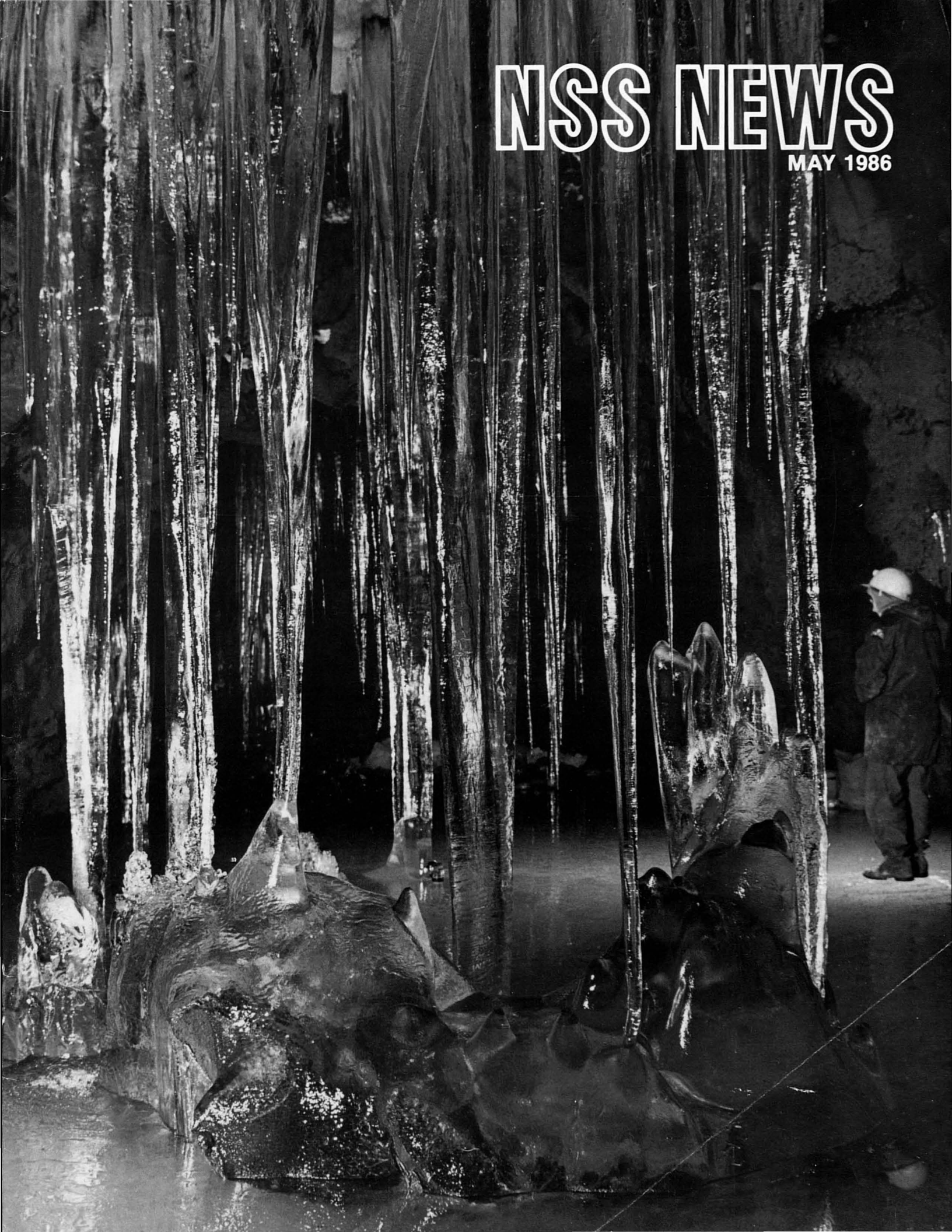

NSS NEWS

MAY 1986

CALENDAR OF EVENTS

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

May 2-4—MAR Regional Meet, new OTR site. Caving and work on property. Contact: Carol Tiderman, 7600 Pindell School Rd., Fulton, MD 20759, (301) 792-0742.

May 4—North Country Region Meeting, Cedar Bluff, Iowa. Contact: Michael Bounk, RR3, Box 194, Tipton, IA, (319) 886-6614.

May 4-7—82nd Annual Meeting of the Association of American Geographers in Minneapolis. Proposed Sessions on General Karst, Pseudokarst, Karst of the Upper Midwest, and open time. Contact: George N. Huppert, Geography Department, University of Wisconsin-La Crosse, La Crosse, WI 54601, H: (608) 784-8652, W: 785-8333.

May 23-26—Kentucky Speleofest, '86, Metcalfe County, KY. Contact: J. Pat Stephens, Louisville Grotto.

May 29—AAAS Meeting in Philadelphia—Groundwater Pollution in Karst Terrain. Registration and information contact: AAAS, 1333 H Street, NW, Washington, D. C. 20005.

June 14-15—SWR Work Regional, Tularosa, NM. Final preparation of the Lion's Park Site for the 1986 NSS Convention Campground. Workers are asked to bring construction & garden tools. Contact: Jeff Lory, P.O. Box 6084, Las Cruces, NM 88006.

June 14-22—2nd Bighorn Cave Expedition, Armpit, Wyoming. Open to 15-20 NSS cavers to work in survey, inventory, exploration, and support. A $60 fee covers special equipment, supplies, and food. Contact: Bob Brown at (206) 569-2724, 7 to 10 pm (PST) Mon-Thurs.

June 22-28—NSS Convention, Tularosa, New Mexico. Contact: NSS Convention, P.O. Box 2763, Las Cruces, NM 88004 or call Doug Rhodes (505) 877-1159.

June 29-30—*NSS News* Open House begins 7:00 PM, June 29. Contact: Doug and Glenda Rhodes, Adobe Press, 515 Isleta Blvd. SW, Albuquerque, NM 87105, (505) 877-1159.

June 29-July 5—National Cave Rescue Commission Seminar at Carlsbad Caverns, N.M. Contact: Jackie Barlow, Box 784, Culloden, WV 25510, (304) 743-5455 for info.

July 3-6—SERA '86 Summer Cave Carnival, Bee Rock KOA Campground, Monterey, TN, hosted by Nashville Grotto. Contact SERA '86, c/o Brenda Martin, 4084 Port Cleburne Drive, Hermitage, TN 37076.

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

Aug. 8-10—33rd Annual Indiana Cave Capers high above the Ohio River at Buzzards Roost Campground near Alton, IN. On-site banquet features Texas-style pig roast via pre-registration only. Contact: Central Indiana Grotto, P.O. Box 153, Indianapolis, IN 46206, (317) 897-1940.

Aug. 16-17—Minnesota Speleological Survey Annual Corn Feed. Forestville State Park, near Wykoff, MN. Contact: Calvin Alexander, (612) 822-9357.

Aug. 28-Sept. 1—Old Timers Reunion. Daily, W. Va. For preregistration blanks or information contact Beth Ann Webb, registrar, 3830 Bell Road, Burtonsville, MD 20866, (301) 384-0316.

Sept. 19-21—9th Annual Texas Oldtimer's Reunion. Place to be announced.

Sept. 26-28—Fall MVOR in Perry Co., Mo. featuring Central Perryville karst. Good food & fun. Contact: MMV Grotto, P.O. Box 3733, Kirkwood, MO 63122.

Oct. 10-12—TAG Fall Cave In hosted by Dogwood City Grotto. Details to be announced later. Contact: Bill Hardman, 1865 Ridgewood Drive, NE, Atlanta, GA 30307.

Feb. 9-11, 1987—Second Multidisciplinary Conference on Sinkholes and the Environmental Impacts of Karst, mtg & field trip. **Abstract deadline: Aug. 15, '86; manuscript, Nov. 14, '86.** Contact: Dr. Barry F. Beck, Director, Florida Sinkhole Research Institute, U. of Central Florida, Orlando, FL 32816.

Aug. 3-7, 1987—NSS Convention, Sault Ste. Marie, Michigan. Contact: David Luckins, 20840 Botsford Dr., Farmington Hills, MI 48024, (313) 471-0716.

June 1988—NSS Convention, Hot Springs, South Dakota. Contact: John Scheltens, 303 North River Street, Hot Springs, SD 37747, (605) 745-4366.

From the Editors

This issue contains one ad soliciting funds for the Trout Cave gate and three letters opposing the gate. This might seem strange to an outsider or, perhaps, even to a newcomer to the NSS. Rest assured, folks. What you are witnessing is democracy in action, not *Apocalypse Now.*

Cavers are a strange breed—fiercely independent, yet strongly dependent when working as part of an underground team or expedition. They live hard, party hard, play hard and, yes, when it comes time to fight, they fight hard too. Fights and feuds have always been part of the NSS turf, just as they are part of any close relationship between people. Many good things have resulted from the feuds; the Congress of Grottos, for instance, grew out of a conflict in which some members of the NSS were dissatisfied with the way the Society was being run.

As Steve Knapp noted in his letter elsewhere in this issue, we have renamed the "Letters" column "Cavers' Forum" in order to encourage more discussion of controversial issues such as the Trout Cave gate.

By the way, we expect the gate to be discussed heavily at the convention and understand that some BOG directors are planning on making certain that the subject is raised again. Sounds as if the party has just begun.

In the meantime, we encourage readers to let our readers know where they stand on this important issue. Please keep your letters fairly brief—we don't have the room to print a thesis.

We don't mind the controversy; it's all in the family.

Doug and Glenda Rhodes

Cavers' Forum

REPLACEMENT NEWS?

The information in the *News* doesn't seem to make it clear where one should inquire about missed copies, but I assume I should write directly to you. I have never received the February 1986 issue. I'd appreciate it if you could send a replacement.

My congratulations, incidentally, for consistently keeping the *News* on time—that's more important to me than anything else about it. (I only wish whoever is supposed to be putting out the *Bulletin* was doing so well.)—*Donald G. Davis, NSS 4956RF, Denver, Colorado*

Ed. Contact the NSS Office for replacement of missing or mail-damaged issues of the NEWS. Andy Flurkey of Lakewood, Colorado, was named BULLETIN editor at the March BOG meeting. One of his primary objectives will be to get the BULLETIN back on schedule.

SAME COVER?

I noted that the cover of the March 1986 *News* was the same photo as that on the October 1980, Part 2, *News*. I admit *your* placement of text obscured less of the pipistrelle, but aren't there enough photos around to avoid repeating them as covers within the span of a few short years? The lack of color is bad enough.—*Carl D. Snyder, PE, NSS 21806S, Clifton Park, New York*

Ed. Blush... we'll be more careful in the future. All color is now being supported by the NSS News Photographic Endowment Fund. You will see some color this year and more color as the fund continues to grow.

KEVLAR ROPE ALERT

In doing some research for a new product, I have been alerted to several shortcomings and possible inadequacies as regards the use of Kevlar cored ropes in climbing situations. It is the current rage to use 5.5 mm Kevlar cored rope for such things as stringing chocks, fixed lines, rappels, and as I recently learned, some are using it with mechanical-type ascenders.

While the high strength properties of Kevlar ropes would seem to make them ideal for these applications (and they have been promoted as such), domestic rope manufacturers, and in fact Dupont, manufacturer of the raw material, tell a different story. Before going into Kevlar's properties, however, I'd like to make one point. A 5.5 mm rope is one-half the diameter of a typical 11-mm climbing rope, but it has only one-quarter the cross-sectional area. Thus, there is only one-quarter as much material to actually cut through as opposed to a typical climbing rope. While the figures show that Kevlar is harder to cut than nylon, a good sharp knife will virtually sail through either type rope. John Harlin was killed when a rock severed his rappel rope—5.5 mm Kevlar increases the chances of this happening by a factor of 4!

The three rope manufacturers I contacted all recommended against the use of Kevlar cored ropes under these conditions. As a matter of fact, the Technical Director of one described the use of an ascender or descender on Kevlar cored ropes as a "very poor situation" due to the "severe abrasion/flexing/tension problems" inherent in Kevlar cored ropes. One of Kevlar's most interesting traits is its abrasion resistance, or, more properly, its lack of it. Kevlar has an abrasion resistance about 1/12th that of most polyester ropes and about 1/15th that of nylon. More importantly, though, is its high fiber wear factor. A test was run recently on a Kevlar cored rope in which a section of rope was taped and clamped off. A 10 lb load was added and the rope cycled back and forth 180° for half a million cycles. The result? When the rope sheath was opened, the core had simply disintegrated! Kevlar, while very strong initially, has a very short fatigue life!

Kevlar does not like being put into compression. Loading and bending it severely lowers its tensile strength. The loop break strength is one-half that of the

continued

NSS NEWS

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TYPESETTER: Linda Starr **PROOFREADER:** Jack Dorsey

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

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CONTENTS

COVER: Jot Dean Ice Cave in the Mt. Shasta Area of northern California. This photo by Charlie and Jo Larson won a Merit Award at the 1971 NSS Photo Salon. It was shot on 2¼ x 3¼-inch plus-x film using a Graflex camera with two flashes.

straight break strength. When designing a pulley sheave for Kevlar rope, a sheave diameter to rope diameter ratio of 10:1 is called for. In other words, the sheave in a properly-designed pulley for 5.5 mm Kevlar rope should measure about 4¼ in. diameter. Furthermore, the sheave cross-section for Kevlar ropes is totally different than it is for nylon or polyester. There is, to the best of my knowledge, not a mountaineering or rescue pulley in current usage that meets these criteria. This minimum bend radius has serious implications for the use of Kevlar ropes in chocks. When Kevlar is bent over a tight radius such as it is when stringing chocks, any load applied is first supported only by the outer fibers in the bend. As these fibers begin to rupture, the load is progressively transferred towards the center of the bend until total failure occurs. While this is a normal phenomenon, it is especially critical in Kevlar due to its low stretch characteristic which serves to accentuate the problem.

Of all the contacts I made, by far the most optimistic came from Dupont. I was told that "this is not an ideal application for Kevlar, but it might work sufficiently." The emphasis here is on "might" as Dupont does not have the data to prove the statement. Traditionally, climbers as a whole have been slow to accept new technologies, faddish gadgets and mechanical devices with good reason: most would prefer to risk "buying the farm" for reasons of their own shortcomings over which they have some control rather than the failure of a mechanical widget over which they do not. Over the past few years, we have witnessed a slow drift away from our traditional values which to some extent has made it possible to push the limits ever higher. The price seems to be an accompanying push on the limits of safety! Is that acceptable?—*Ronald K. Kirk, Jr., President, CMI, Franklin, West Virginia*

MORE ON FX-2

The FX-2 battery pack should *not be charged for more than 16* hours, to avoid possible damage.—*John Ganter, NSS 22870, State College, Pennsylvania*

TROUT ROCKS GATE—TOO MUCH MONEY!

Whoever decided to change the name of "Letters" column to "Cavers' Forum" should be congratulated, for it is the only place where many of us can discuss pertinent issues and trade information.

One controversial issue now facing the NSS is the proposed gating of Trout cave, which is prominently mentioned in most of the BOG candidates' platform statements. While I believe that cave conservation and protecting endangered bats are very important, I do not support the gate on Trout Cave. Simply put, it does not make sense to spend thousands of dollars to save a few bats. The NSS is an organization of limited resources, and many more caves and their bat populations can be protected by using that money where it can accomplish more per dollar. I have heard estimates that the gate will cost upwards of $20,000. Why not use the funds to gate 10 caves with larger colonies of bats? I am all for managing cave resources in a responsible manner, and spending all that money for a *temporary* gate on the unproven hope that bats will return to Trout Cave does not seem very responsible to me.

I urge other cavers to use the "Cavers' Forum" to put forth their opinions about this issue. Will the gate really cost that much? I have heard only one estimate. The point is that we as an organization need to make a well-informed decision. The more points of view that can be exchanged, the better the chances that the final action will reflect the desires of a majority of the NSS membership. Surely, not all will agree on what's to be done. However, through discussion we can at least come to understand the opinions and objectives of others. —*Steve Knapp, NSS 25412*

Everytime I think of the Trout Cave Gate Project, I can't believe I belong to a Society that solicits money to buy a tourist cave, finds two bats and solicits money to close the cave. What does that come to?... $10,000 a bat? My life insurance isn't even that much...then again, I'm not an endangered species or am I??? Find two of me!!! Why don't we build these guys a nice home somewhere else in the valley in one of the many other closed caves?

What I'm really having a tough time coming to grips with is that I contributed to the original purchase...so I could feel as if I "...owned a piece of the 'Trout' Rock." Wouldn't it be grand to be able to walk through a cave and feel ownership (partial)? Bottom line—it appears as if we're setting a precedent and those of us who used to open our wallets will now be less than generous.

I'm a caver, not a gater.—*Bruce Smith, NSS 12458, Hixson, Tennessee*

Southwestern cavers have long adapted to gated and closed caves over the last 10+ years, but usually the gates are for better reasons than protecting a minute number of endangered bats—hazards in the cave, mineralogical and paleontological resources, large numbers of bats or other rare critters, historical resources. I was initially supportive of the gating of Trout Cave, thinking that if we have to tolerate closed caves during some seasons and most of our caves are gated year-round, eastern cavers can bear with similar restrictions as well. Now that we have been further informed of the situation, it appears to be the general consensus here in the Southwest that the NSS has gone too far this time, wasting money on a *temporary*, unpopular and risky venture. Southwestern cavers would prefer to see this cave left open or the price of managing it significantly reduced. —*Linda Starr, NSS 11384F, Albuquerque, New Mexico*

Reading

***AMCS Activities Newsletter No. 15.* Peter Sprouse, Terri Treacy Sprouse, editors. Association for Mexican Cave Studies, P.O. Box 7672, Austin, TX 78713; December 1985, 96 pp. [with index]. $8.00 softbound, $12.00 hardbound, postpaid in U.S.**

Veteran cavers who always eagerly await the next *AMCS Activities Newsletter*, or new cavers wondering what Mexico's all about, will welcome issue No. 15 of what long has been the publication of record on Mexican caving. Issue No 15, dated December 1985 but mailed in late February, 1986, has the usual plethora of exploration articles and maps (including three fold-outs, one in color) and expertly selected photographs. Halftone quality from the Speleo Press ranges from good to excellent—there are no poorly reproduced photographs—and it's all wrapped into a nice package between two color covers, including Keith Goggin's stunning multiple-flash view of the expanses of Anthodite Hall in Sotano de San Agustin. The Sprouses manage to present it all in such a way that newcomers won't feel lost and veterans will have plenty to smile about.

