UNDERWATER SPELEOLOGY

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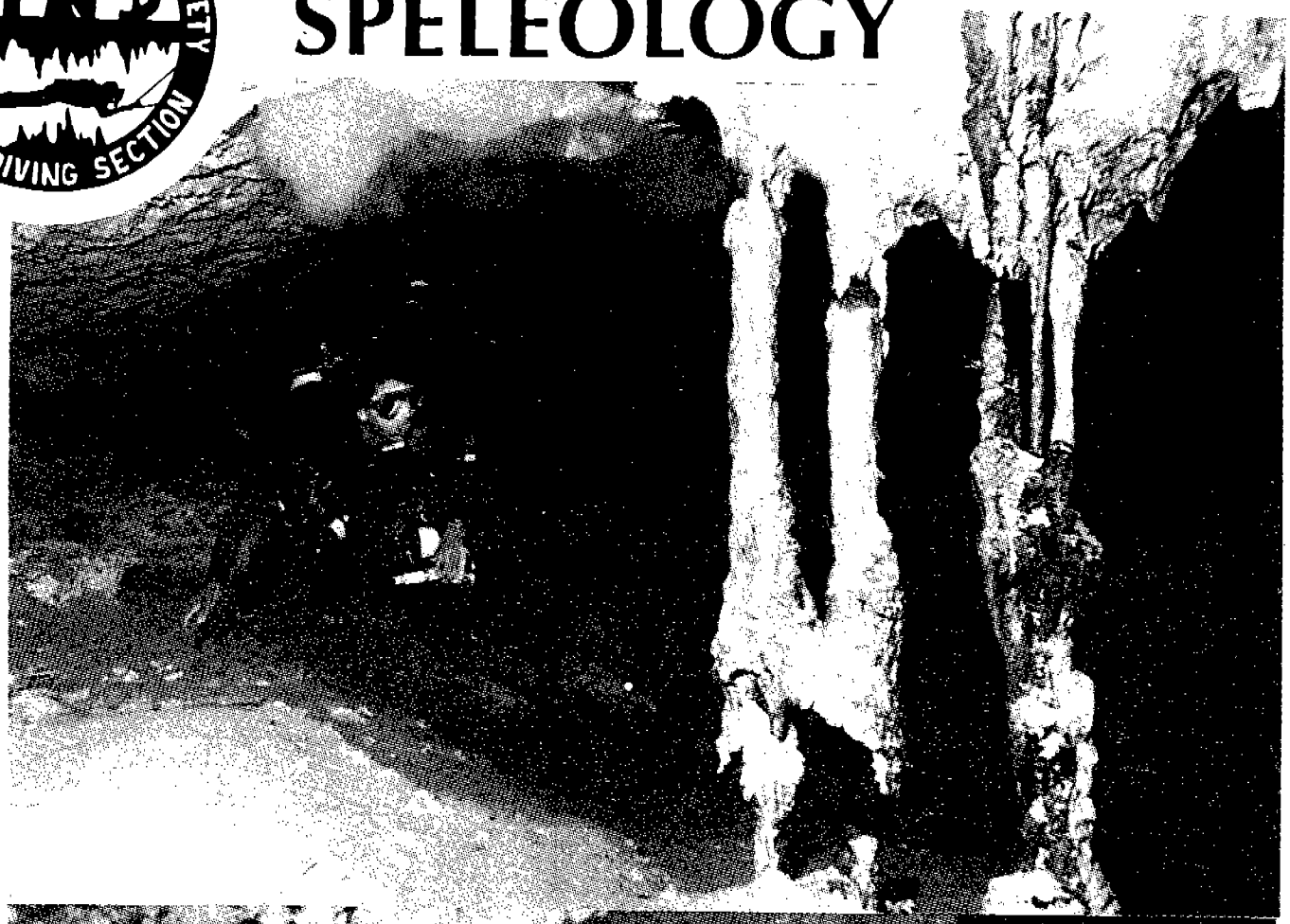

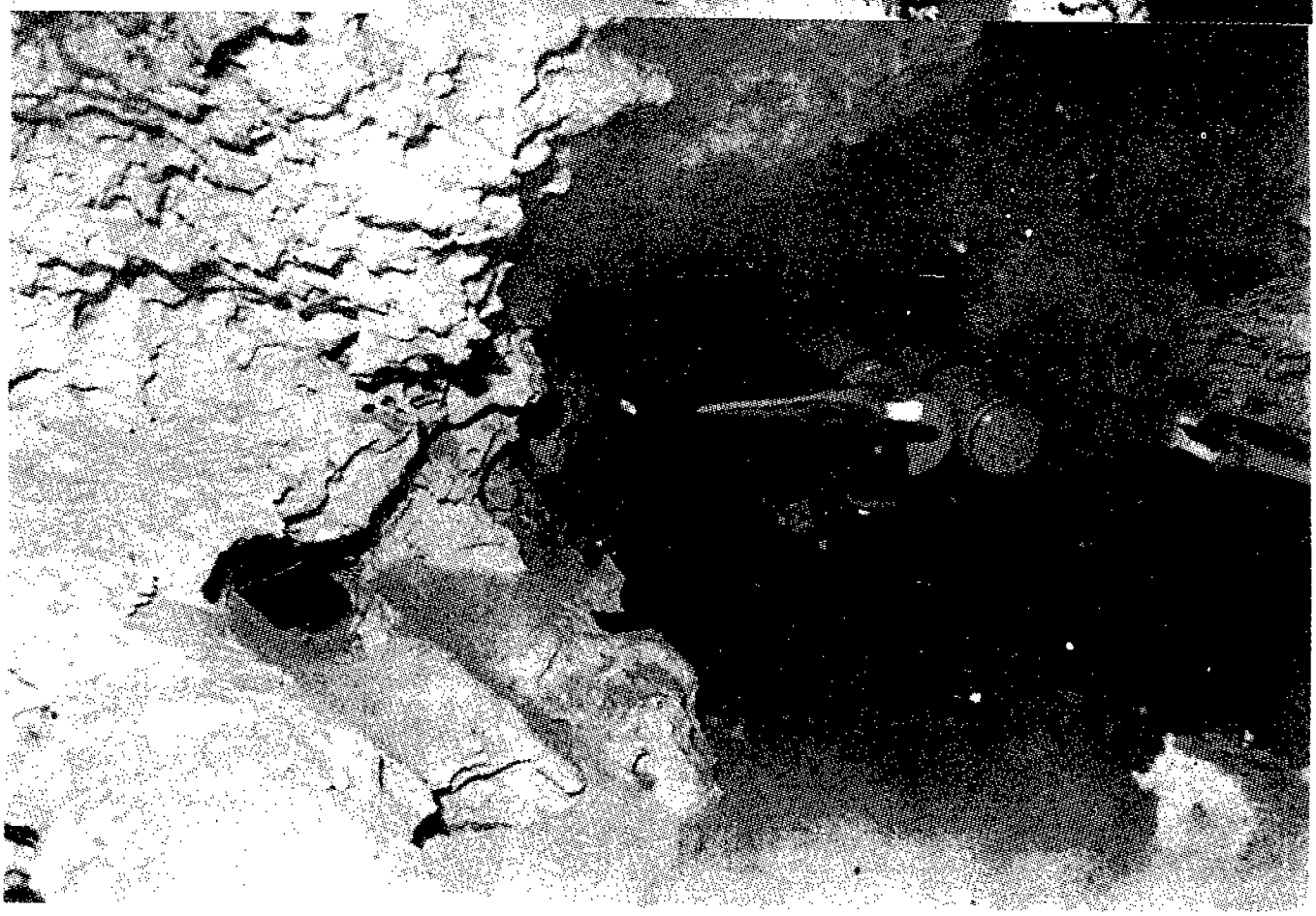

Underwater Speleology is the official newsletter of the Cave Diving Section of the National Speleological Society, Inc. Section membership, which includes subscription to the newsletter, is open to all members in good standing of the NSS at $5.00 per year. Subscriptions for non-members are $10.00 per year. Membership/subscription information, applications, and status may be obtained by writing to the Secretary-Treasurer c/o the Section's permanent address:

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All current news items, reports, articles, photographs, negatives, slides, cartoons, or other submissions for the newsletter should be sent or telephoned in directly to the Editor:

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(813) 485-0799 (bus.)

