



NSS NEWS

August 1988



CALENDAR OF EVENTS

Send information on coming events to *NSS News*, P.O. Box 12334, Albuquerque, NM 87195.

Aug. 12-14—35th Indiana Cave Capers, Delaney Park, 11 miles north of Salem, IN, on SR 135. Contact: Scott Fee/Jackie Allen, 8668 Chessie Dr., Indianapolis, IN 46217, (317) 882-7963 or Mark Laing (317) 353-0535.

Aug. 20—Second Annual Pig Pickin, Central Carolina Borehole Grotto, Statesville, NC, auction and cave olympics. Contact: Doris Haarr, 4904 Robert Andrew Rd, Greensboro, NC 27406. Preregistration is \$7.50 per person; tickets at the door are \$10. Send registration to Robin Hinkle, 2117 Chestnut Ext., High Point, NC 27260.

Aug. 21-22—Powell Mountain Grotto CaveFest, Scott County, VA. Contact: Sally Crumley, Rt. 1, Box 156, Ewing, VA 24248, (703) 445-5340.

Sept. 1-5—39th Annual Oldtimers Reunion, Daily, WV. Contact Evelyn Bradshaw, 1732 Byron St., Alexandria, VA 22303 or call Beth Webb, (301) 384-0316.

Sept. 2-5—Southwestern Regional, Fort Stanton Cave, NM. Contact: Dave or Carol Belski, 408 Southern Sky, Carlsbad, NM 88220, (505) 885-6168.

Sept. 9-11—23rd Annual Hodag Hunt and Fall North Country Region Meeting, Quietwoods North Campground, WI (2 mi. south of Sturgeon Bay). Contact: Gary K. Soule, 224 South 7th Ave., Sturgeon Bay, WI 54235, (414) 743-6488.

Sept. 16-18—Texas Oldtime Caver Reunion. Location to be announced. Contact: Gil Ediger, (521) 441-0050.

Sept. 17-24—Speleofest 1988, Glory 'Ole and Windy Link Pot. Vancouver Island, B.C. Contact: Tich Morris, (604) 325-3555.

Sept. 30-Oct. 2—Joint Fall VAR/MAR at Lazy A Campground, Berkeley County, WV. Contact Bob Bennett, P.O. Box 211, Gerrardstown, WV 25420, (304) 229-2195.

Oct. 7-9—11th Annual TAG Fall Cave-In at Sequoyah Caverns. Contact: Margie Coates, 1269 Druid Place NE, Atlanta, GA 30307, (404) 688-4428.

Oct. 24-29—"New Trends in Speleology," international symposium in the Baroque Castle of the Czechoslovak Academy of Sciences, near Melnik, Czechoslovakia. Sessions of the UIS Commissions on Paleokarst and Speleochronology and on Physico-Chemistry and Hydrology of Karst. Contact: Antonin Jancarik, ZO CSS 1-05 Geospeleos, P.O. Box 656, 111 21 Praha 1, Czechoslovakia.

Oct. 28-30—NSS BOG meeting, New Brunswick, NJ. Contact: Tom Pollock, 21 Kingsley Way, Freehold, NJ 07728, (201) 462-1718.

Nov. 5-6—National Association for Cave Diving's 20th Annual NACD Seminar, EXPLORATION '88, Kamp Kulaqua near High Springs, Florida. Contact: NACD, P.O. Box 14492, Gainesville, FL 32604.

Nov. 9-11—5th International Symposium on Vulcano-speleology. Pre & Post Symposium trip. Contact: Japan Vulcanospeleological Society, Ogawa Mansion, 1C, 1-11-19, Kita-Otsuka, Toshima-Ku, Tokyo 170, Japan.

Nov. 10-12—International Union of Speleology meeting on "Cave Tourism," Postojnska jama, Yugoslavia. Contact: Jeanne Gurnee, 231 Irving Avenue, Closter, NJ 07624.

Dec. 27-31—TROPICON, 17th Biennial Conference of the Australian Speleological Federation, Cairns in Far North Queensland. Field trips to Rockhampton, Chillagoe and Palmerville. Contact: TROPICON, P.O. Box 92, Cairns 4870, Australia.

July 31-Aug. 4, 1989—NSS Convention, Sewanee, Tennessee. Contact: Bill Stringfellow, P.O. Box 76873, Atlanta, GA 30358-1873, (404) 257-3287 (w); 751-1257 (h).

Aug. 14-20, 1989—10th International Congress of Speleology, Budapest, Hungary. Pre-congress and post-congress caving tours and technical meetings in Hungary and neighboring nations. Contact: Jeanne Gurnee, 231 Irving Ave., Closter, NJ 07624.

Oct. 3-7, 1989—National Cave Management Symposium, New Braunfels, TX. Contact: Mike Walsh, P.O. Box 310732, New Braunfels, TX 78131.

1990—NSS Convention, Mt. Shasta, California. Contact: Michelle Richardson, 111 Seton Way, Santa Cruz, CA 95060.

June 30-July 5, 1991—NSS Convention, Cobleskill, NY. Contact: Thom Engel, 7D West Street, Vorheesville, NY 12186, (518) 765-3699.

CAVE RESCUE NUMBERS

Alabama—Madison County Rescue	(205) 536-2720
Georgia—Walker County Sheriff	(800) 654-2276
Tennessee (Tennessee Emergency Management Agency (TEMA)	(in state) (800) 262-3300
(out of state)	(800) 258-3300
Eastern Region NCRC in Virginia—	
(Pennsylvania, South New Jersey, Delaware, Maryland, West Virginia, Virginia, North Carolina, East Kentucky and East Tennessee)	(804) 674-2400
Texas (and Mexico!)	(512) 686-0234
Scott AFB—Air Force Rescue Coordination Center (48 contiguous states; not Alaska, Hawaii, or Puerto Rico)	(618) 256-4815
Alaska Air Command Rescue Coord. Center	(907) 552-5375
Honolulu Joint Rescue Coord. Center (Air Force and Coast Guard)	(808) 531-1112
Puerto Rico—Coast Guard Rescue Coord. Center (San Juan)	(809) 722-2943

Additional numbers are needed for other areas of the country. If possible, submit numbers that are constantly manned and cover the widest possible geographical area. Send to the *NSS News*.

From the Editors

Changing of the Guard

On June 27th John Scheltens became the 16th president of the Society. He replaces Paul Stevens who held the position for the past five years, longer than any other person except our founder, Bill Stephenson. Let's look back and consider what's happened during Paul's term and what John wants to accomplish during his presidency.

During Paul's term NSS membership grew by over 30% from 5682 to over 7500. The Society assumed management responsibility for Kingston Saltpetre Cave (Georgia) and the Barton Hill Karst (New York); developed consensus on how to manage Trout Cave; and started an effort to acquire the Weller entrance of Roppel Cave, a part of the Mammoth Cave System. We negotiated memorandums of understanding with the Bureau of Land Management and Fish & Wildlife Service to help them manage caves, and worked with the Forest Service and National Park Service to develop similar agreements. We worked with various government and private organizations to develop the Federal Cave Resources Protection Act; testified on its behalf before the U.S. House of Representatives and Senate; and were successful in having it pass the

House. We published *Cave Minerals of the World*, *On Rope* and various other books and began development of a first-class library of video tapes on caves available for checkout by the membership. We improved our administrative functions in many ways such as putting computers in the office; picking convention sites three years in advance rather than the year before; and with better budgeting. While Paul wanted the Society to be professional in its dealings with outside organizations, he wanted it to be friendly and informal with its members. He emphasized volunteerism and showing appreciation for what people did. Many people deserve credit for what was done during Paul's term, but Paul provided the leadership and fostered the environment that allowed it to happen.

When asked what he intended to do after stepping down as president, Paul outlined his goal to improve the quality and quantity of items in our audio/visual library in order to provide the entertainment at grotto meetings, to sell and loan videos to individual cavers, to record the many exploration and scientific sessions given during convention to create an educational resource, and to communicate our message to non-NSS

groups. He will serve as chairman of the Audio/Visual Library and work with Alex Sproul to get the job done. Paul's other goal is to work with Jim Borden to acquire the Weller entrance of Roppel Cave, part of the over 300-mile Mammoth Cave System. They've made arrangements with the current owner for her to sell the land to the Society and have developed a draft management plan. We'll see what happens next.

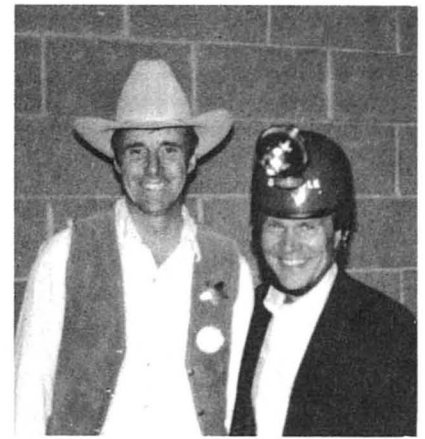
John was cochairman off the 1988 convention which he and his wife Pat hosted on their ranch. With almost 1300 cavers registered, it was the largest convention ever and one of the best. When asked what he wanted to accomplish as President, John set the following goals:

- Get the Federal Cave Resources Protection Act enacted as law and work with the various agencies to make sure their implementing regulations reflect our concerns.
- Acquire ownership or management responsibility for several significant caves such as Roppel Cave.
- Improve the quality and quantity of audio/visual items in our library.
- Continue to improve our publication program.
- Promote educational training seminars on topics such as cave management, caving safety and cave conservation.
- Continue to develop active roles in cave interpretation, management, and conservation with federal and private cave landowners through cooperative agreements.
- Encourage cavers from all states without cave protection laws to work with their local representatives to develop such laws for their areas.
- Promote international cooperation, training and education on joint cave projects.

We're sure that John will expand on these topics in future issues of the *NSS News*.



Retiring NSS President Paul Stevens officially passes the gavel of office to new NSS President John Scheltens.



John Scheltens with Senator Tom Daschle (in helmet) of South Dakota. Senator Daschle was instrumental in sponsoring the Federal Cave Resources Protection Act in the Senate, S-927.

John has served as Executive Vice President of the NSS for the past four years, during which our publication program has grown substantially. The *NSS Bulletin* is now back on track and *On Rope* is breaking all sales records. John has been a leader in the Wind Cave (SD) project since the early 1970's during which the amount of surveyed passage grew from 5 to over 50 miles. He's the city engineer for Hot Springs, South Dakota, and continues to cave actively.

Doug and Glenda

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COVER: "Welcome to Hell!" is Rick Day's caption for this green-ribbon winner in the 1987 NSS Photo Salon. Rick captured Paul and Lee Stevens and John Scheltens in one of the Mount St. Helens Lava Tubes in Washington state. Three bare flash bulbs were used to provide the torch effect, the shot was recorded on Ilford XP-1 film in a 6x7 camera with a 55-mm lens.

Sumidero of the Rio San Jose de Atima

The 1987 NSS Expedition to Honduras

By Steve Knutson



The Sumidero of the Rio San Jose de Atima is 2000 ft above sea level in low, mountainous country in the Department of Santa Barbara in west-central Honduras. (Ed. A *sumidero* is a drain or sewer.) It is a well-known feature in this area of few people where logging and agriculture, primarily subsistence farming, has removed most forest cover. Unlike most Central American countries, there are not heavy population pressures on most areas of usable land. The people are nearly all of mixed Indian and latin descent, speak only Spanish and appear more European than Indian.

The tree-lined Rio Atima flows peacefully through quiet pastureland and past the tiny town of Atima; a few miles downstream it enters a narrow valley where it is briefly bordered by tropical forest. It then flows north another half-mile, past Cerro Pen-caligue on the west and a larger, unnamed mountain on the east, to where the valley suddenly closes around, ending in a tall cliff. The sleepy river suddenly gains life, plunging from its boulder-strewn bed down a crashing 15-ft falls into a huge canyon-like portal or sumidero. A little over a mile to the north and about 630 ft lower, it reappears from a similar, somewhat smaller, jungle-lined orifice.

When Jon Burkig and I first visited this cave in March, 1980, we stood at the upper entrance and marveled at this river grinding off into the great unknown—could it be explored? To our minds it looked pretty straightforward . . . just get into your wetsuit and go for it! If only we had the time . . .

The Ledges

In February, 1981, Jon and I returned with Todd Rasmussen, a Peace Corps veteran of Honduras. The weather had been rainy and the river flow was increased by about tenfold; past the falls at the entrance, it was white water as far as we could see. Going in at water level seemed out of the question, but we found ledges on the left-hand wall and proceeded. About 300 ft in there was a sharp turn, into total darkness. It was an awesome

"Patience and fortitude conquer all things."—Emerson

"Too much patience will get you absolutely nowhere."—Dr. Who



The crew at the equipment dump outside the lower entrance. From the left: Pete Carter, Ric Finch, Randy Spahl, Paul Hill and John Wyeth.

sight from our high ledge to see the great canyon continuing, and so did our ledges. Spray from waterfalls kept these ledges slick and slimy; one had to watch every step. The dark, massive bedrock afforded no natural anchors; at rappels or upclimbs we placed bolts or pitons, and used handlines at tricky traverses. This caving took steady nerves—a miss-step would dump one into the malestrom below with little chance of rescue. Our hardware ran out 1600 ft in, but the canyon continued so tall and narrow that both floor and ceiling were invisible from our narrow ledge, 70 ft above the river.

The Ten-Meter Falls

Political unrest kept us out of Central America until April, 1985, when Pete Shifflett, Mark Stock and I returned to find that

the ledges did not continue. We rappelled to stream level but found the going interesting; this effort is reported in some detail in the May, 1986, *NSS News*. We passed three major falls, the biggest and last of around 10 meters. With heavy flow and a sheer-walled canyon, even a 10-m drop creates a serious obstacle. Passing the Ten-Meter Falls occupied one whole push trip. When we ran short of hardware at a terrible chute, Mark went to the end of the last canal line and found a stretch of calm water. But we were finished, after only 2600 ft, in a cave over a mile from portal to portal, straight line. Considering the difficulties we had already passed, the potential effort required to finish this cave was appalling.

After derigging, we took a day trip around the mountain to scout the lower entrance



The great ledge of the lower part of the cave. The river is in the 80 ft canyon to the right.

passage. Even though we took no climbing gear, we penetrated 3000 ft upstream, encountering only swims and small falls in nearly horizontal passage. A later survey plot showed a gap of *only* 1300 ft between the upper and lower sections of cave!

The Alien Pool

Our 1985 efforts showed that we could operate at stream level but that progress in the cave would demand a lot of rope and hardware, more than we could bring in by air. We decided to put forth a heavier effort in '86 and wrap up the cave.

In March, 1986, I drove the 4000 miles down from Oregon with a heavy load of gear; other cavers flew in or drove down.

When Bill Bockstiegel, John Blum, Jon Burkig, Paul Hill, Scott Linn, Rick Rigg, Dave Walker and I met at Atima, the river was down.

The ledges were rigged without incident, but floods of the previous year had modified the cave. One drop, that was climbable last year using a wedged log, required two bolts to get out over a plunge pool. It went slowly, but soon Blum, Burkig, Bockstiegel, Linn and I had pushed past Stock's calm pool. Beyond, the stream split into two falls in a wide chamber, the Twin Falls Room, there, far above, the upper section of the tall canyon split off.

Ahead, the stream canyon had a ceiling low enough to be visible with our lights, but it

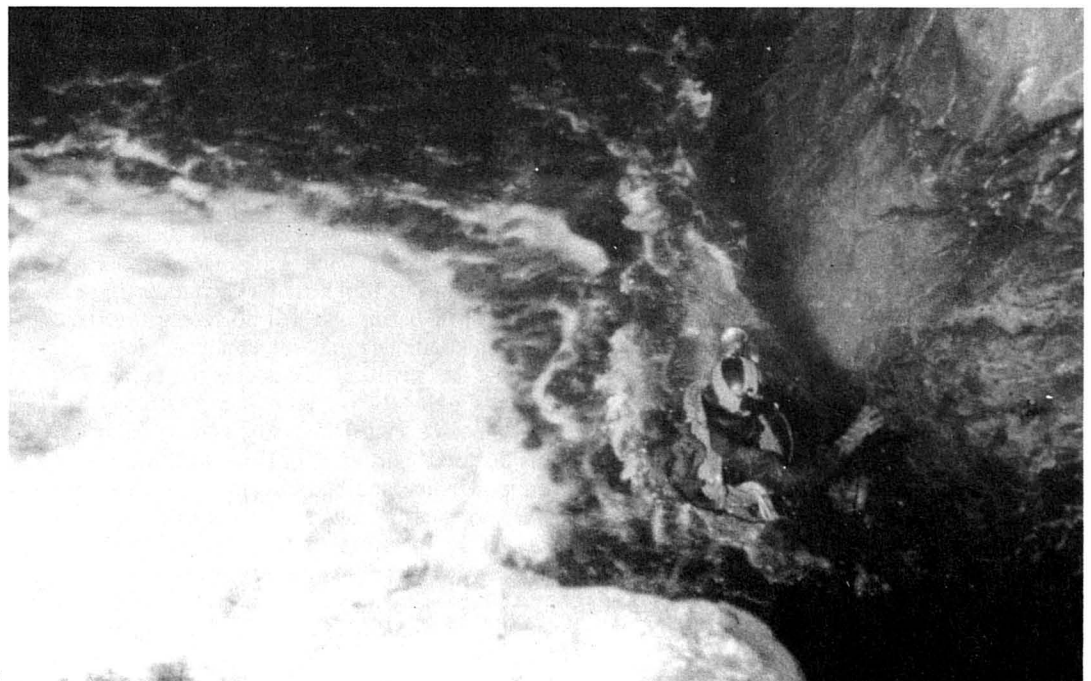
was even narrower than before and this did not bode well. As we rigged to the start of the narrow canyon, we saw that we would be dropping into fast water on the next push.