This issue shows much-improved attention to editing and proofreading when compared with past efforts from the AMCS, and the articles are laid out in an appealing fashion. No. 15 also exhibits an increasing participation by Mexican national caving groups. Major updates are presented on the 1984-85 efforts in or near Sistema Purificacion, the Xilitla area and Sistema Huautla. Recent mapping by Projecto Espeleologico Purificacion members has extended Sistema Purificacion—Mexico's longest—to more than 55 km in length, and PEP cavers also have significantly expanded nearby Cueva del Tecolote, now 7015 m long and 231 m deep. A list of the 10 longest and 10 deepest caves in the Purificacion area complements the text.

Elsewhere, Mark Minton recounts last

Continued on page 129

honduras

explorations of the Rio Talgua

By Larry Cohen

PROLOGUE

I met Marc on a heavily rutted dirt road in the Bay Islands. We had been picking our way across the washouts and navigating our overloaded pickup through the deep pools of thick mud which pass as Roatan's only highway. Suddenly, from out of a "pulperia," sprinted a most unHonduran-looking redhead. He was overburdened by his pack and waving his arms wildly to flag us down. And so we added this unusual hitchhiker to our own rowdy herd as we continued into French Harbor.

While enjoying a few drinks dockside at Romeo's Restaurant, the hitchhiker and I began to converse in Spanish. "So you're from France," I said. "There are some tremendous caves there." Marc told me he was a caver and belonged to the Speleoclub de la Seine in Paris. From that moment on we became close friends.

THE CAVE

Marc had been exploring two caves near Catacamas in the Department of Olancho in the company of a Peace Corps volunteer from Wisconsin named Beto Santell. The caves were located up a river valley less than an hour's hike from a small "aldea" named Guanaja. At a Peace Corps party in Tegucigalpa, Marc introduced me to Beto, who mentioned that a deep, unexplored drop existed in one of the caves. There was never any doubt. We arranged to visit Beto and the caves over Veteran's Day weekend.

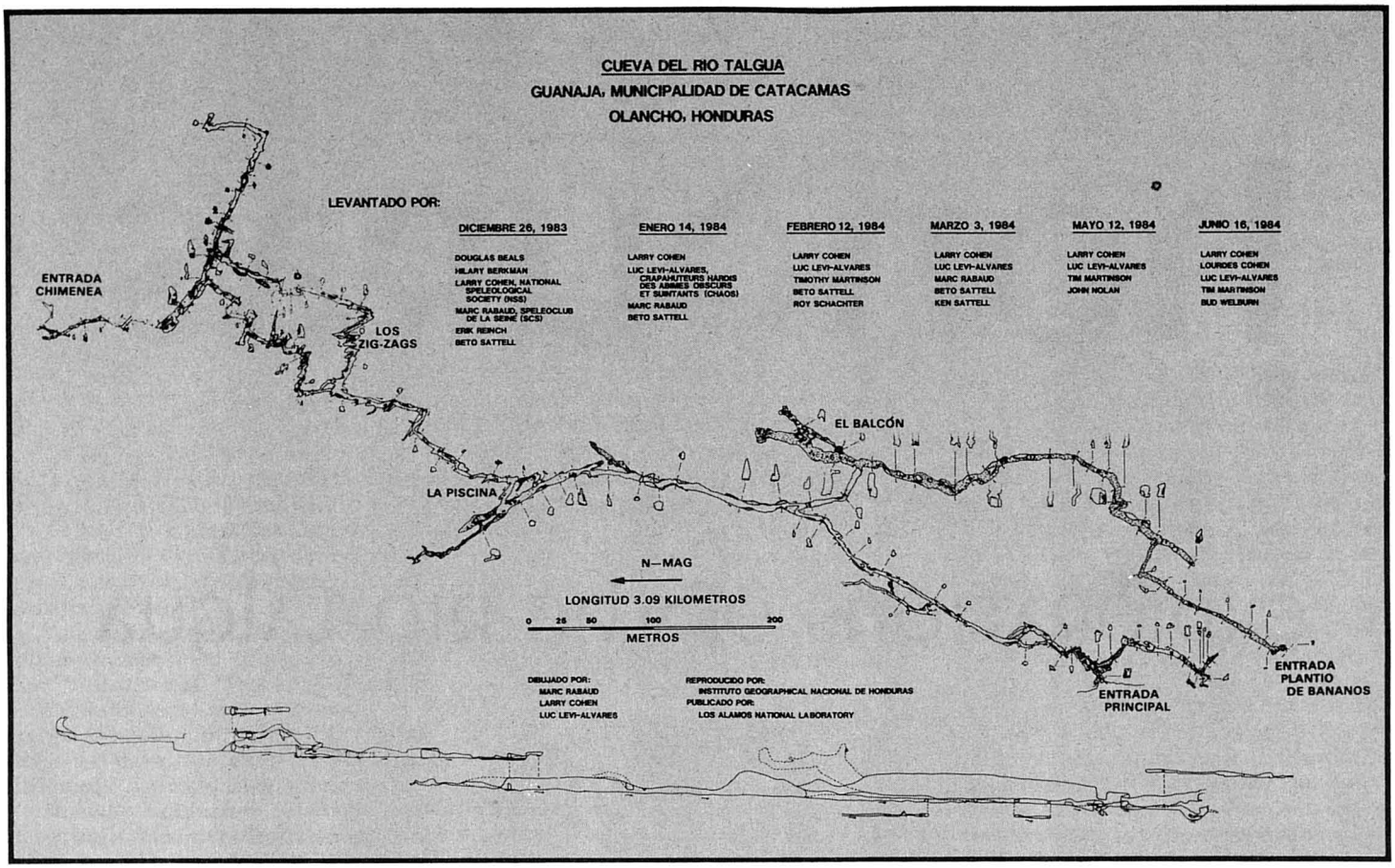
We departed Tegucigalpa late Friday afternoon for the two-and-a-half-hour drive through Olancho's pine forests and cattle grazing valleys to Catacamas. Arriving in town, Marc and I criscrossed the deeply rutted streets in search, first of Beto's residence, then of Beto himself. We found him in the town plaza with friends and convinced him to accompany us to a restaurant for carne and frijoles. We talked late into the night and crashed on Beto's floor.

Since this was our first trip together, Marc and I did not plan to survey the cave. We expected only to explore a bit and perhaps take some pictures. Beto, unfortunately, had to teach that day at the local agricultural school and was unable to accompany us. Early that morning, Marc and I set out for the first of what would be numerous trips in the Cueva del Rio Talgua.

We parked the car beside a white plastered hut from where emerged an army of children of all ages, only the oldest half dozen or so wearing any type of clothing. We proceeded to hike up the valley, the trail becoming progressively narrower, the rustic lodgings becoming even more primitive. Hump-backed Brahma cattle occasionally straddeled our path. We eventually waded the rushing Rio Talgua and continued under a canopy of banana plants and tropical forest to a precarious footbridge. Underneath flowed a stream which emerged from an impressive 8-m-high cave entrance, less than 50 m away.

A side passage climbed to the right from the entrance room; however, it was the main stream passage which beckoned us forward. From a narrow slot in the rock, water cascaded over a 4-m fall; a convenient bypass above the stream over a boulder wedged in the slot provided access over the rushing water. Above the fall, the stream widened and leveled out; we quickly moved ahead in the knee-deep stream.

I was unprepared for the cave's shear size and beauty. The main stream passage continued for what seemed like an eternity (actually less than a kilometer) to a pool which we declined to enter. Flowstone in various forms lined the walls. Later we backtracked to the cave's major side passage, dry with a floor of hard mud, but every bit as large as the stream passage. We marveled at the size of the old formations and tremendous breakdown as we scrambled over the broken floor. Close to the end of the trunk passage, Marc led me through a much smaller, narrower passage to a second, albeit less impressive, entrance which looked down on the bright, sun-drenched forest through which we had



walked earlier.

The next morning, escorted by Beto and a few of Catacamas' Peace Corps contingent, Marc and I hiked up the valley again; this time however, we travelled farther to the Cueva del Rio Talgua Grande. The 20-m-wide by 10-m-high entrance halfway up the mountain yawned open into a stupendous cavity, strewn with huge breakdown and gigantic flowstone columns reaching 20-30 m to the ceiling. The room was the cave. We picked around the chamber for a few hours, without really seeing all there was.

THE SURVEY

On Christmas Day, Marc and I returned to Catacamas to meet with Beto, Hilary Berkman, Beto's girlfriend from Missouri, and with Peace Corps Volunteer Douglas Beals, and a local friend, Erik Reinbach. This time, Marc and I were prepared with 40 meters of rope and vertical gear. Beto led us into the dry passage and up the left-hand fork to where he had found the drop. We climbed up a good distance to a balcony which overlooked a large, dark chasm. We rigged our rope and Marc descended only to find himself, 22 m later, on the floor of the passage we had just climbed. So ended the mystery surrounding the pit in Cueva del Rio Talgua. With our remaining time, we surveyed from the pool to the entrance.

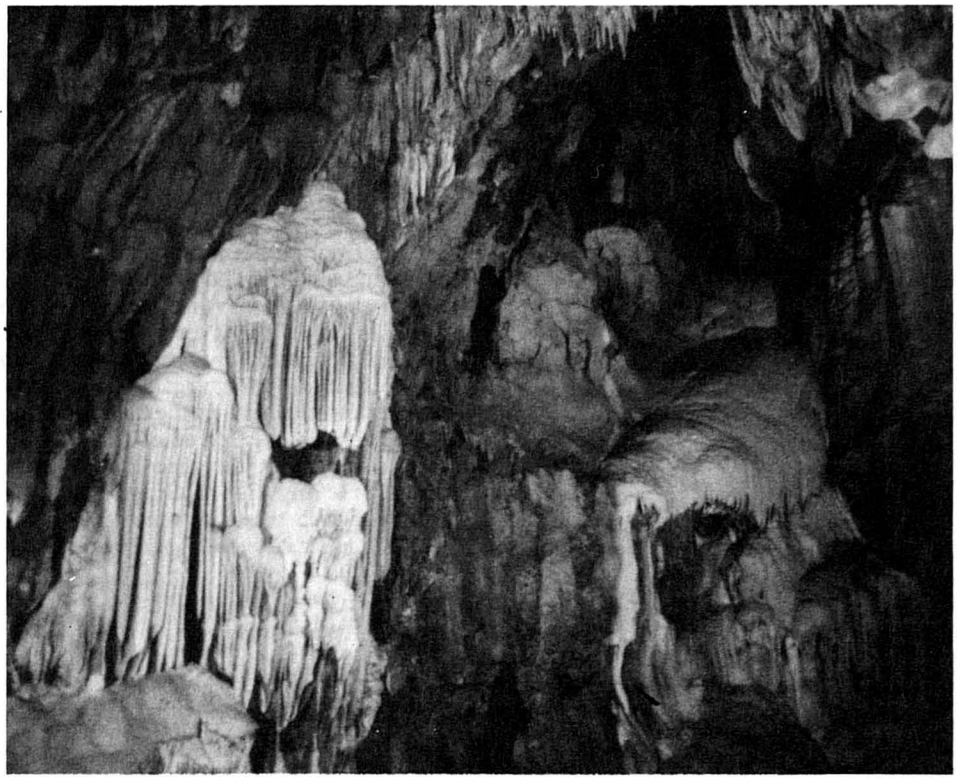
Our January 14, 1984, trip would be strictly surveying. Marc, Beto, and I were joined by a recently-arrived French caver, Luc Levi-Alvares from CHAOS (Crapahuteurs Hardis des Abimes Obscurs et Suintants), a caving club near Paris. Our first objective was the side passage at the entrance. Eight stations into the passage, a stream entered from the left, flowed for a moderate distance, then disappeared down a hole to emerge a short distance away as a spring on the river. At the end of 21 stations, we could see light, but no exit. Next we pushed a low, muddy crawl on the left of the main stream for 13 stations before backtracking to drier terrain. Two more leads fell before our tape and compass and, before leaving, we felt a quick jaunt into the pool might yield a few extra meters—a fine culmination to a full day's work. The pool, however, did not cooperate, and although the water at times reached our chins, it didn't sump. We had found a new and unspoiled section of the cave. Total surveyed length had reached 1405 m but we had only begun.

We returned in February to finish surveying the dry section of the cave to the second entrance and to push the cave survey beyond. Marc, who was travelling in Guatemala, missed the trip. Beto, Luc, and Tim Martinson and Roy Schachter, rounded out our survey team. The dry survey went quickly in 41 stations and several hours later we were enjoying the bright sunshine above the banana plantation.

After a brief lunch, we returned to the main entrance and the water passage. The water was not cold and the surveying was quite tolerable in our T-shirts. The cave soon narrowed to a short sand crawl, then opened into walking stream passage. On we surveyed through numerous zigzags where the stream kept hidden some bathtubs for the unwary. We pushed up one sliding board-shaped waterfall where the roar of the stream made communication all but impossible. Finally, 47 stations into the passage from the pool, we arrived at a large T-junction where we call it quits; another 983 meters had been added to the cave.

THE BACKDOOR

Both Marc and Beto were leaving Honduras the first week in March. Beto's brother, Ken, was down visiting and they planned to depart for Mexico on March 5th. Marc had just returned from Guatemala and would be leaving for the U.S. on March 5th as well. Perhaps we had one more chance. I convinced Marc we could finish the cave with a kamikaze one-day effort from Tegucigalpa. At 6 AM on Saturday, March 3, Marc, Beto, Ken, Luc, and I squeezed into my VW Rabbit for what we expected would be the final push. We soon arrived at the T-junction at Station 47P. I suggested we first survey the apparently drier, left passage (thinking we would return to finish off the right); I was quite mistaken. The left fork opened dramatically to heights



View in main stream passage of Cueva del Rio Talgua.

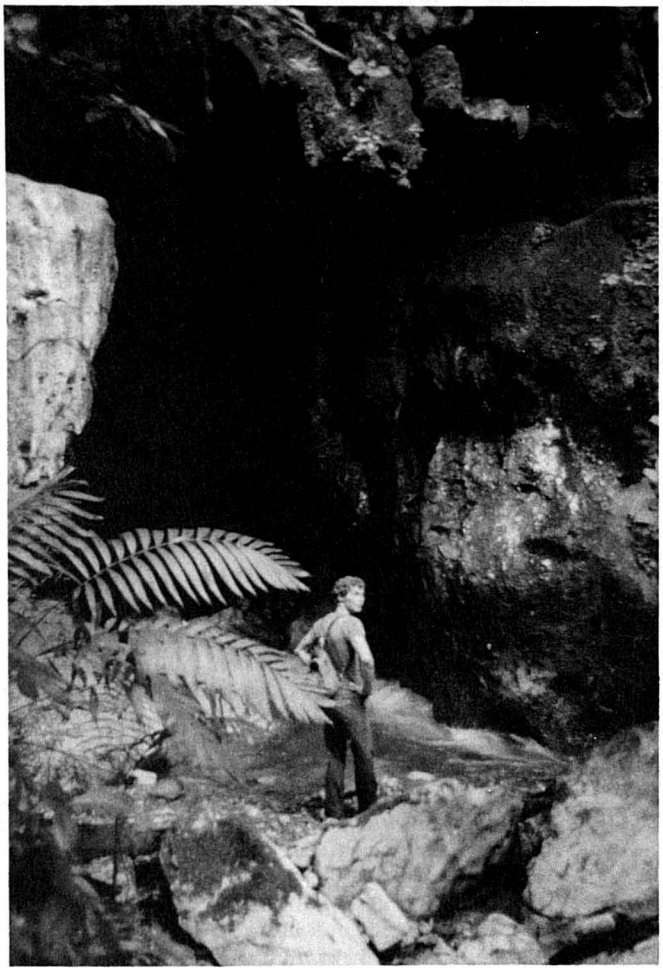
of at least 15 m with huge breakdown which broke the main trunk into smaller avenues. Delicate cave pearls and crystal lined the floor. The survey tape continued to penetrate the maze, and within 10 stations we entered a series of narrow fissures. Insects and a slight air movement suggested the possibility of another entrance and we pressed our search. Squeezing himself up a narrow crack, Marc spotted light. Thirteen meters above the floor was a small opening which overlooked a dry riverbed. A back-door had been found. Although our net total for the day was only 214 m surveyed, we were loathe to descend the chimney again now that we were enjoying the full beauty of the day and savoring the success of our efforts. From the cave entrance, we ran up and down the streambed, quite by accident discovering another cave entrance about half a kilometer away. The afternoon, however, was fast fading and we had to return to Tegucigalpa.

THE CIRCLE

Although a back door to the cave had been found, our survey remained incomplete. The trip included Luc, Tim, myself and John Nolan, another Peace Corps volunteer. Pushing off from 47P, we followed the stream to the right. At one point our progress was blocked by formations which forced us to traverse through a very deep pool by holding onto the formations. Because of a lack of hardhats, Tim and John were carrying lights in their hands. While grabbing a hold, Tim's lamp dropped to the bottom of the dark blue water. No one was willing to free-dive for the lamp. Chalk one up for the cave. Meanwhile, the passage soon ended in a sump; it appeared time to wrap up the survey. Before departing from the cave, I checked my sketch of the left fork passage to the chimney. There, as we looked up, looming before us on the left, was a large lead we had completely missed the previous trip. While John waited below, Tim, Luc and I climbed upwards for 11 long and glorious stations to a balcony room. With little doubt we had reached the highest point of the cave. Also, I strongly felt we were over halfway back to the steam. Alas, one more trip would be necessary to complete the cave. At this point sum total for the entire cave survey stood just 85 m shy of 3 kilometers.

In June, in the company of my new wife, Lulu, and yet another Peace Corps Volunteer, Bud Welborn, Tim, Luc and I began the last final push. Earlier in the month the rains had begun, so we found the cave stream significantly higher than during our previous two trips. From our last survey station at the top of the balcony, we followed the breakdown to the right and descended around the drop. The passage continued to descend over breakdown and within an hour we had reached the stream. Our arrival

(Clockwise) Marc Raband, Ken and Beto Santell, Luc Levi-Alvares, and Larry Cohen pose outside newly-found chimney entrance of Cueva del Rio Talgua.



Marc Raband in entrance of Cueva del Rio Talgua.

there felt strangely anticlimatic, particularly for Luc and me. After all our trips into the cave, perhaps we sensed that this would be our last. To be honest, I was getting a bit tired of Cueva del Talgua. Still, we could not help but feel gratified in the survey.

EPILOGUE

The cave had been surveyed to a total horizontal length of 3.09 km.