CALENDAR

Oct. 30 - Nov. 2 - Annual International Diving Symposium, Florida State Univ. Conference Center. Contact Greg Stanton, 010 Montgomery Bldg., FSU Marine Laboratory. Tallahassee, FL 32306, (904) 644-3450.

Dec. 27-28 - NSS-CDS Winter Workshop, Branford High School, Branford, FL. Theme: "Innovations and Explorations."

Dec. 31 - Ginnie Springs New Year's Eve Midnight Dive and Party. See article, page 4.

Mar., 1987 - NACD Cavern Workshop for Open-water Instructors, Manatee and Ginnie Springs. Workshop Chairman: Steve Gerrard, 5714 Ed White Ct., Tallahassee, FL 32301, (904) 877-8196.

A REMINDER! - RESCUE/RECOVERY TEAM MEMBERS

Please be sure to notify the National Crime Information Center (NCIC) in Jacksonville, FL, of any change in your address or phone numbers within 24 hours. This is absolutely necessary if the Recovery Team is to maintain its credibility and efficacy. NCIC Phone: (904) 633-4159

COVER:

TOP - Johanna de Groot at the Figure Four Formation in Dos Ojos Cenotes in Mexico. Photo by James G. Coke.

BOTTOM: Johanna de Groot - "Exploring" in Dos Ojos Cenotes. Photo by James G. Coke.

REPORT ON THE 9TH INTERNATIONAL CONGRESS OF SPELEOLOGY, BARCELONA, SPAIN, AUGUST 1986

- by Dennis Williams

Jill Yager and I, along with my two sons Kirk and Keith, attended the 9th meeting presented by the UNION INTERNAZIONALE DE SPELEOGIE (UIS). The English translation is "International Union of Speleology." I had been in Spain in 1983 and 1984 to dive the Lanzarote lava tube, but this was my first chance to spend any time on Spain's Mediterranean coast. The Congress opened on Friday, August 1st, with the most important business of the day being the admission of Argentina to the UIS by the General Assembly, bringing the number of member nations up to 40. That evening the equivalent of the NSS National Convention "Howdy Party" was hosted by the Barcelona City Council. Jill and I renewed many friendships from past caving meetings and from the 8th Congress held in Kentucky in 1981.

Saturday morning Jill gave her talk, "Notes on the Distribution and Ecology of Remipede crustaceans," at the Biospeleology-Aquatic Fauna session and I listened to topics that ranged from Volcanospeleology--"Cave Formations from Noncalacareous Caves in Kyushu, Japan" to General Hydrology--"Karst Hydrology and Geomorphology of Beleze." All of Sunday was taken up by a field trip that included a visit to a dry cave in conglomerate rock (very rare) and a quick stop at the Montserrat Monastery in the mountains northwest of Barcelona.

On Monday we held the first of three meetings of the UIS Subaquatic Commission (English translation--International Meeting of Cave Divers). During the 1981 Kentucky Congress 40 cave divers representing 13 countries attended the luncheon that the NSS-CDS hosted. This year the Spanish Meeting was not as well attended, with 12 divers representing 9 countries--Germany, Italy, Sweden, Czechoslovakia, Netherlands, Spain, Portugal, Canada, and the United States. Most noticeable was the absence of the French and the British. Some of you will remember Tom Piskula; well, he is still the chairman of the UIS Subaquatic Commission and was in charge of running the three meetings.

Considering our small number, we were still able to conduct some important international business. I believe the most important subjects addressed were training standards and internationally recognized certification. Franz Krieg of Germany and I are assembling this information from the 40 UIS member nations; when it is available I will get our finds printed in Underwater Speleology. Another important piece of business is the UIS-sponsored International Camp of Cave Diving to be held in Gorizia, Italy during August, 1987. I have several application forms, so if you are interested let me know.

During our second meeting each participant gave a short presentation describing cave diving in his own country. It showed me that there is a good deal of remarkable work going on world wide and that the UIS Subaquatic Commission continues to successfully serve the international cave-diving community.

After leaving Barcelona we spent 3 days as guests at the Underground Laboratory in Moulis, France. They do biological research on cave animals in a lab inside a cave. It is the only facility of its kind in the world and even though it was in a dry cave we found it fascinating.

The 10th International Congress of Speleology will be held in Hungary in 1989. Should be very interesting. The following is a short summary of some of what I learned during the Congress.

1) Some European sump divers are unreeling two-conductor electrical cable as a guide line. When they reach air they hook up a telephone to communicate with the other side of the sump. (A sumpmarine cable?)

2) Swiss cave divers have explored an 80-degree submerged cave underneath an active glacier in Iceland.

3) The Lava Tube in Lanzarote, Canary Islands that Sheck Exley and others pushed to over 1400 meters in 1983 was walled-out this past July with a maximum penetration of 1610 meters. The dive team used mixed gases, scooters, and had a total in-water time of 8 hours. Last year a Spanish team had tried to find the end, stopping just 40 meters short at 1570 meters.

4) There are underwater caves to be explored all over the planet, and a lot of cave divers wear a drysuit because they dive in cold water.

My address is still Box F-931, Freeport, Bahamas. I have a new phone number: (809) 373-7334. See you in Hungary.

VOLUNTEER(S) NEEDED FOR CDS PUBLICATIONS

We welcome Tim Holden of Spring Hill, FL, who is now handling orders of maps. (Most of you will probably remember Tim from his letters and reports on the Hernando County sinkhole in recent issues.)

We also welcome Stan Hankins of Tampa, FL, who will be taking over the management of Back Issues of UWS. With Hank's help, we hope to obtain copies of all the missing issues so that a full set will be available to members.

We bid Jeff Morelock, of St. Petersburg, FL, au revoir and best wishes with his November enlistment in the Army and thank him for his enthusiasm on handling the Back Issues these last few months. Jeff says that he will be training in demolitions and that he hopes to be assigned to Hawaii in the near future. Happy Lava Tube diving, Jeff! (Be sure to read Jeff's fiction story elsewhere in this issue.)

Congratulations are in order to Dr. Susan Drake of Tallahassee who is expecting her first new little cave diver sometime around the end of January. Our thanks to Susan for her willingness to take on shipment of individual orders over the past several months.