On that first push I severely twisted my left ankle when I stepped into a pothole; as I hobbled from the cave, I thought I would not be going back in. To make matters worse, the weather turned bad and occasional rain swelled the river. The next day, food poisoning claimed Linn, Blum and Rigg—they did not recover before leaving for the states. In the space of a day, our strength had vanished.

Burkig and Hill went back and entered the narrow canyon. The fast water led to the top of a deep falls. They descended this on the left, but at the bottom, swimming between sheer walls in a spray-covered, turbulent plunge pool, they discovered that the cave had turned right. Against the left wall, Paul, with the more streamlined outfit, led off that direction, only a few yards away from the crashing falls. Jon followed, but he nearly drowned in the down currents against the wall. The pool led immediately to the top of another falls, they would have to cross the fast, sheer flow at the top of that falls to continue their descent. They were forced to retreat.

A few days later, with somewhat recovered ankle, I joined the next push. When I tried to follow Jon and Paul across the terrible pool, the heavy currents pulled me under. I struggled for some time before retreating to the rope and back up. A disappointed Jon and Paul joined me and we came close to aborting the effort. If we had to cross that pool to continue to push the cave, someone was going to die!

With a belay from Paul, I crossed the top of the falls and did a short aid climb to a broad ledge. Another climb led to a wide ledge near the ceiling and right at the corner where the cave turned sharp right. With my



Randy Spahl negotiates fast water.

spot beam I could see that a rappel from the "Hippo Seat" had every chance of descending the next two falls—we were back in business! We named the cause of our in-cave troubles "The Alien Pool"—in that pool, no one could hear you scream. . .

The push might continue, but bad weather and sickness had used up the time of Blum, Burkig, Linn and Rigg. With their departure we were suddenly short-handed; moreover, only Paul and I were willing to continue the push.

So, push we did, down from the Hippo Seat, down a swim to a 10-ft falls and through the heavy turbulence below to the top of yet another falls. Here we did an aid climb to a high ledge on the left. From the end of this ledge, we saw another chute far below with a falls beyond. It was just too much for us. On the last trip into the cave, it was all Paul and I could do to derig what we had done. We had been defeated.

The Encampment

On Sunday, March 8, we reached the ford of the Rio Atima, 2 miles above the cave.

Women were beating clothes on the rocks and a beat-up pickup was being washed in the water. Not much had changed and it appeared that Wyeth was correct—the dry season was well advanced and the river at its lowest. The abandoned logging road to our campsite was still usable, but a heavy storm could change that.

We stopped by the house of Santiago, the caretaker of the huge tract of land that included both our campsite and the cave. He was not at home, but his wife would tell him we were back and he would drop in to see us as soon as he could. . . there would be a lot of embracing, hand-shaking and good-natured conversation!

That night, we were dismayed by the clouds that rolled in and the lightning and thunder that soon followed. When it began to rain, we had the horrible feeling that this was to be another jinxed expedition. . . .

We would have prayed to Chac, the Mayan rain god, but when the offerings of man please Chac, he *brings* rain, to help grow the life-giving crops. We did not want to please Chac.

It grumbled and rained fitfully through the night, but by morning it was over and the river had risen only slightly.

We split into two two-man teams with Paul and I each leading a team since we both knew the rigging and route to the end of last year's push. Randy would pair with Paul and John with me. . . This was a little chancy in a cave like this, but it allowed backup to each push as well as camp guards while a push was on. More important, though, it allowed exploration to proceed without involving everyone each trip. Cavers "burn out" rapidly in a cave like Atima with high river noise level, constant danger and frequent technical maneuvers.

The Initial Attack

Paul and Randy made the first trip in, rerigging the numerous short drops and handlines along the ledges of the first 1500 ft. After rappelling to river level, they proceeded downstream to the first major falls where they turned back after Randy led the slippery friction traverse to the next rappel point.

The 1987 Expedition Personnel

I have always enjoyed small-party expeditions; one is more personally involved, is more instrumental in overcoming challenges, and the sense of accomplishment is greater than with large expeditions. For 1987 I planned only two strong teams of dedicated push cavers. As the time neared, it appeared that I had a good Rio Atima crew: Paul Hill, Randy Spahl, John Wyeth, Pete Carter, Larry Cohen, Maureen Handler and Ric Finch.

A last-minute cancellation took Maureen, and Larry slipped and was injured on winter ice at home. Pete had agreed to join us but did not show. That left Paul Hill, Randy Spahl and myself on hand for the Atima effort. I called John in Tegucigalpa and he assured me he would be there. A call to Ric in Tennessee produced a similar commitment. We were four if John drove in and five if Ric managed to fly in. It really looked minimal and a risk of another defeat. How many defeats could one take before giving up completely? We loaded up and left for Honduras. Let's have a closer look at this tiny group of cavers:

Randy Spahl—A very quiet, reserved caver from Calgary, Alberta, Canada. Randy, though young, is a veteran of both Canadian alpine caving and Mexican tropical caving. I knew him from our efforts in 1983 at the great Sumidero Santa Elena through-trip in Puebla, Mexico. Though he seldom spoke up, I haven't seen an underground move he wouldn't try. Cynthia Ream says that when she told him he looked really sexy in his wet-suit, he smiled and quietly replied, "I know."

Paul Hill—A precocious young computer programmer from Salt Lake City, Utah. Paul is a veteran of western alpine caving with experience in Columbine Crawl, Great-Ex, and Little Brush Creek Cave. His tropical experience includes Belize and Guatemala as well as Atima in 1986; this latter experience would prove invaluable since only he and I had been to the end of the '86 push and knew the complete rigging along the devious route.

Pete Carter—Pete is an Outward Bound instructor from Olympia, Washington, with wet caving experience in Belize and West Virginia. His mountaineering and rock climbing abilities and stamina would be needed at Atima. Quiet and good natured, he was a natural for expeditionary caving.

John Wyeth—A citizen of the world, this British caver has expeditionary experience from New Guinea and Belize. John is an economist presently working on a coffee production project in Tegucigalpa, Honduras. I knew him from Tom Miller's Chiquibul Expedition in Belize and had no reservations about his stamina or ability. Randy and John formed the "civilized" element of our group.

Ric Finch—Ric is a professor of Geology at Tennessee Tech University. Having done his doctoral field work in Honduras, Ric is quite at home and had already done some interesting caving there, including a penetration of the Rio Atima resurgence in the wet season. He proved to be tough, reliable and not bothered by the unnerving conditions in a cave such as Atima.



John examines a wad of rope from a previous expedition found in the lower part of the cave and carried it out on the de-rig trip.

On Tuesday, John and I pushed the rigging down past the Ten-Meter Falls and to the end of the treacherous sloping ledge along the chute below.

As I led the climb to the bypass ledge at the Ten-Meter Falls, I thrilled at the feelings of isolation inspired by a cave like this. The tumult of the falls, makes conversation with your partner impossible unless you are face-to-face and yelling at each other; the narrow, towering canyon, its slick, dark walls rising vertically from deep, murky water; your light lost in darkness above, the ceiling a complete unknown. . . Yet there is beauty here, if only in the nearly-black, shining wet bedrock laced with white calcite veins, smooth and water-sculpted. As you make your way along the wall-to-wall water, you wonder, perhaps, what would happen if a flood were to come—what could you do? Try to nail your way up the wall to some high ledge and trust to your back-up team to re-rig whatever had been carried away and get you out? . . . or could you ride the flood and arrive safely at the lower entrance? But your mind soon reminds you of the terrible falls, the churning plunge pools, the log-jams and cul-de-sacs where you would likely die, horribly and alone. You also recall that the cave is smallest just before the lower entrance—in a heavy flood it sumps there, to drown you if you did make it that far, your lifeless body finally cast up far downstream, on some deserted riverbank. . . In Atima such things occasionally enter your mind.

The following day, Randy and Paul went in for the third trip in three days. They had been complaining of colds, but managed to rig the Twin Falls Room and on to the top of the Alien Falls where Randy led the climb to the Hippo Seat, taking a fall in the process.

So far, it had gone in excellent fashion. We had gotten in three trips in three days and had made good progress reregging. There were disconcerting signs of the violence of floods, however. At one rig point we found a tattered piece of rope with *half* a carabiner snarled in it. Below the Hippo Seat, a rope had been left rigged across the top of the Alien Falls to expedite the retreat. This had been anchored to a bolt and piton on one side and a bolt on the other—this bolt had also been roped to a bolt at the Hippo Seat. The remains of this rope was still hanging, otherwise unattached, from the bolt at the seat. The chrome-moly piton had been pulled out as well as the bolt next to it; the bolt and hanger on the other side remained, but the locking biner had been ripped away, rupturing the eye of the hanger!

The Wankering Begins

I awoke Thursday with a headache and felt poorly, so we put off our next trip. Later in the morning two uniformed soldiers with automatic weapons, came by to see how we were doing. John told them in his best Spanish that we would not put up with a



Ric Finch does a short rappel with a load of rope.

repeat of last year's robbery when much of our vertical gear had been taken.

The route was now rigged to the Hippo Seat which was close to the farthest point of penetration last year. The next trip might break through and go all the way to the lower entrance. If this happened, the crew doing it would want to hike back to camp over the mountain, so we spent some time scouting and flagging the trails. As it turned out, we never did get them right.

That night it clouded over and began to rain, lightly, but fairly steadily. This continued into Friday morning, so we wankered once again—it was very difficult to want to go into the cave in bad weather. The river had risen an inch and it began to look like last year once again. So we acted accordingly and sat around under the kitchen tarp and read, ate, worked on gear, counted pitons or whatever. Suddenly, I noticed a person standing at the edge of the tarp, carrying a big pack. I stared for a moment and then realized—it was Pete Carter! He had come in by bus and local vehicles, a good omen if ever there was one—our team now numbered five and the weather soon cleared.

Just Another Push

On Saturday, March 14, John and I entered, expecting to get to virgin cave. We rigged the long Hippo Seat rappel and a canal line to the next falls, a short 10-footer. This was rigged and a canal line run through the tur-

bulence at the bottom and on down a canal to the top of the '86 Falls. We set up a belay and I redid the climb to a high ledge to the left of the falls. John followed and we edged along to the end of the ledge and looked down; we were 80 ft above a plunge pool and close to the ceiling. We rigged our remaining rope, a 200-ft 9-mm PMI regular.

John descended and returned. He didn't like the look of it at all. The current funneled into a narrow, dangerous, nasty chute. I aimed my Roosa-lite spot beam at the wall ahead and started working out a lead along some marginal ledges—yes, it looked possible to get around to a flowstone canopy above and past the chute. Before we committed ourselves to the traverse, John went back down to give the water a try. He dropped into the current and, lo!, an underwater ledge led to a notch to the left of the chute. John climbed over this notch and down to a slimy, sloping ledge that led along the chute for 15 ft to the edge of a 12-ft falls, but it was immediately obvious that this falls would have to be descended on the right, for the cave turned to the right at the falls. There was a ledge across the chute and it proved to be easy to cross, though a bit dangerous—at the very edge of the falls was a 2-foot-wide span with only part of the water going over it. The main flow went crashing down a grind hole to reappear partway down the falls. It looked like a huge Waring Blender—to fall in that would be bad news.

I got the hardware together and went down. At the notch I placed a knife blade to secure a handline for the chute crossing. A large crack on the far side accepted two medium angles, and we rigged the chute handline to it and the last of our mainline down the 12-ft falls. Our last canal line went on the end. John descended and fought a back current to the other end of the pool about 100 ft away. He secured the line to a jammed log—beyond a log jam was a chute and the noise of yet another falls. We had to be close to the lower cave, but it didn't matter. We were out of rope. Tired and disappointed, we started the long trip back out.

At the top of 10-ft falls, I ascended and watched as John came up the canal line and into the turbulence below the falls. Suddenly, he seemed to be drowning—his head was going nearly underwater and he had ceased making progress. I tried to signal that there was an underwater ledge just ahead and pulled on the canal line to help him get there. This apparently didn't help and John backed off, getting back downstream, out of the turbulence. He then made another attempt and came on through—he had forgotten to inflate his bouyancy compensator before entering the turbulence; as he reached me he mumbled something about "disease" and "swallowed a lot of water. . ." Such is Atima, but sickness we didn't need.

early Sunday morning: "Hey, over the mountain?" "Thru-trip?" "Hell, no—out of rope, falls ahead; we didn't make it." "Damn. . ."

The Final Curtain

Soon after we returned, Sunday dawned as another good weather day. The other crew was well-rested and in good spirits. They added Pete Carter and headed for the cave at 10 AM. Ric Finch's arrival that day brought the group to six.

Previous surveys had shown that we had only a 700-ft straight-line gap to complete and that descent of the '86 Falls would complete the vertical descent. We had often discussed this, but Pete, Randy and Paul regarded it as a stale joke. They took a fresh 200 ft of 9mm PMI and picked up 400 ft of canal line from a stash in the cave. In just a couple of car-bide charges, they had reached the end of our push.

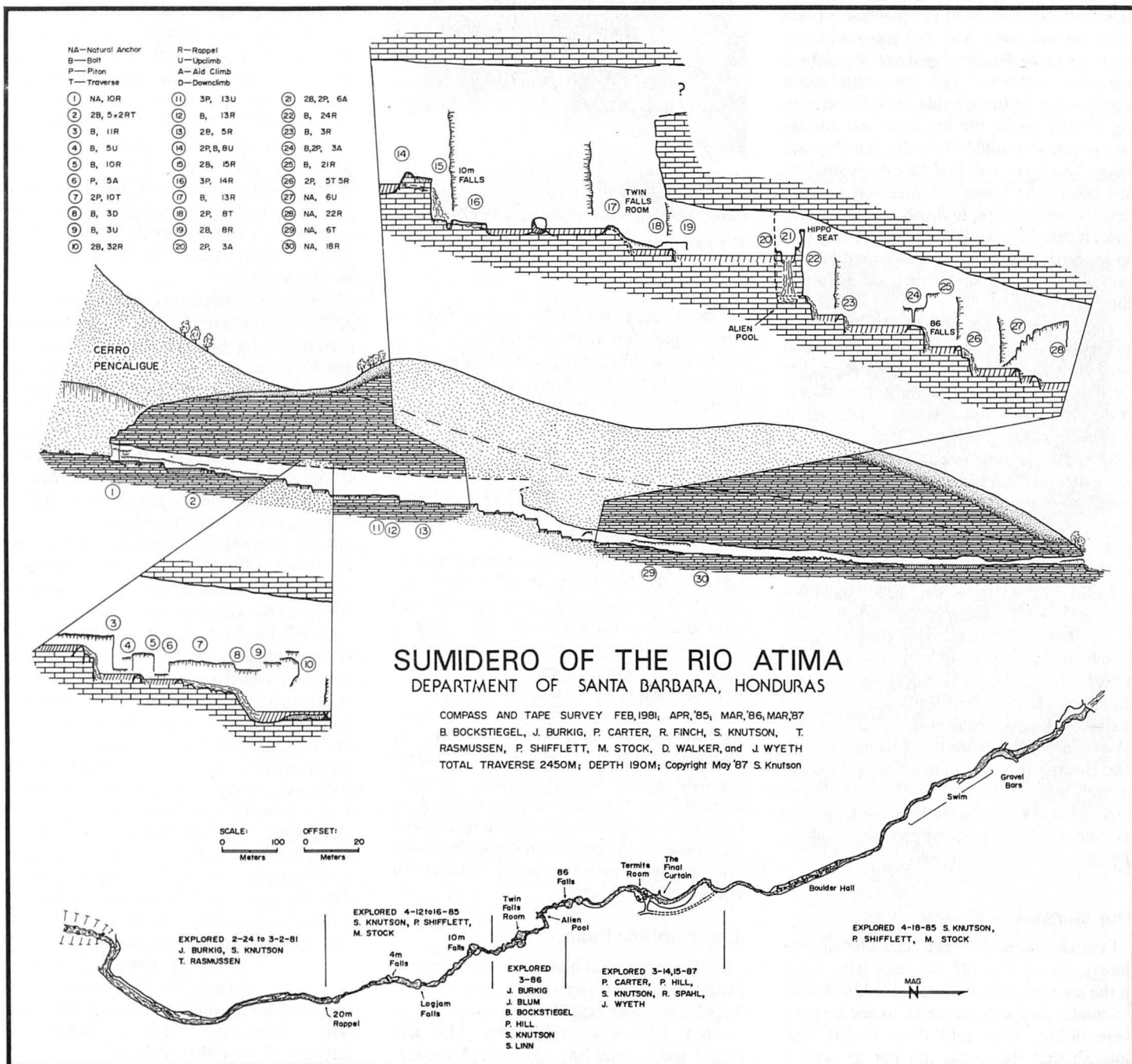
They rigged a hand line on a difficult,

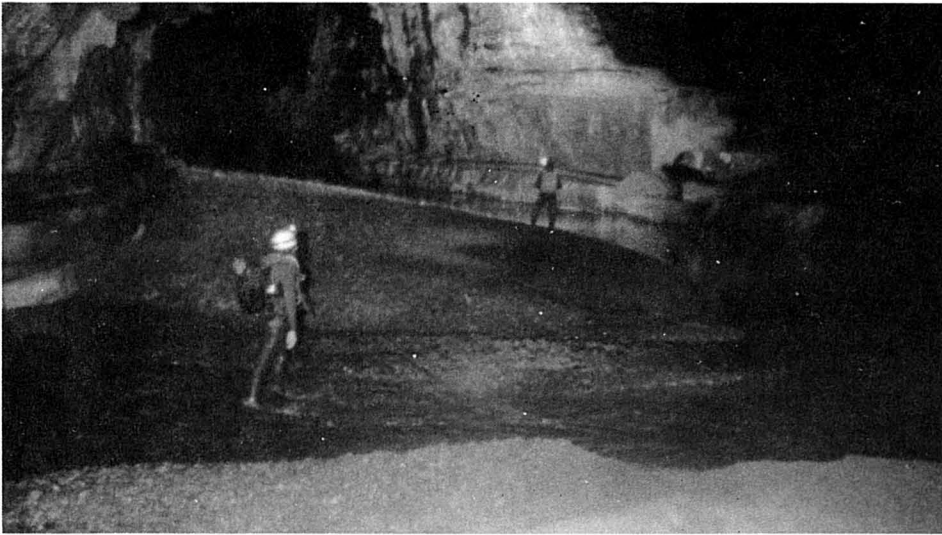
potholed climb to a ledge about 50 ft up on the right. The ledge ended quickly but bypassed the gorge and the falls below. For the first time in the exploration, a natural rock anchor presented itself, so they rigged 70 ft of PMI and rappelled into deep, slow water in a narrow canyon. They payed out 200 ft of canal line to where the passage broadened greatly and the water shoaled onto a sand bar with huge breakdown blocks.