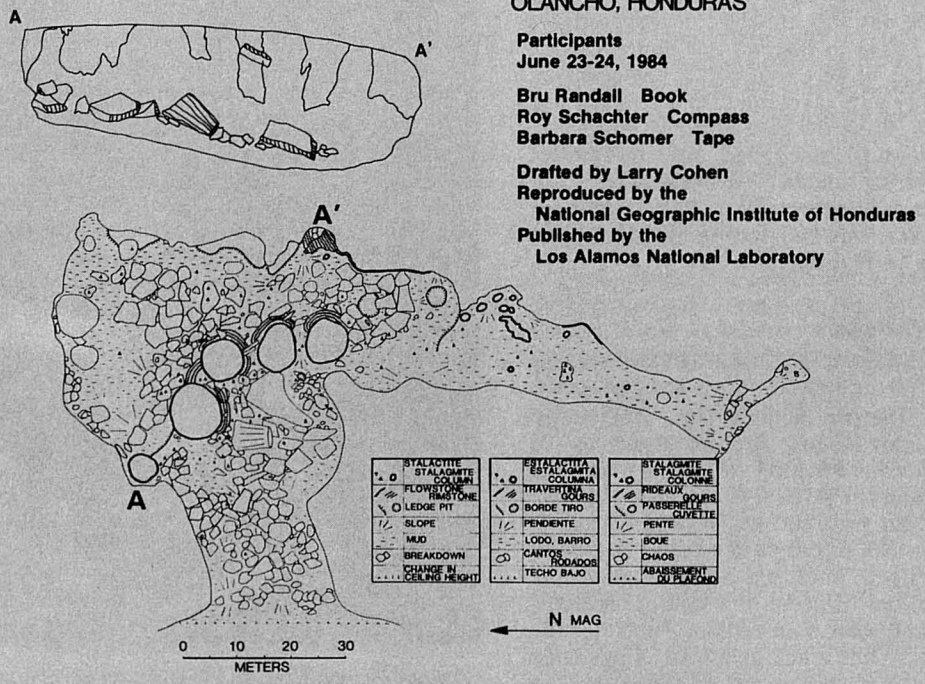
A few days after the final survey trip into Cueva del Rio Talgua, Bruce Randall and Barbara Schomer, presently of Pittsburg Grotto, arrived in Tegucigalpa for a bit of summer vacation and caving before moving on to Costa Rica. I directed them to the Talgua caves with the specific thought of their surveying Cueva Grande del Rio Talgua—which they did, exactly one week after the lower cave had been finished.

Cueva Grande del Rio Talgua can best be described as a huge room. The entrance, high above the river at the base of an overhanding cliff, is a large, eliptical opening, approximately 10 m in height and 18 m wide. Within 10 m of the drip line is the crest of a tremendous breakdown pile which slopes downwards into the cave.

With the exception of the alcove at the southern end of the cave, the entire floor is covered with breakdown blocks and fallen formations as large as 10 m on a side.

The cave may be considered in three sections. The southern alcove, already mentioned, has a flat flowstone and clay floor with almost no breakdown and formations on both ceiling and floor. The entrance section of the cave includes the entrance breakdown pile leading to a number of flat clay areas behind which another breakdown pile leads up to five massive flowstone columns. The ceiling, slanting down 20 m above, has numerous stalactites. Beyond the massive columns, the floor is again littered with breakdown and fallen formations. A number of leads are found under the breakdown. However, they generally pinch out after about 10 m. The back wall is flowstone with many beautiful formations. The ceiling in this portion of the cave is vaulted and lacks formations.

Bruce Randall



honduras

the sumidero of the rio atima

By Steve Knutson
Photos by author

In cave exploration there are a number of "classic" challenges: the vertically-oriented, very deep cave with its numerous pits and loads of rope that must be ferried in and out; the alpine cave with its numbing cold; the maze cave in which one can truly be lost; the crawlway cave with the physical punishment it inflicts. But of the classics, surely the most interesting to the noncaver is the submergence of a large stream into a cave—a "sumidero" as it is termed in Spanish America. The mystery is obvious—where does this river of the underworld go? Can it be followed to a resurgence? What would be encountered along the way? Traversable submergences are rare in the United States but are occasionally encountered in Mexico and Central America. The Rio Atima in Honduras is one such.

Rising in low tropical mountains in the Department of Santa Barbara, the Rio San José de Atima quickly finds the valley floor and flows quietly past the sleepy Honduran village it is named for. This little river is like a thousand others in the Central American tropics—rolling brown and heavy in the wet season and low and slow in the dry. A few miles below Atima, the valley suddenly narrows, and shortly closes around in massive cliffs. The river, however, seems to gain new life as it approaches this barrier; at the first cliff it turns abruptly right and plunges over a 4-meter falls into a huge canyon-like opening in the mountainside, to disappear into darkness in a series of rapids.

I first heard of this cave from Todd Rasmussen, a Peace Corps volunteer and caving friend who reported hearing of a cave with a water flow so great that it shouldn't be entered. In 1980, five of us were scouting for caves in Honduras; we had spent some fruitless days in the steaming jungle. It was April, the height of the dry season, and we decided to have a look at the Atima cave before heading north. The view at the entrance, some 35 m high by 15 m wide, was impressive, but certainly didn't look impossible—we vowed to return in 1981 and try it.

Jon Burkig, from Rogue River, Oregon, Todd Rasmussen, from Tucson, Arizona, and I returned in late February, 1981. As we approached through the short section of tropical forest in the narrow valley above the entrance, we could see that the water flow was greater than the previous year—the dry season just wasn't as far along. At the entrance more than 50 cfs roared over the falls—our plan of descending in the water flow in wetsuits obviously wasn't going to work! In frustration we scrambled up onto some ledges on the left-hand wall. The main ledge continued unbroken for some 80 m to a sharp left-hand bend in the huge passage. A hole behind some flowstone led around the corner, but the ledge ended some 20 m above the river, the huge passage continuing as far as our puny lights could follow. Tying a rope off, we rappelled down a great flowstone canopy to a rimstone ledge sloping down and on. This got us another 100 m to the river where it passed noisily over a 7-m falls.

Everything in the cave for some height above the river showed obvious signs of water-scouring with driftwood from wet season floods found halfway to the ceiling. The torrential rains from a hurricane, for instance, must swell a river like this to tremendous size. Climbing over some scoured-out gullies, we passed a big canopy and rimstone pools. Here, our broad ledge narrowed as did the passage, the ceiling now out of sight. Where it ended we placed two pitons in preparation for a short rappel to a new ledge, but decided to call it a day. We got out the Suunto compass and clinometer and mapped our way out the 319 m to the entrance.

On February 28 we went past the end of the previous penetration. A 3-m rappel, a short ledge traverse, and a 7-m rappel brought us to broadening ledges and back to the gradually descending river. All the ledges we traversed—even those high above the river—were wet with spray from the many falls and rapids. This, plus the ledge's smooth, rounded character, and possibly some biological activity, made the footing extremely slick...and we were usually directly above the raging river.

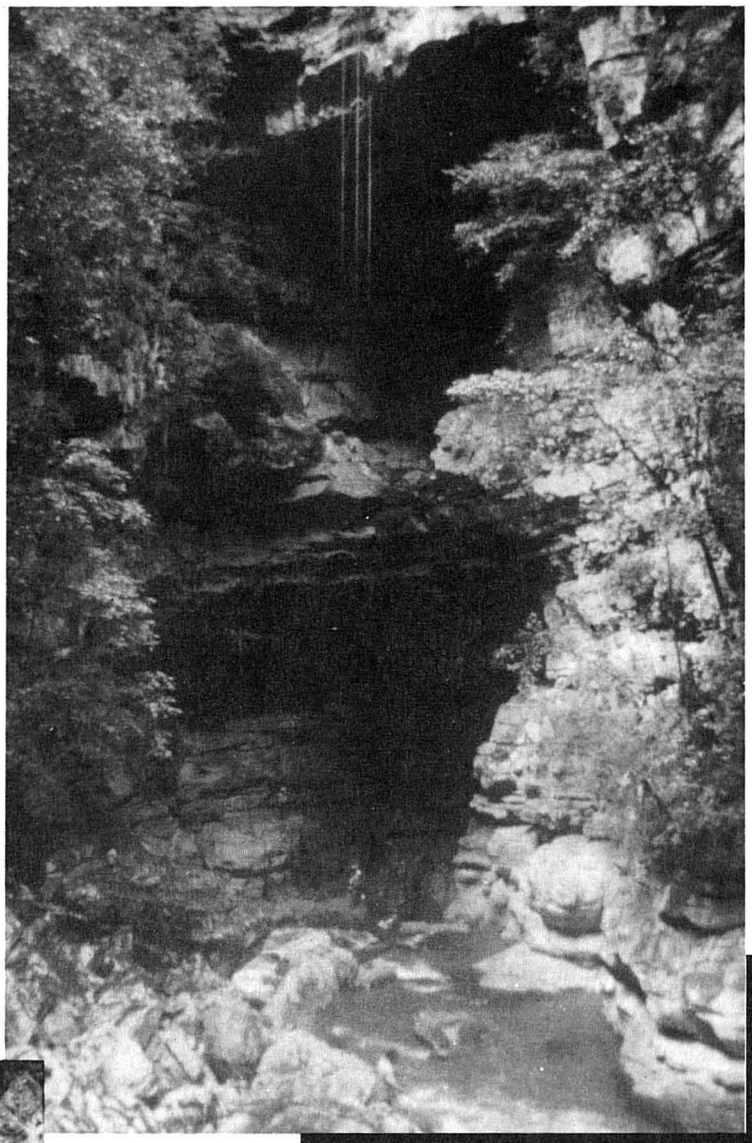
At the falls the ledges narrowed again, then ended. We placed a bolt and piton to anchor a rope for a 10-m rappel that put us on a narrow landing next to the water. Here a huge tree had wedged across the passage a

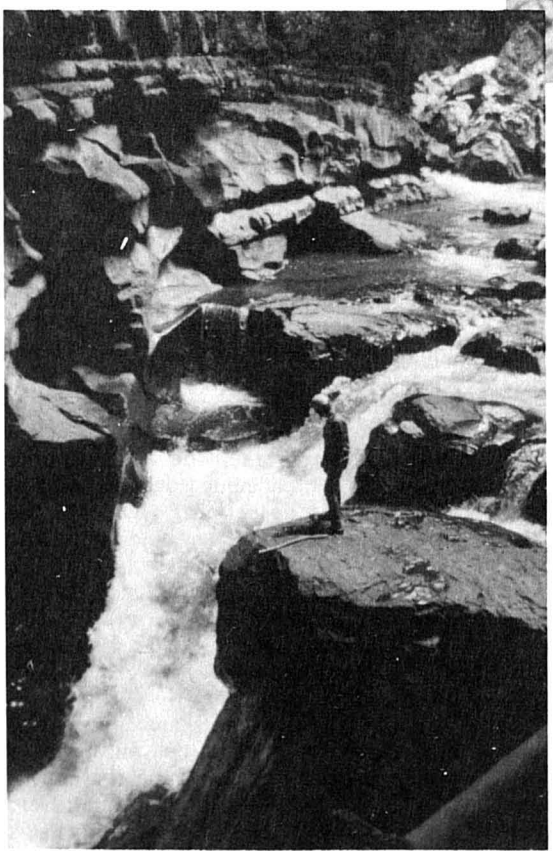
few feet above stream level. A three-m aid climb, a 20-m belly crawl ledge, and a handline traverse brought us to a point where the continuing ledges were going to require a continuous belay. It looked like our luck had run out. We were down to a minimum reserve of hardware and rope and ahead it appeared to require a lot of equipment. Our ledge attack had gotten us 500 m into the cave, but the high water flow left us thoroughly defeated.

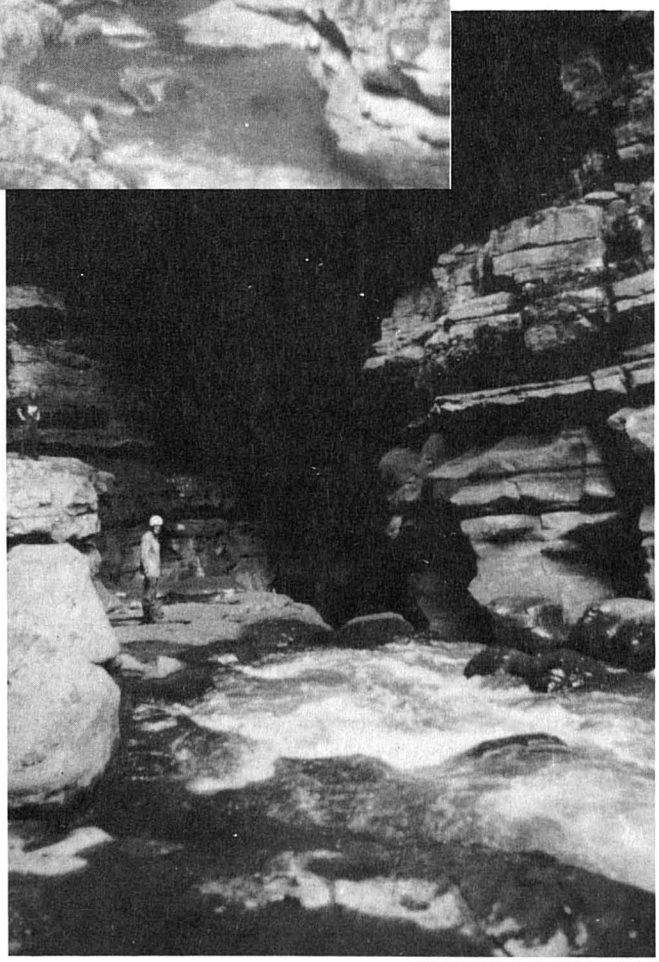
Before leaving the area, Jon and I took a day and hiked around the mountain to the lower entrance. It took us so long to get there that we had no time to explore the 15-m high by 7-m wide opening before finding our way back. Later, I learned that it had been visited by another caver, Ric Finch, a Professor of Geology at Tennessee Tech., in the summer of 1980 while doing geologic work in Honduras. He found that

> "Ledges led us into the cave on one side, where it opened up into an ample room before becoming wall to wall water about 50 m into the mountain...I entered the water, and clinging to the right hand wall where the water was over my head (most places) worked my way up to the point where the passage narrowed, bent right, and went out of sight. Peering around the corner, it was wall-to-wall agua as far as my light would reach...."

We both, independently, located the resurgence at the same point on the topo



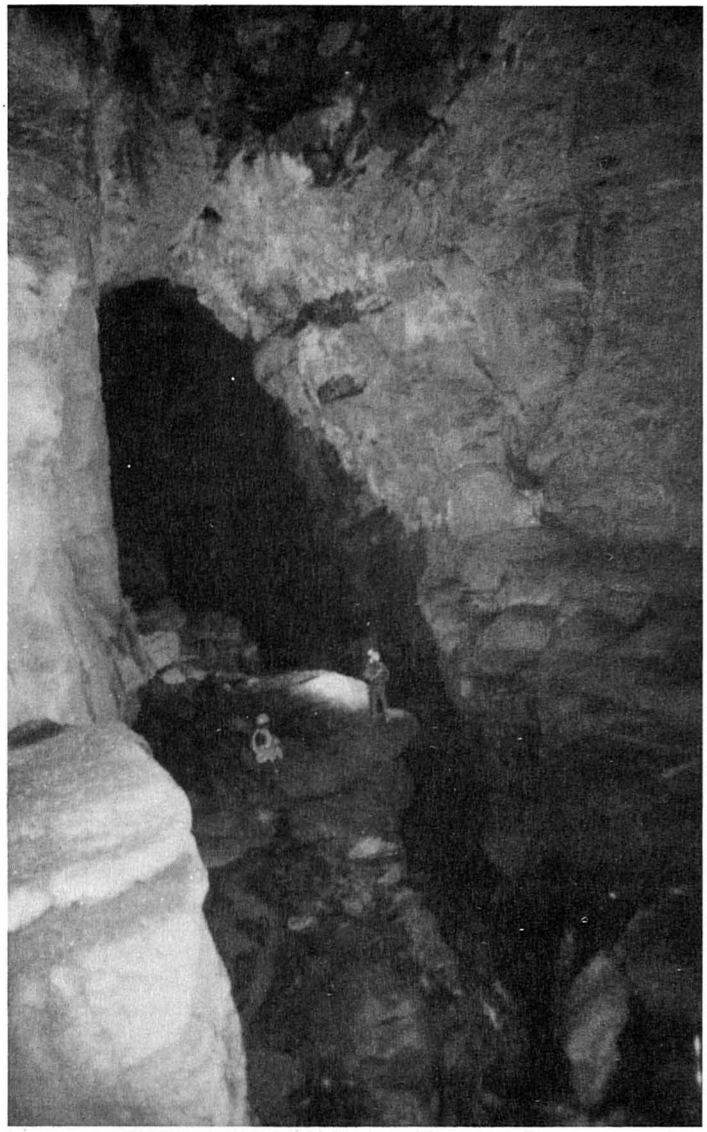




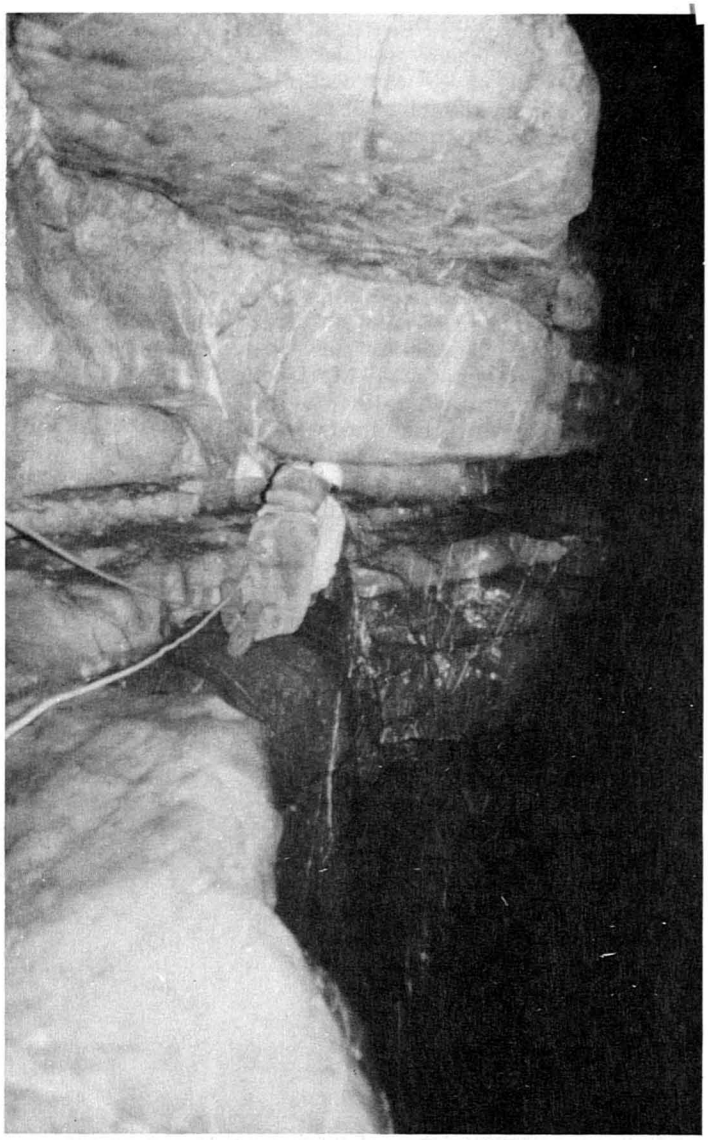
Above: Looking downstream at the Upper Entrance of Rio Atima.

