication** January 30, 1093
ANALYSIS: Heavy water flow is always dangerous. Villagomez' narrow escape from the plunge pool is due to the fact that somewhere in the hydrologic structure of the flow, some of the water must be going downstream. But making the right choice in a desperation situation is pure chance. Better to trust to companions, belays, flotation devices, etc.

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Park's Ranch Cave, New Mexico **October 31, 1982**

On October 31, 1982, Dave and Carol Belski and Dick and Sandy Gilson entered Park's Ranch Cave in Eddy County, New Mexico. This was to be a quick tour. Five minutes into the cave Dave Belski (45) stopped to wait for the others. To pass the time he climbed a small chimney. When the others approached, he slid back down. At the bottom he missed his footing on the edge of the ledge level with the main passage and fell an additional three feet or so, striking his right wrist on a rock as he did so. The wrist was painful so they left the cave. The wrist proved to be broken.
REFERENCES: 1) Carol Belski "Trip Reports—Park's Ranch Cave" **Southwestern Caver** Nov.-Dec., 1982.
2) Carol Belski **Personal Communication** July 6, 1983.
ANALYSIS: Possibly one is more accident prone when fooling around on an easy trip than on a trip which you know to be dangerous such that your mind is focused on the hazards.

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B: Snail Shell Cave, Tennessee **November 7, 1982**

On November 7, 1982 three cavers (teens) entered Snail Shell Cave near Murfreesboro, Tennessee, and became stranded. Two other teenagers, who may have been part of the group, left on the rubber rafts they were using and summoned help. Rescuers used boats and soon located the missing cavers, who were cold but otherwise alright.
REFERENCE: From Wire Reports "Searchers Find 3 Chilled Teenagers in Cave" **The Atlanta Journal** Monday, November 8, 1982 p 14A.
ANALYSIS: This is possibly attributable to dead flashlights and no reserves of light.

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A: Green Valley Cave, Alabama **November 11, 1982**

At about 1:30 p.m. on Thursday, November 11, 1981, Becky Brown (18) and companions were exploring in Green Valley Cave Etowah County, Alabama. About 300 feet from the entrance Brown was attempting to climb a chimney called "The Slide" when she fell some 25 to 30 feet to the sandy floor of the stream level of the cave.

At 2 p.m. the Etowah County Rescue Squad was called and a unit arrived at around 3 p.m. A caver heard the call on a scanner and collected Jeff Steele and Bobby Whorton and arrived at the cave at 3:30 p.m. By that time the victim was at a "keyhole traverse 30 feet above the lower level." The victim was passed through this fissure, a room, another fissure and reached the entrance by 6:45 p.m. She was later found to have sustained "lower back injuries, leg injuries and lacerations to the face and head."
REFERENCE: Bobby Whorton "Green Valley Cave" **Gadsden Grotto Newsletter** 3:1 Jan.-Feb., 1983 p 8.
ANALYSIS: Whorton reports the cavers to have been ill equipped and inexperienced. He also found the rescue squad personnel to have too few helmet-mounted lights or proper boots. Their lack of "experience with rope rescue techniques underground" slowed the rescue somewhat.

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B: Friar' Hole System, West Virginia **November 13, 1982**

On November 13, a group of nine cavers entered Friar's Hole in W. Virginia to do a six mile through trip, coming out the Canadian Hole entrance to this very extensive cave system. This is somewhat normal caving, including water crawls as well as borehole, until the exit is reached where one must negotiate a series of drops, of 12, 24, 8, 15, and 35 feet. At least the first four were waterfalls at this time. Before the trip started, these had been rigged, a single rope strung over the first three, the 15 left as an unbelayed free climb (5.4) and another rope on the 35 foot entrance drop. The first three were rigged with the rope laying right in the waterfall.

Only the leader and one other wore wetsuits; several had no helmet-mounted electric light, one had only a carbide lamp—no backup. At least some had left their regular vertical rigs behind, bringing a lighter set up to save weight on the long trip. One planned to use prussiks but had no previous experience.

The trip as far as the exit drops was not without incident. The leaders moved rapidly, others tried to keep up and the caver second most experienced in that cave brought up the rear. At least a couple tried to maintain the pace of the leaders but weren't used to it and tired. The group became very strung out, causing confusion at some points to those unfamiliar with the cave.

At the exit waterfalls, cavers put on any extra dry clothes and they stated up. The leader went up the first two drops and was quickly out of sight. Two cavers then proceeded up drop 1 with some difficulty. The next caver had never used prussiks before. Six feet above the plunge pool this caver got into the falls, the carbide lamp was extinguished. The prussiks then slipped and the victim slid down into the pool.

It was quickly decided to haul this caver up. Fortunately the victim is of small build so this was possible. The three then proceeded to drop 2 while the others followed. Four cavers still in good condition proceeded up drop 2 and hauled up the victim and another caver who had grown too tired to do the waterfalls. The original victim was by now nearly exhausted.

Drop 3 was negotiated with a 3-man shoulder stand. The victim was now shaking violently as hypothermia set in. They moved on to drop 4, the free climb were it was obvious that another rope was needed to get the victim up. The leader went on out and was back in 45 minutes with a rope and down vest. With the rope as a belay, the victim was allowed to climb up. At the entrance pit, the victim was hauled up by a 6-person surface team. To save time, everyone else was hauled up as well.
REFERENCES: 1) John Iacovino "In Gary's Wonderland" **The Explorer** (Explorer's Club of Pittsburgh) January, 1983 p 7.
2) Bruce Randall "Chasing Rabbits or How to Precipitate a Cave Rescue (Maybe?)" **ibid.** p 11.
3) Bruce Randall **Personal Communication** July 16, 1983.
ANALYSIS: Bruce Randall makes the point that the party would have been stronger at the drops if the pace were slower and if there had been no confusion through the group being strung out. He goes on to say that the victim succumbed to a combination of factors: "1. only been caving 3 or 4 times before, 2. poorly dressed for ascending a a rope hanging in a waterfall, 3. not familiar with knots on a wet rope, and 4. unduly tired from having pushed unnecessarily to chase some rabbits through the cave."

The group was quite unprepared for the waterfalls. Vertical rigs were varied and those using knots in some cases did not know how they would work in wet conditions. There were few electric head lamps and the carbide cavers apparently had been using muddy cave water in their lamps. This causes sediment plugging of the water drip—in caves with muddy water always carry carbide water. Lack of wetsuits was another problem. A waterfall series can be counted on to provide very slow going to a large group with some inexperienced cavers, so wetsuits would have helped.

But the best solution, that would have eliminated all real problems, would have been to go in Canadian Hole and rig the drops so that the ropes lay out of the water flow.

When taking novices or cavers inexperienced in a technique required for that particular trip, it is always a question as to whether they can make it or not...and don't forget that their welfare depends on **your** judgement, not on their decision to go, ignorant as they are of the conditions to be met. If it had been possible, time-wise, it would have been good to take the party down the exit series and back out so they could experience the conditions and be able to improve their equipment. Instead, they came to the exit with the choice of doing it, or retreating 6 miles!.

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A: Vast Caverns, Alabama **November 13, 1982**

On November 13, 1982 William Garrett, Linda King (18) and Jeff Machen were practicing deep pit work to give King more experience. Shortly after noon they rigged the 227 foot entrance drop of Vast Caverns in Jackson County, Alabama, and Garrett and King rappelled in. They had only two sets of ascenders so Machen waited at the top—Garret would ascend and Machen would rappel in with Garret's ascenders for King to use.

At about 1:25 p.m. Machen rappelled in, unclipped from the rope and moved to where King was sitting, about 25 feet from the bottom of the rope, "partly protected by a 50 foot high rock wall." King removed her hard hat for comfort and the two sat talking.