It occurred to the crew that this was a longer distance without a difficulty than encountered since the Ten-Meter Falls. After that, and especially after the Twin Falls Room, the river plunges down a series of rapids and falls in a very narrow canyon. We knew at some point this had to end, that the cave would broaden out into the mainly

horizontal, lower cave we had seen in 1985. But none of these people had been on that trip, so how would they know when they had entered explored cave and had a free "run" to the lower entrance? Still, they could feel that the character of the cave had changed.

The river continued into a gorge, but the passage was no longer just a narrow canyon; a broad ledge to the right offered an easy alternative. Indeed, the cross-section became a huge mushroom with the stem an 80-ft-deep river gorge and the canopy a 20 to 60-ft horizontal ledge, especially to the right side. They followed this for several hundred feet with only a few gaps requiring a 15-ft rappel and a 40-ft exposed traverse where they left a handline. Natural anchors were available on both difficulties.





The river runs between gravel bars near the lower entrance.

When the ledge ended, the river was far below, and they realized that this next rappel would finish their supply of mainline, leaving 150 ft of canal line. What if another difficulty was encountered? And even if they were in the explored cave, changes in log jams could easily require more rope. If they were eventually turned back, each step they took now would make the long and arduous retreat that much more difficult. . .

Across from them, as they sat on the edge of the canyon contemplating this, is a huge, golden flowstone canopy, extending at least a hundred feet up and down the top edge of the gorge. Suddenly, it occurred to them that this must be "The Final Curtain." They rigged their rappel and continued.

They left 100 ft of line in the canal below. Soon they came to a falls, of only 10 ft but unclimbable from below. Yet, there on a log jam Paul found a 13-ft piece of old Bluewater II, a remnant torn away from another year's rigging somewhere upstream. They attached it to a jammed log and pushed on.

They passed down a swim and left the last canal line in two short rapids. They had done more than the distance required to bridge the unexplored gap and felt sure they were in explored cave, but knew that some change wrought by floods might still require a complete retreat—they couldn't afford to pass an obstacle that couldn't be done going upcave. Another thought came to their minds, as they moved along in their great isolation: what if this cave *doesn't* go to the resurgence we know, but to a different one, farther downstream? But the mind doesn't hold such a thought for long—the consequences are too unbearable. . .

And so they went, through long swims, easy rapids and down short falls, to a low-ceilinged stretch where the river wound through gravel bars. This they knew was near the lower entrance and their elation began to build—they knew they had done it! They scrambled over slick rocks, down short rapids and over slimy grind holes. Finally, swim-

ming around a bend they saw, in Paul's words, "the blue glow of a newly-full moon lighting the partly cloudy sky. . ." Even normally reserved Randy joined in the yelling and hand-slapping that ensued. They dangled their legs over the edge of the lower entrance waterfall and ate the last of their cave food, savoring it and the glorious moment.

The Aftermath

When they arrived back at camp, we got out the caña and had a further celebration. With a cave like this, there is no assurance of success until the thing is done; there are so many ways to be denied. And in small-party expeditions there is no overpowering the objective; each person is involved and success depends on everyone.

There was still much work to do. Ric joined John and me, and on Tuesday we thru-tripped, mapping half of the remaining gap and doing some photography. We were almost out of the lower entrance before I recognized things I'd seen in 1985; it was so changed by shifting logs and sand bars.

The next day Paul was sick, but Randy and Pete mapped the rest and did more photography. Thursday we met with Santiago and his sons and arranged for help with a pull-down derigging trip the next day. One son would guard camp while Santiago and the other two came around Cerro Penciligüe with horses, arriving early Saturday morning at the lower entrance to pick up the rope and equipment. "How much would there be?" Santiago wanted to know. How much, indeed? We added up at least a kilometer of rope, there were pitons, bolt hangers and carabiners at most of the rig points, a couple of hammers and bolt kits and strings of unused hardware; to this would be added the personal gear of six river cavers. Santiago decided on two pack horses.

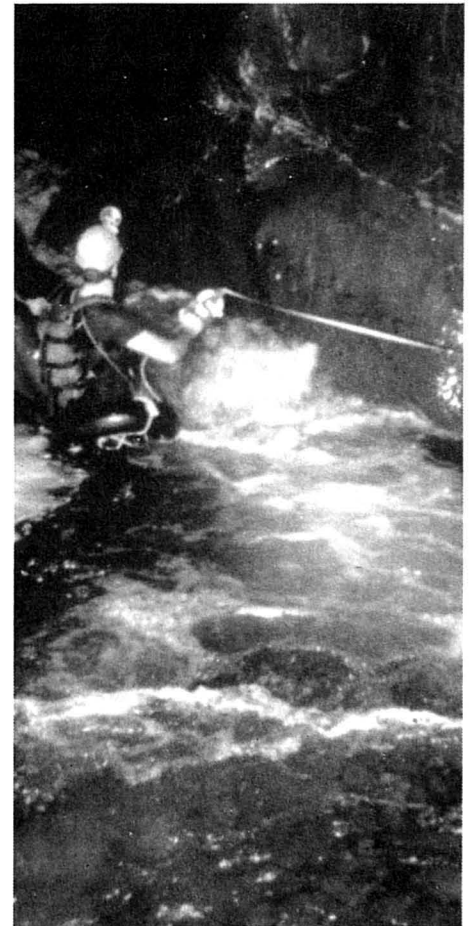
On Friday Jon and I teamed up and Pete and Randy teamed up. The two teams would take turns rigging and executing the pull-

downs. The remaining two started loading up. This went well, but by the time we got to the connection with the lower cave and the last of the major riggings, we each had more baggage than we really wanted. The last kilometer, though essentially horizontal, became an exhausting obstacle course of slimy rocks and ledges, tricky log jams, swims, short climbs and wading. Finally, we reached the lower portal; under dim starlight we staggered down the riverbed outside to where the horse trail crossed. There we made a pile of all the gear and made the long walk back over the mountain to camp, leaving Ric and Paul to wait for Santiago. Santiago later insisted that the baggage weighed over 500 lb—it certainly felt like it. We were indeed fortunate to have six cavers on-site during the derig.

Conclusion

In just two weeks the 1987 trip rigged, pushed, mapped, photographed and derigged a very challenging cave, mostly with just four cavers. Such success is a tribute to the attitudes and abilities of the crew.

Although not a long or deep cave, the Sumidero of the Rio Atima offers great resistance to exploration. In a 2.5 km thru-trip only 190 m deep, we used over a kilometer of rope in 54 riggings (that we



Mark Stock surveys to the edge of a small chute.



John Wyeth below short falls in the lower part of the cave.

recall) and a lot of hardware. Efforts in such a cave are the epitome of cave exploration. Many caves of great length or depth are not really difficult—their exploration is just a matter of time. Caves like Atima offer a challenge that puts one at the cutting edge of caving. Perhaps one day we will come upon one that is truly “impossible”—wouldn’t that be interesting?

Acknowledgements

I thank all those who supported any of the expeditions to Atima. Sponsors were Bob and Bob, Pigeon Mountain Industries, Bluewater, Ltd., Smith Safety Products, Keson Industries, Forestry Suppliers, Rite-in-the-Rain (Darlington, Ind.), the National Speleological Society, and the Western Region of the NSS.

We also acknowledge cavers of previous expeditions who became involved in the push of the cave: John Blum, Bill Bockstiegel, Jon Burkig, Scott Linn, Todd Rasmussen, Pete Shifflett, and Mark Stock.



INTERNATIONAL NEWS



By Jay Arnold

A Cave Research Foundation expedition to southern China located numerous caves during a three-week stay in late February and March and turned in 8 km of surveyed passage, expedition leader Ron Bridgemon says. The trip was a joint effort between CRF, the Speleological Society of South China Normal University at Guangzhou and the Institute of Karst Geology at Guilin.

Karst, caves and fauna were studied at Guangdong, Hunan and Guangxi provinces, including the Tongtianluo Shaft in northern Guangdong, which was 80 m across and 100 m deep. Wahuayan Cave was the focus in southern Hunan.

Several members of the SSSCNU were given extensive training in the use of single rope techniques, and CRF team members also presented papers and suggestions for cave preservation and the development of tour caves in China.

Besides Bridgemon, team members were: Bob Buecher, Dave Jagnow, Cal Welbourn, Ron Kerbo, Ian Baren, Phil Whitfield, Jim Eller, Debbie Buecher, Jim Goodbar, Mike Taylor, and Ron Simmons.

A major article is planned for a later edition of the *News*.

* * * * *

Members of Proyecto Espeleológico Purificación surveyed another 4 km in Mexico’s longest cave, Sistema Purificación, in March, boosting the system’s length to 71.6 km, Peter Sprouse says. The team spent eight days in Camp I, mak-

ing new discoveries in the Confusion Tubes area and finding a dry upper level, Arrakis, heading east outside the previous bounds of the map. The new area is paralleling the main cave, which continues to have “too many leads to count,” Sprouse says.

* * * * *

Three Mexican caves surpassed the 1000 m mark this past season as the pace of new deep discoveries south of the border continues to astound. An American effort at Sotano de Ocotempa in the state of Puebla pushed that cave down to 1041 m, according to Mark Minton, who says the cave likely will turn out to be about 1063 m deep when two new Belgian-discovered higher entrances are added to the survey. The cave now is being called Sistema Ocotempa, Minton says.

In the vicinity of Ocotempa, a Belgian expedition hit paydirt with Akematl (or Axematl), a new cave that went down to 1130 m, according to a note left by the Belgians in the caver’s log at the Pena Fiel restaurant in Tehuacan (we hope to get official confirmation of this information at a later date.)

And south of Huautla in the Sierra Juarez, Americans Bill Farr and Carol Vesely led a return expedition to Cueva Cheve in March that pushed that cave down to 1038 m. About 15 people participated in the effort, during which the Proyecto Papalo cavers tied in an upper entrance to Cheve, Cueva Moscas. The resulting cave, henceforth to be known as Sistema Cuicateca, blossomed to 9.18 km in length before explora-

tion ended at a boulder choke. The team pushed another cave, Osto de Punta Natural, to 441 m deep and 1 km long.

Minton notes that there now are 32 caves in the world deeper than 1000 m. Two years ago there were just 22. His Top 10 deepest (in meters) are:

1. Réseau Jean-Bernard, France, 1535.
2. Vjacheslav Pantjukhin, USSR, 1465.
3. Sima de las Puercas de Illamina, Spain, 1408.
4. Sistema del Trave, Spain, 1381.
5. Snieznaja Pieszcziera-Mezhonnogo, USSR, 1370.
6. Sistema Huautla, Mexico, 1353.
7. Réseau de la Pierre Saint-Martin, France/Spain, 1342.
8. Gouffre Berger-Réseau Rhododendrons, France, 1241.
9. Vladimir Iljukhin, USSR, 1220.
10. Batmanhohle, Austria, 1219.

Elsewhere in Mexico, Jim Smith got a positive dye-trace connection in early February between Mexico’s deepest, Sistema Huautla, and a resurgence on the Rio Santo Domingo. The resurgence is about 10 km south of the Sotano de San Agustín entrance to Sistema Huautla—and around 1650 m below the highest point in Sistema Huautla.

Also, the 30-member British Black Holes expedition mapped 30 km of passage during a three-month stay early this year in the Sierra Zongolica in Puebla state. The Brits told Bill Farr they found hundreds of entrances, but nothing went very far. The best was a 4 km resurgence cave. One of the numerous surface pits was 250 m deep.





1988 NSS CONVENTION

JUNE 27 — JULY 1



GOLDEN MEMORIES

A record 1300 cavers "Discovered the Gold" at the 1988 South Dakota NSS Convention. The largest convention crowd in NSS history was treated to the most action-packed convention ever. There was an 1880 train ride, trail rides, a stagecoach, the obligatory rain storm broken by a lightning strike, a speleo-splashdown, a bank robbery, and the world's first speleorodeo. In addition to the above, there were a record number of papers presented at the various symposia, the usual speleopoliticking and meetings, the photo salon and banquet. Following the close of the convention, there was a Platte River float trip and several cave projects.

The convention opened hot and dry with temperatures above 100° F. Most cavers pulled in over the weekend and by 6:00 PM Sunday, 129 of them were on the Caver Special, a steam train excursion into the Black Hills.

Cavers were awakened early Monday by the roar of an inflator fan and blasts of a propane burner as the first convention hot air balloon flight launched from a hill above camp. As the welcoming ceremony began, a crop-duster appeared towing a banner with the words, "HOWDY NATIONAL SPELEOLOGICAL SOCIETY."



HOWDY NATIONAL SPELEOLOGICAL SOCIETY

Greeting cavers were co-chairmen Dave Springhetti and John Scheltens, Hot Springs Mayor Carl Oberlitner, and Wind Cave Superintendent Ernest Ortega.



Hot Springs Mayor Carl Oberlitner and Convention co-chairman John Scheltens.



Wind Cave Superintendent Ernest Ortega



Convention co-chairman Dave Springhetti

Symposia and meetings began later that morning; these are the heart of a convention and cover all manner of subjects relating to caving. They continued during the week with additional informal discussions taking place during lunches and in the campground during the evenings.

The Circle B Cowboys set a Howdy Party record by serving food to the entire convention in less than a half hour. There was lots of good



grub; even the cavers couldn't finish it all. Cowboy ballads and western songs entertained the group during the early evening hours, then the

Foggy Notion Band pulled the stops and it was dancing time amongst the hay bales. Some folks were moving a mite slowly the next morning, but they must have had fun—we counted 14 empty kegs.