As a consequence of attrition, one or two more people are needed to help with Publications jobs involving the mailing of individual orders for books and decals, and individual orders for shirts. The orders throughout the year are not overwhelming on these different items, and if one interested, responsible volunteer would like to do both, all the better. Otherwise, the job can be subdivided into two smaller jobs. The T-shirts do need to be carried or shipped to Branford for workshops, however.

If you are willing and able to lend a hand with these--or any other Section projects, contact H.V. Grey at POB 575, Venice, FL 34284-0575 or (813)485-0799, or other appropriate board member or program coordinator. Thanks!

MAN DROWNS - by George Petrena, Branford News, Oct. 9, 1986. Submitted by Kenneth L. Heiges.

A Palm Harbor man drowned in Royal Springs over the weekend, according to the Suwannee County Sheriff's Office.

Listed as a fatality was James Edward Morgan, Jr, 28, of 3643 Linnmac Ct., Palm Harbor, Florida.

According to authorities, Morgan drowned in about 40 feet of water inside the cave at Royal Springs.

Morgan was reportedly not trained in cave or cavern diving and violated four of the 5 rules associated with untrained divers who drown.

Morgan had been in open water with two other "open-water divers" when he separated and entered the cave.

A sign inside the cave clearly stated, "Do not enter this cave unless you are properly trained and certified as a cave diver."

Other rules Morgan violated were entering the cave without a guide line, not carrying three lights, and saving 3/4 [sic] of his air for return.

According to the Sheriff's Office, the area inside the cave is very silty and was difficult to see.

"It apparently got silty inside the cave and Morgan couldn't see to get back out of the cave," said a spokesman for the Sheriff's Office.

Two certified divers from the Cave Diving Section of the National Speleological Society attempted to retrieve Morgan shortly after he entered the cave Friday.

Morgan entered the cave around 5 pm but it was too silty for the [recovery] divers to remain in the cave.

When the silt settled, divers re-entered the cave Sunday morning. Morgan's body was recovered at 10:20 am Sunday. According to the NSS divers there was no failure on any of Morgan's equipment.

The drowning was investigated by Sheriff Robert Leonard, Deputy Tom Abercrombie, and Deputy Sam St. John.

EDITOR'S NOTE: The Recovery was performed by NSS-CDS Recovery Team Members Mark Leonard, Woody Jasper, and Arwyn Karr.

According to Mark, this was another case of an open-water diver with no cavern- or cave-diving training breaking almost all the rules in the book. He had no guide-line, inadequate lighting, and insufficient scuba. Failure to plan his air according to the Third's Rule was probably not a major factor since the recovery team speculated that when the victim first became lost he was probably within 15 feet of the entrance of the cave.

A word to the wise: Mark Leonard--veteran cave diver and instructor, recipient of the ISCDA (1000+ dives)--says that he hopes he never ever has to go back in this cave again. He says it has no flow and is extremely silty. You don't want to go there! It's bad news--extremely dangerous. If it was ever on your list, cross it off your list. Don't even send it a Christmas card!

GINNIE SPRINGS' FOURTH ANNUAL
NEW YEAR'S EVE MIDNIGHT DIVE AND PARTY

Hey, Divers! We're doing it again--and you're all invited. Don't miss this year's New Year's Eve Midnight Dive and Bonfire Party. When the last second of 1986 ticks away and the clock strikes 1987, plan to be with us underground swimming in liquid light.

All certified divers are welcome to the make the well-supervised Ginnie Springs Cavern Galaxy Dive, and all certified cave divers are invited to do the same in the Devil's Eye/Ear System's Main Gallery. We're sure those who have made this dive with us in the past won't want to miss it, and for those that have yet to participate, we promise your most unique New Year's experience ever.

After the dives there'll be food and drinks for all, enjoyed around a huge bonfire. Since the party ends at ?, all are welcome to stay until morning. There's no charge for the party, and it begins at 8:00 pm. All divers should be here and checked in by 10:00 pm.

For safety's sake, save your imbibing for after the diving. Also, no strobes on the dives as they're much too hard on the eyes. All divers attending the Ginnie Cavern Dive must have prior daylight diving experience in the cavern.

See you there!

- the Ginnie Springs Management

A TIME OF RECOLLECTION - A TIME FOR ACTION

- by William A. Seacrest, Sr.

My first introduction to scuba took place in a YMCA pool in Pennsylvania in 1962. After passing that course, I experienced diving in quarries, lakes and rivers until moving to Florida in 1963. During the summers of 1963 through 1967, I was introduced to cave diving in its infant form. At that time, I was not aware of any organized programs, special instruction, special training or customized equipment directed towards cave diving. We did have submersible pressure gauges and twin 72's with a single-valve system as our main life supports. But octopus systems and 5-foot hoses were basically unknown at that time. Lead-acid motorcycle batteries and sealed-beam flashlights were our sources of light and direction. We used plastic jugs in place of BC's and large, cumbersome aluminum reels, with 1/8" cord as a safety line.

Thinking back now, I recall the unspoiled beauty, personal challenge and excitement of my initial experience in cave diving. Memories include diving trips to Ginnie Springs, which at that time was located in an undeveloped patch of woods. The awe and wonder of looking up from the white sand bottom at "Eagles Nest" and seeing the sun shining down the shafts above is an experience one cannot forget. The mystery, silence and total blackness of Zuber instilled in me a respect and recognition that I was a small participant in an alien world. Many evenings and nights were spent diving and exploring Blue Springs (Orange City) after work.

There were also times of personal challenge and resolve, which included running out of air in Blue Springs and having to buddy breathe in stages to the surface. A healthy case of nitrogen narcosis in Zuber gave me a renewed resect for not diving beyond reasonable limits. Marriage, college, career and other interest changes caused me to cease diving in 1967 for approximately 18 years.

In the early part of 1985 my son expressed an interest in learning scuba. Since it had been almost 20 years since I had been involved in the sport, I enrolled both my son and myself in a PADI course in Lakeland. It was during this time that I had the good fortune to meet Steve Forman and become aware of his involvement in cave diving. After successfully completing my open-water and advanced course, I enrolled as a personal student of Steve, completing my cavern and basic cave-diving courses. It was during this time that my awe and interest in cave diving was rekindled.

Somehow I had forgotten the unparalleled beauty of the underwater cave systems in Florida. The personal exhileration of seeing the majesty and natural architecture in this underwater environment renewed my resolve to continue to develop myself in the area of cave diving. The personal challenge of the course requirements instilled a renewed belief in myself and respect for cave diving. Advanced techniques, equipment, and training now stood were only "guess work" and "experimentation" had stood before safety and education were stressed above personal desires and needs. Buoyancy compensators and Ni-Cad lights replaced old archaic equipment. Dual-valve systems and special safety rules reduced risks to an acceptable level.

But a challenge has now arisen to cave diving that cannot be ignored. Recent deaths in Devils's Eye, Morrison Springs and other underwater systems have caused renewed concern from businesses, landowners, and the public, which threaten the continuation of this worthy endeavor. This concern has the potential of being channeled into negative action to either prohibit cave diving by State regulation and legislation, or further action on the part of landowners.