Without warning a rock fell, brushing Machen's right shoulder and striking King, who screamed. Machen calmed the victim down somewhat and found that she appeared to have a broken forearm and an injured, bloody leg, with a minor abrasion causing some facial bleeding.

Machen yelled for Garrett and he descended with a pack. King was covered with a space blanket. Garret then went for help while Machen stayed with the victim.

Machen moved the victim under a ledge for more protection and administered what first-aid he could, making a sling for the arm and wrapping her in the space blanket.

Garrett returned in two hours and called for his pack so that he could rig the pit with a pulley for the evacuation. At 4:50 p.m. the rescue commenced. An ambulance service person rappelled in and he and Machen splinted the injured arm and leg and got the victim into a Stokes litter, ready for hauling.

The Stokes was rigged with the rescuer directly above it for guidance while Machen exerted some control from below with a line attached to the litter. As the litter neared the top a 3-cell flashlight came out of the rescuer's harness but missed Machen, below. The victim reached Jackson County Hospital at 8:05 p.m. The arm had a broken bone but the leg only a deep puncture wound.

REFERENCES: 1) William Garrett "Rescue at Vast Caverns" **Gadsden Grotto Newsletter** 3:1 Jan.-Feb., 1983 pp 5-6.
2) Jeff Machen "Accident Reports—Vast Caverns" **ibid.** pp 3-4.
3) Dave Teal "Analysis" **ibid.** p 1.
4) William Garrett **Personal Communication** June 14, 1983.

ANALYSIS: The call-up was complicated and the Sheriff's Office never called caver rescuers. Thus Garrett and Machen became essential parts of the rescue, providing most of the know-how.

Teal points out that the pit has obvious instability around the upper part. Since falling rocks can bound laterally for some distance, 25 feet is not far enough removed from the drop for safety. Certainly, once the two were down they should not have remained thus exposed for "conversation." Obviously, removal of one's hard hat in such a location is foolish.

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A: Lisanby Cave, Kentucky **November, 1982**

In late November, 1982 three cavers entered Lisanby Cave near Princeton in Caldwell County, Kentucky. They apparently planned to stay in the cave overnight, as is done on occasion by locals, and built a fire a short ways inside. One of the group (age 18) was epileptic and unfortunately suffered a seizure. His companions "either panicked or simply left him alone while seeking help." While unattended the victim fell into the fire and suffered serious burns. He was reportedly evacuated by local rescue authorities.

REFERENCE: Mike Dyas **Personal Communication** March, 1982.

ANALYSIS: Anyone prone to any occasional physical malfunction should alert his companions to proper remedial procedures before a trip.

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D: Huccacove Cave, Colorado **November 21, 1982**

On November 21, 1982, five cavers were in Huccacove Cave in Colorado on a cleanup trip. At 2 p.m. as they were ascending Angel Falls on the way out, "the upper overhang (dried mud), about two feet in diameter, broke off at the base." This shattered on an overhang four feet lower, and buried the climber coming last from the shoulder to the top of his hardhat, the mud fragments filling in the spaces around him in the slot he was ascending. He descended to relieve himself of the loose material and continued out. He suffered only slight bruises on his head from his hardhat.

REFERENCES: 1) Lee Schrock "Incident Report" **Pueblo Underground** (S. Colo. Mtn. Grotto) Jan.-Mar., 1983.
2) Editor "Incident in Huccacove" **Speleo-Flyer** (USAFA Grotto) 1:1 February, 1983 p 3.

ANALYSIS: The ascent was being done with cavers on the two overhangs to help novices and help pass trash bags up. A novice had just stepped onto the upper overhang when it collapsed. Schrock speculates that very dry conditions may have weakened the dried mud of the overhang. Many cavers had used it previously with no problem. He also observes that more than one caver making a climb at the same time is a poor practice.

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D: Un-named Pit, Oregon **November 27, 1982**

On Friday, November 25, Larry Ritchey (34) began a projected three day hike through the winter wilderness on the north slopes of Mount Hood in the Cascade Mountains of Oregon. He was warmly dressed, with long underwear, wool pants and shirt, parka, mittens and rubber soled boots, and equipped with food and shelter. He left an itinerary with friends, planning to be back by Tuesday the 29th.

On Sunday the weather produced snow and as he slowly snow-shoed along, he suddenly plunged into a snow-covered hole, falling 12-14 feet, landing on his back. His pack prevented injury but, after lighting one of several candles he had, he found himself at the bottom of a pit about ten feet in diameter, with overhung walls, with a stream of water swirling along the floor. It came from a passage which he explored for 200 feet without finding an exit. Moreover, there was no air movement so he returned to the pit.

After eating (his stove was smashed so food was eaten without cooking) he got out a 30 foot rope he had brought and realized a rock tied to one end might catch in the boulders outside if thrown up through the hole.

For the next three days he threw his makeshift grappel to no avail. The first two nights he slept standing up, feet in the water. The third night he hung in a loop of the rope, suspended from a tree root.

On Tuesday evening Ritchie's absence was reported to the Hood River Sheriff's Office. On Wednesday searchers on snowmobiles traced his hike plan but new snow had covered his tracks and fate. Helicopters were ineffective due to fog and bad weather. Ritchie was on his own.

By Thursday he had consumed all of his food and was beginning to slip into hypothermia, with slurred speech and an unsteadiness to his limbs. But that day he got lucky. The rock at the end of the rope snagged the limb of a dead tree, and he hauled himself free. It was raining but he dared not stop. He slogged ten miles to Highway 35, caught a ride and finally was safe.

REFERENCES: Anon. "Missing Hiker Reappears After 3 Days in Hole" **The Oregonian** Saturday, December 4, 1982 p D4.
2) Peter Michelmore "A Stone's Throw from Life" **Reader's Digest** May, 1983 pp 107-112.

ANALYSIS: Certainly this points up the importance of being prepared for emergencies, especially when engaged in a solo activity. Some, like Ritchie, survive ordeals like this; others, in the same circumstances, would not. Attitude is very important.

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B: Harmon's Waterfall Cave, West Virginia **November 28, 1982**

At around noon on Saturday, November 28, 1982, a group of five cavers entered Harmon's Waterfall Cave in W. Virginia. After exploring for some time, they had difficulty in discovering the route back to the entrance. When their carbide supply ran low, they sat down to wait for help.

Late Sunday afternoon a cave search was mobilized and six cavers responded, one of whom was familiar with the cave and had brought a map. Though it was raining hard the main part of the cave is dry and no flooding was expected. Eight hundred feet of "semi-crawling, tight" passage leads from the 25 foot entrance climb-down to a junction. If the lost group was not encountered at that point, the rescuers would split into three groups of two to sweep the known cave.

At the junction they heard voices and soon encountered the stranded cavers, who were led out with no further incident.

REFERENCES: 1) George Dasher "West Virginia Caving Accidents" **The West Virginia Caver** December, 1982 p 10, 15-16.
2) George Dasher **Personal Communications** December 10, 16 31, 1982.

ANALYSIS: The cavers were "experienced outdoors people with a minimum of caving experience," who should have had greater light reserves, but did the right thing under the circumstances.

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Further Minor Incidents

B:Bear Plunge Pit, Indiana **August, 1981**

A caver rappelled the 76 foot entrance pit on a rope that fell 10 feet short of reaching the bottom. He was warned by another group in the cave. Another rappelled in with sufficient rope but no light. He had to be assisted (light) in attaching his vertical gear for ascent.

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D: Carcass Pit, Indiana **September, 1982**
While preparing to ascend the 70 foot pit, a caver was nearly struck by a falling oppossum.

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D: Indian Cave, Kentucky **November 14, 1982**
A carbide dump bag explosion set a jacket on fire while cavers were using inner tubes for floatation in low air space. The jacket was extinguished by submerging the caver.

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D: Fisher Ridge, Kentucky **November, 1982**
On Thanksgiving weekend a group exited to find only eight inches of air space at "Splash," apparently just escaping entrapment. It rained considerably the next two days.