Tuesday night's auction netted \$1750.50 for the NSS News Photo Endowment Fund and the Exploration Fund and auctioneer Deacon Deems sported a new "cowboy" tux. The Evans

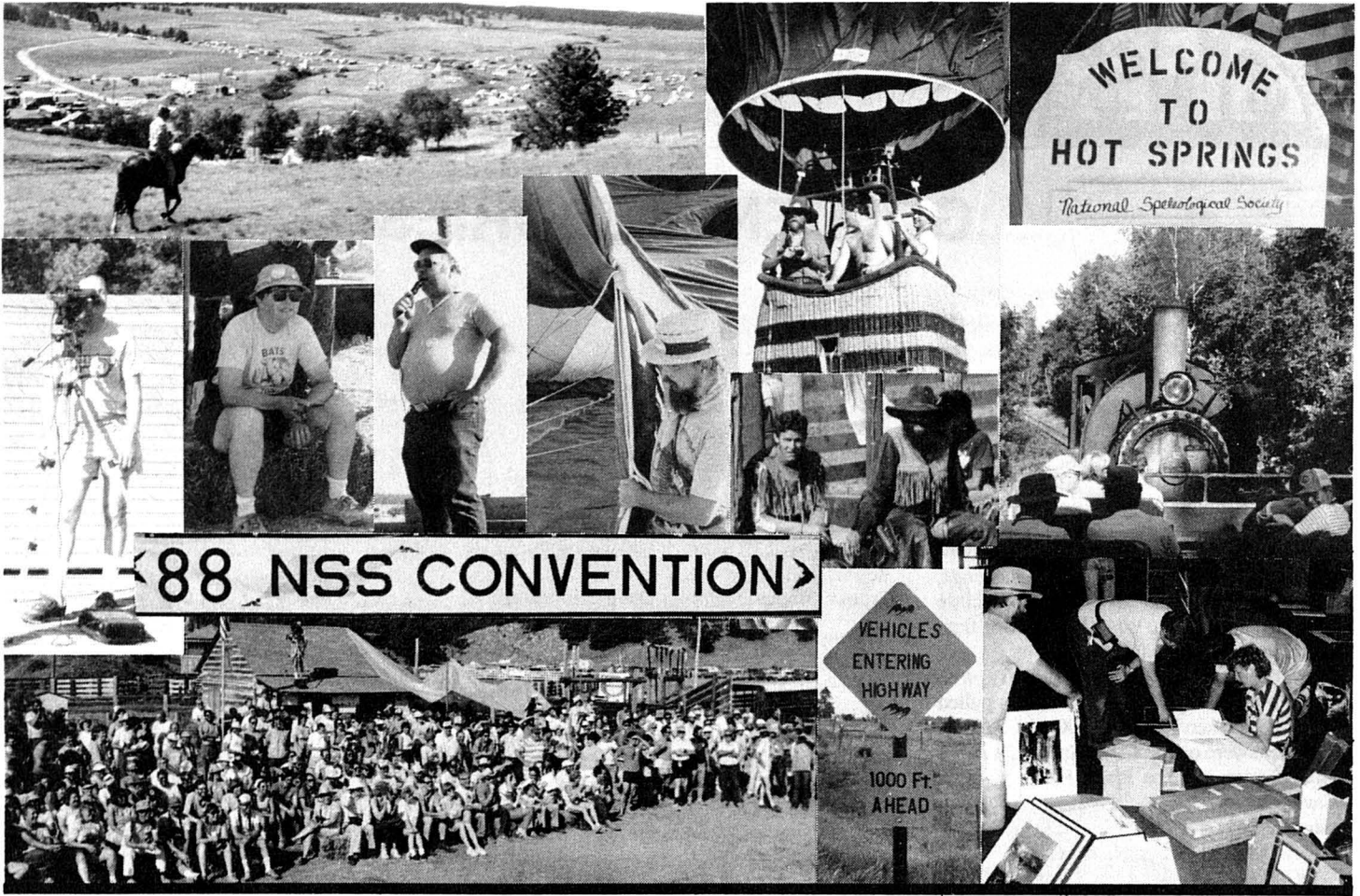
Plunge splashdown party was a huge success with most cavers regressing at least 20 years playing in the water like children.

Wednesday morning the Dalton gang rode into town with evil intentions. Mayor Oberlitner was shot when he asked them to leave town and the lead singer for that night's party was taken hostage during the robbery of the Norwest Bank in the center of



Hot Springs. One of the Dalton boys (Robert Herbst) was wounded. Judge Schuppan found him guilty and he was quickly hung by Sheriff Leo Bray. Bank personnel and local officials were all played by people who actually hold those positions in town. The robbery was as big a hit with local people as it was with the cavers.

Black, ugly storm clouds built up that afternoon and many cavers returned to the campground to secure their tents. Margie and Frank Torncello, Paul Rubin, and Serge Thiffault were talking beneath a canopy shortly after 5:00 PM when it was hit by a lightning bolt that jolted the entire encampment. An NSS doctor was on

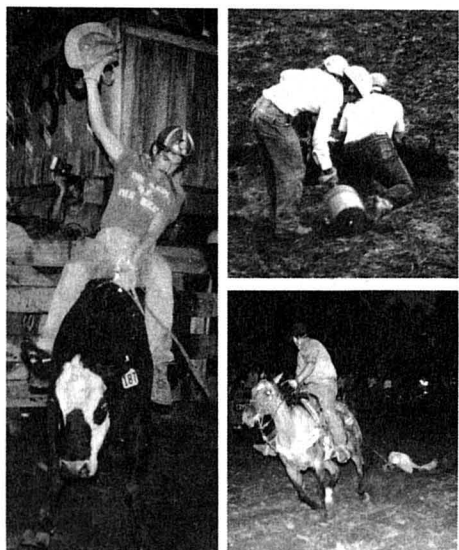


88 NSS CONVENTION



the scene immediately and NSS paramedics arrived within minutes. All four victims were taken to the Hot Springs Hospital by ambulance, treated and released. The lightning blew a hole in the ground where the four had been sitting, welded together their aluminum canopy pole, and covered nearby coolers with dirt blown from the hole. Margie was most seriously injured with minor burns down the outside of her leg and thigh. Everyone returned to the campground that evening, but they were in no condition for their team to participate in the rodeo.

After the annual convention rainstorm subsided and lightning-shattered nerves calmed down, the Speleorodeo opened with buffalo chip tossing. Dave Jagnow won with a record toss of 173 ft. Cavers were teamed with cowboys for



the next event, calf-branding. Ideally, the cowboy and horse would pursue and rope a calf when it was released from the chute. The cavers would then throw the calf to the ground, hog-tie it, brand it with paint, and release the lariat—the best time wins. Some cowboys were not too handy with a rope, or some calves were too quick—the event turned into a comedy when a few teams tackled the calf on their own.

Next came hide riding—a round-the-arena thrill with the rider stomach-down on a cow hide towed by a racing horse. The final event was wild-cow riding. When several cavers wanted to know how the event would be judged, they were told it would be by time only. But what if several stayed on the entire 8 seconds—no problem said the judges, no one would—record time was just over 6 seconds. The rodeo was completed with no serious injuries, but judging



by the contestant's movements on Thursday morning, the livestock won the contest. The Lechuguilla team placed first of the human teams with 134.1 points; next was the Southern California Grotto with 155.1 points, third place

was taken by the Central Indiana Grotto with 160.1 points. More music, dancing and tapped kegs followed the rodeo.

Activities continued Thursday with awards presented for convention events and the usual outstanding photo salon that evening. It may be difficult to improve on perfection, but Karen Kastning and Bruce Bannerman seem to present a better salon each year. That event alone is worth attending a convention for.

Events wound down Friday and most cavers had a chance to relax and clean-up for the banquet. Cave-related centerpieces and a cake decorated with the convention logo highlighted each table. The annual beach ball toss came to an end when the ball, a veteran of three conventions was cut. Although most of their



workers were serving a fire crew, Black Hills Catering served 498 lb of roast beef to 1222 hungry cavers. Top NSS awards were presented after the banquet and Bill Stringfellow, chair-

man of the 1989 NSS Convention in Sewanee, Tennessee, was recipient of the annual passing of the hat. A magnificent multi-media slide show capped one of the most thrilling conventions ever held.

Saturday, a post-convention float trip attracted 31 cavers to the Platte River in Wyoming. Other



post-convention caving projects were also in progress.

During the entire convention week caving trips in Wind and Jewel Caves were a popular focus of many convention-goers. Also a hit amongst many parents and children attending the convention was a mid-week Kid's Caving Trip to Reeds Cave.

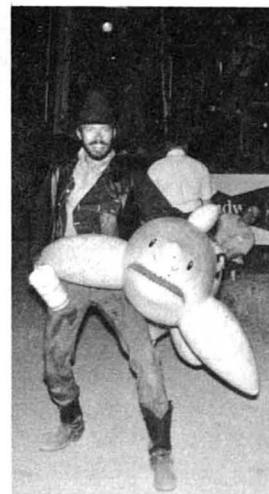
Convention Shorts

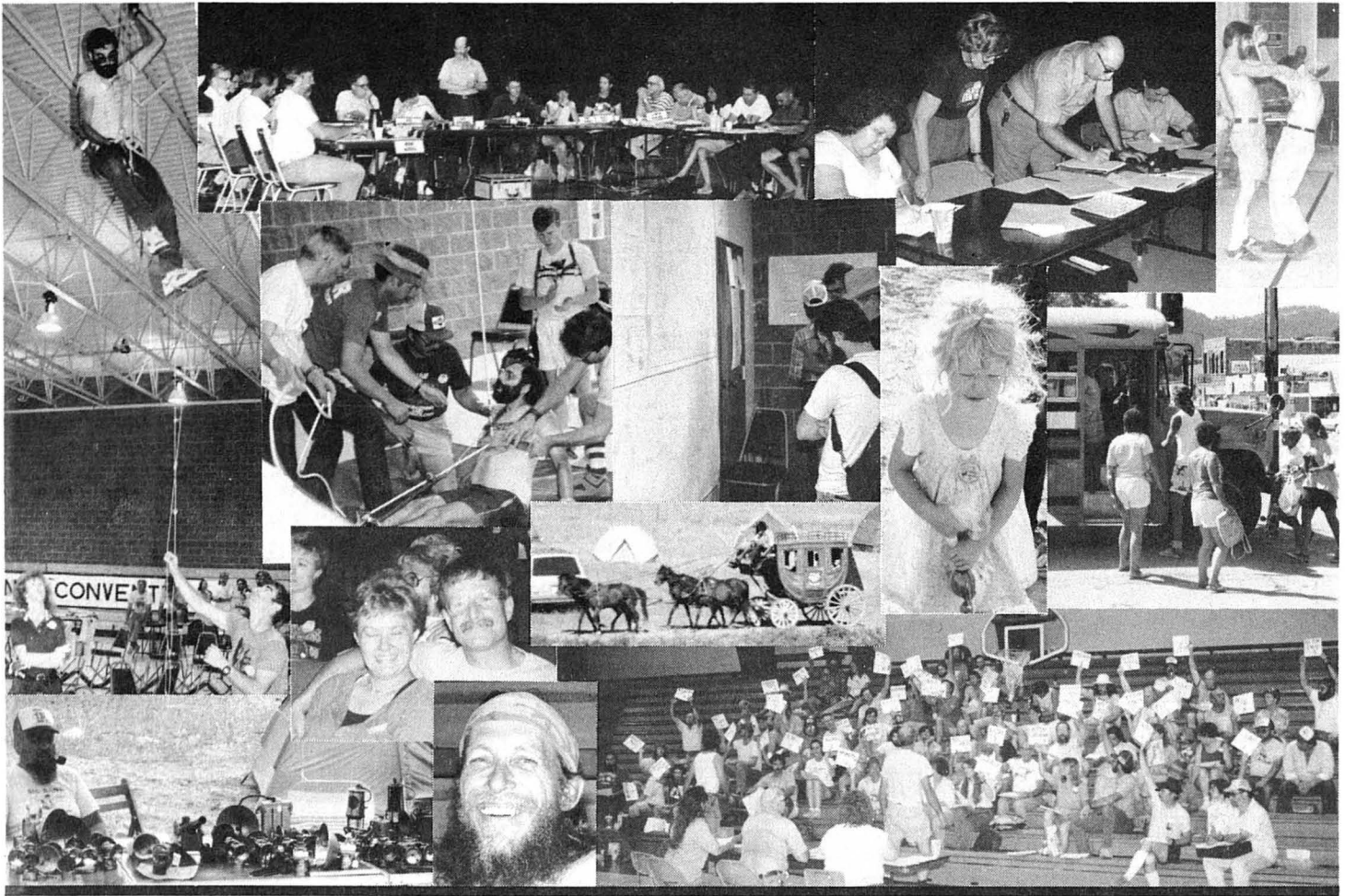
Scum Ridge residents want to know if Bob Montgomery's inflatable shark doll really had teeth. . .Gloria Aspinal's buffalo steaks were the

tenderest meat at the convention, but Samantha Jane's delicious Buffalo Chili kept the tents warm in the evenings. . .Barb amEnde badly needs a new shirt—one without holes. . .After a new slate of NSS officers were selected, President John Scheltens discovered himself surrounded by S.H.I.T. (Society of Honorable Indiana Troglodytes).

Dog 1 : Bob Liebman 0, but the eye is recovering nicely. . .Kathy Peerman was released from the hospital in time to attend the banquet. She is now home doing well. . .Scott Fee does better with ladies than calves; he'll soon be walking normally. . .The Bear survived. . .Farewell Sara, Roberta, Clayton, and others; you were remembered at the Howdy Party. . .Twenty vendors offered their wares at the convention—a record number.

The entire convention was put on by a small nucleus of staff with many volunteer assistants. The staff we kept running into included: Gloria





Aspinal, Andy Flurkey, Mike Francik, Rick Gensler, Kim Goddard, Greg Hanson, Mike Hanson, Robert Herbst, Mark Lamphere, Ed LaRock, Joe and Anne Lux, John and Pat Scheltens, Gary Schilberg, and Dave Springhetti (our apologies to any other hard-working staff members we may not have noticed). The convention medical staff treated a number of injuries, including two people hit on the head by rocks thrown by juveniles, four lightning victims, several cases of heat exhaustion; one encounter with a guy line; and many other minor cases of bumps, bruises, scrapes, and illnesses. The medical volunteers rarely get credit, but it sure is nice having you folks around when we need you.

Margie discovered that nylon melts when subjected to a strong electrical discharge. . . For the fourth straight year, Ed Zawlocki-son flew all the way from Tokyo, Japan to attend an NSS convention. As usual, he brought along a bunch of oriental goodies, but this year he is taking Maureen Handler's shirt back with him—well worth the price, we understand. . . Fernando



Tristan accepted our invitation for the Asocia-tion Espeleologica Co-starricense and flew in from Costa Rica; our Russian friends were unable to attend—perhaps next year. . . The Puerto Rico contingent keeps growing—maybe

next year they'll bring us some island entertainment. . . Dirty Dave's Bath House was the most unique we've seen at a convention and convenient because couples could pass the soap between sides. . . Speaking of showers, this year Jeanne Pridmore had fresh clothes to step into after her showers!



Hot Springs merchants are still figuring out what to do with all those wooden quarters and two-dollar bills. One thing for certain, they know we were there. . . Speaking of impact, 10-ft-tall Gary Soule was quite a hit with the kids when he attended the convention as Uncle Sam. . . Ivy McLane right or left? . . . Did anyone see Bruce Smith eat the Big Mac that was presented to him at the banquet? . . . Walt Olenick and Elaine Hackerman—we aim to please; look closely, you finally made a convention montage.

The Cavers' Matinee of "Journey to the



Center of the Earth" was a big hit, but the response to certain scenes was probably not what the director had in mind when the film was originally shot. . . Skip and Glen Rhodes proved that raft trips and high-velocity swimming could be combined—a few items lost, but no injuries. . . Don Jenkinson and poison ivy are no friends, but Duke McMullan took leaves home—crime prevention? . . . Shuttle bus service was a major convenience with pleasant, helpful, drivers—thanks guys. . . Howdy party events included impromptu laser spots, thanks to the Electronic Section.

Horse wrangler Festus (Mike Emery) enjoyed our convention so much that he wants to go caving and is thinking of attending the Sewanee Convention—better brush up on your ropin' skills, Festus; those Southern Belles can move even faster than a South Dakota calf. . . County Sheriff Leo Bray was amazed that we had 1300 people in attendance and no problems; he and many other Hot Springs residents want to know when we're coming back. . . Norwest Bank President Duane Bunkowske is the only bank official we know who would invite the Dalton gang in to hold up his bank. During the robbery we noticed several bystanders dressed in suits—they



were from a competing bank.

Each convention lately seems to have it's share of Mother Nature's surprises—in Tularosa, it was floods; Michigan had a near-tornado; this year, a lightning strike. The California 1990 convention planners are a little worried about earthquakes on Mt. Shasta. Be prepared.

Hot Springs Spar Editor Norma Peacock asked us to pass thanks onto Greg and Norm at High Plains Graphics. They gave her a 9:00 PM deadline and still delivered printed copy that night.

The owners of several rodeo items would sure like to get them back; chances are they were picked up as souvenirs. If you have the branding iron with the NSS logo on it, please send it to John Scheltens, 303 North River St., Hot Springs, SD 57747. Five large paper banners are also missing from the rodeo grounds. These have general announcements on them such as, "Welcome Rodeo Fans." If you have one or more of these, please send them to Matt Bowers, P.O. Box 4956, Boulder, CO 80306, phone (303) 443-3061. Marcus Medalen called us about a watch he lost at Cascade Falls; he is hoping one of our people may have found it. The watch has the seal of the University of North Dakota on the face and has strong sentimental value. Contact Marcus at 814 East Centennial, Rapid City, SD 57701, (605) 348-4601.

Well, folks, it was a great and memorable convention. We hope to see y'all in Tennessee next August.

