UNDERWATER SPELEOLOGY

VOLUME 9 NUMBER FIVE

UNDERWATER SPELEOLOGY

Published Bimonthly
Beginning in February

by

The Cave Diving Section of
The National Speleological Society

Deadline for publication is the second Friday of the preceding month. Send exchange publications, articles and editorial correspondence to the editor.

John Zumrick
120 Rusty Gans Dr.
Panama City Beach, Florida 32407

Section membership, which includes a subscription to Underwater Speleology is open to all members in good standing of the National Speleological Society at $5.00 per year. Subscriptions to non-members is $7.00 per year. When making application for membership or requesting subscription information contact:

Stephen D. Maegerlein (NSS 31183)
P.O. Box 60
Williams, In. 47470

Make checks payable to the NSS Cave Diving Section in care of the Treasurer. Opinions expressed in Underwater Speleology are not necessarily those of the section or the NSS.

THE YEAR IN REVIEW

Having completed my term as Chairman of the CDS I would like to take a moment to reflect on our accomplishments, thank the many people who have contributed significantly to the Section, and point out some areas where I feel the CDS might improve its programs.

I think this has been a most productive year. Among our most important accomplishments was the adoption of a new Constitution which should improve the CDS in years to come. Another major item was the establishment of our new Rescue/Recovery Program to provide professional assistance during the most difficult of situations. Equally important was the creation of our Outstanding Service Award and its presentation to two outstanding individuals who have set a high standard for future would-be recipients.

Our Safety Program was rejuvenated and numerous new safety signs were installed in critical cave locations. We conducted two fine Workshops at a superb new location, Branford High School. The Executive Committee adopted new policies regarding publications about cave diving, and advertisements for cave diving courses, and updated our training policies.

Finally, after many months of hard work, we published our new CAVE DIVING MANUAL which will not only serve to greatly improve the training of present and future cave divers, but also provide the CDS with an income for several years.

I am grateful to the entire membership for support and assistance which was given me over the past year. However, there are number of individuals to whom I would like to express special thanks. Of course, this includes the members of the Executive Committee who worked with me. Steve Hudson, Steve Maegerlein, Steve Straatsma, Forrest Wilson, and John Zumrick. I would like to particularly thank Sheck Exley, Mary Ellen Eckhoff, India Fuller, and the authors for their work on the new manual. I would like to thank Henry Nicholson for his work in setting up the Recovery Program, George

Bortnyk, for his great personal committment and inventiveness in expediting our sign program, and Wayne Marshall for his contribution to the new Constitution. In addition, I want to thank Shannon and Paul Heinerth and Steve Hudson for the fine workshops they put on. Finally, I would like to publicly thank my wife Sandy for helping me with all these projects.

With regard to future CDS activities, I would like to suggest some possible areas which might be considered. First, the Recovery Program needs to be broadened in terms of member participation, perhaps through a more aggressive recruitment program. The Outstanding Service Award needs to be continued, for we have numerous members who might be recognized. Our sign program needs more volunteers so that the signs already in hand can be deployed. The Abe Davis Award program needs to be rejuvenated. Finally, the concept of CDS-sponsored activities in the periods betwwen workshops needs to be reinitiated. There are numerous special topics which could be the subject of "mini-workshops", and such activities would contribute greatly to the cohesiveness of our group.

In closing, I would again like to express my appreciation to all of you for your support. SAFE DIVING.

BILL FEHRING

The long awaited National Speleological Society Cave Diving Manual is now available. It consists of over 300 pages of the most up to date information on cave diving available. Editors Sheck Exley and India F. Young with seventeen contributors, each an expert in his or her field, have combined to make this the most comprehensive manual on both sump and spring diving currently available. Chapter titles include: Introduction, Environment, Psychological Aspects, Hypothermia, Basic Equipment, Specialty Equipment, Equipment Construction, Logistics, Dive Planning, Techniques, Decompression, Emergency Procedures, Search and Rescue, Surveying, and Photography. Single copies are available for $10.95 plus $1.00 for postage and handling. Bulk orders of 5 to 29 copies are $7.50 plus 5% for postage and handling and thirty or more copies are $7.00 with postage and handling included. Order through the N.S.S. Cave Diving Section, Publications Committee, 10259 Crystal Springs Road, Jacksonville, Florida 32221.

* * * NEWSFLASH * * *

WORKSHOPS ANNOUNCED FOR APRIL & MAY

Jack Rensch, Chairman of the Spring '83 workshop has advised us that it will be held in Branford on Saturday, May 28,1983. Lots of goodies are promised FOR YOUR EDUCATION AND INFORMATION. It certainly promises to be an excellent year for workshops after the Winter Workshop just produced by Shannon and Paul Heinerth. If you weren't able to be there with us in January, you really missed it! That just means that you are that much less current in your knowledge of the STATE OF THE ART IN CAVE DIVING and that you need to be at this one!!