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C: Nunnally Mountain Cave, Indiana **April, 1982**
A caver suffered a minor facial cut when struck by a small rock while ascending a rope.

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D: Roppel Cave, Kentucky **June 12, 1982**
A caver tripped, striking his head and was badly stunned.

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D: Roppel Cave, Kentucky **June 12, 1982**
A carbide dump bag exploded.

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1983 Graphic Arts Salon Results

Photographic

Medal Winner: *Oklahoma Grotto* (Central Oklahoma Grotto) No. 9
Merit Award: *California Caver* (Western Region) Vol. 33, No. 3
D.C. Speleograph (D.C. Grotto) Vol. 38, No. 5
Honorable Mention:
Huntsville Grotto Newsletter (Huntsville Grotto) Vol. 23, No. 6
Huntsville Grotto Newsletter (Huntsville Grotto) Vol. 23, No. 7
California Caver (Western Region) Vol. 33, No. 2
The Brass Light (Richmond Area Speleo. Society) No. 8
D.C. Speleograph (D.C. Grotto) Vol. 38, No. 6

Non-photographic

Medal Winner: *Guano Gazette* (Annapolis Grotto) Vol. 6, No. 2
Merit Award:
Huntsville Grotto Newsletter (Huntsville Grotto) Vol. 23, No. 8
York Grotto Newsletter (York Grotto) Vol. 19, No. 1
Northeastern Caver (Northeastern Region) Vol. 13, No. 1
California Caver (Western Region) Vol. 32, No. 4
Southwestern Cavers (Southwestern Region) Vol. 20, No. 2
Southwestern Cavers (Southwestern Region) Vol. 20, No. 5
Southwestern Cavers (Southwestern Region) Vol. 20, No. 6
Guano Gazette (Annapolis Grotto) Vol. 6, No. 1
Honorable Mention:
Electric Caver (Greater Cincinnati Grotto) Vol. 17, No. 2
Huntsville Grotto Newsletter (Huntsville Grotto) Vol. 23, No. 3
Gross-Out (Greater Randolph Organization of Speleological Science) Vol. 2, No. 2
Pack Rat Scat (Greater Allentown Grotto) No. 6
Pack Rat Scat (Greater Allentown Grotto) No. 7
Pack Rat Scat (Greater Allentown Grotto) No. 9
Southwestern Cavers (Southwestern Region) Vol. 20, No. 3
Southwestern Cavers (Southwestern Region) Vol. 20, No. 4

I'd like to thank all the organizations that entered this year's Graphic Arts Salon. Several changes are probably noticeable in this year's salon. The award schedule has been changed to reflect that of the NSS Photo and Cartographic Salons.

Medal winners and merit award winners were matted for display at the convention to enhance their presentation. All of us who present this salon express our appreciation to those who participated, and we look forward to an even better salon next year.

John Baz-Dresch, Salon Chairman

WILDERNESS SUBCOMMITTEE

continued from p. 253

timber resources. The House committee report stated that less than two-tenths of a percent of the total commercial forest land in Alabama was located in the proposed wilderness. **Arizona** — Wilderness bills have been introduced in both the House and Senate. The bills grew out of discussions between the National Parks and Conservation Association and a mining concern, Energy Fuels Nuclear Inc. Their talks led to meetings with other Arizona conservationists, industrialists and community leaders, and the bills enjoy solid support. **Arkansas** — Both the House Interior and Agriculture committees heard testimony on the Arkansas wilderness proposals. Conservationists support HR2917, introduced by Rep. Ed Bethune, which designates 11 areas as wilderness and contains standard sufficiency language. The other bill, HR2452, introduced by Rep. Beryl Anthony, contains unacceptable release language, and designates seven wilderness areas. **California** — The late Rep. Phil Burton's bill, HR1437, was passed by the House. It is nearly the same as the California wilderness bills that passed the House in the previous two sessions of Congress, but died in the Senate because of the opposition of former Sen. S.I. Hayakawa. A similar bill, S5, was introduced by Sen. Alan Cranston. S5 is similar to legislation Cranston introduced in the last Congress, with the addition of Tuolumne River Canyon. The bill contains the compromise "sufficiency" language that would settle the dispute over the adequacy of RARE II. The "release" language frees the Forest Service from reevaluating roadless areas until the mid-1990s. Rep. Robert Walkner, R-Pa., offered a weakening amendment to allow the Secretary of Agriculture to waive any provision of the legislation (that is, remove any area from wilderness consideration) if the secretary determined it contributed to unemployment. The Walkner amendment was defeated. Sen. Pete Wilson thought the S5 bill contained too much wilderness, so he introduced his own bill. **Florida** — The House passed HR9. Senators Lawton Chiles and Paula Hawkins support the wilderness bill, and were expected to press for early Senate action. The bill has been before Congress in various forms since 1974. The measure passed both the House and Senate last year, but was vetoed by President Reagan. The Administration opposes closing Osceola to mining. The bill includes wilderness designation for seven forest areas, including part of the Osceola. **Idaho** — Senate Energy Committee field hearings have been scheduled on Idaho wilderness proposals. **Indiana** — The decision to allow oil and gas leasing in the Hoosier National Forest before completion of the Forest Management Plan, an environmental impact assessment and a 60-day public comment period was reversed. There had been strong public opposition to a proposal to initiate oil and gas leasing before the release of environmental studies for the southern Indiana forest. Geologists report the area has little oil and gas. **Michigan** — Congressman Dale Kildee introduced a bill to designate 90,000 acres in 11 areas as wilderness, including the Sturgeon River Gorge. **Missouri** — The House passed HR2170 to establish the Irish Wilderness in the Mark Twain National Forest. The Senate passed a similar bill that includes an additional 2,000 acres. Missouri conservationists oppose the 2,000-acre concession to lead mining interests in the House bill.

NOMINEES SOUGHT FOR HONORARY, OUTSTANDING SERVICE AWARDS

In the spring of 1984 the NSS Board of Governors will consider the names of possible recipients of the highest honors the Society can give: Honorary Membership and the Outstanding Service Award. In order to receive as many nominations as possible and not overlook any outstanding individual, please send suggestions for possible recipients to Jeanne Gurnee of the Awards Committee, including description of this person's qualifications and achievements.

Honorary membership is awarded for highest service to the science of speleology. Life Membership is also conferred on the recipient. Outstanding Service Award carries equal importance and is usually conferred upon a member of the NSS, as it honors individuals who have given outstanding service to speleology and to the NSS. This award also includes Life Membership.

Please send nominations before Jan. 31, 1984, to Jeanne Gurnee, 231 Irving Ave., Closter, NJ 07624.

CAVES & CAVING

MIKE DYAS

One of Bob Taylor's very first caving trips was to the back section of commercialized FANTASTIC CAVERNS, just north of Springfield, Mo., in 1962. The cave was discovered a century earlier but wasn't mapped in earnest until Don Rimbach and companions produced some two kilometers in 1966. They also tackled SMALLEY SINKHOLE CAVE, which lies a short distance south of Fantastic and was suspected to connect, at least hydrologically (later verified). But Smalley's wet, cherty crawls and sumps were to discouraging. Nearly 15 more years lapsed before Taylor and Ozark Highland Grotto became interested in the system. They took advantage of an early 1981 drought to push into more inviting new sections of Smalley Sinkhole, mainly to the south (i.e., away from Fantastic). Rains came before the presumed connection crawl to Fantastic was attempted. About 1.1 kilometers was mapped in Smalley as cavers settled back to await another dry spell, with potential leads (sumps and digs) in both directions. Bob's summary, with geological and hydrological analysis, is featured in the recently published *Ozark Underground* for 1981.