Left: Churning falls occur as river empties into cave.

Right: Burkig and Rasmusen add scale to closeup of Upper Entrance.



Travelling on ledges in first 500 meters of cave.



Burkig is belayed traversing narrow, slimy ledge.

map, making the potential through-trip about 1.7 km straight-line, with a vertical drop of about 170 m.

After 1981 the political situation in Guatemala and Honduras worsened and we had to forget about our enigmatic cave. In 1984, however, I learned that things had greatly improved and in December of that year, Dr. Finch led a caving expedition to Honduras and encountered no problems. Most of my caving acquaintances were in school or had jobs they couldn't leave, but I found two—Mark Stock of Bartlesville, Oklahoma, and Pete Shifflett of San Diego, California—who were free and we agreed to have another go at the Rio Atima in April, 1985.

On April 5 we arrived at Tegucigalpa airport to be greeted by Larry Cohen, a caver working for the State Department and at that time stationed in Honduras. Larry and his wife, Lulu, whisked us through customs, put us up at their house, located a rental vehicle and, in general, were invaluable, despite the fact that Larry was unable to get time off work to join us. There were numerous delays, like missing baggage, so it wasn't until Wednesday, the 10th, that we rolled into our Rio Atima campsight. "Este camino es para Atima?" "Si, si, derecho, derecho...adalante!" Everyone along the road had been friendly, most looking more European than Indian—a nearly totally mestizo culture.

The following day we got an early start and proceeded to the end of the 1981 push, rerigging the 5 rappels, 3 upclimbs and 2 handline traverses, using up a lot of hardware and 90 m of rope. We had to worry about equipment consumption since, by flying in, we had been limited in the amount brought. In fact, our only hope for a through-trip was running into a long section of easy cave.

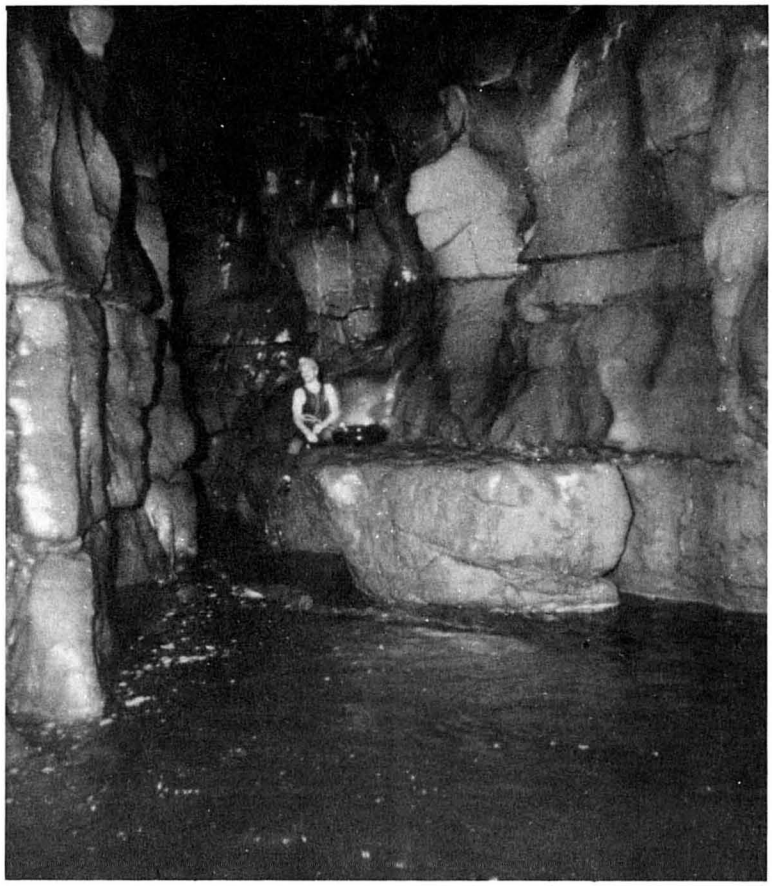
We set up a belay and Pete proceeded along a crawl ledge for 15 m or so, then returned. The ledge ended; there were no others visible—no possible ledge continuation. The only choice was to descend to stream level. So we set up for rappel and Mark went down. In a cave like this, there is no way you can understand voice communications over any distance, so we used the usual signals—1 shout/whistle for "stop," 2 for "up," 3 for "down," 4 for "off the rope" and a continuous blast/yell/scream for "help." There was a bit of suspense while we waited for Mark to let us know if it was hell below or looked reasonable. But soon came 3 shouts and we descended to find a circular chamber with a nice ledge at water level—you landed in the water, but it was slack since just beyond the passage narrowed to three m with a small log jam at the narrowest point. The water was about 75°, but you still needed something for insulation. Pete wore thermal underwear, Mark had a "Farmer John" wetsuit bottom (torso covered, arms bare) and I had a full wetsuit. Pete found he got cold when in the water and Mark was more or less OK. I had a bicycle innertube inside my suit for additional flotation while the other two had partly inflated auto innertubes. Carrying rope and hardware in deep water proved easier for them. For this trip we were out of rope, so we headed out.

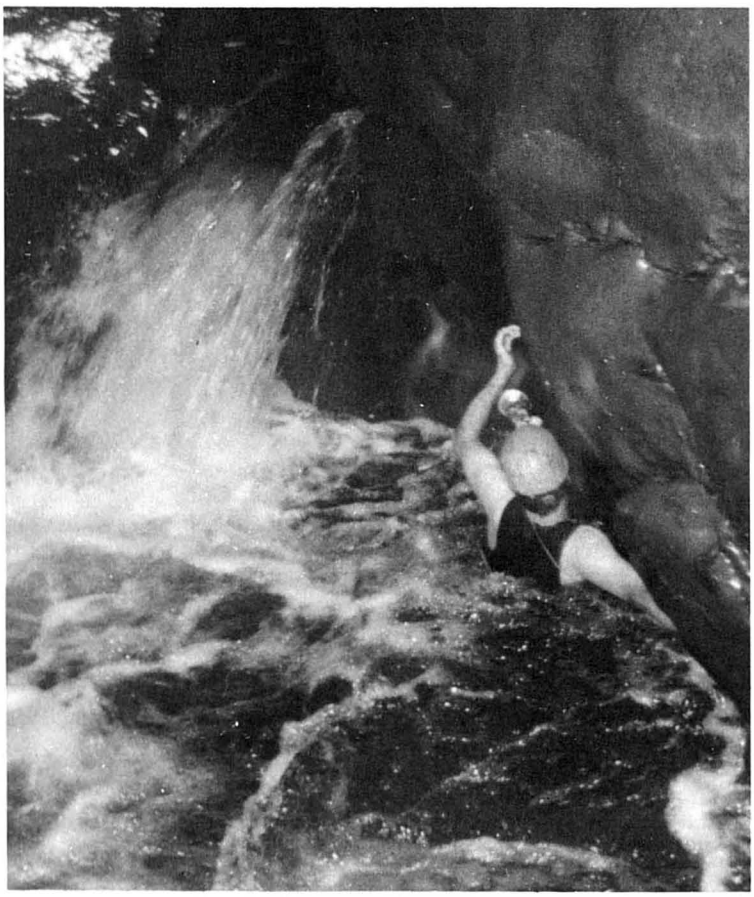
At camp the stoves were malfunctioning,

one having been damaged in transit, and Mark, having experienced problems with his lights in the cave, was occupied jury-rigging. The sky was full of clouds, but hopefully there would be no rain. In the brush, cicadas produced a great volume of sound. Oropendulas warbled as they flew... stinging ants crawled up any open pant leg...it was idyllic.

The next day one load of carbide got us to the log jam where we had stopped. Rigging a length of polypropylene rope (a "canal line") so we could get back up the swift water beyond, we proceeded. Mark let himself out on the canal line, being cautious—flowing water has great power and demands respect. He found a ledge just out of the water, so I followed and we put in a piton to anchor the bottom end of the line. Pete followed carrying a load of rope. We then swam down slow water to another ledge where the flow picked up. Another piton was placed and we lined downstream to a log jammed in a crack and tied off to that. Across the stream was a ledge where we regrouped. Mark was experiencing light difficulties again—he had switched from carbide to an electric headlamp and the batteries were shorting out in the water. He had no choice but to wait while Pete and I went ahead. From ahead, however, there came the thunder of a major falls. We made our way down a swim, getting out just above a half-meter falls which we climbed around on a ledge. The passage there was broad, so we continued on boulders above the water to where it narrowed at the top of a four-meter fall, the source of our "thunder." It appeared that we could proceed along the sloping wall on the left, but we decided to wait until the next trip when we would be at full strength. We collected Mark and left, mapping our way back to the end of the '81 survey.

Mark Stock resting in river passage.





Mark Stock approaches a small falls from below.

At camp we worked up all the survey data on an HP-41C and found that we had stopped only 520 m straight-line from the entrance, less than one-third of the way through!

Our next trip was on the 14th. It is interesting to reflect on the feelings one might have while traversing the known part of the cave. In the first 500 m, one is always on ledges somewhere above the stream—in danger of falling into the stream, but at nearly any given point safe from flooding. At stream level we never saw the ceiling, only the walls, rising smooth and precipitous into the darkness beyond the reach of our cave lights. What would one do in case of a flood here? There was a tremendous feeling of isolation.

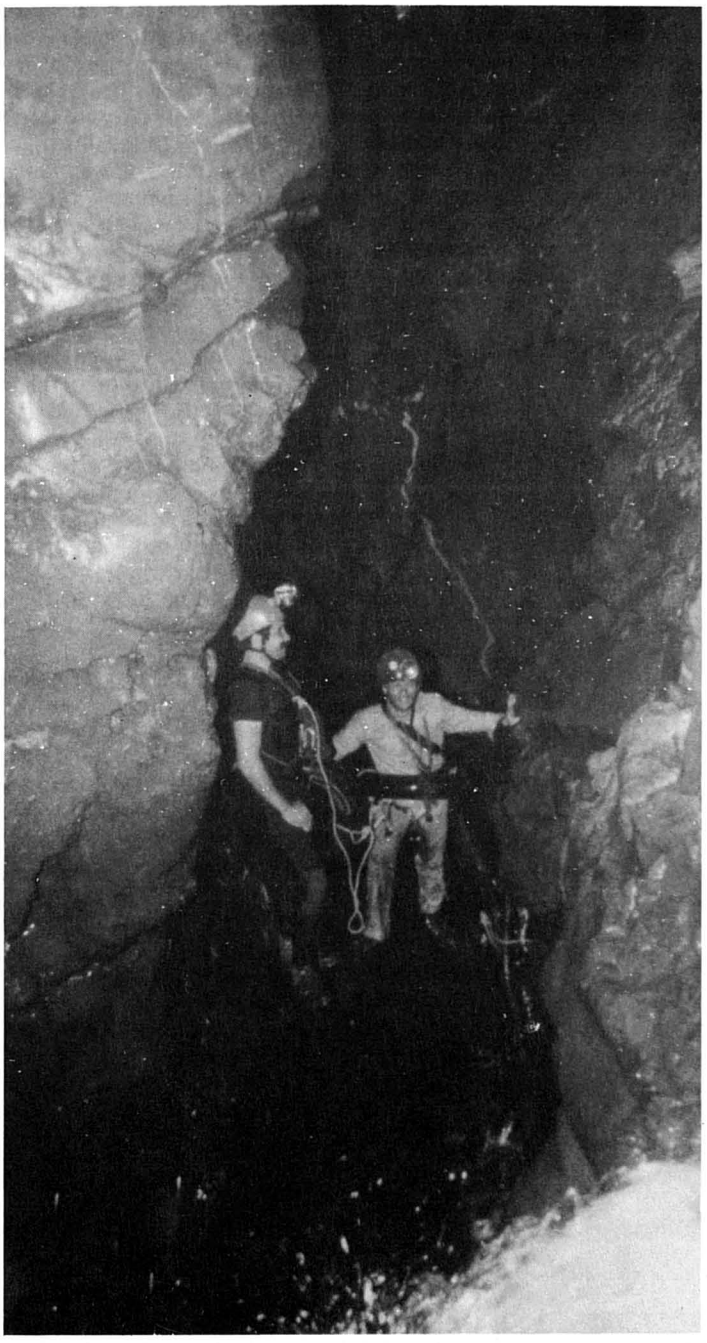
At the falls where we had stopped, Pete led out, on belay, to a sloping ledge about 15 m farther on. We set up a rappel and I descended 10 m to hit the water in a current but beyond the white water below the falls. A canal line was attached and I washed

down to a small ledge, placed a piton and tied it off. The others followed. Pete then led down to a falls at a narrows. A large log had jammed here with one end at the top and the other at the far end of the rapids below the falls—you could descend the falls on the log. Mark led to the next constriction, a narrow, white-water chute with sloping sides above it. We rigged a stout handline and carefully climbed down to the pool below. The limestone was slick, but some chert inclusions provided good footing. Still I managed to slip, being held at the water's edge by Mark and the handline.

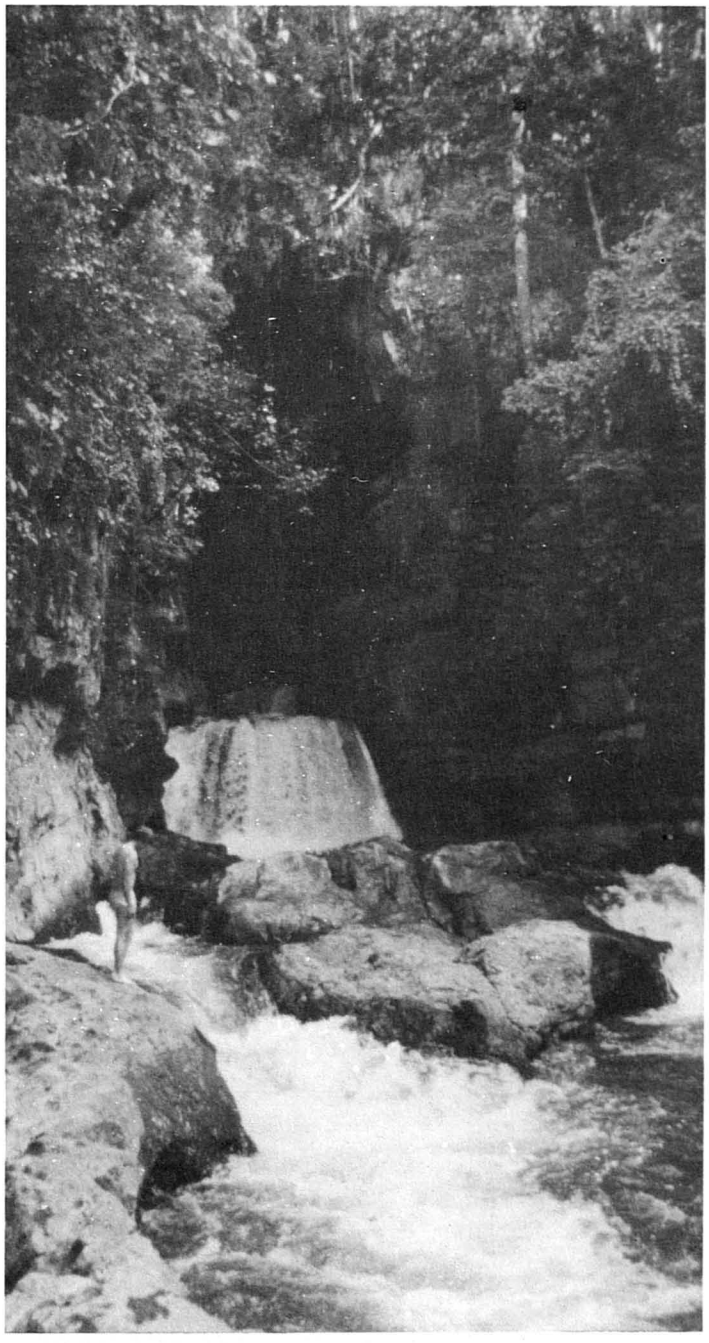
The cave was forming a pattern of narrowing regularly with falls and rapids and this was eating up our rope and hardware at a steady rate. There were no natural anchors except jammed sticks or logs. We passed two more narrows and came to a wide pool. From ahead came a thunderous tumult, so we swam to a ledge on the near side and considered the situation....

We could see that the flow entered a narrow chute with a steeply sloping but possibly climbable slope on the right and a ledge on the left, about one meter above the water. On a safety line I swam across but found no holds below the ledge. I returned with pitons and a hammer, but from a swim I couldn't hit the piton hard enough to start it. This was solved by having Mark swim behind me, pushing me into the rock. With the piton (a RURP) in, an etrier gave secure footing and two more pitons gained the ledge. There was indeed a large falls just beyond; it looked to be about 10 m with an apparent second, shorter falls just beyond and to the right. Descending from my ledge not only would put you into hell below but leave you with another falls to be dealt with. We would have to pass on the right, and that looked a bit hairy. The chute had a circular churn hole in it that looked like a huge washing machine in action. We called it a trip and left.