This threat should have the effect of mobilizing this and other cave-diving organizations to positive action in order to preserve the future of cave diving. Will we be able to pass on only memories of this activity to our children or will we be able to exposed them directly through qualified training and personal experience to this sport? I believe that the choice is up to us. I recommend the following lines of action for your consideration:

Educations is the enemy of fear. It is important that we educate the general public to the merits and positive points of cave diving. At the same time, it is necessary to educate people that this is an activity which requires specialized training, equipment and techniques over and above those taught in any opn-water scuba course. It is also necessary to educate the public to the necessity of having a healthy respect for the land upon which this sport occurs and the people who own it. There are video tapes and an abundance of material which could form the basis of community programs of great interest to the general public.

Most of the diving instructors and programs existing in the State of Florida focus on open-water diving. I believe it is important that a positive program be instituted to educate the open-water instructors to the necessity of receiving specialized training both for themselves and those of their students who may desire to go into cave diving. Open-water instructors should be encouraged to receive the training themselves and direct students to "qualified" cave-diving instructors.

Education of the media is an extremely important part of building a positive image of cave diving. Introducing staff writers to scuba diving and then cave diving by actual participation should be pursued. Responsible articles and information in the

form of press releases should be formulated by knowledgeable experts in the field of cave diving and submitted for publication. Invitations should be given to the news media to attend cave-diving workshops and other similar activities. When an unfortunate death or injury does occur, it is important that a responsible press release be immediately submitted once an evaluation of the incident has occurred.

As an adjunct to informing the media, it is also necessary for us to take an active effort in educating and lobbying members of our Legislature. The Legislature at this point is and will continue to receive increasing pressure to limit diving activites or otherwise regulate them through the State. Positive programs must be developed to be presented to our lawmakers, convincing them of the right, need, and advisability of allowing qualified and well-trained individuals to continue to participate in the area of cave diving. Short education courses should be prepared to present to the Legislature to show them the difference between open-water diving and cave diving, pointing out to them why deaths have occurred as a result of ill-trained and ill-equipped divers. Along with this, both business and private landowners need positive relief from potential liability for cave-diving deaths occurring on their property. The recent "Tort Reform Act," along with the required commercial insurance rate rollback has caused many commercial insurance companies to cease writing insurance in the State of Florida. All insurance companies, either in the area of personal lines or commercial, are now reevaluating risks. Landowners and private businessmen, especially in the area of dving, are finding it almost impossible or increasingly difficult to obtain insurance at any reasonable rate. We need to lobby the Legislature to provide some responsible legislation in order to protect landowners from liability for deaths occurring underneath their property in underwater caves. With this type of legislation, they should find it increasingly easier to obtain insurance at reasonable rates. In presenting any programs to our various Legislators in the State, it is extremely important that we develop a uniform platform of ideas and suggestions and not present them in a piecemeal and potentially conflicting manner.

As in anything else, personal example speaks louder than words. It is my understanding that there has never been a recorded cave-diving death of a qualified and certified cave diver in the State of Florida. Let's keep it that way! Let's all remember the basics each one of us have been taught, including the necessity of "S" drills, equipment checks, and light checks. Regardless of your level of experience, should you continue to solo dive? Isn't it true that there are underwater emergencies which might occur, including certain equipment malfunctions, which even backup systems could not help you through? In this volatile and delicate time, the death of a "certified cave diver" could be the death blow to this sport and endeavor.

It is necessary at this point for the public, the Legislature, and landowners to see cave divers in a positive light. We need to form some type of high-visibility projects in the community or arounds spots still open to cave diving, showing cave divers in a positive light. A recent trip to Peacock disgusted me in seeing the large piles of trash and garbage lying around the area. I realize that this most likely was not placed there by responsible cave divers. However, the association by the public of that area with cave diving and the garbage and other trash is inescapable. I would suggest that some type of program be instituted where a publicized cleanup of the area takes place. Once the trash and garbage level rises to a substantial level, the State will most likely step in on the land, close it and regulate it. Wouldn't it be better for us to take the initiative at this point to show the State and the public that we are concerned enough to clean up this area and other similar areas? How many of us have also watched open-water divers entering Peacock and other areas ill-equipped and obviously ill-trained. At the present time we have no means to keep them out of the system. I do believe, however, that something in a positive light should be said to these individuals each time we get a chance, encouraging them to seek proper instruction and equipment prior to diving in the systems. Perhaps if we make them feel uncomfortable enough we may save just a few more lives and spur some people on to get the appropriate instruction and equipment.

Like any effort, all this will cost time, money, personal commitment and personal sacrifice. In order to preserve cave diving in the State of Florida it is now necessary for us to "walk in the shoes of the landowner and businessman," and understand their problems and try to address our efforts in solving their problems as they might relate to continued cave-diving resorts, businesses and on private property. What has been suggested above is not to be considered as an exhaustive list or as the best means of accomplishing our goals. As a new initiate into cave diving, I only wish to suggest that at the present time we need some positive efforts in the above areas. It will be very easy for some people to say "this can't be done," and "I don't have the time." If this is going to be our attitude, then it is my opinion that within the next few years cave diving in the State of Florida will be only a memory.

[Bill Seacrest is an attorney with Haas, Boehm, Brown, Rigdon, Seacrest & Fischer in Lakeland, Florida.]

TRAVELS_IN_MEXICO - by Jeffrey Bozanic

"Buenos dias, amigos!" Welcome to one of the nearby "meccas to be" for Florida cave dvers--Mexico!

Over the last several years, I have been involved in a number of expeditions down south of the border; to the land of tacos, siestas, cannibis farms, and... caves. Mexico offers one of the finest areas for virgin cave diving in the northern hemisphere, with systems rivalling those seen anywhere else in beauty, length, and depth.

This article will report on our last two trips, with a few notes about other visitors. The first trip of 1986 began at DEMA....

"Would you like to come teach a cave-diver course down on mainland Mexico?" was the question asked of me as I stopped at the booth for Cancun dive shops. As Parker Turner explained about the numerous cenotes (sinkholes), the three students (all open-water instructors), and the fact that my expenses would be paid, I began to salivate.

"Where do I sign the dotted line?" I asked. Two weeks later, I was on a flight to Cancun, located in the state of Quintana Roo, on the Yucatan Peninsula. Meeting me at the airport were Parker, Hilario Itriago Schon (owner of Krystal Divers in Cancun), and Mike Madden (owner of CEDAM Dive Shop in Aventuras Akumal). From there we drove down to Aventuras Akumal, about a 1.5-hour drive south of Cancun, to where the course would be held.

Early the next day, we began the course with the three above students, plus Johanna de Groot from Excursiones Akumal, another local dive shop. The course ran two weeks, with many interruptions for the various shop owners and instructors to take leaves of absence to handle unexpected problems.

Jeff Bozanic and Mike Madden look over ruins on the way to dive Xcaret.

Dennis Williams, Santiago Vivas, Kathy McNally, David Swinehart, and Jeff Bozanic pose before ruins at San Gervasio before walking in to Cenote Sagrado.

During this time, we were able to dive many locations. One of the prettiest was Carwash Cenote, located on the road between Tulum and Coba. This cave has about 1200' of passage on the spring side, and at least 400' on the syphon side. Much of this line was laid by Paul DeLoach, Tara Tanaka, and John Zumrick in the summer of 1985.

Of especial beauty was the Room of Tears, formerly called the Ice Palace Room. It was so named because of the glittering crystalline stalactites and stalagmites filling the room. The current name comes from the tears it brought to Hilario's eyes as he saw this marvel on his final dive of the course. This is an easy stage dive with double 80's, and is located at the end of the line on the spring side.