1988 Photographic Salon

By Karen M. Kastning
Photo Salon Chair

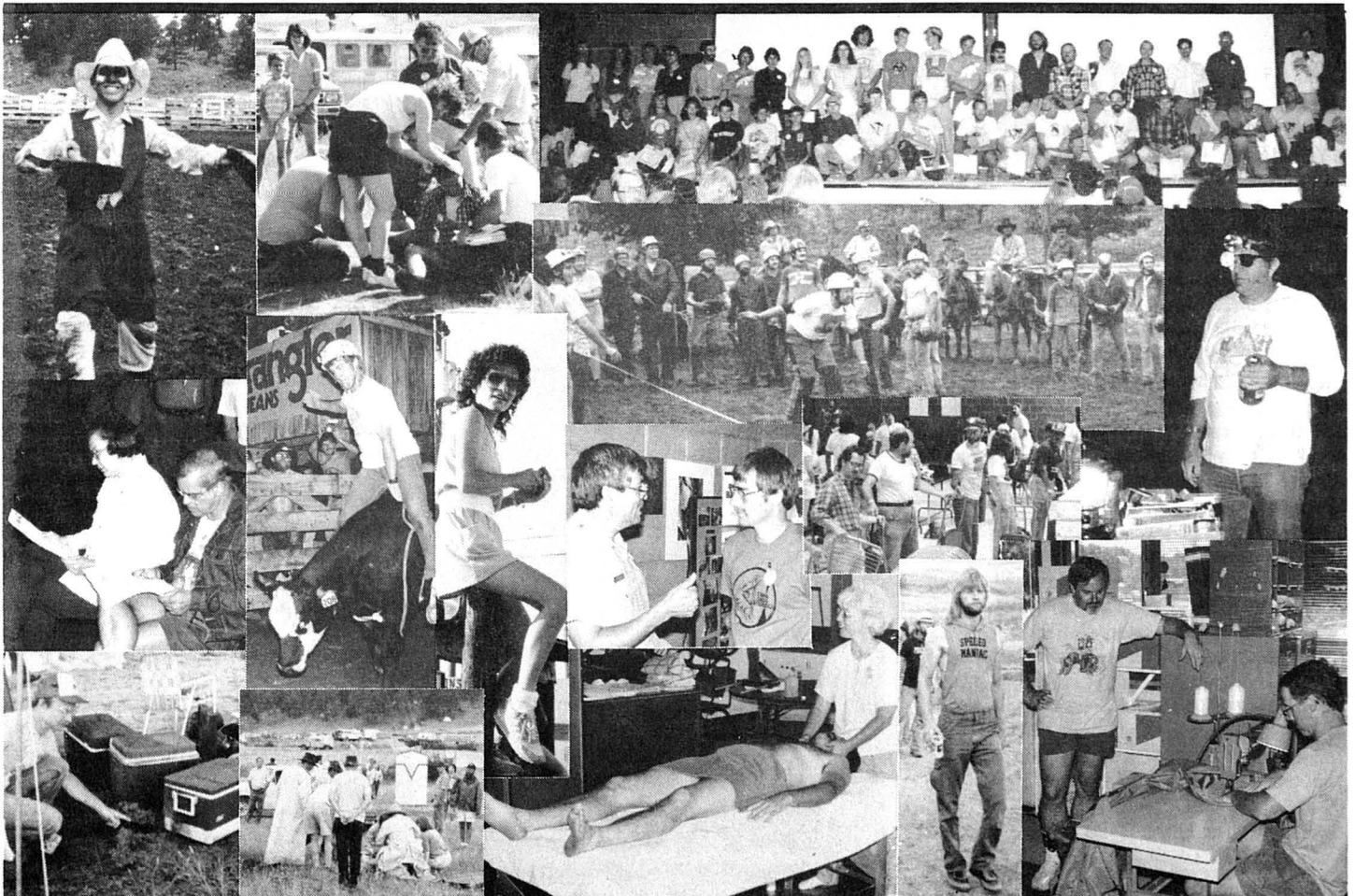
This year was a big one for the 41st Annual NSS Photo Salon, especially in the slide division of the competition. Of the 798 slides entered, 265 were accepted for presentation, including a Medal winner, six Merit Awards, and 18 Honorable Mention awards. In the other categories, the awards were as follows: Black-and-white Prints—10 out of 18 prints were accepted with one Medal, one Merit Award, and one Honorable Mention award; Color Prints—64 of the 91 entries were accepted, plus a Medal, five Merit Awards, and nine Honorable Mention awards were given; AV Library Donation Award—three entries were received and one show was awarded an Award of Recognition; Multi-image slide programs—of two shows entered, one received a Merit Award; Videos—no entries were accepted; Movies—no entries were received.

Medal Awards were presented to: Kenrick L. Day (Harrison, AR) for his black-and-white print "Chandelier Ballroom Triptych; Kenrick L. Day and Dick LaForge (Eureka, CA) for their

color print "Crystal Realm;" Scott Fee (Indianapolis, IN) for his slide entry "The Gate Keepers." An Award of Recognition for the best donation to the AV Library was given to Rick Rigg (Idaho Falls, ID) for his program "Thailand Expedition Hydrologic Survey, December 1983-January 1984."

Merit Awards (blue ribbons) went to: Peter and Ann Bosted (2 color prints); Dave Bunnell (color print); Kenrick L. Day and Dick LaForge (color print); Kevin Downey (color print); Bill Frantz (black-and-white print), Ron Simmons (multi-image slide presentation). For color slides to: Peter and Ann Bosted (2), Kenrick L. Day (2), and Norman R. Thompson.

Honorable Mention awards (green ribbons) were awarded in the categories as follows: Black-and-white Prints—Bill Frantz; Color Prints—Peter and Ann Bosted (3); Dave Bunnell (2); Kevin Downey (2); Ed Schultz and Norman R. Thompson; Color slides—Peter and Ann Bosted (4); Dave Bunnell; Kenrick L. Day (5); Kevin Downey (2); Jim Loftin; Norman R. Thompson (2); Carol Vesely (2); and Frank





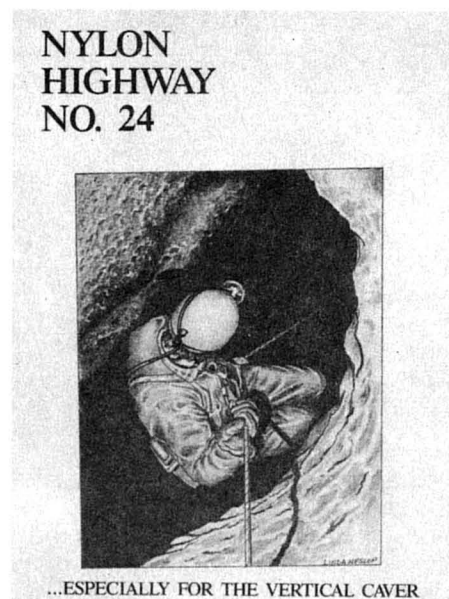
Results Contests/Salons

Vichek.

The following photographers had entries accepted in the 1988 Photo Salon. The numbers and code in parentheses after each name give the number of entries accepted for each category. The code for the categories is: SL—slide; BW—black-and-white print; CP—color print; MI—multi-image slide presentation; and AV—AV Library Donation. Tom P. Bertolacini (1 CP); David Black (4 SL), Peter and Ann Bosted (12 CP, 38 SL); Dave Bunnell (12 CP, 24 SL); Dave Bunnell and Ed Schultz (1 CP), Kenrick L. Day (1 BW, 45 SL), Kenrick L. Day and Dick LaForge (2 CP), Kevin Downey (7 CP, 30 SL), Ralph Earlandson (2 SL), Scott Fee (1 CP, 13 SL), Bill Frantz (4 BW, 2SL); Keith Goggin (2 CP); James Greer (1 CP, 3 SL); Patricia Jablonsky (1 CP); Dave Jagnow (4 CP); Randolph Kohlwey (3 SL); Bill Liebman (3 SL); Bob Lipinski (1 SL); Jim Loftin (8 SL); Bob Montgomery (3 SL); John Mylroie (2 SL); Rick Olson (1 SL); Terry Raines (1 CP); Rick Rigg (1 AV); Barbara Schaefer and Buck Cobb (5 CP, 8 SL); Ed Schultz (3 CP, 6 SL); Ed Schultz and Dave Bunnell (1 SL); Ed Schultz and Kenrick L. Day (1 SL); Ron Simmons (1 MI, 18 SL); Mike Sims (1 CP; 3 SL); Peter Sprouse (1 SL); Paul and Lee Stevens (3 SL), Paul Stevens and Tina Shirk (4 SL), Noble Stidham (5 BW); Norman R. Thompson (1 CP, 19 SL); John Van Swearingen IV (13 SL); Carol Vesely (6 SL); and Frank Vichek (1 SL).

Graphic Arts Salon

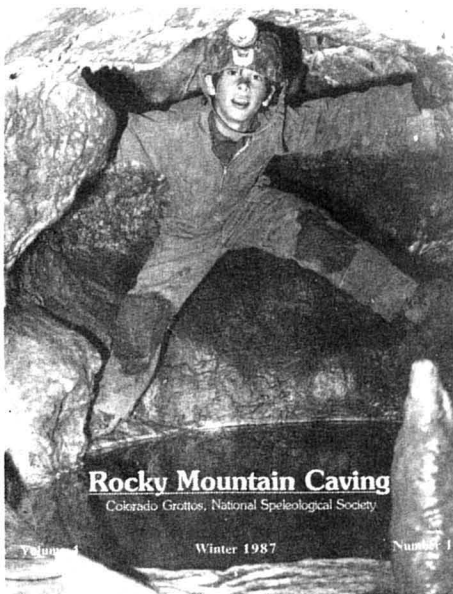
The Graphic Arts Salon judges newsletter covers of NSS grottos, sections and surveys.



This year's salon showed a minor increase in the number of organizations submitting entries. Overall quality of newsletter covers continues to show improvement, both from more attention to detail and from the influence of desktop publishing computer programs.

It is heartening to see some organizations talking about planning for next year's salon before it arrives.

The medal winner in the nonphotographic category was an issue of *Nylon Highway* published by the Vertical Section. Merit Awards went to the *Cave Cricket Gazette* published by the Miami Valley Grotto (2); the *Devil's Advocate* published by the Diablo Grotto; the *Explorer* published by the Southern California Grotto; the *CIG Newsletter* published by Central Indiana Grotto; and *Virginia Cellars* published by the Virginia Speleological Survey. Honorable Mentions went to: *Cascade Caver*, Cascade Grotto (4); *Pack Rat Scat*, Greater Allentown Grotto; *CIG Newsletter*, Central Indiana Grotto (2); *The Explorer*, Southern California Grotto (2); *The Underground Press*, Kansas City Area Grotto (2); *Better Caves & Caving*, Santa Barbara Underground Grotto;



Huntsville Grotto Newsletter, Huntsville Grotto.

The Medal winner in the photographic category was an issue of *Rocky Mountain Caving*, Grottos of Colorado. Merit Awards went to: *Southwestern Cavers*, Southwestern Region; *Texas Caver*, Texas Speleological Assoc.; *Pholeos*, Wittenberg Univ. Speleo. Soc.; *Rocky Mountain Caving*, Grottos of Colorado (2); *Devil's Advocate*, Diablo Grotto. Honorable Mentions were given to: *Southwestern Cavers*, Southwestern Region (2); *Subterranean Sun*,

Sligo Grotto; *Texas Caver*, Texas Speleo. Assoc. (3); *Huntsville Grotto Newsletter*, Huntsville Grotto (2); *Devil's Advocate*, Diablo Grotto; *RASS Register*, Richmond Area Speleo. Soc.; *Pack Rat Scat*, Greater Allentown Grotto; *Better Caves and Caving*, Santa Barbara Underground Grotto; *Virginia Cellars*, Virginia Speleo. Survey; *CIG Newsletter*, Central Indiana Grotto; *Habla la Abuela del Oztotl*, Dallas-Ft. Worth Grotto.

Cartographic Salon

This year 25 people entered 38 maps in the NSS Cartographic Salon. There were 27 maps from the United States (12 different states), six from Mexico, one from Canada, two from Jamaica, one from Honduras, and one from Australia. Almost without exception, all of these maps were superb representations of each cave and the three judges (Bill Storage, Keith Goggin and George Dasher) wish they could have given awards to all of the entries.

This year the maps were judged more by technical merit, usability, and clarity rather than cartographic detail. Seven awards were presented—five Honorable Mentions, one Merit Award, and one Medal Award overall winner.

The map of Dunco Spring Cave, Jamaica, West Indies by Mike Futtrel was awarded the Gold Medal. The map of The Caves of Thanksgiving Island, Vancouver Island, British Columbia, Canada, by Stephen Grundy and Olivia Whitwell received the Merit Award.

Honorable Mentions were awarded to maps of Copperhead Cave, Pennsylvania, by Walt Hamm; Cueva Inclinata, Oaxaca, Mexico, by Carol Vesely; Rock Springs, Utah, by Rodney Horrocks; Lechuguilla Cave, New Mexico, by Rick Bridges, Alan Williams, and Andy Lutch; and Cutlip Cave, West Virginia, by Doug Medville.

Cave Ballad Contest

The Cave Ballad Contest was very successful this year. There were 14 entries in the Traditional category and 4 in the Original category.

The contestants wrote some fine songs and congratulations are in order. Thanks go to the judges for their efforts and to Doug Bradford for constructing the flowstone record awards. The winners are as follows: Original category—1st place, "To Turn Off the Night" by Dale Pate; 2nd place, "Another Tight Hole" by Ken Anderson. Traditional category—1st place, "Cave Girl" by Pooch Amy; 2nd place, "Swingin'" by Dawn Marie Burow; Honorable Mention, "Echos of the Cave" by Pooch Amy; Honorable Mention, "Cavin' in the Guads for Eternity" by Donna Anderson; Honorable Mention, "Where Can I Go" by Doug Bradford. Performance Awards went to Pooch Amy for "Cave Girl" and Dawn Marie Burow for "Swingin'." A Conservation Award went to Fred Stork for "Caver's Hymn."

Barbara amEnde
Committee Chairperson

Section Announcements

Vertical Section

As one of the largest sections in the NSS, the Vertical Section is always busy at the convention. In the Section Session various presentations were given on vertical techniques. Discussions on adapting European techniques to North American caving were well received.

Section members presented the 22nd Annual Climbing Contest and had a record number of participants. In thanks to all the vendors who helped with prizes in the past, next year the section will pay its way and purchase prizes from our friends. Revenues from the sale of our new symbolic devices have made this possible.



The Vertical Techniques Workshop held each year by the section enables people to learn safe and proper vertical skills. Another learning experience was an informal event comparing various climbing systems on a technical course. The course consisted of ascending past a knot,

transferring correctly across to a second rope and rappelling over another knot back down to the floor. This display helped in the learning of rebelay skills to add to our traditional North American vertical caving style. In all, it was an exciting convention and next year is not far away.

Conservation and Management Section

At the meeting of the Conservation and Management Section, concern was expressed about some of the changes that appeared in the version of the Federal Cave Resources Protection Act which was passed by the House of Representatives (HR 1975). These changes are currently being considered by the U.S. Senate. The section urges all concerned members to obtain copies of this version of the bill from their Congressman or Senator immediately. A summary of the changes is being prepared and soon will be available from John Wilson at 7901 Dalmain Drive, Richmond, VA 23228.

Women's Section Disbanded

During the luncheon meeting of the Women's Section at this year's convention, the section voted to disband, assigning their remaining treasury to the newly-active Social Sciences Section. It was felt that the goals and purposes of the section have been fulfilled and that any further needs can be met through other currently-existing NSS sections.

AWARDS

Roswell Jones and Richard A. Watson Receive Highest NSS Awards

The William J. Stephenson Award for Outstanding Service and the Honorary Membership are the highest honors the NSS can bestow. The Honorary Membership is given for outstanding contributions to the field of Speleology; the Stephenson Award is given for outstanding service to speleology and to the NSS. The awards are of equal stature and each one includes a life membership in the Society.

William J. Stephenson Outstanding Service Award

The 1988 William J. Stephenson Outstanding Service Award goes to W. Roswell Jones, NSS 4822. "Jonesy," as he is better known, is familiar to many as the big man who travels throughout the country setting up equipment for NSS Board of Governors meetings. A long-time caver, he joined the NSS in 1958, when total membership was only about 1400 members.

Jonesy was a vigorous caver during the late '50s and early '60s. He was one of the original explorers of the challenging Overholts Blowing Cave in West Virginia. He was active in the Carpenter-Swago System, Martha's Cave, and many other caves in West Virginia. In 1982 he hauled a scaling pole into Friars Hole trunk and worked on the survey of that cave. During the past 15 years, he has participated in several extended caving/backpacking trips into alpine karst areas in Wyoming. Shortly after joining the NSS, he became active in the New Paris paleontological dig and contributed many years to this noteworthy project.

When the new OTR (Old Timer's Reunion) site needed construction, Jonesy showed up with skill, dedication, and his personal tools. When



Roswell Jones, "Jonesy"

the 1983 Convention found their projectors inadequate for the photo salon, Jonesy used his professional contacts to rent suitable machines directly from the manufacturer and then drove to another state to bring them back in time for a successful salon. During the 1976 Morgantown and 1983 Elkins conventions, Jonesy was campground director.

During the NSS office move to Huntsville in 1972, Jonesy picked up the NSS Library, back issues of the *Bulletin*, the archives, and other items scattered around Pennsylvania; loaded them on a rental truck, and made the long drive south. He helped with production of several early *Speleo Digests*, worked on the NSS Library Committee, headed the Equipment Committee and kept its scientific equipment in operating condition. He has helped erect countless convention hot tubs and adds much to the spirit of the participants.

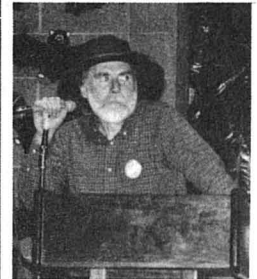
A confirmed Coke drinker, Jonesy has always worked behind the scenes—away from the limelight, but he is one of the strongest workers in the Society. For almost 30 years he has dedicated himself to the NSS and to handling important tasks that few people notice. He is truly one of the biggest little men in the NSS.

Honorary Membership

The 1988 Honorary Membership goes to Richard A. Watson, NSS 1665. "Red" Watson is the premier editor of cave-related books in the world and an author as well. He joined the NSS in 1950 as a member of the Iowa Grotto. On Thanksgiving, 1955, he made his first trip into Floyd Collins' Crystal Cave—and that hooked him on Flint Ridge caving.