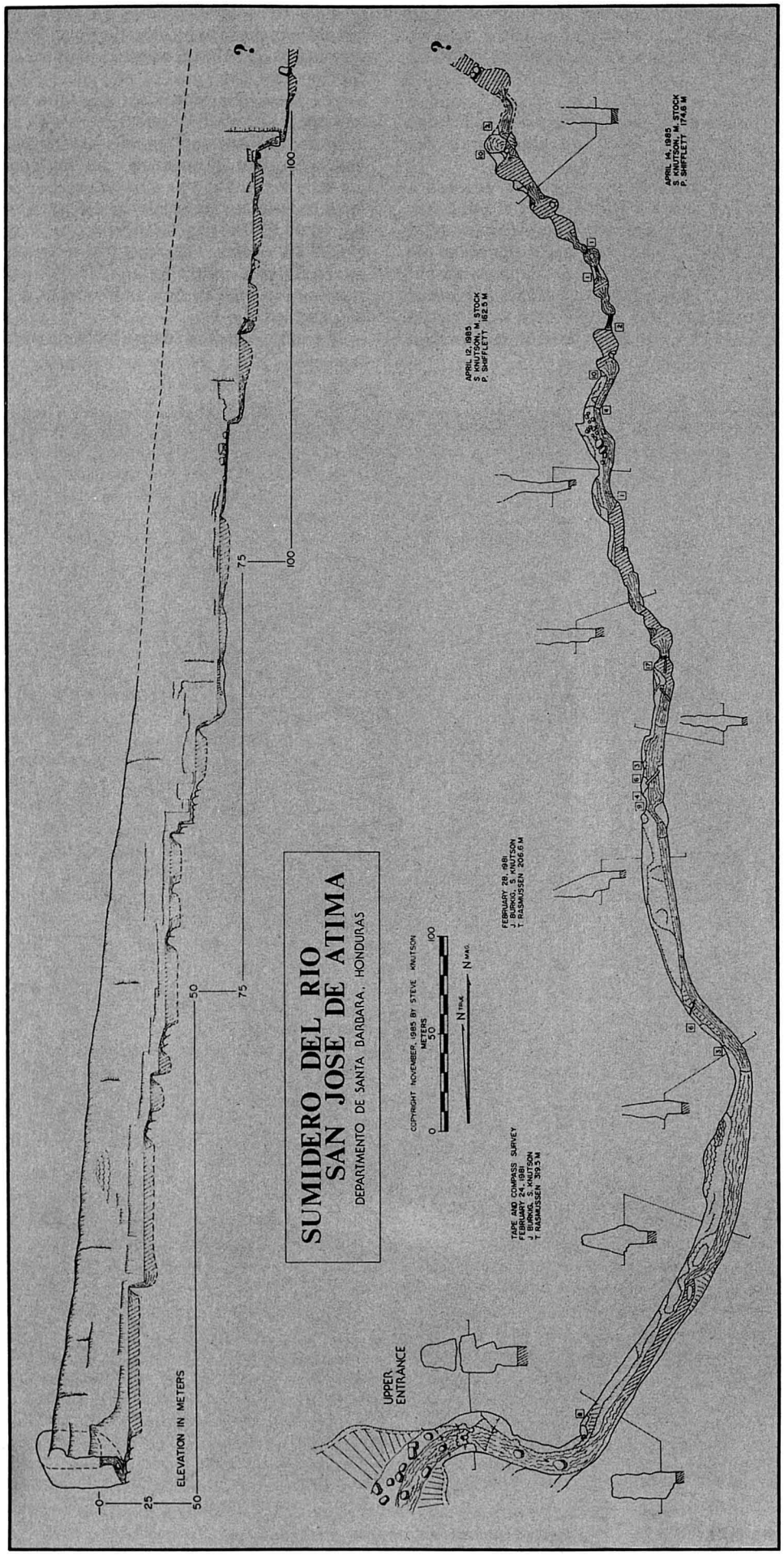
The most useful hardware had proven to



Stock and Shifflett standing on wedged log above falls.



Resurgence with Burkig in foreground.



be pitons. Bolts had been placed, but mainly to free the limited piton supply for further use, since bolts take time to place and the loose parts are tedious to handle in a river passage. In any case, it looked like the next push would be our last—we were down to one bolt kit, a few pitons and one length of canal line.

So, on the 16th we headed in, replacing a few pitons with bolts on the way, and trying not to be anxious about dealing with the big falls. At the falls anxiety was lost in planning. I sorted and racked the remaining hardware while Pete, on belay from Mark, swam over and surprisingly found a foothold just below waterline to the right of the chute. He then climbed to the ledge on the left side. The plan was to have two belays, one from Pete on that ledge and one from Mark at the upstream end of the pool—I did *not* want to fall into that churnhole! We decided on 1 shout for "stop," 2 for "tension," and 3 for "slack." No words were intelligible over the noise of the falls.

Once on Pete's foothold, I was standing out of the water. Two aid pitons got me to the first footholds above that. I then moved onto the steep slope above the churnhole and had Pete throw me the end of his belay rope. With a piton to secure me, I placed a bolt. The climb to a ledge above was done free and suddenly it was over—I could see that the ledge led far enough to the right to get us past the second falls. I set a bolt and belayed the others over.

Pete was first over and went out to the end of the slick and sloping ledge and placed a bolt to keep the rappel rope from swinging back into the falls. Then it was Mark's turn to go down and see what we had achieved—was it hell or heaven down below? Soon came 3 whistle blasts, so we followed. The rappel was only 15 m, but spectacularly close to the falls...what a sight! It wasn't exactly heaven at the bottom. A rapids raged on for 15 m with a ledge too steep to walk on, on the right—our side. Pete led to the end of this, using a handline all the way. The ledge ended where the rapids entered a pool, but we had only one piece of canal line left and no pitons. It was time to hang it up...but not before Mark had tied on that last piece of canal line and gone to the end to see what it looked like ahead. The passage continued as before and this was of interest, but if anything had happened to Mark, we had nothing to go get him with.

So the great adventure ended, less than halfway through the cave. We used up 180 m of canal line, 270 m of main line, 20 bolts and 30 pitons. Maybe we can get back to this fine cave in 1986 and continue the push. Caves should never end.

I wish to thank Pigeon Mountain Industries of Lafayette, Georgia, for a generous donation of rope, and Larry and Lulu Cohen for their great hospitality and aid while we were in Tegucigalpa, Honduras.

Proposed Federal Cave Resources Protection Act

Current Status

By Jer Thornton

Director, Government Affairs Division, NSS Conservation Committee
Executive Director, American Cave Conservation Association

The effort to develop, introduce and pass a Federal Cave Resources Protection Act is still alive and well. Idaho Congressman Larry Craig announced in August that he would be unable to act as the primary sponsor to the proposed legislation due to an increased workload and other more pressing priorities. In the meantime Congressman Frederick C. Boucher of Virginia has picked up the project.

Forest Service officials told Boucher during a meeting in September that, with the exception of a need for a Freedom of Information Act exemption for sensitive cave information, additional legislation is unnecessary. Boucher has since met twice with NSS and American Cave Conservation Assn. (ACCA) representatives to discuss the Forest Service claims and to go over various areas of statutory omission.

Following those meetings Boucher asked that ACCA, the NSS and other interested organizations prepare a formal legal brief outlining exactly where and why legislation is needed. He plans to ask that the Forest Service prepare legislation to address these areas. Both the NSS Legal Committee and the counsel for the American Cave Conservation Association are now working on the requested brief.

Among the most serious setbacks coming from the change in sponsors is the loss of the clause proposing an exemption from liability. FCRPA would have reduced liability exposure to the Federal government for use of wildlands for caving and other recreation purposes. Although numerous states, including Virginia and California, have similar laws for state and privately held lands, Boucher felt that the exemption would run into heavy opposition and could threaten passage of the rest of the proposed legislation.

The New Mexico State Office of the Bureau of Land Management has sent a memo to the Washington BLM office pointing out the need for legislation to protect caves and urging the support of the Agency for such legislation and the development of formal policies at both the agency and Departmental levels.

For those who are unfamiliar with federal laws and application of existing laws to caves on federal lands, the following is a summary of the problems presently caused by the lack of statutes and regulations:

1. Caves located on Federal lands are most often located in isolated areas, long distances from the understaffed offices of the agencies responsible for their management. This makes it impossible to regularly patrol these sites and vandalism continues to increase. Even caves located in backcountry areas of National Parks are inadequately protected due to lack of funding and isolation.
2. Federal law does not forbid the disturbance or killing of cave species, unless protected under the Federal Endangered Species Act, by state laws, or located on National Parks, wildlife refuges, or within specially designated Federal management sites.
3. Speleothems are not protected under Federal law except on National Park lands, or in specially designated management areas. A 1900 Interior Department decision which exempted speleothems from mining laws was reversed in 1976. General collection is also allowed, except as noted above. Title 43, CFR 8363.2-1, "Permitted activities.," paragraph (a) states:

   Collecting—hobby specimens. Flowers, berries, nuts, seeds, cones, leaves and similar renewable resources and nonrenewable resources such as rocks, mineral specimens, common invertebrate fossils and gemstones may be collected in reasonable quantitites for personal use, consumption or hobby collecting.
4. Both guano and limestone are considered leasable commodities under Federal Mining law. Now that speleothems are but a step away from full redefinition and commercially legal claim status, FCRPA faces potentially heavy opposition from opposing lobbyists within the mining industry. If you don't think that mining laws will take precedence over administrative cave management programs, take a look at the number of designated wilderness areas in which mining and oil exploration is still allowed.
5. Caves located on federal lands are being closed and access regulated because of "hazards." The perception by land managers that caves are extremely dangerous is common. Concerns about liability brought about by this deeply entrenched perception is not only making access to many caves much more difficult, but is preventing competent cavers from working as volunteers to help solve management problems. Underfunded and understaffed Federal agencies are actually refusing the offer of free help from volunteers in many parts of the United States, specifically because of this.
6. There are no Federal cave laws! The National Park Service and the Bureau of Land Management have, however, developed and implemented cave management policies and the Forest Service policy is still unfinished. These are not, however, laws, but administrative policies which interpret existing laws and regulations, setting forth guidelines for application and administration procedures under the existing law. These can be changed or eliminated in a matter of minutes by the secretary of a department or an agency chief.
7. Budgets for land management agencies continue to decline and are now so lean that effective management of all resources is almost impossible. Roughly 30% of America's caves are located on Federal lands. These include many of our premier caves, most of which are located outside of the more strongly managed National Parks. The majority of these are presently being protected solely by the caving community through the suppression of location information.

Isolated caves cannot be protected by the Federal land manager through the use of

restricted information unless the cave is associated with cultural or historical resources. This makes it virtually impossible to effectively protect many of America's outstanding caves—even with gates. If the Federal land manager is aware of the location of the cave, he must make the information available to anyone requesting the information.

How the information will be used is irrelevant. It might be intended to write a guidebook, to locate sources for speleothems to be removed or sold as curios, or just to find a place to drink beer, smash speleothems, spray paint around, harm wildlife, and have a good time. The information is not protected. It doesn't matter that the cave may contain rare, threatened or endangered species and is so isolated that a regular patrol of the site is impossible. The land manager must give the information to anyone who requests it

Rumors are that a Freedom of Information Act exemption is unconstitutional because a suit filed under the 1906 Antiquities Act was set aside by the Supreme Court in 1975. Neither of the two new antiquities laws (the Archaeological Resources Protection Act of 1979 and the National Historical Preservation Act of 1966, as amended in 1976) has ever been contested. The 1906 law did not contain an information exemption. The Freedom of Information Act was not passed until 1976.

The proposed Federal Cave Resources Protection Act addresses each of these problems, concentrating heavily on establishing directives to allow the use of volunteer cavers at each management level. In an era when tax dollars for resource management are becoming scarce, this is the only way in which we can hope to bring proper protection and management to caves.

Even though many folks live in states where most of the land is privately held and where federal law does not presently apply, it is important to remember that Uncle Sam does move quickly. The proposed Spencer Range Training Center in Tennessee (see page 346 of the Nov. '85 *NSS News*) is an excellent example. The American Cave Conservation Association was successful in getting a written commitment that the Guard would develop and implement a cave management program using local volunteers if the site is approved. That is, however, only a last ditch safety valve in the event the proposed project cannot be stopped entirely. It is little more than another administrative decision and, as such, can be reversed administratively in a matter of minutes. The proposed training center lands would be subject to FCRPA, if passed, and protection for cave resources ensured.

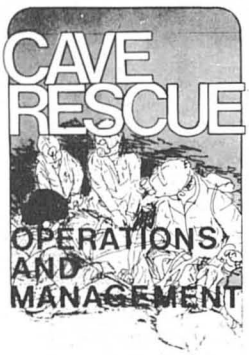
How Can You Help?

First, get the facts. Write to Dave Allured, 4231 Eaton Court, Boulder, Colorado 80303 and ask for copies of (1) the latest draft of the proposed Federal Cave Resources Protection Act; (2) the background information report; (3) the Congressional Review Service Report; and (4) the FCRPA status newsletter. Then write Congressman Frederick C. Boucher, Room 428, Cannon HOB, Washington, D.C. 20515. Tell him of your concern for caves, your support for legislative protection, and ask that he not drop the section on liability. Send similar letters to your own state's Federal legislators.

If you or others have specific questions concerning the law or legal actions influencing or impacting cave resources, write Jer Thornton, c/o The American Cave Conservation Association, P.O. Box 7017, Richmond, VA 23221.

Finally, be prepared for the long haul. It took seven years to pass the Wilderness Act. Fewer people care about caves than about wilderness. Unless more people, including those who pass and administer our Federal land laws, are made aware of the unique and fragile significance of caves and the existing voids in current law, and unless they are continually prodded by the few of us who care, we face more and more closures and the increasing destruction of those caves that belong to all of us.

Because of some controversy surrounding the FCRPA, we are allowing reserving an equal amount of space in the next issue for opposing viewpoints.



The National Cave Rescue Commission's Ninth Annual Seminar will be at Carlsbad Caverns National Park 28 June through 5 July 1986.

Underground environment, Preplanning, Management structure, Logistics, Response systems, Caving First aid and equipment, Patient treatment, Communications, Hypothermia, and In-cave patient transport are some of the topics to be covered during the seminar.

Check in will begin at 0800 Saturday 28 June 1986. The initial session (1200 to 1800 Saturday) will permit instructor evaluation & review of all students' background, experience, and equipment.

The seminar will conclude with a day-long in-cave rescue exercise providing experience in all facets of cave rescue presented during the week.

Registration fee for the seminar is:
$150.00 for NSS members
$175.00 for Non NSS members

A $25.00 Early Bird Discount applies if application received before 15 May 1986. Registration includes all meals for the week but does NOT include lodging.

Participants must arrange their own lodging. The Best Western Cavern Inn, RV Park and Primitive Campgrounds at the entrance to the park are recommended. Call toll free 800/228-3767 for rates and reservations.

Questions? Jackie Barlow - (304) 743-5455

Detach and return — One student per form — Photocopy as needed

Return application and fees to:
NCRC SEMINAR 1986, Box 784, Culloden, WV 25510-0784

Please register me for the NCRC Seminar 1986:
Level One_____ Level Two _____
Prerequisite - Completion of Level One course

NAME:_____
ADDRESS:_____
CITY, ST ZIP:_____
COUNTRY:_____
PHONE: DAY:( ) -_____
NIGHT:( ) -_____
ORGANIZATION
REPRESENTING:_____
ADDRESS:_____
CITY, ST ZIP:_____
NSS NUMBER: (If member)_____

FEE SCHEDULE

	Before 15 May	After 15 May
NSS Member	$125.00	$150.00
Non NSS Member	150.00	175.00

25% Cancellation fee charged after 1 June 86.
Make checks payable to: NCRC SEMINAR 1986.

Emergency Information
Blood type:_____
Allergies:_____
_____
Medication:_____
_____
_____
Notify in Emergency:( ) -_____
NAME_____
ADDRESS_____
_____
EQUIPMENT
IDENTIFICATION:_____

Convention '86 Coverage

Convention Update

The telephone numbers for the convention are (505) 585-9745 for the campground; (505) 585-2282 for the high school; and if all else fails and you have a bonafide emergency, (505) 585-2704 for the Tularosa Police.

The New Cave tours at Carlsbad Caverns National Park have been reinstated with two tours a day instead of four. People whose earlier reservations were cancelled should have received new ones by the time this appears. We highly suggest a visit to this cave if you plan on stopping at Carlsbad. Reservations are necessary and may be obtained by calling the Park at (505) 785-2233.

When filling out the convention registration form, note that the campground fee is per person with no charge for children under 6.

As mentioned earlier, the campground will be primitive. We started with a nice picnic area surrounded by overgrown and unused rangeland. We've done a lot of work on the area and more will be done by the convention, but don't expect too much grass; dust and sand will be much more common. A main bonfire area will be provided. Campers should bring self-contained stoves for cooking. A dump site for holding tanks is available at the fire station, several miles from the campground. **The campground is about two miles northeast of the intersection of Routes 54 and 70. The direction given in the May issue was in error.**

A slide projector will be available for use in the picnic area of the campground during the evenings. Anyone with slides to show is welcome.

If you have not already sent in your registration, please do so at your earliest convenience.

If you are traveling to the convention through Albuquerque and are interested in taking a scenic, all-day route past picturesque Spanish villages, Indian Ruins, and other attractions, send a stamped envelope to Doug Rhodes, P.O. Box 12334, Albuquerque, NM 87195, for a road log.

Attention! Cave Stereo Photographers

The Photographic Section of the NSS invites all stereo cave photographers (Realist format) to contribute stereo slides to a non-competitive stereo showing at the New Mexico Convention. This showing will be similar to those given in 1982, 1983, and 1984. A difference is that all slides must be sent by June 10 to: Dick LaForge, 450 Redmond Road, Eureka, CA 95501.

Wanted—Video Camera Person

If you own a video camera and plan to come to this summer's NSS convention, why not bring it. The Society wants videos of convention activities, especially the exploration and science sessions and the photo salon. If you'd be willing to video tape a session and then loan the tape to us, we'll duplicate your tape and circulate an edited version to other members. This year we hope to gain experience in obtaining, editing and circulating videos of convention activities. If we're successful, we will pursue it more actively in the future.

If you are interested in helping to establish an NSS video tape library on cave related topics, contact the NSS Cave Video Ad Hoc Committee, Jay Arnold, 10129 Sassafras Wood Court, Burke, VA 22015, phone: 703-250-6668.

Information for Hams

Information on repeater stations is available from Duke McMullan, N5GAX, 3301 Monte Vista Blvd. NE, Albuquerque, NM 87106.

Vendors

An important benefit of NSS conventions is the opportunity to see and purchase items from many different vendors. The following descriptions are from vendors who have already signed up for the convention:

Adobe Tours: Professionally-escorted train tours through Mexico's Barranca del Cobre (Copper Canyon) and in other areas of Western Mexico. Customized packages for schools and other groups. See us for the best prices and tours designed especially for those with a sense of adventure. Adobe Tours, P.O. Box 12334, Albuquerque, NM 87195.