Anyone interested in speaking at the workshop is urged to contact Jack Rensch quickly so he can have their hip waders tailored for them in time for the workshop.

* * * BE THERE ! * * *

FOR FURTHER INFORMATION CONTACT:
JACK RENSCH, WORKSHOP CHAIRMAN
2969 DAISY LANE
COLUMBUS, OHIO 43204
(614) 272-7179

---

* * RESCUE/RECOVERY DIVER WORKSHOP * *

Henry Nicholson and Forrest Wilson are presenting a Rescue/Recovery Workshop at Indian Springs on April 30,1983. This promises to be a very informative and much needed training session. We are all in need of any training that can help save a life ! ! Speakers are needed as well.

FOR FURTHER INFORMATION CONTACT:
HENRY NICHOLSON, WORKSHOP CHAIRMAN
4517 PARK ST.
JACKSONVILLE, FLA. 32205
(904) 384-2818

Last year was one of the safest years posted for cave diving in Florida with only three recorded deaths over the entire year. So far two cave diving fatalities have been posted this year with both occurring during a single accident at Potter's Spring north of Ebro, Florida. Both deaths can be attributed to failing to follow the third rule. Neither diver had any cave or cavern diver training.

Stephen Maegerlein
HERO, N.S.S. Cave Diving Section

Dear Steve,

How does it feel to be retired? Somehow the Cave Diving Section just won't be the same without your holding the "purse strings" for us. Since there are only 3 of the Section's charter members still active, I doubt if much of our present membership is aware of how much time and effort you had to spend in the "old days" to scrape us up some money to operate.....or how your careful tracking of these funds made it possible for us to have workshops, publish brochures and books, install warning signs, etc.....or how your conscientious, meticulous accounting of our treasury enabled our executive committees to know at any time exactly how much money was available. (I've worked with a lot of treasurers in other non-profit organizations and NONE of them have ever done nearly the job you did in that area.)

I also doubt if many of our members are aware of the fact that it was your editorship of Underwater Speleology in our second year that took it from being a club newsletter to a truly worthwhile and interesting magazine.....or that it was your computerization of our membership records that made it possible for us to mail out issues, ballots and other items on a timely basis and thereby avoid the inertia that strangles so many other organizations...or that it was your single handedly publishing our newsletter for so many years that saved us a fortune in funds and made it possible to hold our dues at a rate so low that we were able to rapidly become the world's largest cave diving organization. And I wonder how many of them see one of your professional exploded drawings of a helmet, light, battery pack,etc., and realize how many hours it took you to produce it....or use an item of specialized cave diving equipment and realize your role in developing it....or see a map of a cave in Indiana, Kentucky, Florida, etc. and realize that you are the surveyor and draftsman that produced it. How many of us are aware of the many contributions you made to cave diving before there even was a Cave Diving Section, such as your fine film of cave diving in Rock Bluff Springs.....or your many sacrifices in time, effort, and money to journey so many miles to our meetings in Fla. Michigan, and elsewhere to give us the support we so desperately needed?

And, because of your modest nature, I'm absolutely certain that no one except myself is aware of fact that the only thing that kept us solvent in the old days was your very generous donation of money to the Section's treasury. The list of your achievements and contributions to cave diving and the Section could go on and on, yet truly few people are aware of the scope of your efforts because you were always willing to let someone like myself step forward into the limelight and get all the credit.

Steve, it was eminently appropriate that our Executive Committee awarded you our initial "Outstanding Service Award" as a small token of our appreciation. The inscription on the certificate that Bill Fehring read to us (at the Winter workshop) was excellent,but in my opinion it should have been changed to read one word:

HERO

That's because that's what you are, a hero to the N.S.S. Cave Diving Section, for without your unselfish efforts over the years we could not possibly exist today.

Sincerely,
Sheck Exley
Past Chairman,
N.S.S. Cave Diving Section

Editor's note:

I had intended to write an editorial for this issue on the merits of both our "Outstanding Service Award" recipients. It was going to be a good one too! I even planned to invoke the immortal John F. Kennedy who said something like "Ask not what the Section can do for you, but what you can do for the Section."

I don't need to do that now because all my key points were so well made in the letter from one recipient to the other. I know that this was not Sheck's intention, but what he has done is clearly establish to all concerned what the standards are to be a recipient of an "Outstanding Service Award."

I for one am glad to have walked a few miles with both these gentlemen, and would be happy to know that my own son had grown up to be just like either of them. My only regret is that it would seem too much like plagiarism to go through and change Sheck's letter around and send it back addressed to Sheck Exley,HERO, N.S.S. Cave Diving Section.