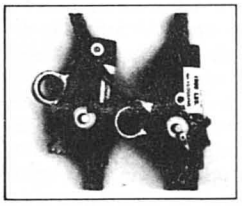
Abstracts from spring issues of Missouri Speleological Survey's *MSS Liaison* (March through May): the state has published "An Inventory and Evaluation of Missouri's State Parks Cave Resources" (93 caves in all), the product of several years labor by Gene and Treva Gardner. The Division of Parks also has prepared a management plan for Onondaga Cave State Park, with input from several cavers. Among good ideas is to relocate parking lots to prevent possible run-off into the cave . . . A new map by the high school South Side Grotto of St. Louis' CLIFF CAVE has been completed, with aid from Tex Yokum. About 1.5 kilometers has been surveyed in what's probably the most heavily visited cave in the state . . . MSS President Dwight Weaver advises that good progress continues on catching up the *Missouri Speleology* series, thanks in part to an anonymous $1,000 gift toward the J Harlen Bretz memoirs. A Crawford Country report is now out and several other overdue volumes in various states of completion, giving hope that *MS* may soon be back on schedule for the first time in a decade . . . Tex Yokum marked his 61st birthday on March 6 by — what else? — caving with friends in Perry Country. They're mapping multi-level PARKER CAVE . . . Scott House updates the status of various projects undertaken by Southeast Missouri Grotto, particularly in Pulaski and Shannon counties. Work in more than one cave is limited by grey bat maternity colonies, including PIQUET CAVE, the map of which is being drafted to show some seven kilometers.

Keith Ortiz is back on the subject of reported safety shortcomings in Kentucky's FISHER RIDGE CAVE SYSTEM in Detroit Urban Grotto's April *DUG Scoops*. A recent newcomer to the project remarked that the Fisher Ridge project is "the least safety conscious I've seen" — which Ortiz takes as basically a compliment. He sees that active cavers usually ignore safety lectures, taking for granted that most are authored by "bureaucrats." Keith also states he's not worried about improving his own practices. Just the same, he agrees to be more careful about coaxing novices into situations where they may get in trouble; and says that better protection at several vertical hazards in FRCS might be appropriate. Changing the subject a bit, Keith notes new evidence that the real threat of lung cancer to smokers may be atmospheric radon, which cigarette smoke seemingly concentrates. Given the radon scare in caves a number of years ago, Ortiz concludes that cavers have a particular incentive to break the habit . . . According to Dan Crowl in his monthly FRCS update, the cave went past 33 kilometers (20 miles, more-or-less) in mid-April. A key move was dropping from MoFo Domes into a new stream trunk, which may or may not be part of Stinky River.

Northern Indiana Grotto members haven't got down to Tennessee's DUNBAR CAVE too often lately. They did make it last Thanksgiving and were concerned to find evidence of "non-organized" cavers: fresh spraypainted arrows in old Dunbar and litter in the Roy Woodard extension. Fortunately, these visitors — most likely local youths — didn't find their way to Woodard's formation rooms. Information from Keith Dunlap and Jeff Steinbach in the *Michiana Caver* (January-March issues).

On the occasion of his book *Trapped!* (co-authored by R.K. Murray) being issued in paperback by the University of Kentucky press, Roger Brucker offered an afterword on "What Really Killed Floyd Collins" (Central Ohio Grotto's April *COG Squeaks,* reprinted by Miami Valley Grotto in the May *Cave Cricket Gazette*). Roger believes that Collins didn't cave alone by preference; but by the time of his downfall, his compulsive style had burned out so many friends and relatives that the only way he could explore was solo. Brucker also theorizes that the immediate cause of Floyd's death wasn't hypothermia, as long been taken for granted. SAND CAVE has been known to flood, and a heavy rain shortly after the man was last seen alive (and the cave partially collapsed) may have drowned Collins . . . There's considerable evidence that the controversial landfill over parts of the SLOAN'S VALLEY CAVE SYSTEM (Pulaski Co., Ky.)

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is causing the sort of bad effects feared by Debbie Campbell and other neighbors. Tests of ground water in the area, including from the cave, show markedly higher bacterial and nitrate pollution since the dump opened. At the same time, farm animals have mysteriously sickened or died after drinking suspect water. The residents' legal appeal remains mired in governmental red tape.

Attempts to objectively index the world's longer lavatubes have been vexed by the tendency of such caves to break into more-or-less distinct segments and the inability of students to agree on how this problem should be approached. Rod Crawford has been wrestling with this for some time and offers recommendations to the NSS Section on Cave Geology and Geography in the Winter 1983 *Geo²*. He'd like to see the standards of the International Commission on the Greatest Caves (Claude Chabert, et al.) applied to lavatubes. This would mean, among other things, that a collapse which is wider than deep definitely divides a lava cave into separately counted segments. Still not resolved would be the case where a cave roof has only partially fallen in, leaving an extended overhang on one side. Using his proposed standards, Rod lists the world's 21 longest lava caves (more than two kilometers each), with several well-known caves known either to be segmented or not actually surveyed deleted. Virtually tied for first place at a bit over 11 kilometers each are BILEMOT GUL (Cheju Island, South Korea) and KAZUMURA CAVE (Hawaii), neither of which is completely mapped. In third place at 9.15 kilometers is the upper portion of Kenya's LEVIATHAN CAVE, which also is easily the deepest-known cave of this type (– 480 meters).

Bruce Smith was asked recently by a heavy-set friend to design him an appropriate rope climbing system. The 135 kilogram man was unable to effectively use standard ascending setups due to leg strength or balance problems. Bruce started with a special seat harness for extra support. Next, it was determined that the "portly prusick" would require a sit-stand approach. The solution: a lower ascender with equal knee-length stirrups, allowing both legs to lift together; and a shoulder-positioned upper cam which rides up unaided. The system was successfully tested in several well-known TAG pits. Also in the NSS Vertical Section's *Nylon Highway* No. 16 is an excellent guide to rappel racks by Steve Hudson and Toni Williams. While written for rescue personnel or beginning vertical cavers (possibly as part of the "Caver Information Series"), the article includes pointers that even veterans may find useful. For instance, they instruct that aluminum brake bars are light and cheap and may be preferred for long drops since they dissipate heat better than steel. But aluminum also wear relatively fast and may be too "slow" for short or muddy pitches (particularly for lightweight cavers). It's feasible to mix aluminum and steel bars in some applications, for instance steel for the top bar or two. Aluminum bars should be retired when worn one-third through and steel bars when half.

Jerry Thornton shares some of the frustrations and fun of cave hunting in Idaho with readers of the April-June *Gem* (State Grotto) *Caver*. Generalities include: (a) high elevation leads are mostly hopeless due to frost shattering; (b) low elevation openings, if visible at all, usually lead to caves no longer than the entrance is wide (notably in Hell's Canyon); (c) a great many Idaho caves are obstructed by packrat nests and amberat deposits; (d) you probably have as good a chance of finding a significant cave by the roadside as far off in a trackless wilderness.

Joel and Carol Sneed have found Pleistocene-age bones in another cave in northern Georgia, as reported in the Clayton County Cavers' *Monthly Breakdown* for May. YARBROUGH CAVE (Bartow County) is small in itself and was mined for niter, as attested to by ceiling soot and excavation that lowered the original floor considerably. As was also the case at nearby KINGSTON SALTPETER CAVE, it was mining that gave access to the Pleistocene remains, although much must have been destroyed in the process. Yarbrough has so far yielded evidence of an extinct giant armadillo.