The Eyeless Fish Trail was discovered on that trip, and Red knew there had to be more passage just waiting out there. . . . For the next 20 years, he was a hard-core Flint Ridge caver and an active member of the Cave Research Foundation (CRF), serving as the second president of CRF from 1965-67. He served on the CRF board of directors from 1963-1971 and, since 1980, has been editor of CRF's *Cave Books*.

Along with Roger Brucker, Red wrote *The Longest Cave*, the fascinating saga of the exploration that culminated in the connection of



Richard "Red" Watson

Flint Ridge Cave System and Mammoth Cave. He also wrote the caving novel *Under Plowman's Floor*, coedited *The Grand Kentucky Junction*, edited the Johnson Reprint Corporation's Classics in Speleology series and the Speleologia series of Zephyrus Press. He has written countless short articles on cave-related subjects and serves on the *NSS Bulletin* Advisory Committee.

Red's greatest regret is that he was "over the hill" before the last big push to connect Flint Ridge with Mammoth Cave. Red may not have made the connection, but his words have enabled thousands of armchair cavers to make the connection alongside those who slogged through the muck, out there past Q-87.

1988 Lew Bicking Award

The Bicking Award is given each year in memory of Lew Bicking, a caver who, in the late 1960s, made many contributions to the exploration and mapping of caves in the east. Bicking did a lot of the early exploration in the central part of the Friars Hole System in West Virginia as well as in a variety of other caves in Virginia. Following his death in an vehicle accident, the Bicking Award was established to honor those cavers who carry on the aggressive exploration that characterized Bicking's work.

The recipient of the 1988 Bicking Award is James H. Smith, Jr., NSS 14529. Jim has been caving in the Southeastern U.S. and Mexico for over 18 years. Over the past 15 years, he has tripled the number of known caves in Tennessee, Alabama, and Georgia that are over 400 ft deep. Recently, in Tennessee, he explored two multi-drop caves—377 ft and 342 ft deep—but did



Jim Smith

them from the bottom up.

In 1975, he was the coleader of an American team on an expedition in the Pyrenees. He connected a new, higher entrance into the Pierre St. Martin System and reestablished it as the world's deepest cave.

In 1976, Smith went on his first trip to the Huautla area in Mexico and has returned every year since—more than anyone else. In 1981, he pushed Li Nita to a depth of 1020 m—the first cave in the Western Hemisphere to be over a kilometer in depth. Then in 1983, he followed Nita Nanta to a depth of 1080 m; this was the second cave in the Western Hemisphere to be over one km deep. In 1982, he pushed Sotano de Trinidad to 834 m in depth. In April, 1985, he connected La Grieta to San Agustin. As a result of the work of Smith and many others, over the years San Agustin has become the Sistema Huautla; connecting to Li Nita and La Grieta and increasing in depth from 612 m to 1252 m—the world's sixth deepest cave. This past December he bottomed Sistema Ocatempa, reaching a depth of 1028 meters.

In all, Smith has been on 88 cave trips to a depth of over 500 m. His caving spirit and motivation are phenomenal. Those who have caved with him have called him: "the best caver in the United States," "the champion push caver," and "the best caver that I know of. Period."

Smith has written in the *NSS News* and various newsletters about his work, has surveyed, dove sumps and, in general, has done whatever it takes to understand the deepest caves in the western hemisphere. He is currently working on a Masters thesis on the development of the deep caves of the Huautla Plateau.

Certificates of Merit

Three Certificates of Merit are awarded annually for specific accomplishments which further the goals of the NSS. The awards for 1988 went to Allen Padgett and Bruce Smith for their work on the new NSS publication, *On Rope*; to the Huautla Cave Project for recent accomplishments; and to John W. "Jay" Clark for legal work during a recent litigation suit.

NSS Fellows, 1988

At each convention, the designation Fellow of the NSS is awarded to a few members who have, over the years, demonstrated their dedication to the goals of the NSS through efforts in the fields of cave exploration, cave conservation, cave science, or local or national administration. Most recipients of the award have accomplishments in more than one of those categories. These are the people whose efforts have kept the NSS and its committees and local groups going year after year, and it is a pleasure for the NSS to be able to thank them in this way. A recipient remains a Fellow as long as he remains a member of the NSS. There are a total of about 325 NSS Fellows, somewhat fewer than 5% of all NSS members.

The following were selected as Fellows of the NSS for 1988: Steve Attaway, NSS 16583; Gregg Clemmer, NSS 16664; "Deacon" Deem, NSS 13951; John Fetvedt, NSS 20965; John Ganter, NSS 22870; Ernie Garza, NSS 13484; Susan Holler, NSS 9168; Tom Kaye, NSS 16356; Chris Kerr, NSS 14548; Ed LaRock, NSS 14362; Dave Luckins, NSS 14010; Norma Peacock, NSS 19961; Jim Pizarowicz, NSS 16872; Jim Smith, NSS 14529; Paul Smith, NSS 14385; Joel Stevenson, NSS 14246; Terri Treacy, NSS 17102; John "J.V." Van Swearingen, NSS 12729.

—Bill Mixon

1988 Ralph W. Stone Research Award

Ira D. Sasowsky is the recipient of the 1988 Ralph W. Stone Graduate Research Award. This award is given annually and includes a \$1000 grant which the student, who must be an NSS member, can use to pursue a cave-related thesis project.

A graduate student with Dr. William B. White in the Department of Geosciences, The Pennsylvania State University, Ira received the award for his research proposal entitled, "Karst Hydrogeology of the Obey River Gorge, Tennessee: Development of a Genetic Model for Plateau-Margin Karst." He will examine several

aspects of karst development in the Cumberland Plateau margin setting. Three following inter-related objectives will receive attention: the hydraulic geometry of the caves, the groundwater geochemistry of the plateau margin, and the drainage basin geomorphology on the plateau margin.

Ira received a Bachelor of Science degree in Geology from the University of Delaware in 1983, and a Master of Science (Geology) degree from Pennsylvania State University in 1988. He has previous work experience as a hydrologic consultant, a petroleum geologist and a mudlogger. He currently serves as a research assistant in the Materials Research Lab at Penn State.

James G. Mitchell Award

Jane Mulkewich is the recipient of the 1988 James G. Mitchell Award for the best scientific paper presented at the convention by an NSS member under 26 years old. Jane's paper, "Pollen Deposition in Caves: Results from the Canadian Rockies" was presented on Thursday in the Geology/Geography session.

Conservation Award

The 1988 Conservation Award was presented to the Richmond Area Speleological Society (RASS) for their many accomplishments during the past year. The RASS has made major grants to Bat Conservation International for base operations, to the Northwest Caving Research Institute to help fund the Jewell Cave field work camp, to the Huautla Project for support of a study of the hydrogeology of the Sistema Huautla drainage basin, and to the NSS in a grant earmarked for the Eastern Region of the National Cave Rescue Commission.

RASS has worked closely with the Richmond Children's Museum to provide continuing modifications and improvements to the artificial cave at the museum. They have coordinated cave cleanups with Boy Scout and Girl Scout groups and have helped local school systems incorporate information on caves and bats into the school curriculum. They brought internationally-known bat expert Merlin Tuttle to Richmond for two lectures to the general public and cavers on bat conservation.

The official motto "RASS is Conservation" sums up the attitude of this unique and highly active grotto.

Peter M. Hauer Spelean History Award

Noted speleonaut Dr. William R. Halliday is the recipient of the 1988 Hauer Award.

For over 30 years Bill has recorded the history of cave exploration in the U.S. and has published it in books and periodicals. Currently a member of the NSS Board of Governors, he continues his work on a number of spelean history projects.



1988 NSS Fellows

1988 Vertical Contest

By Allen Padgett
1988 Contest Chairman

This year's contest was an amazing event with one world record broken, nine new age group records set, and a record number of climbers on rope. In two days of competition, 152 entrants climbed over 3¼ miles, an average of one climber every seven minutes.

The volunteer workers handled the huge turnout quickly and efficiently with 10 volunteers working to support each climber. The climbers contributed by being ready when called, and a good facility helped everyone. Unofficial times, displayed on a stadium clock, were a big hit with spectators who frequently cheered the climbers on.

Get your equipment fine-tuned, strengthen those climbing muscles, and be ready in Sewanee in '89.



Key:
W.R.—New Overall World Record
O.W.—Overall Winner in this Class
A.G.R.—New World Record in Age Class

WOMEN'S 30-METER MECHANICAL

Age 12 and Under

1. Irene Stucklen 1:20.5

Age 13-16

1. Susan Medville 1:07.5
2. Emily Graham 1:18.3

Age 20-29

1. Cyndie Walck 1:02.6
2. Nancy Pistole 1:18.7
3. Maureen Handler 1:21.1

Age 30-39

1. Martha Clark 0:47.1 (O.W.)
2. Susie Lasko 0:52.5
3. Sarah Gayle 1:00.5

Age 40-49

1. Tish Korbly 1:41.6
2. Chris Southam 2:00.5
3. Deb Stucklen 2:43.0

WOMEN'S 120-METER MECHANICAL

Age 0-12

1. Irene Stucklen 9:26.3 (A.G.R.—O.W.)

Age 13-16

1. Ginger McPhee 11:02.4 (A.G.R.)

Age 30-39

1. Barb Schaeffer 14:06.8

WOMEN'S 30-METER—3 KNOTS

Age 13-19

1. Emily Graham 4:25.1 (A.G.R.)

Age 20-29

1. Cyndie Walck 2:42.8 (A.G.R.)

Age 30-39

1. Martha Clark 1:54.7 (W.R.—O.W.—A.G.R.)
2. Sarah Gayle 4:13.4

MEN'S 30-METER MECHANICAL

Age 0-12

1. Ethan Frantz 1:09.0
2. Kass Kastning 1:14.5
3. Colin Jones 1:47.2

Age 13-16

1. Dan Gruss 0:34.4 (A.G.R.)
2. Troy Teets 0:39.3
3. Arron Bird 0:44.3

Age 17-19

1. Andy Belski 0:38.2
2. Tor Steinke 1:35.6

Age 20-29

1. Rossano Boscarino 0:26.4 (O.W.)
2. Bill Bussey 0:33.7
3. Matt Oliphant 0:37.6

Age 30-39

1. Paul Smith 0:35.4
2. Peter Sprouse 0:36.5
3. Greg McCoy 0:46.2

Age 40-49

1. Dick Graham 0:38.5
2. Jim Hall 0:52.5
3. Randy Gruss 0:55.6

Age 50-59

1. Ken Laidlaw 1:36.3
2. Mike Sims 1:39.5
3. W.E. Meyer 1:58.0

Age 60-69

1. Dale Lofland 4:24.4

Age 70-up

1. Annando Kramer 3:52.0

MEN'S 120-METER MECHANICAL

Age 0-12

1. Ethan Frantz 9:07.1

Age 13-16

1. Dan Gruss 5:36.7 (A.G.R.)
2. Troy Teets 7:57.2
3. Arron BBird 8:42.8

Age 20-29

1. Rossano Boscarino 4:40.5 (O.W.)
2. Bill Bussey 6:05.4
3. Phillip Batise 7:29.1

Age 30-39

1. Miles Hecker 6:33.2
2. Larry Novikoff 6:57.0
3. Jim Goodbar 7:33.8

Age 40-49

1. Dick Graham 6:09.9
2. Mike Palethorpe 6:20.7
3. Jim Hall 7:37.9

Age 60-69

1. Vance Nelson 10:29.8

MEN'S 30-METER—3 KNOTS

Age 13-16

1. Ken Honebrink 2:53.6 (A.G.R.)

Age 20-29

1. Bill Bussey 1:59.0 (O.W.)

Age 30-39

1. Charles Clark 2:48.4

Age 40-49

1. Dick Graham 2:24.2

MEN'S 120-METER—3 KNOTS

Age 13-16

1. Ken Honebrink 14:46.2 (A.G.R.)

Age 20-29

1. Bill Bussey 12:10.7 (O.W.)

Climbing Contest World Records

Age Group	Time	Name	Year Set
Men's Mechanical 30 Meter			
0-12	1:01.5	Bill Stucklen	84
13-16	0:34.4	Dan Gruss	88
17-19	0:33.8	Peter Sprouse	73
20-29	0:25.7	Rossano Boscarino	87
30-39	0:34.1	Dick Graham	83
40-49	0:35.1	Dick Graham	85
50-59	1:09.9	Chuck Wilkinson	82
60-69	1:22.6	Vance Nelson	84
70-up	0:45.4	Darrell Tomer	84
Overall	0:25.7	Rossano Boscarino	87

Age Group	Time	Name	Year Set
Men's Mechanical 120 Meter			
0-12	8:26.0	Bill Stucklen	84
13-16	5:36.7	Dan Gruss	88
17-19	5:55.4	Peter Sprouse	73
20-29	4:10.7	Rossano Boscarino	87
30-39	4:50.5	Bill Corley	82
40-49	5:30.1	Dick Graham	85
50-59	6:22.0	Bill Cuddington	87
60-69	7:27.1	Darrell Tomer	78
70-up	7:24.2	Darrell Tomer	85
Overall	4:10.7	Rossano Boscarino	87

Age Group	Time	Name	Year Set
Men's Classic 3-Knot 30 Meter			
0-12	18:05.0	Jeff Frantz	84
13-16	2:53.6	Ken Honebrink	88
17-19	—	—	—
20-29	1:37.1	Jeff Forbes	81
30-39	2:03.9	Paul Smith	85
40-49	2:14.9	Dick Graham	87
50-59	2:13.4	Bill Cuddington	86
60-69	6:42.7	John Van Swearingen	82
70-up	—	—	—
Overall	1:37.1	Jeff Forbes	81

Age Group	Time	Name	Year Set
Men's Classic 3-Knot 120 Meter			
0-12	—	—	—
13-16	14:46.2	Ken Honebrink	88
17-19	10:51.9	John Bassett	70
20-29	9:39.2	Trick Howard	85
30-39	10:16.6	Marion O. Smith	79
40-49	10:56.5	Marion O. Smith	83
50-59	—	—	—
60-69	—	—	—
70-up	—	—	—
Overall	9:39.2	Trick Howard	85

Age Group	Time	Name	Year Set
Women's Mechanical 30 Meter			
0-12	1:08.9	Susan Medville	85
13-16	1:02.1	Susan Medville	87
17-19	0:50.6	Nora White	72
20-29	0:44.6	Patty Mothes	81
30-39	0:43.4	Martha Clark	85
40-49	1:05.4	Miriam Cuddington	84
50-59	1:25.1	Avis Van Swearingen	83
60-69	13:22.3	Sara Corrie	81
70-up	4:30.9	Jane Fisher	85
Overall	0:43.4	Martha Clark	85

Age Group	Time	Name	Year Set
Women's Mechanical 120 Meter			
0-12	9:26.3	Irene Stucklen	88
13-16	11:02.4	Ginger McPhee	88
17-19	—	—	—
20-29	5:59.0	Nana Bain	82
30-39	5:40.1	Louise Hose	87
40-49	9:11.6	Miriam Cuddington	86
50-59	11:11.1	Avis Van Swearingen	83
60-69	—	—	—
70-up	—	—	—
Overall	5:40.1	Louise Hose	87

Age Group	Time	Name	Year Set
Women's Classic 3-Knot 30 Meter			
0-12	6:13.0	Emily Graham	87
13-16	4:25.1	Emily Graham	88
17-19	2:42.2	Dena Hawes	73
20-29	2:42.8	Cyndie Walck	88
30-39	1:54.7	Martha Clark	88
40-49	3:26.2	Miriam Cuddington	86
50-49	6:12.6	Avis Van Swearingen	82
60-69	—	—	—
70-up	—	—	—
Overall	1:54.7	Martha Clark	88

Age Group	Time	Name	Year Set
Women's Classic 3-Knot 120 Meter			
0-12	—	—	—
13-16	—	—	—
17-19	—	—	—
20-29	24:10.4	Cyndie Walck	85
30-39	12:29.3	Martha Clark	84
40-49	—	—	—
50-59	—	—	—
60-69	—	—	—
70-up	—	—	—
Overall	12:29.3	Martha Clark	84

In the Media

By Bill Klimack

"Black Walls, Cold Fear" head a *Sports Illustrated* feature on caving in Wyoming's Great Expectations Cave. While the tone of the article emphasizes the dangers of caving in Great X, and by implication, caving in general, the article is accurate if unflattering. Quoting columnist Tim Cahill, cavers are described as "closemouthed, introverted, even slightly hostile." But the author goes on to explain that these characteristics have grown from the cavers' desire for cave conservation and good landowner relations. The history of the exploration is well described, including the feelings of those involved. Great X is, of course, an extremely challenging cave with the most intense section named the Grim Crawl of Death. (Previous *NSS News* coverage on Great X quoted a caver as saying that this name sounded entirely too pleasant for the conditions of the exit crawl). The text spans 11 pages and includes photographs by Ron Simmons as well as an illustration showing the profile of the cave. The latter portion of the article describes the author Taylor's participation in an August 1987 expedition that unsuccessfully sought to find another exit as well as photograph the cave. While Taylor's impressions are vibrantly portrayed, and would read well in an article intended for a caving audience, his work certainly doesn't seem balanced for general interest readers.