Bob & Bob: Froggie VI (that great white feline), who is the real boss of Bob & Bob, invites you to visit her and browse among the large array of caving equipment available at Bob & Bob's van in the campground. She will be sleeping among big-name caving gear by day and chasing cyalumes and critters by night.

J. E. Weinel, Inc., the friendliest speleo vendor. Visit with us in New Mexico during the 1986 NSS Convention. Offering quality caving equipment at rock bottom prices. PMI, Petzl, CMI, Gibbs, SMC, Weinel, Coghlan's Forrest, Stubai, Tekna and much more. J. E. Weinel, Inc., P.O. Box 213, Valencia, PA 16059, (412) 898-2335.

L & S Sporting Goods is centrally located in West Virginia's caving country and is a dealer of sporting and caving equipment. We handle a broad line of equipment tailored to meet the needs of the most avid caver. Contact us so we can become a part of your caving experience.

Pathfinder Sports has been serving cavers, climbers, and outdoor enthusiasts since 1978. We stock equipment from over 25 manufacturers. At the convention we will bring the usual caving and climbing equipment plus backpacks, parkas, sleeping bags, tents and stoves. Write for our free price list. P.O. Box 30670, Tucson, AZ 85751.

Speleo Sports Ltd: Purchase your caving equipment at the best prices and make a tax-deductible donation to the NSS at the same time. Speleo Sports Ltd. will take 5% of your entire bill and donate it to the NSS in your name. Send for a free catalog. Speleo Sports Ltd., R1 Box 57A, Tijeras, NM 87059.

Square One Adventures: Education in caving, technical and cave rescue. Distributor for California Mtn. Co., Ltd., plus our own line of caving/rescue harnesses and a complete ropewalker system being introduced for the first time! Display will include a VCR of our 1986 seminar in Technical Rescue, and a free drawing. Square One Adventures, 5412 Harco St. E, Long Beach, CA 90808.

Obituaries

Lewis Lyman Cutliff
1901—1986

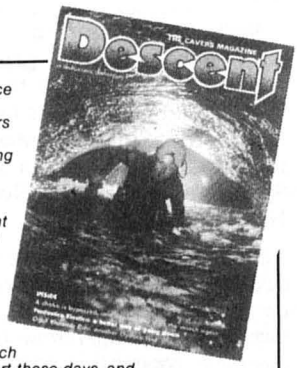
Lewis Lyman Cutliff, one of the last of the "old time" Kentucky cavers, died in Glasgow, Kentucky, on February first. He was buried on a snowy day at Park City, Kentucky, Sunday, February 16. The crowd of mourners who thronged the funeral home looked like a "who's who" in Kentucky caving. Known to his friends as Lyman, he had been confined either to his home or to a nursing home in Glasgow for almost 10 years. He worked in Mammoth Cave long before it became a national park. During the 1930s, while overseeing improvements in Mammoth Cave, he and the late Grover Campbell were credited with finding the mummy, Lost John, under a huge boulder which they jacked up to remove the remains.

Mr. Cutliff was the owner of James and Coach Caves of Park City when serious exploration began exploration still continues after 30 years. He commercialized James Cave, making paths and building a steel bridge over the formerly "Impossible Pit." He was a man of vision and strength! Lyman Cutliff went to his grave with several important "cave" secrets, which he promised Grover Campbell he would never tell.

Lewis Lyman Cutliff, 85, is survived by his wife, Mrs. Lillian McDaniel Cutliff, his son, Lewis Douglas Cutliff, a brother, Chestean Cutliff, five grandchildren and nine great-grandchildren.

The Lyman Cutliff story has never been, and probably will never be told. He was a legend in his own time!

—Sara Corrie



We'd like to introduce you to the caving magazine that cavers themselves acclaim as the world's leading publication for their sport - DESCENT.

Published every two months, Descent is packed with bang up-to-date news reports on what's going on under the limestone both in Britain and around the globe.

Caving is very much an international sport these days, and Descent readers in all countries benefit from, as well as enjoy, the many fascinating reports on expeditions and major discoveries around the world.

Now we've introduced Descent to you, we'd like to welcome you to it as a regular reader.

If caving is your sport, this is your magazine.

Sample copy and subs details from:-
Ambit Publications Ltd.,
13-15 Stroud Road, Gloucester GL1 5AA, England.

Carl R. Larson
NSS 9076

Carl Larson, a good friend of Western cavers, passed away on February 17, 1986. Carl had to give up caving in the mid-70s because of a five-way by-pass heart operation, and he had two more such operations after that. But it was cancer that took him at the age of 59.

Carl was a friendly and jovial person who loved caving and telling jokes. He was a charter member in the Diablo Grotto and served a term as president and also, as a safety chairman. He was always there to help the neophyte into caving. C. R., as he was known to all, was one of the leaders in rediscovering Windeler Cave in 1972. Even though he had been medically-retired and had to give up caving, he continued to stay in contact with cavers for he loved caving.

C. R. will be missed by his many friends. The memories of C. R., with his humor and enthusiasm for caving will remain with us, for he was also a companion and friend. We will miss him.—**Ernie Coffman**

Kent Seavers
NSS 15978
1952—1986

On February 14, 1986, cavers of the Virginia Region lost a dear friend and strong caver—Kent Leroy Seavers. In his last challenge, this time with cancer, his friends saw him draw upon the same iron resolve and raw courage that had so characterized his caving. With the same dedication he brought to pistol marksmanship and caving, he became expert in his knowledge of his illness as well as in the latest research and treatment techniques. Fully aware of the perils, he nevertheless agreed to pursue treatments on the cutting edge of medical research. In January, just days before his death, he told one friend, "As long as I have the dice in my hands, I still have a chance!"

Kent was introduced to caving by his future wife, Lucy, while attending college in Pennsylvania. It was not long before "Kent and Lucy" were active participants at York Grotto functions, caving in many of the local caves. While caving with York Grotto, Kent developed a strong interest in the caves of Swago Valley, West Virginia. He spent many pleasant hours exploring the inner reaches of Carpenter-Swago, Roadside Pit, and Overholt Blowing.

In 1976, he and Lucy moved to Charlottesville, Virginia, and quickly joined the Shenandoah Valley Grotto. SVG members quickly recognized a blue-chip caver, particularly after a hard trip into Chatums' Murdering Creek Cave in which Kent endured a surprising encounter with bottomless quick mud. (Since that trip, there has been only one return venture.) The late '70s were characterized by touring caves in the Virginias, always with a bent to "finding virgin cave!" The Seavers never missed an OTR at Alpine Shores.

Kent was ever eager to find new cave. On June 24, 1978, he and two others dug open Fossil-Moss Cave, a virgin ½ mile of pleasant cave located in a supposedly caved-out area of Highland County, Virginia. Fired by this find, Kent poured his energies into the SVG's Walt Allen Cave Project. Because of his slim build and iron tenacity, he was rapidly became one of the better "tight men" for pushing cracks and crevices in the low downstream area below the "140." The name "Snake" seemed appropriate one evening around the campfire and it stuck.

Throughout 1979-80 Kent helped pioneer the route through the nasty Cobblestone Creek portion of downstream Walt Allen... and was the first person to successfully negotiate a way through the Extremely Tight Spot. Kent's passage of the ETS led directly to the discovery of the large downstream trunk that was mapped in November, 1980. Partially due to the severity of the cave in this area, no one has returned to continue the survey.

Kent had always been interested in the potential of the Burnsville Cove, particularly in light of the Fossil-Moss find in 1978. In this regard he joined a small group of SVG members in a quiet push to discover the secrets of Chestnut Ridge. One cave, Bobcat Cave, captured the group's attention and punishing trips were sent into the cave to find the source of the breeze. In 1982 after blasting one particular obstruction in a cold, mucky section, a small crack was seen leading downward and around a corner. Determined to get through, the team could not seem to force the slot. On a last-ditch effort, Kent, minus helmet and lamp, twisted his body through the jagged orifice and down a seemingly impossible angled tube. This first passage of the "Snake Hole" has now led to some 12 km of growing cave and remains the only way into the inner reaches of Bobcat.

Unlike many of us, Kent rarely wrote or talked extensively of his caving prowess...he let his caving speak for itself. In this regard, the Bobcat exploration team has decided to name a decorated portion of the cave in Kent's honor. May Kent's Kave always remind us of the "Snake" in tight places, a man who always shot straight, and a caver who pushed all leads.

Subaquatic Speleology

By Milledge Murphey, Ph.D.

1986 CMAS/AAUS International Symposium

Recently Rob Palmer, leading British cave diver and current editor of the *United Kingdom Cave Diving Group Newsletter*, wrote me regarding the 1986 CMAS/AAUS International Scientific Diving Symposium which will be held in Tallahasee, Florida, during October 30 through November 2, 1986. Rob was particularly interested in conversations he had had with Nic Flemming, Chair of the CMAS International Scientific Diving Committee, concerning my organization of the first CMAS International Cave Diving Symposium in conjunction with the CMAS/AAUS meeting. Rob's letter prompts me to write a description of the first international cave diving symposium as conceptualized by Nic Flemming, Gregg Stanton and me, for inclusion as an integral part of the CMAS/AAUS International Scientific Diving Symposium.

I am functioning as Staff Workshop Chair for the AAUS International Scientific Diving Symposium and as chair for the first CMAS International Cave Diving Symposium. These two roles include selection and scheduling of all workshop activity which will occur during the symposium. We are presently discussing openwater and cavern environment orientation dives for inclusion in the program. Sites which have been suggested for these workshop dives include Wakulla Springs, a site which is obviously unavailable for all diving (except scientific diving efforts organized through the Florida State University academic diving program). Fortunately for CMAS/AAUS interests, this meeting is the major scientific diving meeting held worldwide and thus it is probable that Wakulla, "the world's largest spring," will be made available for purposes of scientific study. A number of other outstanding sites exist in the immediate Tallahasee vicinity and the Emerald System will also be considered for the openwater cavern workshop orientation dives.

As part of the first CMAS Cave Diving Symposium, several cave diving workshops will be conducted for persons trained, certified, experienced, and equipped for cave diving. Specific environmental site conditions will be utilized, with techniques for each carefully described and practiced. Hopefully, advanced techniques and equipment as used in Europe, Australia, America, and other countries will be demonstrated and used during these workshops. Sites under consideration include: Madison Blue Springs, Jackson Blue Springs, the Emerald System, Indian Springs, McBride Slough, Die Poulder Sink, Bonnett Springs, the Peacock System, Little River Springs, the Green Sink System and others.

As part of the CMAS International Cave Diving Symposium, an international panel discussion format will be utilized for specific subject area(s) of interest. Its basis will be the subject(s) of papers submitted for presentation at the meeting. Subjects which will probably be selected will include: diving medicine, hyperbaric technology, exploration, hydrology, biology, archaeology, geology, cave diving equipment, photography, advanced techniques, training methodology, certification standards and programs, and consideration of formation of an International Cave Diving element within the CMAS.

Persons interested in presenting papers and/or assisting with the workshop program should contact me immediately. The abstract format for paper submission is scientifically based and I can provide specifics for those who desire to submit abstracts and papers. All papers selected for presentation will be published in internationally refereed proceedings.

Readers are encouraged to correspond with me concerning events planned for the First CMAS International Cave Diving Symposium: Milledge Murphey, PhD, 134 FLG, University of Florida, Gainesville, FL 32611, (904) 392-0580.

Persons interested in attending the American Academy of Underwater Sciences International Scientific Diving Symposium should write or call: Dr. Gregg Stanton, 010 Montgomery Bldg., Florida State University, Tallahassee, FL 32306, (904) 644-3450.

Coming Soon—The New **Cave Minerals of the World**

By Carol A. Hill and Paolo Forti
with a historical introduction by Trevor R. Shaw

Grotesquely twisted helictites, cave pearls polished to a high luster, satin-petalled cave flowers, and the moonmilk (gnome's milk) of ancient medicine—all of these and many other speleothems are portrayed in this new and exciting book. Almost 200 different minerals are described, and nearly 180 color and black and white photographs, drawings and graphs illustrate the splendor of cave minerals from all over the world.

272 pages, including 16 in full color, glossary, bibliography, and index. $24.95 (pb) $29.95 (hb). *Available in July, 1986.*

Order your copy before June 30, 1986 at a pre-publication price of $22.45 (pb), $26.96 (hb), and $19.95 (pb), $23.95 (hb) for NSS members (please provide your NSS number). Retailers—ask about our wholesale prices. Foreign distributors are welcome. Please make payment in US currency. Include $1.50 P&H plus $1.00 on each additional copy.

Order from: NSS Bookstore, Dept. F6, Cave Avenue, Huntsville, AL 35810

News and Notes

Last Call for Participants

The Bighorn Cave Research Project (NSS Project) still needs experienced cavers to sign up for the June 14-22, 1986 field camp.

Last year the project surveyed over 23,000 ft of cave, completed a biological study, started geological and other cave studies, and started to develop management recommendations for the cave.

In order for this project to succeed, we need YOUR HELP! Ten additional volunteers are needed to work in the areas of survey, exploration and support. This is your opportunity to work on and contribute towards the success of an NSS Project.

Interested cavers should pick up their phones and call Bob Brown (Project Coordinator) TODAY! Phone number is (206) 569-2724; best time is 7-11 p.m. PST.

Persons unable to volunteer but wishing to help with a cash donation should forward their donations to: Bighorn Research Project, 1045 NE 103rd Street, Seattle, Washington 98125.

Cave Gating at Xanadu Cave

Work has begun on cave gates at the main entrances (Xanadu and Zoraster) to Xanadu Cave near Jamestown in Fentress County, Tennessee. The work is scheduled during March and April, 1986. Cavers visiting the cave should be aware of possible construction, rock moving, blasting and even gated entrances. If any blasting takes place, warning signs will be posted.

The decision to gate the cave was made last year by the cave owners and cavers due to increased traffic, vandalism, and garbage. Caver traffic to the cave has increased 30% in the last five years to over 400 people per year. Of major concern is the increase in non-NSS organized cavers, who only carry flashlights, spray paint and beer cans. The increased traffic is slowly changing the cave from pristine to trashed. The cave was completely virgin in 1977 and has 24 miles of mapped passages.

Organized caving groups (NSS grottoes) will still be allowed access to the cave. Details for getting into the cave have not been worked out yet, but most likely nearby grottoes will have keys and will monitor visitation. The first year will be a trial period, where the condition of the cave will be monitored to convince the landowners that responsible cavers can visit without damaging the cave. Some sections of the cave will be closed during the winter to protect hibernating bats.

For more information on gating, access, and how to help, write: Xanadu-Obey River Conservation Task Force, P.O. Box 234, Dunlap, TN 37327. Send a self-addressed, stamped envelope for a speedy reply.

Call for Papers Sinkholes and Karst

The 2nd Multidisciplinary Conference on Sinkholes and the Environmental Impacts of Karst will be held February 9-11, 1987, in Orlando, Florida, USA. This meeting is a continuation of the interdisciplinary communication so successfully initiated at the First Multidisciplinary Conference on Sinkholes in 1984. The proceedings of the first meeting, "Sinkholes: Their Geology, Engineering, and Environmental Impact," has become the "state-of-knowledge" in its field. The second volume, and the second meeting, will be expanded in scope and should be even more successful than the first. Our banquet speaker will be Dr. Yuan Daoxian, Director of the Karst Institute in Guilin, China, who will speak on environmental problems of karst geology in China. A field trip to the west coastal area of Florida's classic karst will precede the meeting.

Technical papers and case studies are invited on the following broad subjects: 1) geology and engineering studies of karst areas with emphasis on sinkholes and other practical aspects; 2) hydrogeology and environmental problems of karst; 3) international examples of applied karst geology and hydrology; 4) specific engineering considerations of karst terrain; 5) any additional related topics.

Abstracts will be due by August 15, 1986, and full manuscripts will be required by November 14, 1986. As before, the proceedings will be distributed at the meeting.

The $125 registration fee includes the proceedings and the banquet. Speakers and students will receive a reduced rate. An extremely favorable hotel rate of $28/room (1-4 persons) has been negotiated at the International Inn, which is convenient to Orlando's many tourist attractions, so that participants may economically bring their families.

Prospective contributors should submit a tentative title as soon as possible to: Dr. Barry F. Beck, Director, Florida Sinkhole Research Institute, College of Engineering, University of Central Florida, Orlando, Florida 32816, USA.

Cave Books Call for Manuscripts and Translators

Cave Books, a subsidiary of the Cave Research Foundation, produced three volumes in 1985: The *1985 CRF Annual*

KARST FIELD STUDIES at MAMMOTH CAVE

Karst Geology	May 25-31	**Dr. Arthur Palmer**
Historical Geography of Mammoth Cave	June 1-7	**Dr. Stanley Sides**
Speleology	June 8-14	**Mr. Roger Brucker**
Cave Archaeology	June 8-14	**Dr. Patty Jo Watson**
Karst Hydrology	June 15-21	**Dr. Peter Smart**
Cave Ecology	June 15-21	**Dr. Thomas Poulson** **Dr. Thomas Kane**

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

These intense field courses combine formal lectures with field observations and techniques. Some courses involve long and rigorous trips into rarely visited portions of Mammoth Cave while others are more surface oriented or less physically demanding.

Courses may be taken for undergraduate or graduate credit or as a workshop which has much lower tuition.

Send for brochure:
Nicholas Crawford, Director
Center for Cave and Karst Studies
Department of Geography and Geology
Western Kentucky University
Bowling Green, Kentucky 42101
Phone: (502) 843-4979 or 745-4555

Report edited by Karen B. Lindsley, a reprint of Alexander C. Bullitt's *Rambles in the Mammoth Cave During the Year 1844*, and C. William Steele's long-awaited *Yochib: The River Cave*. But all we have scheduled for 1986 is the CRF Annual Report for 1985.

We need book manuscripts. Our last call brought in a number of outlines, but only one acceptable manuscript, Sheck Exley's *Memoires of a Cave Diver*. We have also contracted a new *Introduction to Speleology* by Arthur N. Palmer and Kathleen H. Lavoie. But these books will not be ready before 1987. It looks like a slim year for 1986 if something doesn't come in soon.