A surprise waited for me here also--a slate tied to the end of the line with the message "Hi, Jeff!" on it. Mike (after some training by John and Paul last year) and Parker (an old-time cave diver looking to update his knowledge) left the slate after discovering the room before the course. It is fairly technical passage for about 75' before entering the room--and an excellent piece of exploration work!

In about 400' on the syphon side is the "Chamber of the Ancients." This room is below the halocline in salt water about 85' deep. The room contains much charcoal debris on the floor, which Parker and Mike hypothesize might be an old firepit site of ancient Indians...who knows?

Xcaret was interesting because of the Mayan ruins on the site. This system was explored by Sheck and Karan Exley and Ned DeLoach in August, 1979. They laid about 2100' of line at that time, which we unfortunately did not get to see all of. All of this dive took place in the halocline, reducing visibility in the clear water to just a few feet. Good for training, though!

Najaron Cenote reminded me a lot of Devil's Ear, because of the black coating

on the walls. The spooky part was that all of the stalactites and 'mites were also black--it felt like we were diving into the open maw of some gigantic sea creature. I almost expected the "mouth" to close and start chewing on us at several times during the dive.

Najaron has been explored by Jim Coke (an NSS-CDS Cavern Instructor) from Excursiones Akumal. He has explored the system with Johanna and others to over 4445' of underwater passage, and is still going strong. It was here that I first collected a very large isopod, or in Jim's terminology, the infamous "scud."

We all got into a little trouble at Xel Ha, a lagoon run as a popular tourist

Jeff Bozanic and Mike Madden ready to dive Xcaret.

stop. I believe the cave was first explored by John Zumrick on one of his early trips to Mexico. It closes at 5:00 p.m. every day. Unfortunately, we didn't surface until after 6:00. I wasn't sure if we were leaving for home, or a more permanent residence--the nearest Mexican jail! All was straightened out, however, allowing us to travel north to Cancun for further dives.

Love Lagoon has several small blue holes, all with moderate ex-current. We dove the largest of these, laying about 400' of virgin line beyond the line already in existence. Not many students have the opportunity to lay and survey their own new line in a major cave like this. We made only a few dives here, because it required a boat to get to. Salvadore, the owner of Lorenzio's Restaurant, lent us his boat for the trips, and treated us to drinks after the dives. (We also had dinner at his restaurant--located on the water on stilts in Cancun. Great food!)

On one of my days off, I went and visited the ruins of the Mayan city of Tulum. This impressive site boasts of a "moderate"-sized temple, painted frescoes on the interior walls, and a superb view of the ocean. If you get down there, be sure to stop by.

This finished off the diving for this trip, but I told the guys I'd return soon to visit. All of them passed the curse [sic], although I'm still awaiting paperwork from some of them. Are you listening out there, anyone?!

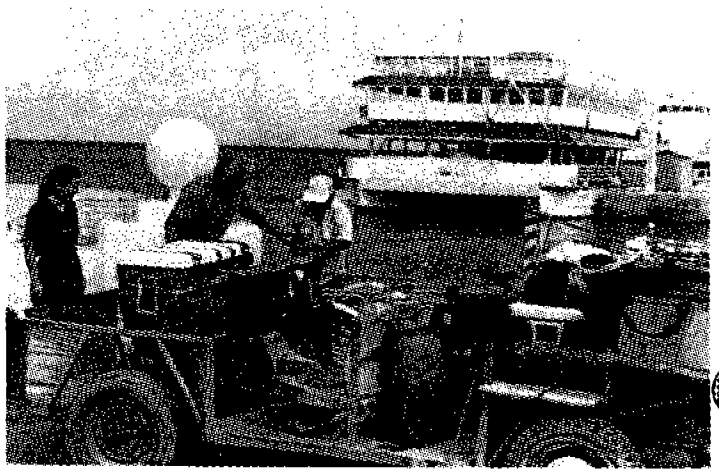
Parker returned to the mainland with Steve Gerrard in March to dive--and found Remipedia in the Chamber of the Ancients. Needless to say, as soon as Dennis Williams heard that, we were on our way to Mexico. We had been planning a trip under the auspices of Island Caves Research Center to continue research in Cozumel anyways, so in June Dennis, Parker, and I found ourselves on another Mexicana Air plane bound for Cozumel.

On the plane, we ran into Gina Chenoweth, who was on her way to dive with Terry Scoggins for four days. They dove a cenote located behind the El Presidente Hotel, laying over 1000' of line.

We checked into Condumel, a set of condos located on the ocean north of town. Bill Horne, the manager, greeted us with a bottle of tequila and an invitation to dinner. Bill has been assisting us for the last several years, and is very interested in cave diving and the scientific research we are involved in. He also is part owner of Aqua Safari, one of the premier dive shops on the island, and arranged for all of our tnaks and other needed dive equipment. He even loaned us his "car," a true Mexican classic.

After meeting with the park superintendent, Ruben Barahona Mendoza, we obtained permission to dive the caves on the Chankanaab Park property. He also consented to our using the rear entrance to the park, saving us a long walk through sand to the dive site. This was invaluable assistance, given the fact that we were carting four tanks per person per dive for most of the work.

This is a location that Dennis and I have been working on for three years, describing the hydrology, geology, and cave fauna. This trip was to be primarily for



The "woody," our Mexican convertible, before leaving on the ferry to Playa del Carmen. Kathy McNally watches as Dennis Williams pays off the porter. Photo by Jeff Bozanic.

Jeff Bozanic prepares to place warning sign in Carwash Cenote. Photo by Kathy McNally.

exploration purposes, since that aspect of our work had suffered due to task loading with scientific objectives.

Over a week's time, we laid over 5500' of new line, and surveyed an additional 1200' of line laid by Terry Scoggins of Texas. By the time we left, Cueva Quebrada was 9052' long, all underwater. I believe this makes it the largest known underwater cave in Mexico--anyone out there know any different? It has 5 surface openings, and its deepest point is an extreme 36' (no, not 360', you Diepolders types!). Three and a half hour dives--and NO DECOMPRESSION!! Heaven, to be sure. Most of our exploration was done with one or two stage bottles, in addition to our doubles.

Working in the system this trip were Dennis, Parker, myself, and Kathy McNally (who arrived five days after we did). The original work in the system was done by a local Mexican dive guide, Ramon Zapato. He's either brave or foolhardy. He laid 600' feet of polypropylene line with a single tank, a small Ikelite light, and no buddy. I soloed it on my first trip there in 1984, and scared myself witless. And I had redundant equipment! Later work has been done by Terry Scoggins, Bill Horne and a few others.

We all took the ferry over to Playa del Carmen, where we were met by Hilario Itriago and Mike Madden. We spent the afternoon diving Carwash Cenote. Dennis, Kathy, and I collected Remipedia for Jill Yager's research at Old Dominion University; while Parker, Mike, Hilario, and Denny (Mike's brother-in-law) shot video in the spring side of the cenote.

The next day, Mike and Denny took us to a new location they have been exploring, named the Temple of Doom. There is about a 50-yeard walk to the cenote, every inch of which is guarded by hordes of hungry mosquitos. It is said that you have to be careful, as the big ones often try to steal the cows away from the small ones as they are carrying them off. Just think of what they do to divers.... A 10-foot giant stride entry gets you into the water. You exit the water by climbing some tree roots at the edge of the overhanging rock.