When cavers began visiting Menard County, Texas, in the early 1960s to explore POWELL'S CAVE, they became aware of a potentially large cave at a silver mine in operation for several generations. Here, much floodwater drains into a creekbed sink known as the Egg-Shaped Basin, and several mine shafts intersected cave passage. But the cave appeared to be flooded and was ignored. Eventually, however, pumping at the mine reduced water levels, and the owner, W.N. Merrick, explored the cave for a considerable distance. Merrick reported this to Pete Lindsley, who checked out the initial cobble crawl of SILVER MINE CAVE with his cave radio. Merrick encouraged further exploration and survey, in hopes of finding another entrance and a water source on a distant pasture. After several hundred meters of crawl and the watery crevice called the Wiggle-Woggle, the main passage was intersected, and after that an upper level and stream trunk. The latter was extended in mid-1982 (the Missing Link passage) when a breakdown downstream was penetrated. At present, Silver Mine has yet to yield a back entrance or trend directly toward Powell's Cave. Several key leads require excavation but potential is great. Bill Russell's summary accompanying map (as of May 1983) by University of Texas Grotto members appears in *The Fault Zone* No. 5 (Oztotl Appreciation Society), which also includes a recap of renewed Texas Speleological Association activity in the Langtry area of far-western Texas. BIG TREE (LANGTRY LEAD) CAVE is being remapped and has been determined to be slightly less deep (106 meters) than originally thought. LANGTRY QUARRY CAVE is being resurveyed also and apparently is more extensive than assumed.

According to Mike Johnson in Dayton Area Speleological Society's March-April *(Johnhouse News)*, a noxious smell appeared in WELLS CAVE (Pulaski Co., Ky.) in mid-1982. Evidently it was caused by a fuel oil spill at a nearby sawmill and prompted a large number of bats to move from their preferred hibernating roost either to another cave or unknown parts of Wells. The smell eventually improved, and some bats returned this past winter. ■

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MANY POST-CONVENTION ACTIVITIES AT FRIARS HOLE CAVE PRESERVE

Post-Convention activities at Friars Hole Cave Preserve in Pocahontas/Greenbrier counties, W. Va., began Saturday, July 2.

A cave geology trip into Snedegars Cave was given to members of Bill Jones' and George Deike's karst hydrology field trip by Steve Worthington and George Deike. The next day the field trip continued south to look at the resurgences for the Friars Hole Cave System and to conduct a dye trace led by Bill Jones on lower Spring Creek.

At least 15 Californians visited the preserve. Most of them were guided on a through trip by Dave Bunnell and Carol Vesely, entering at the Friars Hole entrance and then exiting at either the Snedegars or Canadian Hole entrance. Later in the week, Dick La Forge and Dave and Carol gave a stereo slide show.

Roy Jameson led the Kastnings and Raines on a geology trip into the North Canyon and other parts of Snedegars cave.

As for mapping activities, by Tuesday evening some 900 feet had been added to the system. K. Goggin and Dick Graham squeezed past a constriction in the pendulum passage off Toothpick Pit, mapping 300 feet. In northern Canadian Hole, Roy Jameson, Patty Mothes and Steve Worthington mapped leads off a new room — the Firecracker Room, which is to one side of Skid Row. *Patricia Mothes*

LET UNCLE SAM HELP PAY FOR OUR OFFICE!

If you plan to itemize deductions for your 1983 taxes, remember that making a contribution to the NSS Office Addition Fund is tax-deductible. Depending on your tax bracket, Uncle Sam will, in effect, be making a contribution of several dollars to the fund out of each $10 you give.

For every $10 contribution you make, you will "buy a brick" in the new office building and receive a certificate expressing the appreciation of the Society. For a $75 contribution the NSS will send you one of the limited-edition reproductions of Tom Culverwell's drawing, "Traverse of the Hodag Room."

DON'T HESITATE to give what you can. To be deducted from your 1983 taxes, your contribution must be made by Dec. 31. Send your check to the NSS office, Cave Avenue, Huntsville, AL 35810, and designate it for the Office Addition Fund.

The Society

EVENTS

Dec. 10 — Southwest Region Winter Technical, Library Annex, Carlsbad, N.M. Contact: Dave or Carol Belski, 408 Southern Sky, Carlsbad, NM 88220; 505-885-6168.

Dec. 31 — 22nd NSS Cave Diving, Safety Workshop, Branford, Fla. Contact chairman Joe Dabbs, 1815 Inspiration Ln., Huntsville, AL 35801.

Feb. 22-26 — Friends of the Karst Meeting, Puerto Rico. Talks, field trips, including the Rio Camuy Cave System and the Arecibo Observatory. Small registration fee (hotel and food not included). One-page abstract due Jan. 5 to Joe Troester, Dept. of Geology, Univ. of Puerto Rico, Mayaguez, PR 00708.

Feb. 25 — Spring Board of Governors meeting, Tucson, Ariz.

June 25-June 29 — 1984 NSS Convention, Sheridan, Wyo. Bob Montgomery, Chairman, P.O. Box 2102, Casper, WY 82602; 307-266-6929.

LETTERS

The NEWS welcomes letters on any caving-related topic. To be acceptable for publication, the writer's name and full address must accompany the letter. Letters in excess of 350 words will be subject to editing.

THE GLORY HOLE INCIDENT

To say the least, we were keenly interested in Mark Mitckes' letter in the June NEWS.

As this matter is being further investigated by a Board of Governors' committee, we do not believe that the NEWS is currently the proper forum for this debate, due to the possibility of biasing committee members with emotional arguments, irrelevant circumstances and incomplete information. We have submitted testimony to the BOG committee; we hope Mr. Mitckes has done the same.

The only rebuttal we will make concerns the Florida State Cave Club's policy for showing caves: We stand ready at any time, with reasonable pre-notification, to lead trips for any group of NSS members or otherwise qualified cavers. We will lead them as far as they wish to go without endangering any caver or the cave. We are as close as the nearest phone — a resource Mr. Mitckes failed to use.

In closing, we remain incredulous at Mr. Mitckes' rebuttal of the allegations, followed directly by an admission — in a magazine of international circulation — of violation of Georgia Statute 43-2504 (Georgia Cave Protection Act of 1977) by tunneling under (and thereby breaching) a cave gate. We hope such criminal activity will not be tolerated.

Tim Glover
President, Florida State Cave Club

THANK YOU, CONVENTION PEOPLE

Thanks for putting on such a wonderful convention in 1983. Special thanks to members of the emergency team who located me so efficiently on June 27 when it was reported that my son had been injured at Seneca Rocks. Extra special thanks to Norma Peacock, who lent me her car to drive immediately to Grant Memorial Hospital in Petersburg, W. Va. My son is O.K. now — only minor injuries.

Some people I think helped are Gary Storrick and Bernie Roche. I'm sure there are other names I am not aware of.

Joseph A. Divack
Pittsburgh, Pa.

REGIONS

SERA

On June 7, Joel Buckner and David Parr found an extension to Henpeck Mill Cave in Cannon Co., Tenn. They pushed through a watercrawl with three-inch airspace, crossed an underground drainage divide and eventually popped out into a spacious walking passage with a large stream. They explored upstream for more than 1.5 miles through a breakdown-free walking stream canyon without reaching an end. Several side leads were noted as well as a few domes. One dome complex was estimated to be more than 100 feet high.

Also, the cave is for sale. An acre of land with a three bedroom frame house, plus the cave entrance, is for sale for $19,000. If interested call Joel Buckner at 615-668-8282.

The East Tennessee Grotto has declared Jewett II Cave in Cumberland Co., Tenn., complete. The grotto has been mapping and exploring the cave since its discovery in the 1960s. They have mapped more than 3.35 miles of passage with 636 feet of vertical extent, making it the third deepest cave in Tennessee. On the final trip were Charles and Martha Clark, Richard Wallace, Robert Rannie, Helen Galaway and Jeff and Michele Sims. There is still one possibility the cave might continue upstream.