The *Arizona Republic* published an article on that state's Colossal Cave in its February 28, 1988, issue. The cave, which is now a Pima County park, was originally explored in 1923 by three men. One wore a pedometer which reportedly registered 39 miles of passage discovered while they were in the cave for a week without pushing all the leads. When the cave was commercialized by the Civilian Conservation Corps (CCC) from 1934 to 1937, workers dumped debris into the pit that the first explorers had used to reach a lower level that holds the extensive passage. A walkway was then built over the pit. Despite talking to former CCC members, the park operator has been unable to locate the pit.

Another recent *Arizona Republic* article announced the establishment of a new state park. The effort was labeled a three-year "covert operation." The work was kept secret to protect the cave until arrangements were complete. The cave, south of Benson in the foothills of the Whetstone Mountains, was praised as offering giant, beautiful formations. The 550-acre Kartchner Caverns State Park, named after the landowner, was purchased by the Nature Conservancy for eventual resale to the state.

Wind Cave's shift from eighth longest cave in the world to the seventh position is heralded in two South Dakota newspapers, *The Rapid City Journal* and the *Hot Springs Star* (April 23 and 26, 1988, respectively). Wind Cave now has 51.3 miles of surveyed passageway. The article explains that surveying is done not to gain mileage

alone, but to assist in study of the cave. The survey trip that pushed the cave into the new position included several NSS members who are seasonal rangers at the park.

A Bureau of Land Management (BLM) *Advisor* newsletter special edition reviews the BLM's 1987 accomplishments. A subsection of their discussion of land programs discusses caves in the Roswell District, New Mexico. BLM estimates that there may be up to 1500 caves in this area. Torgac and Fort Stanton Caves are registered National Natural Landmarks and Honest Injun Cave and four of five McKittrick Hill caves have been nominated for this distinction. Feather Cave is entered in the National Register of Historic Places. The Roswell District contains 60 caves open for recreational use; 12 of these are gated. Another six caves are reserved for research purposes. During Fiscal Year 1987, BLM gated Yellowjacket Cave and fenced the surface watershed of Torgac Cave to protect it. These projects used \$7000 worth of volunteer labor.

The Nature Conservancy Magazine for March/April 1988 discusses caves in an article on wilderness areas of the East. Citing caves as perhaps the most unappreciated ecosystem in the Appalachians, the article lists many of the cavernicolous fauna that dwell in the region. The little brown bat hibernates there and the endangered Virginia big-eared bat relies heavily on the area for maternity colony sites. The Conservancy protects General Davis Cave, which contains the only population of a species of beetle and a salamander. The organization is attempting to purchase another tract of land containing a biologically rich cave, but the local chapter currently lacks adequate funds. The Spring 1988 *Arizona Nature Conservancy Newsletter* reports that the organization received a gift of 17 acres of land along Cave Creek in the Chiricahua Mountains. The new preserve contains forest that is well known for its sheltering of bird species and hummingbird feeders there frequently are visited by Sanborn's Longnosed Bat.

The remarkable development of Australian marsupials specialized to occupy niches that are occupied by placental mammals on other continents (for example, predatory kangaroos) is featured in an article in the April 16, 1988, *Science News*. A portion of the article reviews the history of the theories developed to explain the continent's unusual animals. Fossils recovered from Wellington Caves in the nineteenth century disputed a creationist-supported view that all animals were made by God for specific purposes. This theory predicted that Australian fossils would resemble fossils from other areas that had similar climates during the same periods. The fossils were very unlike the contemporary fossils from other areas—which included lions and elephants—and eventually they led to the development of a new theory. The

Law of Succession proposed that fossil animals in an area are followed by more recent fossils of closely related animals regardless of the environment. This concept had supportive impact on development of evolutionary theory.

The debate over the relationship between modern humans and neanderthals continues to involve evidence recovered from caves in Israel. Established views hold that there is such a relationship, with neanderthals perhaps being immediate ancestors of modern humans. Quafzeh Cave yielded evidence indicating that modern humans lived there long before arrival of neanderthals, supporting the contention that the two traveled different evolutionary paths. Nearby Kebara Cave was recently the site of the discovery of the first complete neanderthal pelvis. This pelvis exhibits significant differences from a human pelvis, weakening the argument for the interbreeding and gene exchange. The pelvis also showed that the neanderthal's pelvic outlet was not significantly larger than that of modern humans—a view developed from recovery of partial neanderthal pelvises. The postulated larger opening had led to speculation that neanderthals had longer gestation periods and larger babies.

The May 1988 *Texas Highways* magazine included an article on jeep and horseback tours into Maravillas Canyon. Some of the tour highlights are caves once occupied by Indians. . . Photographs of sea caves in the Pacific Coast section of Olympic National Park, Washington, appear in a *Backpacker* (May 1988) feature on "beachpacking". . . The Grotto, a wave-formed cave in Cyprus Lake Provincial Park, Ontario, Canada, is described in the Spring 1988 *Adventure Travel*. . . The NSS 1988 Convention is included in the calendar section of the American Geological Institute's *Earth Science* magazine for Spring 1988. The same issue's Geoquiz is based on caves, but actually is more of a geography challenge. . . Photographs of several Hawaiian crustaceans which are reef crevice and cave dwellers are shown in *Hawaii* for April 1988. . . *Dodge Adventurer* (Winter 1988) reports that an Egyptian athlete, unable to train for the 1984 Winter Olympic skiing events in his country, dwelled in a cave with spiders and scorpions "to strengthen himself against the trials of competing at Sarajevo, Yugoslavia. The magazine's Summer 1987 issue's cover story was a brief introduction to spelunking. . . Lehman Caves, now part of Great Basin National Park, are summarily described in *Friendly Exchange* magazine (May 1988). . . An expansive rock shelter in the Grand Canyon is the subject of a photograph accompanying an article on running the Colorado River in the April 1988 *Condé Nast's Traveler*. . . The March 6, 1988 *Tallahassee Democrat* mentions Bat Conservation International in a column on developing a better memory. The author uses BCI's phone number as an example of something that his readers may want to remember so that they can order bat-related products—"but only after dark."

News and Notes

OHIO VALLEY REGION

Kentucky Speleofest

More than 500 cavers from 19 states attended the 17th annual Kentucky Speleofest, May 27-30, 1988, at Cedar Hill Campground near Park City, Kentucky. The event is now an Ohio Valley Region function, and was hosted by Louisville and Evansville Grottos. There were trips to several caves in the area during the day Saturday, and Dr. Nick Crawford of Western Kentucky University led a geology field trip through the karst countryside. Saturday night Nick spoke eloquently about the pollution of groundwater and caves in the Bowling Green, Kentucky, area.

There was more caving Sunday, with nearly 200 people (limited to that number by the Park Service) taking an evening "Dinner Tour (box lunch) from the Carmichael Entrance to the

Snowball Dining Room in Mammoth Cave, and return.

The guidebook for the event was dedicated to Sara Corrie.

—Don Shofstall

MISSISSIPPI VALLEY REGION

Lester B. Dill Award

The Lester B. Dill Award was endowed by the late owner of Meramec Caverns and Onondaga Cave, Spring 1972. The purpose of the award is to "give credit and draw attention to speleologists and spelunkers who have spent a considerable amount of time and effort in increasing our knowledge of the speleological sciences."

To be eligible for the award (plated carbide lamp with the inscription, "For Significant Contributions to Speleology"), the recipient should: 1) be from or active in the Mississippi Valley Region of the NSS, and, preferably, from the same area as the MVOR convention; 2) have made an outstanding and significant contribution to the science of speleology during the calendar year preceding the award presentation.

Don Rimbach received the award for past accomplishments and contributions to speleology. For example, stopping the Meramec Dam and flooding of caves (including Onondaga in Meramec Basin), cave diving Missouri springs, cave gating, his work in Cherokee Cave (St. Louis), and his work in the caves of Onondaga Cave State Park and Meramec State Park. A lot of Don's contributions were made 10-20 years ago, but he was never recognized. He continues today with his efforts in mapping, interest in biology, and cave gating/conservation (Pilot Knob mine, which probably has the second largest gray bat population in Missouri).

—Lois Bronnert

Reading

Cumulative Index for the National Speleological Society Bulletin, Volumes 1 through 45, and Occasional Papers of the N.S.S. Numbers 1 through 4. Ira Sasowsky, ed., 1986, National Speleological Society. 202 pp, paperback, \$8.00.

This could be the most boring book you'll ever read, but it is a must for cavers with even a moderately serious interest in speleology. Ira Sasowsky has compiled an enormous amount of data into a highly useable reference book. Unlike some indexes where various caves or topics may be lumped together under a general heading, Sasowsky carefully read each issue of the *Bulletin* and made a specific keyword index of anything which may be of importance. Some articles generated over 200 keywords! For instance, James Wilson's 1979 article, "Glaciokarst in the Bear River Range, Utah," can be found under the keywords: Alpine Karst, Bear-River-Mountain-Range, Geochemistry, Geology, Glaciokarst, Hydrology, Karst, and Utah, among others. The utility of such a system is clearly obvious when trying to determine what has been written on a particular subject.

The Index is divided into three parts: a keyword index, a biological names index, and an author index. Keywords are listed alphabetically and citations are listed chronologically. With the exception of advertisements, everything that has appeared in the *Bulletin* is included in the Index. Also included are all *Bulletin* inserts and the discontinued Occasional Papers series which ran from 1954-1959.

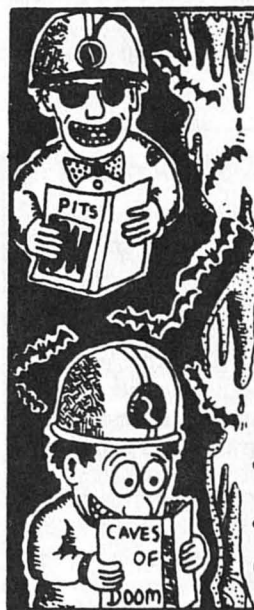
Occasional typos appear in the book, but they

are too few to be distracting. The layout and typestyle make for an easy-to-read format. The index should have been printed on a higher quality paper, something on a par with the paper the *Bulletin* is currently printed on; something that will better survive years of frequent use. And as I've already indicated, if you are seriously interested in any aspect of speleology, this book is something you will frequently use.

—George Veni

The Caves of Bexar County. Second Edition. George Veni. Texas Memorial Museum, 2400 Trinity, Austin, TX 78705; 1988. 300 pages, hardbound. \$24 (mail orders add \$2 for shipping; Texas residents add 8% tax). *Speleological Monographs 2.*

Bexar County, Texas, is not particularly well known for either caves or obvious karst. Veni and other cavers have tracked down 208 caves, but Robber Baron Cave, 1336 m long, is over twice as long as any other cave in the county. There is little surface karst. The main



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speleological interest in Bexar County stems from the fact that San Antonio is there. That city of close to one million people depends almost entirely on a karst aquifer for its water, and increasing sprawl poses two problems: unfiltered urban runoff through caves polluting the aquifer and the paving-over of caves. Indeed, 44 of the caves listed have already been buried or destroyed. Other than those dubious distinctions, Bexar County is probably known best, if at all, to NSS members as the location of Friesenhahn Cave, an important paleontological site, and the home of two species of blind catfish that are known only from deep artesian wells that supply San Antonio's water.

Nevertheless, Veni has come up with 300 pages of typeset fine print, including 184 cave maps and over 40 photos. Even the most insignificant caves (i.e., most of them) get paragraphs on description, history, and geology. Locations are given according to a scheme that is not stated, but appears to be millimeters from the south and east edges of the topo map. There are introductory chapters on the geology of the area as it relates to caves and the cave biology of the country, the latter contributed by James

Reddell. There are no unnamed caves or "for the record only" caves in Bexar County. They all have names, though some might as well be unnamed: Cave of the Cliff, Cave of the Creek, Cave of the Woods, and Cave with Blue Hammer In It add up to about 150 ft in total length. There is a certain tendency to scholarly overkill. The entire phrase "Edwards (Balcones Fault Zone) Aquifer" must appear a hundred times, as though the reader is presumed to be a very slow learner, and the fauna list contains an awful lot of "sight records" of "undetermined material," such as a not very exciting list of caves in which beetles were seen but neither identified nor collected.

The earlier "Caves of Bexar County" was an issue of the *Texas Speleological Survey*, published in 1961 by a different publisher and with different authors, so calling this major new monograph a "second edition" is rather misleading. ("Bexar," incidentally, is pronounced something like 'bear' or 'Bayer.' I have not been able to find out which, because Texans seem to think those words are pronounced the same.)

Caves of Bexar County sets a new standard

for county cave surveys in thoroughness, production quality, and unfortunately, price.

—Bill Mixon

The Association for Mexican Cave Studies has reprinted its *Activities Newsletters* numbers 1 through 7 in a single, bound volume. These issues have long been out of print. Number 1 was published in January 1975 and consisted of seven pages of trip reports and three crude maps. Number 7 was published in November 1977 and is similar in quality and format to the later issues, though it only has 33 pages. The whole set adds up to about 180 pages and contains much historical information, such as reports of the first explorations of Cueva de Infiernillo, expedition reports from Huautla and Sumidero Yochib, and the fact that "Cueva del Brinco is now well over a mile long." (Brinco and Infiernillo have since been connected, and their total length today is about 72 kilometers.) There is also, of course, much that has not been superseded by more recent discoveries. For sale for \$12 (\$13.50 postpaid) by AMCS, Box 7672, Austin, Texas 78713.

—Bill Mixon

40/25 Years Ago

By Dave Hughes

25 Years Ago

The August 1963 *NSS News* contains the annual membership listing and a biographical sketch of NSS President, George Moore. George was born in Palo Alto, California, and is currently working for the United States Geological Survey in nearby Menlo Park. Moore received a Ph.D. degree in geology from Yale University where he was a member of the student grotto. Speleological activities have taken George to many caving regions in the United States and, also, to Wales, France, Mexico and Yugoslavia. NSS cavers can thank George for his introduction of the word

"speleothen" and welcome him to the helm of the Society.

The NSS is approaching its 25th anniversary and its perpetual existence seems assured. Although sporting only 75 members its first year, a quarter century of growth has raised this total to over 2000 cavers. Furthermore, many of these spelunkers are affiliated with one, or more, of the 70 local chapters. Perhaps, much of this success is a direct consequence of the wisdom and enthusiasm of the Society's founders. A significant goal of these people is a positive attitude toward all aspects of

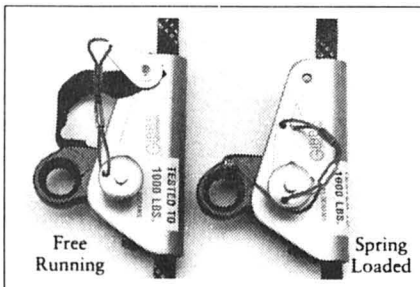
speleological progress including science, conservation and caving techniques.

40 Years Ago

The August 1948 *NSS News* reports that four members of the Charlottesville Grotto spent a great Fourth of July weekend exploring both Sinnit Cave and Thorn Mountain Cave. An afternoon's spelunking in Sinnit confirmed that there are three routes into the "Hall of the Mountain King" in addition to the familiar Silo passage. It appears that, at least, some of these routes were, in fact, chutes used by saltpetre miners to transfer earth to a lower level of the cave. In any event, the group subsequently headed over to Thorn Mountain Cave and agreed that it is much underrated. Several hours are required to explore the cavern which affords nice views of calcite formations in its Crystal Room.

The big Fourth of July Extravaganza for any and all NSS members has turned out to be the best attended cave field trip in U.S. history. Nearly 90 members and friends journeyed to Monroe County, West Virginia, from as far away as Philadelphia, Pennsylvania, and Greensboro, North Carolina. Participants visited Head of Mill Pond Cave, Laurel Creek Cave, Irons, Steele's and Coburn's in addition to Indian Draft Cave. Saturday evening saw members of the Charleston Grotto host a slide show for a standing-room-only crowd gathered at a local school. Thanks are due the NSS organizers who ran the event and the landowners whose thoughtfulness makes such gatherings possible.

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Ray's Review

By Ray Hardcastle

Karst and Cave Projects

Dave Belski reports on GYPKAP (Gypsum Karst Project) in the March-April *Southwestern Caver* (Vol. 26, No. 2), the Southwestern Region's newsletter. Over 1300 ft were surveyed in **Crystal Caverns**, making it the second longest gypsum cave in the U.S. at 2.33 miles. It is also the second deepest at 331 ft. The surveyed length of **Carcass Cave** is expected to rival Crystal Cave when all its enormous leads are pushed. The GYPKAP cavers also explored nearby **Owl Cave** and **Triple Engle Pit**. All four caves promise to yield more cave before the surveys are complete.

Dave Bunnell reports on the Southern California Sea Cave Survey's mapping of the **Cuyler Harbor Sea Caves** in the Western Region's *Cal Caver* (Vol. 37, No. 4). The three caves making up the Cuyler Harbor Sea Caves range from 10 to 13 m in length and are located in the only good harbor on the northeast side of San Miguel Island off the coast of California. A map by Dave Bunnell and photos by Bill Liebman accompany the article. The *Cal Caver* also includes project reports on caves in marble. Bob Richards reports on the caves of the White Chief Basin and Steve Knutson reports on the Marble Valley Project. The caves in White Chief Basin near Mineral King in Sequoia National Park are found in a bed of White Marble at an elevation of nearly 10,000 ft northeast of White Chief Peak. Richard's report includes a map of the basin, photos by Gregg Oelker, and maps of **Resurgence Cave**, **Marmot Cave**, **Seldom Seen Cave**, and **White Chief Snow Cave**. Knutson's Speleo Log for 1987 contains reports of efforts in the Marble Valley Project of northern California: the valley that includes **Bigfoot Cave**. The long drought in the west permitted access to more cave than ever. Three caves were found downslope from the Meat-grinder entrance to **Bigfoot Cave**. **Rainey Cave**, not entered since its discovery in 1977, was pushed 300 ft to a blowing constriction.