Again, Dennis, Kathy, and I collected while the others explored and shot video. Mike told us how to get to a "good-sized room." We proceeded to swim, coming at last to what we thought was the "good-sized room." Then we turned the corner...the room was HUGE. Talk about understatements--it seemed the Astrodome could fit inside! We had entered into the small end of the room, which was over 150' wide by maybe 300' long, and about 30' high. The scary thing is, there isn't a piece of steel in any of that limestone holding up the roof. A cenote waiting to happen.... Great haloclines there, though.

Before leaving, Parker, Mike, Denny, and I placed two NSS-CDS warning signs in Carwash Cenote. One went in the spring side, the other, in the syphon side. Three or four local dive shops are now using the cenote to run cavern dives, and it was felt that the warning signs might help prevent accidents. This possibility was strengthened after a near miss several months ago. Jim Coke and Mike Madden are working together as local CDS representatives, and will be running cavern- and cave-diving educational programs for divers in the area.

Dennis, Kathy, and I returned to Cozumel, leaving Parker behind. He was staying to meet and dive with John Zumrick, Paul DeLoach, Tara Tanaka, and Clark Pitcairn,

Jeff Bozanic after the drive home in their Mexican convertible.

who were arriving two days later.

The day after we returned, we set up a trip to Cenote Sagrado, a sacred Mayan well. We were joined on the trip by David Swinehart, a diver staying in the condo above us. We left from San Gervasio, another old Mayan city. Our guides, Santiago Vivas (just like in the movies) and Evelio Duarte carried machetes and a rifle to get us through the jungle. (Machetes for the vines, rifle for the wild boars.) We then walked two miles to the ruins of a

small temple beside a shallow pond--the "Sacred Well" we had come to dive. Donning the sole tank, I wormed my way down one wall over several feet of leaves and other organic matter. I eventually reached a depth of 46' before turning the dive. The entire dive was made in fresh water, in passage usually less than 12" from floor sediment to ceiling. Didn't make for very good visibility on the return trip!

Walking back through the jungle, we managed to lose the "trail" we had been following. With visions of spending the night running from ravenous clouds of winged critters, we wandered west until we stumbled onto some more ruins. Fortunately, the guides recognized them, and were able to lead us back to the car. After 4 miles of jungle strolling, with dive gear on our backs, we were quite grateful to be able to rest our feet. (Me especially--if you make this dive, I would recommend wearing something other than thongs or booties....)

Before we left, Kathy, David, and I placed three warning signs in two of the three cave entrances in Chankanaab Park. One person died in one of the openings last year, and the caves see a large amount of diving activity. Last year Dennis and I removed over 1000' of "line" from one cave mouth, including clothesline, monofilament fishing line, cotton twine, twisted nylon line, polypropylene line, and anchor rope.

Some general information on Mexico: airfare runs about $160.00 roundtrip from Miami. The peso is low, low, low...and getting lower every day. This means that most items are very inexpensive when purchased with American dollars. Beware the water and vegetables--Montezuma had his revenge on all of us. And bring lots of line....

Mexico offers lots of potential for cave exploration--good diving!!

Acknowledgements: Without the assistance of many persons, these trips would not have taken place. Lodgings were provided by Condumel on Cozumel, and Aventuras Akumal Resort on the mainland. Tanks for the scientific expedition were provided by Aqua Safari. Ruben Barhona gave us much assistance while diving Chankanaab Park. Equipment support was provided by Selpac-Sherwood, Orca Industries, Patagonia (dry-suit underwear), and Oceanic (photographic equipment). Many persons helped us locate sites, and provided information on local areas. Thank you all.

SAFETY BROCHURES

...are FREE. Cave Diving Section members are encouraged to contact the Chairman of Publications (H.V. Grey) for a supply to hand out to...people who look like they might benefit from them! Or, if you're coming to the Winter Workshop, you can pick up some there.

SKILES: CAVE DIVING AT THE CUTTING EDGE - PART II - by Milledge Murphey

"Skiles: Saga of a Speleological Superlative - Part I" [in UWS 13:2] discussed Wes Skiles' early cave-diving experiences. Part II relates highlights of Wes' explorations from 1979 to the present.

During the last eight years, Wes has contributed significantly to the exploration and mapping of more than 15 major Florida springs. Further afield, he has penetrated Bluebird Spring in Georgia (the Ellison Cave resurgence) to air-filled passage; explored in Lucayan Caverns, Ben's Cave and Garbage Hole in the Bahamas; and passed sumps into dry cave in Kentucky's Flint/Mammoth System and the Rio Encantado System in Puerto Rico.

The following narrative relates some of the more significant Skiles explorations and details interesting anecdotes from these efforts.

Florida - 1979-1986

During 1979, Wes and a buddy began exploring Morgan Spring near the Withlacoochee River. They had been diving frequently in caves deeper than Morgan, and were feeling quite secure about their degree of acclimatization and consequent ability to handle depth.

At 165 feet in Morgan they located 3 upstream leads and explored 2 of them, encountering 170-foot depths and unpredictable, sometimes zero-visibility conditions. They turned the dive after a 50-minute penetration and exited rapidly, stopping only to retrieve the stage bottles dropped 600 feet from the entrance. 300 feet after turning the dive, Wes' buddy signaled that he had a problem; seconds later, he drifted to the bottom. Wes swam after him, shouldered his unconscious but still breathing body, and swam toward the entrance. As the depth decreased Wes' buddy regained consciousness, and the pair held together at 50 feet until recovery was complete. They then went through an extensive decompression schedule and surfaced under control.

This was a case of depth blackout brought on by the exertion of the fast exit from the cave after an 80-minute dive at a depth of 170 feet. This experience convinced Wes that problems at depth can occur for anyone, no matter how well acclimatized, and that the 130-foot depth limit is realistic for dives on compressed air. He will dive deep again only when mixed-gas systems become readily available.

During 1981, Sheck Exley, with the help of Wes Skiles, mapped the Madison Blue Springs system. On a dive to the Mount offshoot, Wes entered a small, rock passage. Exley held while Wes pushed into the tiny passage until his line ended. He then found that he could not easily turn around to exit, and was forced to draw his body into a ball, lean back, and pull with his hands until he was wedged upside down

in the passage, mask pressed against the ceiling. Form that position, he somehow managed to rotate 180 degrees, then surveyed back to Exley.

Wes later reported the small Madison passage to Court Smith, who subsequently traversed it to find the "Courtyard" section of Madison Blue. From this experience Wes learned that small passages often lead to larger ones; the seemingingly insignificant may yield a major find. He never writes off a system now, "following his feelings" into sometimes grim passages. Wes believes that optimism is the key to cave exploration: "If someone believes a lead is dead, then it is dead for that person," he states.

The close partnership with Woody Jasper that Wes has enjoyed for 6 years, began with another dive in Madison Blue. The two penetrated a tiny passage for about 1600 feet. When Wes reached the end of the line and stopped to tie off, he looked back through the dim ooze and felt Woody bump into him. Elated, he burrowed into the slop for 100 more feet, feeling the mud pressing against his face and mask, with Woody right behind him. They turned the dive after determining with certainty that the passage went no further. The exit included more than 1000 feet of zero-visibility swimming.