The cave name of the month goes to a recent discovery in Jackson Co., Ala., *Yurian Dropoff,* an 80-foot pit that was explored June 12 by Dave and Valerie Howell, Lin and Debbie Guy, Kevin Barry, Stu Clifton and Marion Smith. *Jeff Sims*

CENTRAL

Surveying in Jaeger Pit, located above Lost Valley Pit Cave in Harrison Co., Ind., has been completed at 2,574 feet. The pit first was descended in the late 1960s, but the original explorers found only a 43-foot, blind pit.

In the spring of 1979 Dave Doolin and Dave Black rechecked Jaeger Pit and noticed a four-inch crevice through which they thought they could hear a distant waterfall. On subsequent trips, Tom Fritsch, John Danovich and Garre Conner enlarged this crevice to reach a waterfall dome. In two push trips, Doolin and Black explored the drain off this dome, digging and crawling through nearly 500 feet of stream passage before reaching a dry upper-level canyon.

In another 500 feet this narrow canyon led to a walking passage more than 1,000 feet long. In a series of survey trips, Doolin, Black, Kent Wilson, Karen Klein, Holly Cook and Tom Weller surveyed the main passage.

This past spring, Mike and Robin Miessen, Holly Cook and Dave Black located and explored a new pit cave complex, Penny Well, near Mauckport, Harrison Co., Ind. Following a 50-foot entrance drop they found 23-, 33- and 20-foot drops, giving the cave a total depth of 107 feet. Off the second drop a canyon led to a parallel 45-foot drop. *Dave Black*

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READING

Reviews, Misc.

Anyone may contribute items to this column simply by forwarding same to the NEWS address.

***Caving Basics*. Jerry Hassemer, Caver Training Committee, Ed. National Speleological Society, Cave Avenue, Huntsville, AL 35810; 1982, 125 pp, paperback $10.**

Caving Basics is a compilation of articles by experienced cavers on various aspects of speleology that should prove to be extremely useful for both novice and seasoned spelunkers alike. The book can serve as an ideal introductory manual to caving, and as such, a copy should be in every grotto's library, if not in each caver's own library.

The manual covers basic equipment needs for horizontal and vertical caving as well as concepts relating to caving safety, conservation, first aid, geology and biology. There is a brief chapter on legal aspects of caving and land owner relations and a chapter on the structural organization of the NSS. Since each chapter was written independently, there was some overlap of coverage, and obvious differences in writing style were apparent. The latter should not, however, be construed as a weak point in the book.

Other cavers will undoubtedly have comments about this book as well, and they should forward them to the NSS Caver Training Committee to be incorporated into future editions of the book.

Our specific comments are not intended to be serious criticisms; rather they are just our personal observations after reading the book. The discussion on electric lights generally seemed too complicated for most cavers, but indeed would be very useful for some electric devotees. The information concerning bulb life vs. burn time on particular batteries was extremely useful, and all electric cavers should be aware of it.

Regarding additional light sources, we do not feel that chemical lights are a good choice for a serious backup light.

In relation to helmets, too much emphasis was placed on the price of "climbing helmets" and too little emphasis placed on the much superior protection they afford from falling objects.

Regarding clothing, many cavers in our part of the country [East Tennessee] have found synthetic fiber (i.e. polypropylene) undergarments to be excellent, both in their ability to repel water and to keep the body warm. No mention of these garments was made in the book. Perhaps synthetic clothing is not popular in other caving areas.

In summary, *Caving Basics* lives up to its promise as a good introductory source of material for beginning cavers, and its modest price should make it affordable to most. It should be stressed, though, that no matter how good this book is, it cannot serve as a substitute for actual training and experience that can be gained from more experienced cavers.

Paul Monaco, Betty Moss

1983 Society Awards

By Charles Larson
Chairman, NSS Awards Committee

The following awards were given at the 1983 NSS Convention:

Mitchell Award: None given.

Hauer Award: Larry O. Blair, 13921F.

Larry was awarded the Peter M. Hauer Spelean History Award for his many contributions to cave studies, which have included published reports on saltpeter mining in Southeastern U.S. caves. He has a special interest in documenting Civil War-era signatures found in caves associated with saltpeter works. Larry, of Marietta, Ga., began caving in the late 1960s and has been chairman of the Dogwood City Grotto and the Southeastern Regional Association. He has contributed significantly to organized caving in the Southeast. He also has been a member of the American Spelean History Association, and presently is ASHA 1st vice president.

His current projects include paleontological and archeological studies in Kingston Saltpeter Cave, Ga., Big Bone Cave, Tenn., Lookout Mountain Cave, Tenn., and Sequoia Caverns in Alabama. *(Janet Queisser)*

Stone Award: George Veni, 17322F
Dept. of Geography and Geology
Western Kentucky University
Bowling Green, KY 42101.

George won the $1,000 Ralph Stone Research Award for his thesis proposal, "The Interrelationship of Caves, Urban Development and Water Quality and Quantity in the Edwards Aquifer Recharge Zone, Bexar County, Texas." *(Dave Des Marais)*

Fellows: Alexander, E. Calvin, 8088FP
Bishop, Charles S., 9355F
Crawford, Nicholas C., 5008F
Day, Kenrick L., 14486FL
Ferguson, Elizabeth "Foxy," 8660FS
Harrison, Blake, 12101F
Hassemer, Jerry, 3847F
Hissong, Jack S., 16422FL
Hudson, Steve, 11444FL
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Kastning, Karen, 12164FS
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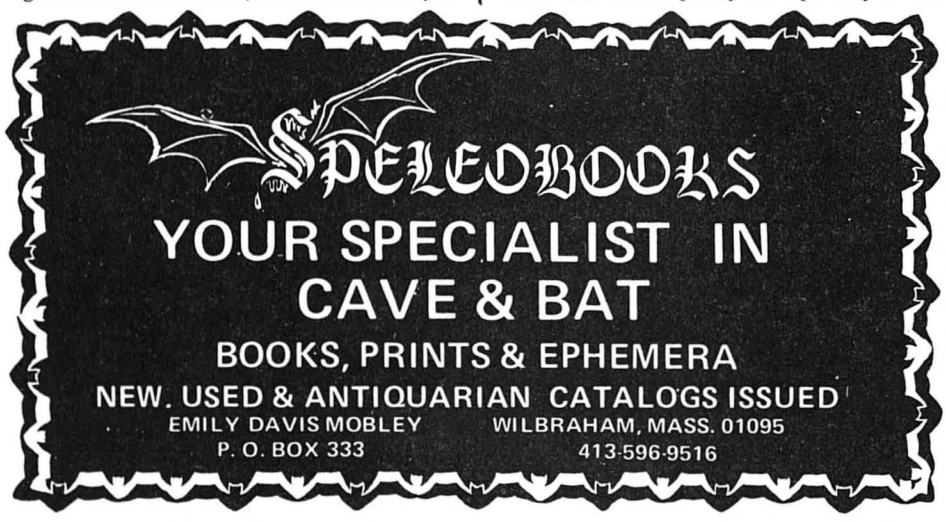
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CAVING TRIPS
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NOTICE
Sign in sign out service for caving trips is being offered by the convention.
The sign out sheets can be picked up at either the college or campground registration or the First Aid tent at the campground. The sign out sheets can be returned to either of the three places or to Larry Lilly or George Dasher.
All signing in will be handled by the First Aid tent at the campground.
The phone number in the First Aid tent is 636-9471 If you are detained on the highway after exiting the cave please call this number to prevent a cave Rescue call out.
1983 NSS Convention, Elkins, W. Va.
The World's Second-Longest Cave
TAKE NOTHING BUT PICTURES
KILL NOTHING BUT TIME
LEAVE NOTHING BUT FOOTPRINTS
SCHOOL BUS
106
JIM WHIDBY

Miller, Lynn C., 18355F
Mueller, Margaret C., 504FS
Quamen, Al, 14262F
Shaw, Dr. Trevor, 1129F
Sneed, Joel, 10137F
Soule, Gary K., 11198FL
Thornton, Jerry, 9342F
Veni, George, 17322F
Veve, Norman, 10691FL
Wallace, Richard L., 14275F
Werner, Eb, 7925F

Certificates of Merit: 1. Jointly to Lynn C. Miller (18355F) and Jane E. Miller (20477F)
2. Fred Grady (19586F)

The first Certificate of Merit went to Lynn and Jane Miller for the outstanding job they did in getting the cave protection bill through the 1983 Indiana Legislature. Their work will contribute to the protection of both wild and show caves in Indiana. The efforts of a great many people were involved in obtaining passage of this bill, but without the dedication and plain hard work of Lynn and Jane, it never would have happened.