The "great" blowing crawl in **Wounded Knee** was pushed 150 ft to a dig. The Marble Valley Project for 1987 left three blowing leads and potential connections to Bigfoot Cave for 1988.

History

The Mar/Apr 1988 (Vol. 6, No. 2 *Massachusetts Caver*) features an article on early cave diving in the U.S. by John J. Fisher. Fisher started cave diving in the northeast in 1954, using a rebreather apparatus rather than SCUBA. Wearing a converted exposure suit and using the compact rebreather, Fisher made his first dive in New Jersey's **Farber's Drowned Cave** and even took an 8 mm black and white movie of the event. After several more cave dives in the northeast, Fisher moved to North Carolina in 1958 and became a marine diver never to return to cave diving.

Pittsburgh (Pennsylvania) Grotto's *Netherworld News* for Jan/Feb 1988 (Vol. 37, No. 1) contains a description of **Delaney's Cave** in Fayette County, Penn., that had been published in 1833 in a local newspaper, the *Westmoreland Republican and Farmer's Chronicle*. The unknown author of the article reported that they had been "about 1500 ft perpendicularly below the entrance." Tom Metzgar, who submitted the article, doesn't mention how much the cave has changed in the 150 years since this description was published.

Exploration

The same issue of *Netherworld News* contains a report by Walt Hamm on recent explorations in Greenbrier County, West Virginia. The survey of **Twin Columns Cave** was pushed to 2800 ft with one lead remaining. An attempt to sketch/survey nearby dead-bottom **Mossy Frog Pit** led to new cave when Barb Randall found a recently washed-open crawl at the bottom of the entrance pit. The crawl led to another pit with passage seen leading off the bottom, but they didn't have enough rope to continue. It is hoped that this lead will connect to **Twin Columns**, and provide the long-sought second entrance. Hamm reports that **Tree Root Cave**, near the resurgence, also deserves further investigation. Future grotto work trips in the area are being coordinated by Hamm and Ken Kramer.

DUG Scoops, the Detroit (Michigan) Urban Grotto's newsletter for April 1988 (Vol. 6, No. 6) has three trip reports on explorations in Kentucky. Joe Saunders reports on explorations in the "Lost Pit" area of **Pruett Saltpetre Cave** and Larry Bean and Keith Ortiz report on recent explorations in the "Toothsome Trail" area of the **Fisher Ridge Cave System**. The "Lost Pit" area survey of Pruet Saltpetre Cave yielded over 500 ft and extended the surveyed length to 3.2 miles. The explorations and survey in Fisher Ridge by Bean and Ortiz added 2200 ft

to the Fisher Ridge map from their 29-hour trip.

Doug Welker, writing in the *Cleve-O-Grotto News*, newsletter of the Cleveland (Ohio) Grotto, for April 1988 (Vol. 34, No. 4), reports on a new connection in **Hoaches Cave** in Geauga County, Ohio. Sue Taylor and her husband chased a rabbit into a narrow crevice that had a lot of air movement. Returning with digging tools, they were able to open a sandy crawl and crevice passage that led, after a couple hundred feet, to a room with a hole in the floor that drops down to Hoaches Cave. Vertical gear will be required to complete a through-trip.

A dig in **Sullivan's Cave**, Indiana, resulted in only 12 ft of progress, but gave the diggers a look at larger (10 inch high) passage just ahead. Tom Cholmondeley reports in the Greater Cincinnati Grotto's *Electric Caver*, April 1988 (Vol. 4, No. 24) that the dig in "Armstrong's Folly" gives hope that the removal of the mud fill will open up a continuation of the 40 ft wide by 20 ft high trunk passage.

Tom Nyce reports on exploring new pits and passages in Alabama's **Fern Cave** in the *Huntsville Grotto News* for March 1988 (Vol. 30, No. 3). Rappelling the virgin drop near the 155 ft pit, they found a 35 ft crawl that led to a 25 ft pit down to known passage. On another trip they were able to find a route to the bottom of the "Blowing Hole/Green Ladder" area without rappelling. The new route to the "Gold Passage" was proved out when they rappelled the 155 ft pit to the bottom and were able to get to the top again without vertical gear. In the same issue Bill Torode reports on his efforts to connect **Sawmill Cave** (AL 200) and **Bullfrog Cave** (AL 217). During several trips to Sawmill Cave, Torode and friends were able to map and explore a couple of thousand feet of cave and get very close to Bullfrog Cave, but couldn't make the connection. Exploration and surveying in Bullfrog Cave was finished at 1536 ft with the caves just 50 ft apart.

The *Cascade Caver* for Jan/Feb 1988 (Vol. 27, No. 1), newsletter of the Cascade Grotto (Seattle, Wash.), contains a trip report by Jim Pisarowicz on recent discoveries in the "Silent Expressway" area of **Wind Cave** (South Dakota). They lost the wind in impenetrable cracks as they tried to follow it down and in a yellow clay-floored maze when they followed it up. Pisarowicz next turned his attention to climbing up Plummer's Pit. He found a rotted 2x6 jammed across a chimney 25 ft up. Continuing the 100-ft climb, he crawled through a hole at the top into Shattered Hall, where he found a piece of newspaper dated 1895. Climbing up to the top of Shattered Hall, he found the Shattered Sky Room where the leads ended.

Carlene Allred reports on Alaskan cave discoveries in the April 1988 *Alaskan Caver* (Vol. 8, No. 6), newsletter of the Glacier Grotto. Carlene and husband Kevin spent their two-week vacation solo exploring and mapping caves on Prince of Wales Island. They had to swap caving and babysitting duties because of their three small children. Even under this handicap, the couple were able to map 2189-ft

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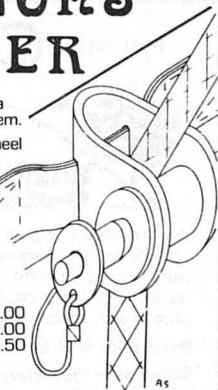
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Starlight Cave and survey 1887 ft in **El Capitan Cave**. Three ink sketches of their adventure and a map of Starlight Cave are included in Carlene's report.

Cave Maps

The Fall 1987 *Tech Troglodyte*, journal of the Virginia Tech Grotto (Blacksburg, VA), has a map of 87-ft **Jimzuther Cave**, Giles County, Virginia, by Mike Futrell on the cover. Another Futrell map of a Giles County cave, 460-ft **Hodge's Cave** in the same issue, includes a short description of the cave. The caves may not amount to much, but the maps are good.

Excellent fold-out maps of **Coon Cave** and **Copperhead Cave**, both in Westmoreland County, Pennsylvania, can be found in the March-April 1988 *Netherworld News* (Vol. 37, No. 2), Pittsburgh Grotto's newsletter. Both maps were drawn by Walt Hamm. **Coon Cave** has a total surveyed passage length of 794 ft and a vertical extent of 65 ft. The surveyed length of **Copperhead Cave** is given as 3926 ft and its vertical extent as 338 ft. Hamm has 24 x 20-inch copies of Copperhead Cave available while supplies last.

China Pig Hole in Wright County, Missouri, is the featured article in the Ozark Highland (Springfield, Missouri) Grotto's quarterly journal, *Ozarks' Underground* for Spring 1988 (Vol. 10, No. 1). A description, photos and a map by Robert Taylor accompany the article. According to Taylor, cavers seem to be intrigued by this cave's large, but severely truncated, main passage and tantalized by the potential of the surrounding karst area, even though the cave's surveyed length is only 1700 ft.

Underwater Passages

The Winter, 1988, *Rocky Mountain Caving*, Colorado's regional newsletter, has two articles by Steve Sims on his 1987 push of the sumps in **Spring Cave** and **Twenty-Pound Tick Cave**. In Spring Cave they were able to reach the fourth sump and dive it, but were unable to fully explore the underwater room beyond. In Twenty-Pound Tick Cave, they dove the sump near the entrance, but were unable to travel beyond previous exploration limits in the long, wet passage beyond.

Jeffrey Bozanic describes exploration reel modifications that enable a cave diver to tie off

the end of his exploration guide line using just two hands instead of the normal seven. Writing in the February, 1988 (Vol. 15, No. 1), *Underwater Speleology*, Newsletter of the NSS Cave Diving Section, Bozanic describes and illustrates with photographs the alterations to a standard diving-line reel necessary to perform this feat. . . . Also in the February issue, Roger Werner addresses the problem of protecting expensive dive equipment from theft. Werner has been ripped off twice while he was diving; each incident cost him more than \$1000. Other divers have related cases where they've had equipment stolen that was underwater. Most cases seem to involve theft of expensive dive equipment and personal valuables out of caver's cars while they were underwater. Werner shares his ideas on hiding car keys, securing your car, locking decompression tanks underwater and other strategies for making things more difficult for thieves to rip-off cave divers.

Safety

Of course, getting ripped-off while caving is not just a problem for cave divers. Three cavers were robbed while they were in **Signature Cave**, Rockcastle County Kentucky, by a thief on horseback! Ron Welch tells the tale in the February 1988 (Vol. 22, No. 1) *Kentucky Caver*, newsletter of the Blue Grass Grotto. The cavers spotted the thief as they emerged from the cave and gave chase. By following hoofprints on the side of the road, they were able to catch up with the highwayman and alert the sheriff. Three hours later the law and cavers had apprehended the 14-year-old desperado and retrieved all their valuables.

Asked to write a little about the topic of cave safety for the February 1988 (Vol. 24, No. 2) *Speleograph*, Oregon Grotto's newsletter, Luurt Lieuwenhuis digresses into a discussion on lights. Lieuwenhuis considers carbide's biggest advantage to be *nostalgia*. He suggests cyalume as the best backup light source.

But perhaps the use of carbide as the main source of light for caving is not a digression from a discussion on cave safety. An accident in **Gilley's Cave** in southwestern Virginia as reported by Ray Rimmer in Central Carolina Borehole Grotto's *Borehole Banter* for April 1988 (Vol. 1, No. 5) occurred while the group was engaged in changing carbide. An inexperienced caver fell down a 22-ft drop while the more experienced cavers were attending to their lamps. The victim's injuries turned out to be minor, but that wasn't known until after a 20-hour rescue from which the last cavers emerged from the cave clutching their last candles!

Luurt Lieuwenhuis addresses caving headgear in his safety column in the March 1988 *Speleograph* (Vol. 24, No. 3), newsletter of the Oregon Grotto. Lieuwenhuis points out that an adequate hardhat should primarily serve to protect brain cells from being bashed in and secondarily as a platform for your cave light. Only then should consideration be given for other uses of the hardhat, such as a digging tool or a carrying container for dead bats. Although light-hearted, Lieuwenhuis' articles are informative.

The National Cave Rescue Commission's *NCRC Newsletter* for January-April 1988 (Edition 10) features an authoritative article on Hypothermia by J. Cooper, EMT-P.M.E. This article should be in every caver's library and every rescue group should be thoroughly trained in how to recognize and reverse the effects of hypothermia. In the same issue, Bill Putnam writes on his accident and rescue in **Ellison's Cave**, Georgia, last year. Putnam's foot was jammed in a chimney by a large rock about 50 ft above TAG Hall at the bottom of 586-ft Fantastic Pit. He describes the accident and rescue from a victim's perspective. Sketches by Alan Padgett of the rescue rigging of Fantastic Pit and the 125 ft Warmup Pit are included with Putnam's report.

Judy Vittetoe mentions an accident at southern Arizona's **Onyx Cave** during the joint ARA/SWR (Arizona Regional Association/Southwestern Region) in early April. Anita Pape fell as she was coming out of the cave and injured her back. Luckily, three members of the Southern Arizona Rescue Association and plenty of willing volunteers were available onsite. The rescue took five hours and the Dept. of Public Safety sent a helicopter to take the victim to the Tucson Medical Center.

Bill Hanson extolls the virtues of chicken loops in the February 1988 *Huntsville Grotto Newsletter* (Vol. 30, No. 2). Hanson explains the dual function of chicken loops around the vertical climber's ankles; keeping the foot loop on the foot *and* as a safety for the climbing system. Hanson notes that chicken loops secured with D-rings will not fulfill this second purpose. One must be able to hang from the heels if upper ascenders fail, but D-rings "are not suitable in life-supporting applications," according to John Weinell. Yet John Weinell makes chicken loops secured by D-rings!

Other Things in the Dark

Have you ever been on trips where your feet are so cold that you don't want to move your toes because you're afraid they might crack and fall off? Walt Hamm asks this question in the January-February 1988 *Netherworld News*, Pittsburgh Grotto's newsletter. Seeking a solution to this malady, Hamm tried various remedies, including wearing two pairs of wool

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socks, or carrying an extra pair of socks in a Ziplock bag. But immersion of feet in cold water quickly sapped their warmth. A polypropylene liner helped, but not enough on slow-moving survey trips. Wetsuit booties are more thermally efficient, but having "soles," they don't fit into boots. Hamm's ultimate solution is 1/8-inch-thick neoprene socks worn over a thin polyprop liner which makes them easier to get on and off. They're flexible enough to get in and out of boots easily and only cost \$20 a pair. Hamm writes that these thermally efficient goodies are available from a lot of mailorder camping companies.

Looking for an inexpensive, maybe even cheap, electric headlamp? Jonathan Beard has written a guide to cheap electric headlamps in the *Ozarks Underground* Spring issue (Vol. 10, No. 1), the quarterly journal of the Ozarks Highlands (Springfield, Missouri) Grotto. Beard evaluates five inexpensive headlamps suitable for caving and costing \$20 or less. The four D-cell Justrite is the most expensive and gives the best light. At the other end of the scale is a two-AA-cell Radio Shack light for a mere \$4. The others considered were Coghlan's four AA-cell, Wonder Lite three D-cell, and the Ever New four AA-cell light. The Ever New looks like a good compromise of light weight with good intensity, but it's not cheap at \$18. Beard makes no "Best Buy" recommendation in his guide.

For the upscale electric caver with a "real" electric headlamp, Bill Oldarce's article on homebuilt charging systems in the *Florida Speleologist*, Winter 1987 (Vol. 24, No. 2),

newsletter of the Florida Speleological Society, should be helpful. Using simple circuit diagrams, Oldarce shows how to make your own constant-charging system, necessary to recharge some cave light systems. Oldarce warns that such a system should not be used to charge lead-acid batteries (Wheat or MSA)! The constant-voltage charging system necessary for these types of batteries is promised for the next issue of the *Florida Speleologist*.

Obituary

Clayton Pauley NSS 26736

Clayton Pauley died unexpectedly June 7 of heart failure at his home in Slingerlands, New York. A person who did many things well, his employers kept him so busy that his many friends never saw as much of him as they wanted—perhaps that would not have been possible. He was someone we all wanted to know better, whom we all wanted to share our discoveries with. Newspaper obituaries noted that Clayton, age 35, was an active "spelunker and white water canoeist"—and lots more. We miss him.

—Roland Vinyard

SLIDES TO PREVIEW CAVING DEEP IN THE HEART OF DIXIE

"Deep in the Heart of Dixie - NSS Convention 1989" will provide just a taste of what's in store in TAG country (Tennessee, Alabama, Georgia), home of the 1989 Convention.

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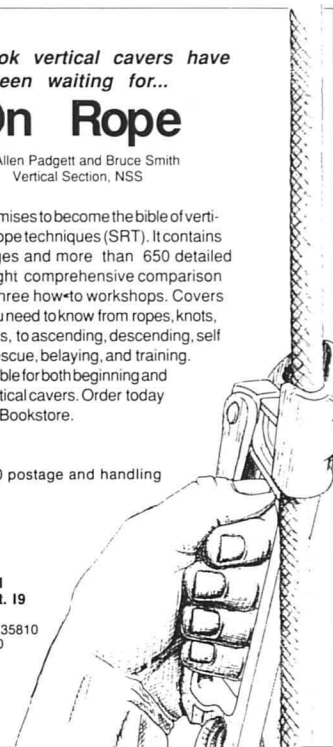
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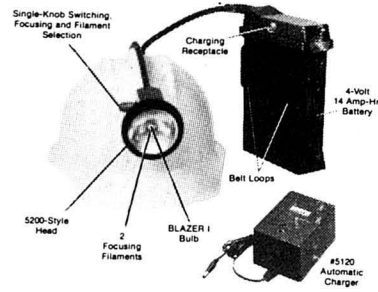


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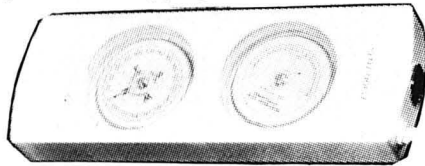
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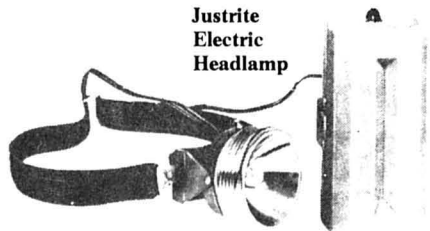
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