Wes and Woody both felt good about what would generally be considered an ominous and unpleasant experience. They had begun to forge the productive and symbiotic relationship which exists to the present day. The two of them soon teamed up with Lamar Hires, and today the three make up a formidably skilled and experienced exploration team.

In 1982, Kenneth (Fuzzy) Roberts showed Wes Azure Blue Hole, a previously unexplored cave in Suwannee County. The cave is essentially a window into the water table; no flow moves through its large passages. Entry to the system is via a cluster of 7 vertical-walled pits [solution tubes] opening to the surface about 20 feet above water level, and one "Back Door" pit distant from the other entrances. Wes began Azure's exploration by lowering (and stranding) double hundred cylinders. Wes is always open to new exploration techniques and when Steve Hudson of PMI (Pigeon Mountain Industries, manufacturers of caving rope) showed him how to use a hauling system, Wes immediately saw its usefulness and began to haul divers and cylinders in and out of Azure in style.

Azure has a sediment-filled lead at 70 feet. Wes initially entered the cave planning to test an experimental double-sidemount rig by lengthening the 20-foot trench he had previously excavated. He plower further into the hole digging, while Lamar and Woody waited at its entrance. Wes immediately noticed that the sidemounts were awkwardly positioned and were snagging on the passage walls. Then, in the zero visibility, Wes' Poseidon regulator, attached to a K-valve on the lefthand cylinder, began forcibly freeflowing.

Wes fumbled for his second Poseidon, mounted on a Y-valve on his righthand cylinder. On his first inhalation it "machine gunned" debris, water, and air directly down his throat. He then switched back to the freeflowing regulator; however, by this time it had emptied the tank, yielding only one partial breath. Wes then retrieved his last second stage, a Sherwood mounted on the Y-valve. This blew a mass of sand, mud, and rock down his throat, and then proceeded to freeflow despite violent shaking. As Wes was losing air fast, he shut the valve. He was now in a tight, zero-visibility passage without readily available air.

Wes lay in the trench, opening and closing the valve to breathe and getting a frothy mixture of air, water, and mud with each breath. He calmed himself and thought through the sequence of movements that would get him safely out of the cave--reel in, open, breathe, close, swim. After he felt secure and calm, he began the exit from the clay trench.

To avoid losing Lamar's reel, he began to reel out. He reeled, turned on the valve, turned off the valve, reeled, and moved down the passage, hampered by the awkward sidemounts. When the ceiling height rose and visibility increased to 3 feet, he stopped to disassemble, clean, and reassemble the Poseidon. It still freeflowed. He then noticed that while he was working, the reel had disappeared.

Continuing to open and close the valve to breathe, he searched for the line but was unable to locate it. Off the line, he moved into clear water in a deadend chamber, which he recognized from a previous survey trip. He realized that he was penetrating further into the cave. Turning back into the muddy water, he swam a short distance before his hand touched the line. He followed it into the crystal clear water below the Skull Entrance, and Woody gave him his first clean breath of air in several minutes. Wes exited breathing from Woody's 5-foot hose and disassembling the Sherwood, cleaning it as he swam. He ultimately was able to go back on his own air, and finished decompressing with 100 pounds of air in his cylinder.

Wes learned several lessons from this dive. He now keeps his second stages clear of debris, no matter how mucky a penetration becomes, and he no longer takes inadequately tested experimental diving rigs into extreme situations. Finally, he believes that concentration and measured, steady reactions during the emergency were the behaviors which saved his life in Azure.

The exploration of the Bonnet Spring extension during 1984-5 has been rewarding for Wes and his numerous co-explorers. Lamar Hires and Wes initially pushed the

cave past the previous penetration by Court Smith and Lewis Holzendorf to the site called the Rock Window, and then past it to a very low, clay-lined passage which they named Debtor's Payment. They laid 400 feet of new line, and a new system had been opened.

On the next dive, Dan Butler and Wes laid 400 more feet of line and broke out into a classic phreatic tube reminiscent of Peacock Spring. Mark Long and Wes returned to this conduit and explored and surveyed 800 feet of fine virgin cave. Woddy joined Wes to explore the downstream section, including the "Catacombs." Wes, Mark Long, and Bill Main discovered the "Amphipod Party Room," and discovered an upper section at a depth of 5 feet. The cave lines out at 3680 feet, with a maximum depth of 38 feet. At the end of the line are several pits, too small to enter, that may provide a future connection to the Peacock system.

Wes believes Siphon Creek Cave, with an entrance located in the Santa Fe River, to be the most exciting underwater cave presently being explored. The exploration team of Hires, Jasper, and Skiles struck another major find during the drought of 1985 when the Santa Fe River cleared. The underground river is of considerable magnitude, flowing rapidly; in places in the cave lines remain in place no more than 8 hours before they are shredded by the force of the current.

Siphon Creek has been explored for 22,000 feet, at depths of 100 feet, and much work remains to be done. Wes is confident that this will prove to be one of the longest systems in Florida. In Wes' opinion, it points to the future of Florida cave diving: he believes that the largest caves discovered in the future will be dark-water systems.

Streamlined Systems for Small Places

When Wes and Woody Jasper squeezed through the "Flipover Restriction" while exploring in Rock Bluff Spring, it reminded Wes of a crude sidemount system he had used years before. Wes, Woody, and Lamar Hires began discussing ways to achieve a flatter and more streamlined diver profile, and initiated the series of experiments and equipment modifications that has, over several years, resulted in an excellent low-profile system for diving in constricted sites.

British sump divers had used hip-mounted cylinders for years to penetrate the low, restricted sumps of the Mendips and Dales. Wes, Woody, and others developed an American variant, featuring flexibility, low profile and easy accessibility to valves and regulators, by moving the cylinders up from the hips to the sides of the body. The development was a team effort as Woody created the first rigid mounting plate by adapting a double backplate; Wes modified it; and Lamar provided the harness. Later, Ron Simmons reduced the bulk of the system considerably by designing a narrow, beamlike plate to incorporate into a harness; Woody suggested a hinge; and Ron built a more comfortable harness.

This modification was aimed at increasing efficiency, reducing weight and bulk, and holding cylinders in a stable, streamlined position. It resulted in a secure mounting system that folds up into a fist-sized bundle, a tremendous advantage for sump diving when equipment must be carried long distances before the dive.

The current design (which is still evolving as it is tested under field conditions) has enabled divers to open new systems in Florida and elsewhere. Mink Sink, the "missing" segment between Stick Sink and Little River Spring, can be penetrated only with sidemounts and has now been explored. Sidemounts have allowed the exploration of Russell's Rub, the headwaters of the Ichetucknee. Dives into Bluebird Springs and in Logsdon River in Kentucky'S Roppel Cave have proved the usefulness of sidemounts for tight, difficult penetrations.

International Diving

The Rio Encantado System in Puerto Rico is a river cave with mostly vertical entrances separated by sumps. The dry-cave segments were initially explored and mapped during 1983-4, and in 1985-6 emphasis switched to diving the sumps and connecting the caves into a single system. Over 4 years of exploration, 28 waterfalls, 5 sumps, and 3 miles of swimming passage were encountered.