We would like to publish two French books, but we need translators for them. One is a guide to cave photography by François-Marie and Yann Callot, *Photographier sous terre*. The other is Jean-Francois Pernette's *Rivieres sous la Pierre*. It is the best-written cave book I have ever read. Here is how it begins:

> At the bottom of the Gorges of Sainte-Engrace, at the foot of the Basque Mountains, mysterious springs rise out of the earth. Fifteen hundred meters above, on the plateau of Pierre-Saint-Martin, spread like a seive through the desert of stones are the pits into which disappear torrential rains.

We need translators for these two books. And we need manuscripts of cave books of exploration, adventure, techniques, and science. Please contact: Richard A. Watson, Editor, Cave Books, 756 Harvard Avenue, St. Louis, MO 63130.

Canadian Exploration Program

If there is a group seeking a long-term, major exploration program, they should buy from the Canadian Government a copy of the Colville Lake NTS 96W and 96NE map. The southwest section of this map shows over 3,000,000 acres of active karst under permafrost. There are hundreds if not thousands of virgin caves. The only exploration that has been undertaken has been the helicopter descent of two or three of the collapsed sinks and a short penetration of Davis Cavern, latitude 125°5', longitude °32'. The Hare River drainage has springs as large as many in the Missouri Ozarks.

Caves exist in the Bear Rock, Mt. Kindle, and Franklin Mountain formations. Potentially the deepest caves will be found in the Mt. Kindle. The karst system may partially drain the Great Bear Lake via the Smith Arm. Exploration has been limited due to lack of road access. Since winter conditions are extreme, archeological sites in some of the caves seems likely. There also appears to be potential for discovery of new flora and fauna.

—William Cate, Pacifica, California

Reading
continued from page 112

year's linkup of La Grieta and Sotano de San Agustin, which added nearly 9 km to the length of Sistema Huautla (now 33.8 km). Accompanying Minton's article are plan and profile views showing the complexity of this deep and demanding cave system and how tantalizingly close some unconnected segments are.

In the Xilitla region, the Sprouses seem to be getting closer to completing the long-promised AMCS Bulletin on what was the first big-time Mexican caving area. Issue No. 15 storifies the "near-completion" of the map of Sotano de Tlamaya and other lesser items of interest.

Articles by Carlos Lazcano, Andrea Raz-Guzman and Pablo and Mauricio Tapie reflect the upsurge in activity by Mexican cavers. Detailed here are trips in the Yucatan, Guerrero, Hidalgo and Jalisco.

The issue also includes an extensive Mexico News section, although most information is somewhat dated; lists of the long and deep caves of Mexico; a directory of Mexican caving groups; a techniques article from Bill Stone on camping beyond sumps; a letter from Stone on getting permission to cave in Huautla; and a review of a Mexican caving publication. At the end is a much-needed index of issues 1 through 15, including, strange to say, an apology for the accuracy of the index?!

All in all, an excellent buy.

—Jay Arnold

An Introduction To Caving: A Guide For Beginners by Kenneth C. Thomson and Ronald L. Martin. *Missouri Speleology*, Vol. 20, Nos. 1-2, 1980, 43 pp., $6.00.

An Introduction to Map Reading by Kenneth C. Thomson. *Missouri Speleology*, Vol. 20, Nos. 3-4, 1980, 70 pp., $6.00.

An Introduction To Cave Mapping, second edition, by Kenneth C. Thomson and Robert L. Taylor. *Missouri Speleology*, Vol. 21, Nos. 1-2, 1981, 127 pp., $7.00.

Available from Missouri Speleological Survey, Inc., c/o Alberta Zumwalt, Route 1, Lohman, MO 65053, and the NSS Bookstore.

The Missouri Speleological Survey, Inc., has long turned out one of the best grotto publications. The thoroughness and accuracy of the editors and writers of the special issues of *Missouri Speleology* is always impressive. They show what a few talented and dedicated people can do. The three volumes considered here are particularly worthy of attention. Notable in "An Introduction To Caving" are numbered lists: advantages and disadvantages, rules, lamp parts, symptoms, checklists, etc. I like the cast of mind that organized this material. The style continues in "An Introduction To Map Reading," a fine elementary textbook. Best is "An Introduction To Cave Mapping." The diagrams and instructions are detailed, and although nobody will agree with everything, all is said clearly enough that confusion or misunderstanding is unlikely. This is most important in an instruction manual; you want to be able to get the point so you can think about and understand the reasons why you agree or disagree. In this respect, this book on cave mapping is the best I've seen. What more would one want? Well, these are introductions, and good ones. Now I hope to see future volumes on advanced and knotty problems in cave exploration and mapping.

—Richard A. Watson

Don't let the dates on these publications fool you; they have all been published within the past year.

Those interested in reading more about the area in northern Spain mentioned in Jay Arnold's "International News" column in the February issue might like two recent publications. The Lancaster University Speleological Society and the Sección Espeleologia Ingenieros Industriales de Madrid have jointly published a booklet on the exploration of Sima 56, which is 1169 m deep. The text is both in English and Spanish, and there are a number of photos, a much-reduced map of the cave, and a rigging list for all the known pitches. The 80-page book costs around $5.00. A special issue of *Spelunka*, dated July-September 1985, is devoted to the caves of the Picos de Europa. The text is in French, but the maps, including four caves over 1000 m deep and 13 others over 500 m deep, and other illustrations are worthwhile even if you can't read the text. I got my copies of these publications from the cave-book seller, Anne Oldham, Rhychydwr, Crymych, Dyfed SA41 3RB, United Kingdom.

—Bill Mixon

Help the News to grow and improve with more color and content.

NSS News Photographic Endowment Fund

Send your donations to: NSS Office, Cave Avenue, Huntsville, AL 35810.

Dyas Digest

by Mike Dyas

Miami Valley (Ohio) Grotto's January 1986 *Cave Cricket Gazette* features updated information on the evolving large cave system under Long Hollow in Pulaski County, Kentucky. MVG (Mark Turner et al.) focused during the second half of 1985 on **"Mud and Slime" Cave** (the name alludes to its extremely flood-prone and debris-laden character), a feature first located in the 1960s by Ed Palczewski of North Carolina. In September and October, Turner and company pushed a series of sleezy crawls to trunk passage, racking up some 2.4 km of survey data. Meanwhile, in close-by **Dyke's Bottom Cave**, competitive Blue Grass Grotto members mapped about as much, with the two caves trending toward connection. This was made by John Holbrook of BGG in November. Doug Stecko comments on resulting political problems between the two groups, which hopefully have been resolved by formation of a "board of governors" to coordinate ongoing work in Long Hollow. Stecko would like to see all cavers concerned "curb their egos and overcome the fear of being scooped." Chris Hacker adds some historical background on the several groups which have operated in Long Hollow during past decades. All contributors emphasize that these caves should be entered only during guaranteed dry weather...Same issue contains a summary by Don Conover of a recent briefing given to MVG by Paul Unger of Central Ohio Grotto, concerning plans for a cave research and management program in cooperation with the Daniel Boone National Forest in eastern Kentucky. The project is an outgrowth of the unsuccessful drive to have the **Cave Creek System** designated as "underground wilderness." (Reportedly, the Forest was upset by hearsay information received on that cave from some letter writers—such as that Cave Creek contains lots of dry passages or that backflooded areas aren't necessarily related to a nearby reservoir.) The envisioned "Boone Karst Foundation" will emphasize finding endangered species, which could lead to gating selected caves or modification of logging plans. Recreational caving data is not to be published. Unger feels that it will take quite a few years to locate all caves in the study area.

Flittermouse (N.C.) Grotto's February 1986 *Der Fledermaus* includes recently-drafted maps of two of the better-known caves in east Tennessee's Greene County. **Big Spring Cave**—which has no hydrological relationship to the resurgence for which named—contains 183 meters of "quick and easy" passage. **Hutton Cave** is over twice as long (405 m), but is mostly wet crawls. Above information courtesy of Laurie Adams.

The basic survey of **Niagra Cave** has been completed by the Minnesota Speleological Survey. A preliminary map showing some 845 m is offered in the February 1986 *Minnesota Speleology Monthly*, with remarks and a speleogenesis scenario by Cal Alexander. Additional trips to the commercialized cave are planned to add detail to the plot.

The Oct.-Dec. 1985 *Journal of Spelean History* (Am. Spelean History Assoc.) has as its lead article "Lesser Saltpeter Caves of Marion County, Tennessee," by Marion Smith. (**Nickajack Cave** will be the subject of a future related paper.) The most significant is **Monteagle** (or **Battle Creek**) **Saltpeter Cave**, which has been known since the early 1800s—and is one of the most vandalized caves in southern Tennessee. The author has been unable to reconstruct very much on the Civil War nitre operations in this cave, other than that Union forces destroyed the works in August, 1863. When organized cavers began visiting Monteagle Saltpeter in the early 1960s, it was characterized as virtually "a city dump" (also an official Civil Defense shelter). A 1977 Chattanooga Grotto map accompanying the article depicts some 1.85 km of passage, with several maze sections...In August, 1887, the *Chattanooga Times* published accounts of the discovery of **Blowing Springs Cave** under Lookout Mountain in extreme northwestern Georgia. The highly embellished story ("Gosh!... a curiosity which can be termed second to none in the country") described the cave as having been explored for around 2.5 km., otherwise being "endless." In recent decades, the entrance crawl was blocked by a rock, which several Tennessee cavers blasted away this past September. Blowing Springs was found to be a "typical stream cave" with no remarkable formations, only about 600 m long.

From the *Northeaster* (Regional Org.) *Caver*, Vol. XVI, No. 4: cave diver John

Schweyen recounts renewed progress in the **Tytoona-Arch Spring System** in Pennsylvania, first probed about 20 years ago by Rick Rigg and John Marsden. Schweyen made a number of trips this past year and, though repeatedly hindered by silt, was able to account for much of the 1200 m between the two caves. The most significant discovery was 532 m of walking passage between Tytoona's third and fourth sumps...The Glen Park caves in northern New York's Jefferson County are being managed by the State Dept. of Environmental Conservation, in cooperation with the owning Niagra-Mohawk Power Corporation. Access is by written application and the caves are closed from mid-October through May to protect hibernating Indiana bats (*Myotis sodalis*), the northernmost-known population of that endangered species...Thom Engle offers a thoughtful article entitled, "Cave Management—a Holistic Approach," which should be required reading for those struggling to draft (or revise) cave management plans. In his summary, the author recommends that such plans be flexible and as complete as possible, written without ambiguities and consistently implemented (i.e., without favoritism). Thom adds that "a management plan must not be an excuse not to manage."

The Jan.-Feb. 1986 *Southwestern* (Region) *Cavers* includes the text of an interesting paper, "Interpreting Wild Caves," presented at the Region's winter symposium by Matt Sanford of the Bureau of Land Management. He observes that government-managed show caves have, by and large, done a better job of using cave tours to enlighten visitors, compared with private caverns—which often rely on colored lights, music, fantastic hype and so forth. Self-guided tour experiments at such meccas as Carlsbad Caverns and Mammoth Cave National Parks have had mixed results—increased vandalism being one. The author also notes the increasing popularity of privately-run "wild cave" tours. Carrying this a step further, to government-owned undeveloped caves, Sanford has established a simple interpretive "tour" in New Mexico's **Fort Stanton Cave**, with marked stations keyed to a pamphlet offering information on the cave's features.

From the January 1986 *D.C.* (Grotto) *Speleograph*: Mike Dyas gives a capsule summary of **Roaring Spring Cave** near Fort Campbell, mapped last year by the Western Kentucky Speleo. Survey. The entrance—reportedly spacious not too many years ago—now is nearly blocked with cobbles. Aside from a conspicuous number of blind fish, Roaring Spring's most notable feature is the deep "gumbo" mud which hinders explorers in much of the cave. Authentic-looking 1865 signatures were found in one of the more remote passages. Some 3.3 kilometers is shown on John Ganter's accompanying "stick" map; chances for further penetration are considered slim... Several years ago, one-time Flint Ridge caver Chet Hedden wrote an article in which he took credit for discovering (in 1960) a key passage—"Candlelight River"—which later was crucial in connecting the Flint Ridge complex with **Mammoth Cave.** Hedden felt that his contribution had for some reason been neglected by his companion on that trip, Roger Brucker, in the book, *The Longest Cave*. In a sequel, Chet recounts his return to Mammoth Cave last summer, in which he hoped to verify his version of events. He was unable to relocate the critical junction vividly remembered from 25 years earlier and postulates that it had been obstructed by deep fill. This, in turn, having been drifted by a "mysterious wind" effecting the cave at times, theorizes Hedden. In comment, Roger Brucker is skeptical of Chet's ideas and denies deliberately overlooking his role.

Willamette Valley (Oreg.) Grotto's Fall 1985 *Underground Express* contains comments from "Captain Speleo" (Steve Knutson) on late 1985 doings in northern California's Marble Mountains. On an October sequel to the customary Labor Day "Speleocamp," renewed attention was paid to **Streamway Cave**, the first sizable cave checked in the Marbles in 1974. Some 245 m additional was surveyed; Mark Fritzke was nearly crushed by a large slab which shifted as he crawled under it. An effort to connect **Brokedown Palace** to **Bigfoot Cave** initially appeared successful, but such wasn't the case. The map of the former evidently is lost and will have to be redone.

The February 1986 *Wisconsin* (Speleo. Society) *Caver* has as its theme cave digging—a subject of customary interest in that relatively cave-poor state. A "Project DEAD" (Deep Exploration and Dig) has been initiated in hopes of extending **Horseshoe Bay (Tecumseh) Cave**, Wisconsin's longest-known. A 10-hour trip to the Door County landmark is retold by Norb Kox and Arnie Hardtke. Its purpose was to re-excavate "Countney's Sandbox" and double-check the roughly 100-m-long extension first pushed in 1978 by two Michigan cavers. This "river" section, being largely filled with bone-numbing water, has only been sketch-mapped. Future trips will attempt a bonafide survey and additional digging... Gary K. Soule has re-evaluated past Horseshoe Bay survey notes and concludes that the previously-disseminated length figure (530 m) is reliable after all (not including the unsurveyed extension)...The "Caver's Limelight" profiles Gary Soule, long-time Wisconsin cave digger, professional stilt-walker, jack-of-all-trades, world traveller, commercial and spelean history lorist and collector of cave-related literature and miscellany...*Caver* editor Norb Kox is also a student of religion and scriptures and offers a sermon inspired by the cliché "Jesus Caves." Some scholars believe that the manger where Christ is thought to have been born was actually a small limestone cave. Likewise, the Babylonian sun-deity Mithra (or Nimrod) also supposedly was born in a cave. Associations between gods and caves are common in mythology—including the more modern cult of Santa Claus, which also has been traced to ancient Mesopotamia via the 2nd century A.D. merger of pagan and Christian customs in the reign of the Emperor Constantine.

There've been a number of relatively successful experiments with epoxy glues for repair of broken speleothems—a particular problem being how to prop stalactites in place long enough for the adhesive to set. Tim Rose has an idea in the January 1986 *Potomac* (Speleo. Club) *Caver* based on practice in **Cricket Maze Cave** (West Va.). It seems that a dab of "crazyglue" will hold a stalactite or sodastraw of considerable size to a cave roof long enough for the primary epoxy to cure.

The feature article in Central Indiana Grotto's February 1986 *CIG Newsletter* is Glen Lemasters on **Bird Horror Hole**, Jackson County, Alabama. It was one of three significant caves found by Indiana cavers on Bingham Mountain during a very frigid January 1985 ridgewalk. Of several pits, the second ("Rocky Top Drop") was a particular problem, requiring clearance of an exceptional amount of loose rock. A subsequent waterfall pitch was the scene of a close encounter with hypothermia for the first descending caver, as the rope was too short. About 600 m has been mapped in Bird Horror Hole, to a depth of 136 m., as depicted on plots accompanying the story. Several attempts to force a squeeze at the cave's known "end" have been fruitless and the lead has been written off indefinitely, notwithstanding strong airflow and potential for another 30 m or so relief...A December CIG cleanup of **Wayne's Cave** near Bloomington, Ind., netted nineteen bags of junk plus several old tires. It was

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found that the most efficient way to haul bags through the cave's famous crawl was moving backwards, tugging on the plastic containers reinforced with GI-style waterproof sacks, according to Stephen Collins.

Golden Gate Grotto's *Short Rounds* returns with its February 1986 issue, after a temporary lapse during editor Charmaine Legge's recent excursion to Micronesia. In a guest "aiming up" editorial, Paul Decker ruminates on the risk factor in caving. He focuses on the "act of God" type cave accident, as exemplified by the fatal rockfalls not long ago in **Valhalla** (Ala.) and **Culverson Creek Cave** (West Va.). Paul feels that seasoned and habitually-daring cavers don't like to admit to the possibility of freak mishaps for fear it would call into question their "pioneer" mystique or ego. He also feels that grottoes should ensure that novices realize that an "act of God" can happen to anyone. (Decker himself recently injured a foot in **Santa Claus (Pearl) Cave**, Calif.)...With considerable historic license, Bruce Rogers reconstructs the 1927 adventure of two lighthouse keepers at Point Reyes, north of San Francisco, in what may've been California's first sea cave survey. Rogers postulates that the pair climbed down the crumbling cliff hand-over-hand on a bulky manila rope, carrying cumbersome equipment, to a large entrance still well above ocean level. The subject cave is a dry fossil (with water heard below in a narrow crevice), penetrating the headland for 30 m to a parallel fault passage. A smaller adjoining cave was also described. The map by G. U. Johnson and F. A. Kreth is the only actual record of their undertaking.

The Jan. 1986 *SFBC Newsletter* includes some facts from Bob Richardson on a particular Santa Cruz County cave on which San Francisco Bay Chapter has been working—identified only as one frequently used for survey practice. Small, overlying **Mars Cave**, after being connected to the main cave by voice and a dangling survey tape, was physically connected in early January through enlargement of the "Fissure of No Return." The combined cave is now some 1.7 km in length, of which a few hundred meters was virgin until recently.

Efforts by cave cartographers to innovatively depict complex multi-level caves on paper have been less than satisfying, even utilizing such techniques as multiple colors and pseudo 3-D renderings by skilled draftsmen or computer graphics. Peter Bosted has been experimenting with three dimensional models with considerable achievement, notably his study of 1220-m-long **Soldier's Cave** in California. Utilizing survey coordinates, the first step is to form a wire skeleton as accurately as possible. As an alternative to modelling clay, Peter is pleased with the results of "plasticene," shaped to the approximate cross-sections of passages. Bosted's observations are written up for the Western Region's Summer 1985 *California Caver*.