The second Certificate of Merit went to Fred Grady for spearheading the effort to acquire the Trout Rock caves for the NSS and cavers.

Fred has been a leading figure in the investigation of Pleistocene deposits in numerous Appalachian caves, including Trout, New Trout and Hamilton — the Trout Rock caves.

As chairman of the Trout Rock Conservation Task Force he initiated the drive to buy the Trout Rock property. The April issue of the NEWS covered much of that success story.

Conservation Award: Richmond Area Speleological Society (third time in a row).



David R. McClurg

Outstanding Service Award:
David R. McClurg, 4608OS.

Dave has been a steady worker for speleology and the NSS since he joined the Society in the late 1950s. As with many of these early members, much of what they have done cannot be remembered — as they are the ones who were at every regional and national meeting doing some phase of the event that made the whole thing work.

Dave began by editing the *California Caver* from 1960 to 1966, meanwhile serving as chairman of the Black Chasm Cave Preserve Committee, 1965-1981.

He was NSS administrative vice president from 1966 to 1970 and a member of the Board of Governors from 1970 to 1973. He was chairman of the Program and Activities Committee from 1973 to 1975.

Dave was chairman of the 25th Anniversary NSS Convention at Sequoia National Park in 1966. Later he co-chaired the Frogtown National Convention in 1975. He has also chaired the Vertical Section at the 1982 and 1983 conventions.

He served as advertising manager of the NEWS from 1972 to 1976 and authored the first detailed report and recommendations, in 1976, for the NSS Cave Ownership Committee. He organized and coordinated six speleo-educational seminars in five California locations and one in Portland, Ore., from 1971 to 1976. In addition he also organized the Lilburn Speleocamp in 1972. From 1976 to present he is primary coordinator of exploration and mapping of Gaping Holes lava tube system in northern California.

Dave has authored two popular books: *Amateur's Guide to Caves and Caving,* 1972, the first published book on caving techniques in the United States, and *Exploring Caves: A Guide to the Underground Wilderness,* 1978. His work for the NSS and speleology continues, and he was the organizer of the first Convention Short Course in Caving Techniques in Bend, Ore., in 1982. *(Jeanne Gurnee)*

Honorary Membership: Dr. J.N. Jennings, Canberra, Australia.

This year's recipient of Honorary Membership was Dr. Joseph Newell Jennings of Canberra, Australia. He is considered the father of cave studies in Australia, and today continues to work and encourage students in speleology.

While he already was interested in speleology in his native Yorkshire, England, it was not until the 1950s, when he migrated to Australia, that Dr. Jennings began concentrating on his first interest, karst geomorphology. He has carried out karst and speleological research in Australia, New Zealand, New Guinea and Malaysia as well as many parts of Europe, the Middle East, the United States and China. He conducted the pioneer work in Australia on the

CLASSIFIEDS

WANTED: Old electric trains — toy trains. Any age — any condition. Will trade caving gear or cash. Bob Liebman, P.O. Box 441, Lewisburg, WV 24901.

JUST FOUND 10 copies of thesis entitled: "Role of Carbonate Rocks in Modifying Extreme Flow Behavior," by Elizabeth L. White. $12.00 postpaid. Checks must be issued on U.S. Bank. Bette White, 542 Glenn Road, State College, PA 16801.

CAVE GEOLOGY. Published June 1983. Edited by Will and Bette White, 30pp. A description of sinkhole (doline) soils and historic papers by E.A. Martel. $3.00 postpaid. Bette White, 542 Glenn Road, State College, PA 16801.

THINKING ABOUT THE INTERNATIONAL Congress in Spain 1985? I am trying to put together a list of people who may want to get together as a charter trip. Today's prices are about $420; in two years who knows? Send me your name, address and phone and we'll see if we can get something going. Joe Buontempone, 2281 7th St., East Meadow, NY 11554.

SMALL BAT PATCHES (1½ in. long) for shirts to replace that alligator. Get The Bat Zod look! Fifty cents each plus 20 cents postage. Albert Ogden, 1017 Sycamore St., San Marcos, TX 78666.

BUYING MINER'S LAMPS: battery, safety, carbide, oil, candle holders. Ray Setteur, 6917 Regency Dr., Parma, OH 44129, 216-843-6649.

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The 1983 Prusik Contest

By Bill Cuddington, NSS 2177OF

The prusik contest had some exciting moments this year. Attempts were made to break the 30-meter mechanical record. The closest came within four seconds. Also, the attempt to break the 120-meter with three knots came within 10 seconds. This category of climbing had more entrants this year overall than in the past.

We wish to thank the college for the facilities and personnel who helped us in many ways. Also, we thank *all* the people who helped us run the contest itself. It couldn't happen without your devotion and help.

Key: W.R. . . . . World Record
O.W. . . . . Overall winner in this class
A.G.R. . . . . Age group record

WOMEN'S 30 METERS — MECHANICAL

Age 12 and Under
1. Amara Tandy 2:03.9
2. Susan Medville 2:07.3

Age 13-16
1. Kim Stevener 1:29.7 (A.G.R.)

Age 17-19
1. Laura Scarberry 1:39.4

Age 20-29
1. Patti Mothes 0:49.6 (O.W)
2. Sharon Knoblach 1:45.7
3. Paula Ledbetter 2:25.2

Age 30-39
1. Shari Lydy 0.56.7
2. Sarah Gayle 1:03.1
3. Miriam Cuddington 1:14.8

Age 40-49
1. Elaine Hackerman 2:32.3
2. Debby Stucklen 2:39.2

Age 50-59
1. Avis VanSwearingen 1:25.1 (A.G.R.)

WOMEN'S 120 METERS — MECHANICAL

Age 20-29
1. Maureen Handler 11:19.2

Age 40-49
1. Elaine Hackerman 17:50.9 (A.G.R.)

Age 50-59
1. Avis VanSwearingen 11:11.1 (A.G.R.) (O.W.)

WOMEN'S THREE KNOTS — 30 METERS

Age 12 and Under
1. Sherry Grove 13:24.3 (A.G.R.)

Age 20-29
1. Cyndie Walck 5:25.7

Age 30-39
1. Sarah Gayle 4:05.3 (A.G.R.) (O.W.)
2. Miriam Cuddington 5:22.0

Age 50-59
1. Avis VanSwearingen 6:12.6 (A.G.R.)

MEN'S MECHANICAL — 30 METERS

Age 12 and Under
1. Billy Stucklen 1:18.9
2. Andy Belski 1:29.3

Age 13-16
1. Watt Whittemore 1:54.7

Age 17-19
1. James Honaker 0:44.7
2. Peter Southam 0:53.8

Age 20-29
1. Greg McNamara 0:33.3 (O.W.)
2. Bill Bussey 0:44.8
3. Keith Barnes 0:47.2
4. Jim Richards 0:49.1
5. Kevin Bruno 0:51.0

Age 30-39
1. Dick Graham 0:34.1 (A.G.R.)
2. Paul Smith 0:40.6
3. Marion Vittetoe 0:47.7

Age 40-49
1. Jim Charlton 0:49.6
2. Jim Hall 0:51.7
3. Bill Cuddington 0:54.1

Age 50-59
1. Bill Hardman 1:35.5

Age 60-69
1. Darrell Tomer 1:32.0 (A.G.R.)