Wes co-led expeditions in 1985-6 that penetrated 4 major sumps, discovered and surveyed miles of underground river, and connected the separate caves Juan Nieves, Rio Encantado, and Escalera into a 10-mile long cave with a total depth of 850 feet, the deepest in the Caribbean. Wes, Paul Smith, Roberta Swicegood, Luis Menoyo, and Steve Ormeroid did the diving, with invaluable assistance from Kevin Downey, Steve Stillman, and other dry cavers who helped haul the equipment.

The Puerto Rico expeditions were almost entirely self-financed, although some diving, climbing, and photographic equipment was donated over the years. Wes believes that in many cases the disadvantages of heavily sponsored expeditions outweigh the advantages. "Administrative" considerations can alter natural patterns of exploration, yielding less than optimum results and creating friction among expedition personnel.

Most recently, Wes and Tom Morris have been working in the Bahama blue holes, entering them under all flow conditions. Based on his experiences, Wes has concluded that these systems should be penetrated during outfow, when water conditions are consistent and a larger window for exploration is available. He states that these were the most dynamic, living, and exciting

caves he has dived in, and that he plans to concentrate on exploration of Bahamian blue holes in the future.

Future Prospects

Wes has done a lot of thinking about the future of cave diving. I sounded him out on the subject; here are some of his observations.

Exploration. He comments that today's exploration diving is always tomorrow's sport diving (consider the history of stage diving); the explorers will move on to longer, deeper, smaller, stronger-flow and lower-visibility systems. The goal must remain to keep these explorations safe.

Equipment. New cylinder arrangements for greater efficiency and safety are presently under development. The trends are 1) toward streamlined systems that allow better access to equipment, and 2) toward more air in smaller packages. Better instruments and lighting systems are needed and more accurate and efficient survey techniques and survey instruments must be developed. Wes is particularly interested in the use of sonar for survey in dark-water systems.

Cave exploration vehicles are the most efficient way to penetrate underwater caves, are generally less damaging to the cave environment than the traditional techniques (if used properly), and are excellent for filming. In some high-flow systems, dry-cave single-rope techniques can be used "in reverse" (climb down in, rappel out) to allow controlled entry and exit.

Diving Procedures. Cave divers will increasingly be working with habitats and will be doing saturation dives. Habitats will range from the very simple to the complex. Wes is presently thinking about 3 habitats he has named the Drum, the Tent, and the Cattle Trough.

Having interviewed Wes at great length and observed his teaching, photographic, exploratory, and many other talents, I must close with the observation that he embodies all that a cave diver should be. When considering cave diving's cutting edge, Wes Skiles, more than any other individual presently active, has and is doing more in a greater variety of cave-diving related developmental areas than any other individual. I look forward to chronicling his future endeavors.

SURPRISE!! ANNOUNCEMENT!!

Treasurer Joe Prosser of Miami, Florida has come up with an exciting new Cave Diving Section collectible: COFFEE MUGS! They feature the Section logo, of course, plus the "Basic Rules of Safe Cave Diving."

They will be available starting at the Winter Workshop (so don't try to order them now) for $4.00. Announcement will be made in UWS on ordering information for the people who can't make it to the Workshop.

F I C T I O N - a Short Story

- by Jeff Morelock

"IT CAN'T HAPPEN TO ME"

It was a typical November weekend in north Florida. The temperature was 75 degrees. The noon sun was high in the blue sky. Everything was just right.

My buddy and I pulled up to our favorite spring and began to set up our gear for another great cave dive.

We planned to do two jumps to a part of the system we had never seen before. We entered the cool water and swam into the cavern. The permanent line starts 50 feet down the main passage. We had made at least 15 dives into this sytem, the last five without running a gap line to the permanent one.

My buddy was in the lead; he had gone around a corner when a "D" ring that held one of my back-up lights and clothes pins for gapping broke. I caught the falling light but missed the pins. I managed to shove the light into my bulging belt pouch, but my buddy had already so far ahead of me that I didn't stop to search for the clothes pins. I rounded the corner to find my buddy waiting at the first jump. I unzipped my pouch to get at one of the two gap reels inside. My back-up light fell towards the mushy floor once again. My buddy saw this and lunged forward trying to catch it.

His ungraceful movement caused a swirling cloud of silt to rise from the floor, reducing visibility to two feet. His attempt was in vain; the light disappeared into the silt. "I'll get it on the way out," I said to myself. I managed to tie the gap reel into the line and reached for a clothes pin to mark the way out. "S---!" My pins were on the floor, 100 feet down the tunnel to the left (or was it to the right?), with my ill-fated "D" ring. "It doesn't matter; I know the main tunnel like the back of my hand," was my next thought. So, off we went.

I was almost to the next jump when a flickering light in front of me caught my eye. "Wow, that looks neat," I said to myself. At the same time, I realized what it meant: my buddy needed help. How could he need my help? He's been diving longer than me.

I looked around to see him charging me, sawing his throat with his fingers. How can he be out of air? That doesn't happen to cave divers, especially to us.

It took him a few seconds to get to me. By then I had barely managed to get my other regulator free. (We will have to practice this, when we get the time.) When he got some air back into His mad dash for air had stirred up the silt in the side tunnel quite a bit. Feeling our way along the line in zero visibility made us breathe pretty hard.

When we got to the main line, the visibility improved to about two feet. The silt from our blind groping in the side tunnel was catching up with us. We started for the exit.

After 15 or 20 feet, I could see myself and my buddy. No walls yet but we were getting closer to the exit. It was a good thing, too, because I was down to 900 psi. We exchanged nervous O.K. signals and swam for the exit. "That's funny, we should have been up drinking a soda 300 feet ago, oh--we went the wrong way!--we'e going to die!" I spun around to see if my buddy realized this fact, only to find myself alone, with my long hose dangling in the silt. A very selfish thought crossed my mind: "Good, more air for me."

I was now thinking a of a million different things. The recovery divers pulling our bloated bodies out. The spoiled safety record of my fellow divers, my grieving family and friends. A few of my friends saying, "I told him he would die in one of those damn caves." The news reports, the people trying to see the waterlogged corpses.

I saw myself turn and swim back into the silt. I swam at top speed. I won't die, no way! Just a little farther. Getting hard to breathe. So tired, why? How could this have happened? I had dived here so many times before.

Just a little farther, please let me make it. There's my buddy, face down in the silt. Claw marks on the wall, fingernails torn off. Please, not like this. So dizzy, can't breathe, out of air, suck harder, got to be air left. All gone. SHOULD HAVE FOLLOWED ALL THE RULES.

It can't happen to me, I'm a certified cave diver. Certified cave divers don't die in caves. Do they? Oh, my God! It is happening to me. No more air left, can't hold my breath any longer. I'm inhaling water now. Blackness!

I'm nothing but a bunch of ashes, sitting in a dark box. You could be in my position. Remember my story the next time you make a jump without gapping it. Or the next time you dive with your gear out of place. Think about this story next time you're considering exceeding your skill level or breaking some of the rules. Things CAN go wrong on YOUR dive. It's no fun being dead.

DANA HUMPHREY HALES FROM GREAT BRITAIN

Dana Humphrey writes: "I am in England, about 60 miles north of London. It's okay here. I haven't had a chance to really look into the diving over here. I'm anxious to receive that book on Cave Diving in England. It would be great if I could cave dive over here. I really miss the springs and all my friends.... I'm planning to be at the springs for Memorial Day...." Dana's address is:

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