Blue Grass Grotto's Feb. 1986 *Kentucky Caver* features recently-completed plan and profile maps by Gary O'Dell of **Cedar Grove Cave** (Rockcastle County), which was discovered last fall in the same ridge containing **Miller's Cave** and several others. With 333 m of surveyed passage, Cedar Grove has a main lower entrance and an upper domepit opening ("Deadwood Drop,"—15 m) connected to the lower cave by a vertical/breakdown complex. The cave is also said to contain some nice formations. BGG is also working on **Monolith Cave** in the same neighborhood plus **Sugar Tree Pit** in adjoining Pulaski County. On a January trip to the latter, Phil O'Dell is said to have been "nearly squashed" by a sliding slab...In retelling a recent visit to Tennessee's ever-more-popular **Xanadu Cave**, Gary O'Dell mentions markedly declining conditions, with battery and carbide dumps conspicuous.

The February 1986 *West Virginia Caver* leads off with editor George Dasher's "final" writeup on **Cricket Cave** in Greenbrier County. It was initially explored over 20 years ago by the former Swathmore Grotto; shortly afterwards, the owner bulldozed the entrance. It spontaneously reopened (barely) in 1981 and the second generation project ensued. Although several dubious leads in Cricket haven't been completely

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40/25 Years Ago

By Dave Hughes, NSS 14550

25 Years Ago

Information on the impending Convention to be held in Chattanooga, Tennessee fills the May 1961 *NSS News*. This meeting is to be held in an excellent karst area and, as such, many interesting cave trips are planned. Preeminent among these is Cumberland Caverns, Tennessee, where attendees will have a choice of the commercial route or four different tours in undeveloped portions of the cave. Several of these trips are designed for photography, so members are encouraged to bring their cameras into the spectacular surroundings. Cumberland Caverns is, also, hosting the Convention banquet and cavers will be treated to an underground, catered dinner in the Volcano Room.

Other special outings include trips to both Case and Sitton's Cave in north Georgia's Cloudland Canyon and a demonstration of the Chattanooga Grotto's portable rescue hoist on Lookout Mountain. Finally, Alabama members are, also, encouraging caving in their state and will feature exploration of Sauta and Tumbling Rock caves. Huntsville grottoite, Bill Varnedoe is especially enthusiastic about Tumbling Rock and includes a map and some anecdotes about early exploration trips in this pre-convention issue of the *News*.

40 Years Ago

The big membership drive is continuing and the goal is to have 1000 cavers in the Society by year's end according to the May 1946 *NSS Newsletter*. Encouragingly, a total of 30 new folks have been signed up since the annual meeting in February. V.P.I. cavers, Tommy Watts and Dick Southworth are really pulling their weight by doing a lot of recruiting in the Blacksburg area. Augmenting these efforts, Burton Faust is preparing a broadcast about caving to be aired on a Richmond radio station in the near future. In addition, Burton announces that he is in the process of writing a comprehensive article on saltpeter mining in caves. *Newsletter* editor, William Hill has contributed his saltpeter file to Mr. Faust and other members are encouraged to do likewise.

Society member, John Petrie and a friend made an April foray to Ohio to visit NSS members and do some exploring. While there, they checked out Ash Cave, Tinker Cave and The Seven Caves in addition to doing some boating on Lake Erie. The highlight of the trip was, perhaps, a stop at Ohio Caverns to enjoy the translucent formations juxtaposed against a backdrop of multi-hued earth.

INTERNATIONAL NEWS

By Jay Arnold
NSS 6482RFP

Saipan doesn't mean Swiss cheese in the island's Chamorro dialect, but it would be appropriate, according to Bruce Davis, who spent some time checking out caves there last fall. Although Bruce and Don Smith, another "Pacific Carpetbagger" (a.k.a. mainland U.S. consultant working on the island) spent much of their time checking out "caves" excavated by the Japanese during World War II, they did find true spelean wonders, particularly Liyang Falngun Hanom (Sinking Water Cave) and Liyang Kalabera. The entrance to LFH lies at the end of a steep drainage near the northern end of Saipan. An opening 25 m high and 10 m wide reveals a chamber nearly 20 m deep, where many pieces of china and glass litter the floor—apparently from the Japanese soldiers who hid in the cave as the Americans advanced on the island. Bruce notes that stuffy, foul-smelling air was encountered here—a factor that would hamper exploration later on.

At the bottom of the entrance room, the cavers climbed down a white marble slope to a large passage below breakdown with a floor of undulating mud mountains and much organic debris high on the walls. Americans Bruce Rogers and Charmaine Legge had encountered high CO_2 levels in this passage previously—and so did Bruce D. and Don. They found another passage large enough to drive an 18-wheeler through, but then left the cave when the bad air began to take its toll. On a subsequent visit, Bruce and Don steeled their nerves against the putrid air and pushed on farther until they were gasping for breath and a carbide light would not stay lit. They saw an estimated 300 m of passage that had diminished in size to pickup-sized passage at the turn-around point, Bruce writes. Smith nearly blacked out twice during the two-hour exploration.

Between these two excursions to LFH, Bruce and Don explored Liyang Kalabera, which was located about 1000 m from LFH. Kalabera featured a 40-m rope drop out of a good-sized entrance chamber to a passage littered with rusted remains of GI fuel cans, ammo boxes, helmets and mess kits. Bruce found a little less than 300 m of walking-crawling passages and rooms. They were nicely decorated. Bruce said he hoped the cave below the drop would be virgin, but once down he found a single set of Vibram-soled boot tracks, possibly from the recent explorations of Jeff Bozanic and Dennis Williams? (See October 1985 *News*.)

Rogers and Legge, by the way, as part of their ambitious karst survey of the Pacific region, told Davis they were mapping an average of about 40 caves a day earlier this year in Palau's Rock Islands. They write: "Swim in to Carlsbad-like rooms; boat into seaplane-sized rooms with sunken float-planes; small caves with rusted Japanese cannons; dry caves with 2,000-year-old artifacts and stone money. It's tough."

. . .

George Moore made a recent visit to China, where he poked around in the Guilin area and its trademark tower karst. He toured three caves near the city: Lu Di Cave, Chuan Shan Cave and Chi Xing Cave. In Chuan Shan, he noted an unusual display in which four shields had grown together in a cluster. Moore, writing in the February San Francisco Bay Chapter Newsletter, also explains that the "fengcong" (clustered towers) and "fenglin" (detached towers) apparently form only when annual average temperatures for a particular region exceed 18°C and the annual rainfall exceeds 760 cm. Another requirement is mountain building—a fraction of a millimeter a year at Guilin, due to the plate-tectonic collision between India and Asia, Moore says. Alluvium rich in decaying plant matter forms between the clustered towers and plays a key role in turning the clusters into detached towers as carbon dioxide-laden water drains the alluvium and erodes the bottoms of the clustered cones. The steep-sided detached towers result, Moore says.

. . .

Japanese cave divers have resumed diving in Japan's famed Akiyoshi-do Cave for the first time in 12 years, reports Atsushi Fujii, an NSS member and head of the Nishinihon (West Japan) Cave Diving Researchers. Fuji says a dive in February found 200 m of air-filled passage beyond three sumps that totaled 650 m in length. Another trip was planned—about which we hope to learn more.

Note: Contributions to this column are welcomed from any source, foreign or domestic. Please send notes, tips, news, etc. to the author at 10129 Sassafras Woods Ct., Burke, VA 22015.

Dyas Digest
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pushed, George is writing off the cave in view of its general nastiness and shortage of enthusiastic volunteers. The main downstream passage becomes too low; the water has been traced, not to the adjoining **Organ Cave System**, but to a hydrologically-distinct spring on Second Creek. Accompanying map depicts 1.27 km of passage, only a little of which wasn't checked by Swathmore...Bill Balfour reports that ridge-walking in the wake of the late 1985 floods led to discovery of a new entrance to the 27+ km-long **McClung's Cave** in northern Greenbrier County. Lightner Pit involved a number of drops and digs. Bill notes that landowner relations for the new entrance aren't firm and recommends that traffic be restrained for the time being...Recapping a four-party January West Va. Assoc. for Cave Studies (WVACS) trip to Greenbrier County's **Buckeye Creek Cave**, George Dasher says that the survey stands at 3.94 km—with apparently more to go.

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Square One Adventures

Friday morning, November 1, 1985, Joshua Tree National Monument, Calif.—Small groups of people are quietly talking at Site 1, Sheep Pass Campground, waiting. This is command post, and today there will be technical rescues. For a week, participants from seven states and Canada have spent their mornings at lectures and afternoons in hands-on practice of vertical rescue techniques. But today is different. The staff and instructors for the week are not readily apparent. They are away from camp, setting up mock rescue scenarios. During a mock rescue, instructors are silent witnesses, watching for safety and critiquing students' ability to perform as a rescue team.

At 9:24 an old blue van with peeling paint slides sideways into the driveway at command post. A hysterical climber jumps out of the van, seizes Mary Tabor, a course participant, by the arm and tries to drag her toward the van with cries of "Help! My partner fell, he's not talking, come quick!" Gently but firmly, Team B debriefs the climber, extracting important information and prepares to respond. The accident happened on Sport Challenge Rock. Reference to the guidebook tells the team where to go, and what to expect. In minutes, the first team is on the way.

They learned many different vertical rescue techniques this week: single and dual suspension litter lowers, fixed and traveling brake, Tyrolean traverse, counter-balance haul and more. The decisions on what to use rests with the team and their captain. At Sports Challenge Rock all is ready. The "victim" is high up on the wall, injured in a leader fall. Staff and instructors are placed to observe, but not interfere.

At 9:50 the A team (Team "Rambo") is activated by a passing "ranger's" radio signal. There is a second scenario, based on an injured climber on Sentinel Rock. The sites had been chosen carefully, from many real situations in the past. They are near enough to each other to allow the teams to give mutual support. Problems are much the same. Each team must get someone up top, rig quick anchors, and get the medical first responder to the "victim." Midface stabilization, evacuation follow. The teams will make their own decisions, independent of each other. Unless unsafe conditions are noted, instructors will remain silently in the background. At one site, crowd control becomes a problem. The climber's friends and family want to help, as do local climbers and passers-by. They must be dealt with carefully, and if possible, given jobs to do. "Why don't you come over here and hold the end of this rope. Of course, there is no one *on* the rope... The news media arrive and want closeups! The rock is 200' tall, the "victim" is 150' in the air... These people must be dealt with carefully, and how to handle them is part of the course. One obnoxious bystander is arrested. He *said* he was an NCRC graduate, but you can't be sure. A family member becomes hysterical and must be soothed. Time is marching by, but technique is more important. Make decisions and make the system work. Never forget the most important rule in rescue: "Don't get dead."

Friday night, at Command Post, by lantern light, team captains and members critique their performance. What could we have done differently? What improvements to our technique would make the rescues work better? All agreed that with practice these techniques for vertical rescue would make them feel confident in a real situation. A 40-hour course of this type does not make a rescue team; it is only the beginning. With practice at home, with their own teams, they feel sure they can get the job done. The caver, climber, window washer or crane operator need not die in an accident. There are techniques to save them, quickly. Some are new, others not well known where it counts.

October 28 through November 1 was Square One Adventures' first full week offering of high-angle rescue training. It was presented with the help and support of many individuals and organizations. The *NSS News, jems,* and *Response!* provided calendar listings, to publicize the course. The National Park Service provided the location, limited facilities, and, of course, rocks in Joshua Tree National Monument. PMI Rope, Survival Technologies, Inc., California Mountain Co. Ltd., Skedco, A. Miller & Son, Inc., Ferno-Washington, Life Support Products, Inc., and Gibbs Products provided high-quality equipment necessary to make this seminar possible. Their commitment to rescue training created the opportunity for students to evaluate a great deal of equipment first hand, in the field.

This course has roots in other rescue courses. The National Cave Rescue Commission Seminar, NASAR's MSF, Joshua Tree's own Training Seminar (JOSAR), and training of SAR teams in the Mountain Rescue Association. We are proud of our instructors and staff for their individual committment to modern search and rescue.

This was not an easy week for anyone. Morning lectures focused on equipment: what to use, where to get it, what is right for the job, and what can be used in other ways? How strong is each piece of equipment? Staying loose and keeping an open mind. Rescue is creative. Do we have better techniques than last year? Why, and what are they? Counterpoint to the lectures, afternoon practice often went on into the evening, and dinners were cooked by lantern light. This is a cram course, with little leisure. That is for your vacation, not this week when you are learning to help save a life.

Square One will offer a one-week Technical Rescue Seminar October 27—31, 1986. For information write Square One Adventures, 5412 Harco St. Long Beach, CA 90808.

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Society

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Some feel the "same old issues" keep coming up at the Congress of Grottoes and Board of Governors meetings each year. If you'd be willing to read the minutes of COG and BOG meetings for the past 10 years and develop a list of repetitive issues, contact Paul Stevens, 5964 Seabright Road, Springfield, VA 22152.

Spring BOG Meeting Report

The NSS board met on March 15 at a country location near St. Louis. The arrangements were very nice: we could all spend the whole weekend together at the same place, which had camping space, a bunkhouse, and a meeting hall. Local cavers catered all the necessary meals. All members of the board were present at the meeting.

During a closed meeting, the directors reappointed Paul Stevens to serve another year, starting at the convention, as President, and elected a new Secretary-Treasurer, Tina Shirk (Apartment 1, 99 North Brower Street, Greenwood, Indiana 46142). Tina will take office on May 1, the beginning of our fiscal year. During a closed meeting of the entire board, we approved the awards to be announced at the convention banquet.

Besides the officers, there were quite a few other appointments. Andy Flurkey (883 Roos Road, Houston, TX 77036) was approved as editor of the 1986 volume of the *NSS Bulletin*. Doug and Glenda Rhodes will continue with the *News* for another year. The new chairman of the McFails Cave Committee is Thom Engel (Rt. 1, Box 119, Voorheesville, NY 12186). Jay Arnold (10129 Sassafras Wood Court, Burke, VA 22015) is chairman of the new Exploration Committee which will administer the Expedition Support Fund grant program. Jack Hissong (4730 Loretta Avenue, Cincinnati, OH 45238) was confirmed as the new chairman of the Youth Groups Liaison Committee. Mary Howerton (402 Town and Country Drive NW, Huntsville, AL 35805) is Archivist, a new post.

An operating budget for the society for the next fiscal year, amounting to about $170,000, was approved. There are no substantial changes from current spending patterns.

Two motions that would have provided money for gating Trout Cave from sources other than donations for that purpose were defeated by close, in fact, tie votes. It is likely that the board will be reconsidering the decision to close NSS-owned Trout Cave during most of each of the next five years at its convention meeting. The outcome will likely depend partly on how successful supporters of the gating have been at getting donations and offers of help. No one has ever planned, incidentally, to use normal operating funds—mostly dues income—to build the gate, as some have feared. We did vote to offer $200 from the Conservation Support Fund to help the West Virginia Department of Natural Resources repair the fence at Hellhole Cave, which is reserved for bats during part of the year.

We turned down proposed bylaw amendments that would have made it harder to petition to be on the directors' ballot and would have rescheduled the election (see the president's column in December, 1985, *NSS News*).

A fairly detailed proposal to create the post of executive director, at a cost of some $25,000 a year, was referred to an ad hoc committee that will be reporting back at the convention. Contact President Stevens regarding who is on this committee if you want to comment.

A trip being organized by Edward Frank (Rt. 2, Box 33, Morrisdale, PA 16858) to the Dominican Republic next winter was approved as an official NSS expedition.

Now, doesn't all that sound exciting? Well, I guess you had to have been there.

—Bill Mixon

Announcement of Grants Support for International Speleological Partnerships

An annual grant will be made in support of speleological research that involves a cooperative, international endeavor. Funds for the grant are from the International Congress Fund, held on behalf of the National Speleological Society by the National Speleological Foundation. The amount of the grant for 1986 is approximately $1500.

The selection criteria for the International Speleological Partnership Grants will include:

1. Joint Planning—the degree to which the project would be jointly planned and implemented by American and foreign speleologists.
2. Mutual Benefits—the ways in which the project would benefit simultaneously American and foreign speleology through expansion of future research opportunities and publications.
3. Continued Support—the probability of continued support for the project from both American and foreign sources.
4. Durable Linkages—the potential for creating durable linkages for speleological research between the partnership participants.
5. Speleological Merit—the speleological merits of the project will be used to judge the application.

The applicants must be members of the National Speleological Society.

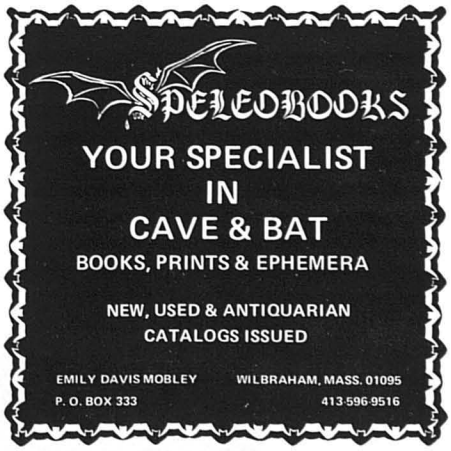
Deadline for the receipt of applications for the 1986 grant is September 1, 1986. Announcement of the recipient will be made by October 1, 1986. Additional information and grant applications can be obtained from the Research Advisory Committee: Donald W. Ash, Chair, 557 Slate Hollow Drive, Powell, OH 43065, 614-548-711 (H); 614-424-6478 (W).

Bids for Hosting Future BOG Meetings Being Accepted

The NSS Board of Governors will accept bids for hosting the Fall 1986 and Spring 1987 BOG meetings. The site for these meetings will be chosen by the BOG at its June 27, 1986 meeting. Send bids to Dave Cowan, 5313 North Ave., Carmichael, CA 95608, phone: 916-487-6687.

ADDRESS CHANGES

send to:
NSS Office
Cave Avenue
Huntsville, AL 35810



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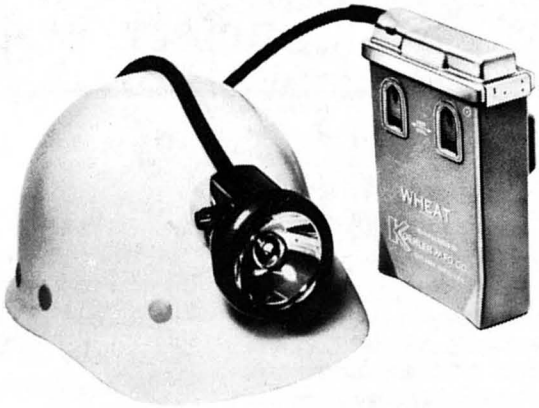

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