MEN'S MECHANICAL — 120 METERS

Age 17-19
1. Peter Southam 6:24.6 (O.W.)

Age 20-29
1. Bill Bussey 7:10.8
2. Peter Bosted 7:24.9

Age 30-39
1. Paul Smith 7:10.8

Age 40-49
1. Bill Cuddington 6:59.8
2. Jim Hall 8:40.4
3. Jim Charlton 10:22.8

MEN'S THREE KNOTS — 30 METERS

Age 17-19
1. Peter Southam 5:04.4

Age 20-29
1. Jeff Forbes 1:37.6 (O.W.)
2. Trick Howard 2:02.7
3. Jim Richards 2:37.8

Age 30-39
1. Paul Smith 2:25.2
2. Bruce Bannerman 4:13.4

Age 50-59
1. Gene Reynolds 8:55.8 (A.G.R.)

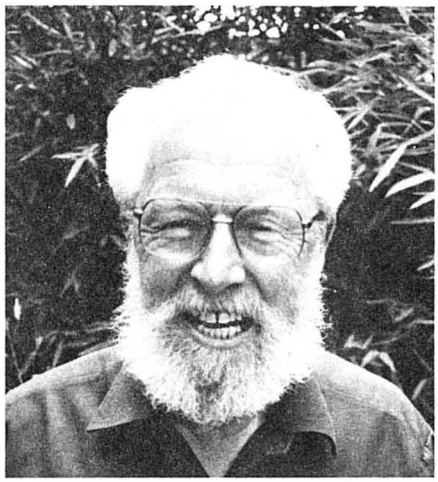
MEN'S THREE KNOTS — 120 METERS

Age 20-29
1. Trick Howard 10:14.7 (O.W.)

Age 30-39
1. Paul Smith 12:50.6

Age 40-49
1. Marion O. Smith 10:56.5 (A.G.R.)

Nullarbor Plains, West Kimberley Ranges, Snowy Mountains and Chillagoe Cave District, and through his enthusiasm and scholarly background he has encouraged and inspired a



J.N. Jennings

new generation of cave scientists through the graduate program at Australian National University in Canberra.

Dr. Jennings has produced more than 150 scientific papers, monographs and books covering caves and geomorphology. His book, *Karst,* is considered the definitive college text on caves and karst.





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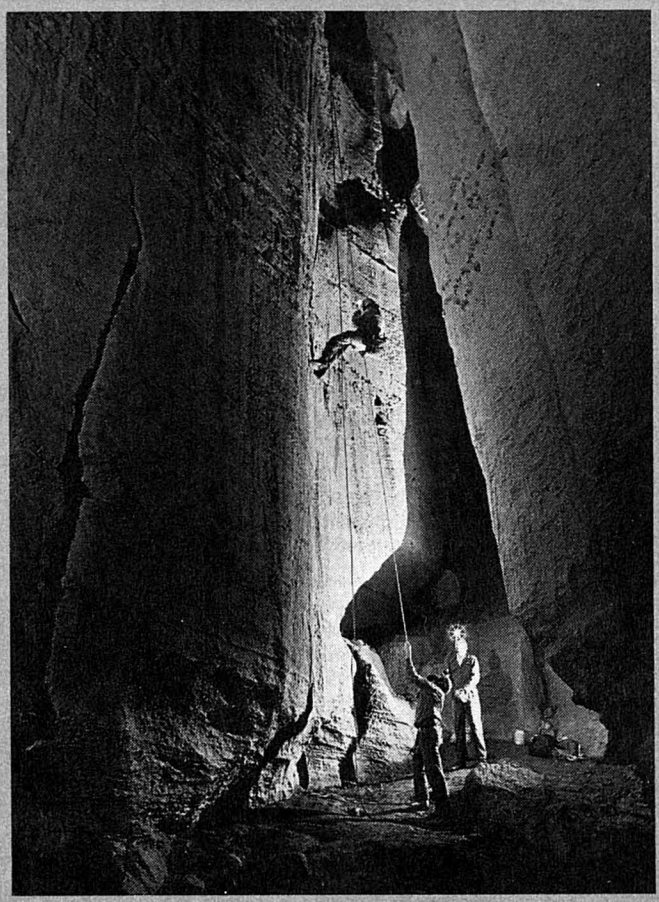
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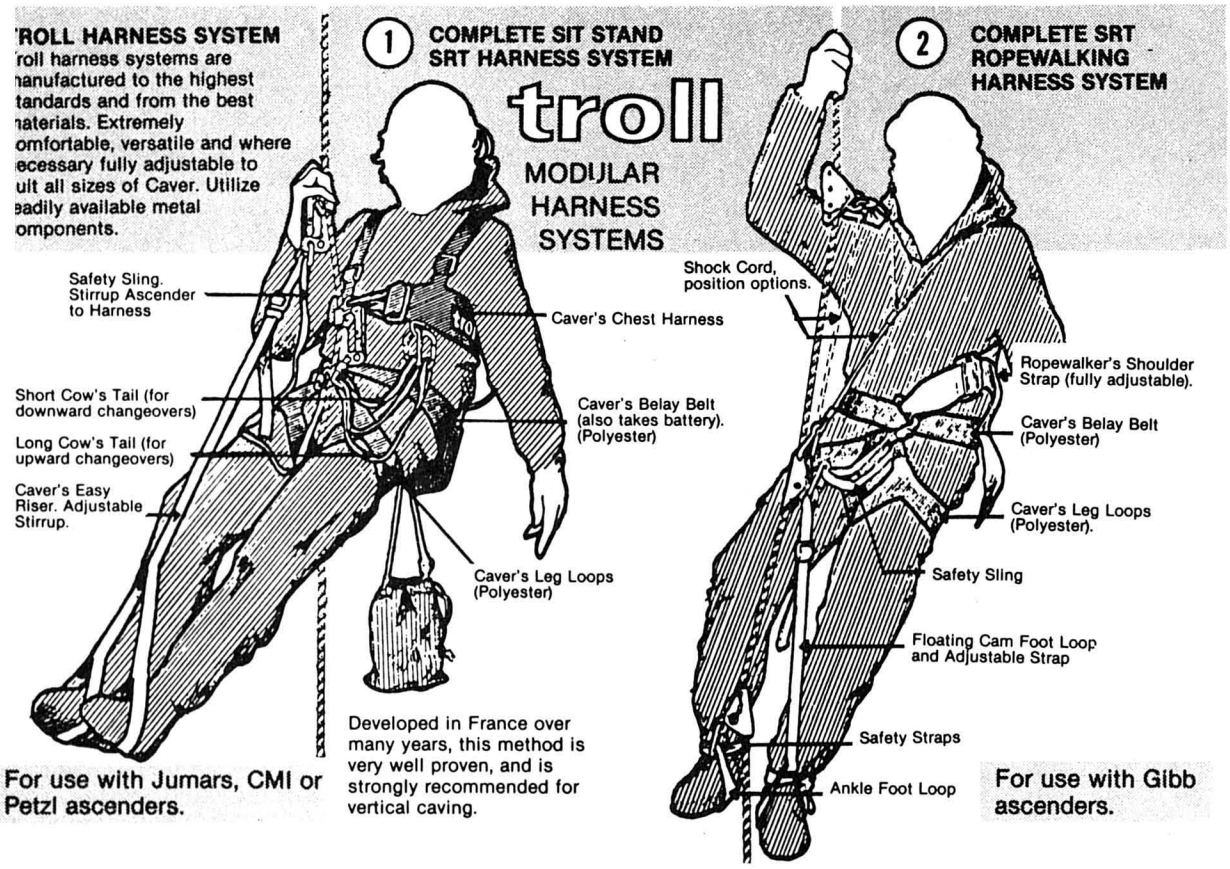
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