COVER PHOTO. Part of the 1982 executive committee taking some time off to do so dry caving in northern Alabama during the TAG Fall Cave In. Shown in the photo are John Zumrick, editor; Bill Fehring, chairman; Forrest Wilson, training director; and Steve Hudson, vice-chairman.

DIVER PROPULSION VEHICLES A NEW EXPLORATION TOOL

by John Zumrick (NSS 18788)

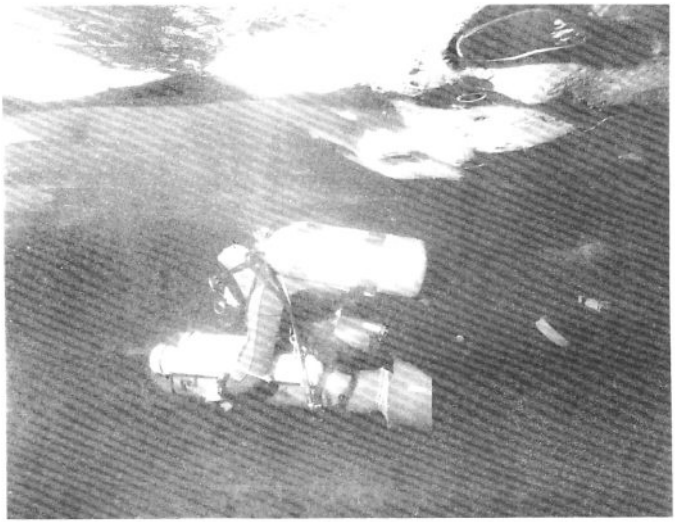
Diver propulsion vehicles, DPV's, because they reduce a diver's exertion and therefore one's air consumption offer the potential for extending the exploration of many extensive underwater cave systems. Just who was first to use DPV's for cave diving is not clear. In Cousteau's book, Three Adventures, mention was made of Dr. George Benjamin using DPV's to aid in his exploration of the oceanic blue holes of Andros Island in the Sixties. Bob Goodman was probably the first to use a DPV in Florida. Using a Farallon MK II DPV to help explore the Upper River Sink Cave System, Bob found the unit to be extremely hard to use. Holding on and being towed from behind was tiring to the arms and made it difficult to lay out guideline, to survey, or even to maintain proper buoyancy control. Perhaps, as a result of Bob's experience, DPVs such as these never became popular for cave diving. A review of cave diving using such a DPV is given by William Morse in Volume 5 Number 3 of Underwater Speleology.

In 1978 Jim Lockwood decided to purchase two of the larger Farallon MK VI DPV's. These units differed form the MK II in having more power, but, more importantly, the diver straddled a T-bar and rode them rather than being towed. Both Jim and Jamie Stone, another DPV pioneer, found that riding was the crucial difference between the two DPV's since it freed one's hands for other uses besides holding on. As a result Jamie and Jim were soon going over 3000 feet into the Devils Eye Cave system in 50 minutes using doubles 100's whereas previous dives using the standard now seemingly neandrathal swimming techniques took 120 minutes and necessitated at least a double stage dive. Clearly, these units had demonstrated their potential in cave diving.

The Farallon MK VI DPV is made in two sections, a front section which houses four 12 volt motorcyle batteries that power the unit, and includes a headlamp, and a dead man's switch, mounted on one of the two front section handles. The rear section houses the electronics, drive motor and propellor. On the side of this unit is a rotary switch that serves both as the master power on-off switch and variable speed control. A T-bar which rises from the propellor fairing serves to propel the diver through the water. Underwater, the unit is nearly neutral.

In normal use the diver stradles the T-baf, turns the master power switch on and selects the appropriate speed by rotating the master power switch. Pressing the dead man's switch applies power to the propellor while releasing it stops the motor immediately. If the diver is neutrally buoyant, the DPV remains nearly horizontal and in this position its prop wash produces surprisingly little silt, generally no more than that of a careful diver. The unit is easily maneuvered by leaning in the direction one wants to go; forward for down, back for up and to either side to make a turn. It is possible to use a DPV even in constricted areas. For example, one can actually ride the DPV through the narrow river entrance of the Devils Eye Cave System by using the DPV's thrust to nullify the current and guiding oneself carefully through the opening by pushing off the walls until in the lesser current beyond the restriction.

Of course, with the use of any new technology problems are bound to develop as one attempts to integrate the new gear with the old. For example, the suction created at the propellor intake is substantial and although a plastic propellor guard is provided it was soon discovered that it was inadequate and that the unit had a propensity for eating various and sundry nearby pieces of dangling equipment that may not be properly tied down. On his initial dive of his brand spanking new DPV, Sheck Exley fed his DPV a rather decrepit looking cylinder pressure guage. Judging



from the clicking sound emitted by his DPV, I diagnosed an acute case of indigestion and recommended that it be hospitilized back at Farallon. There it was found that the propellor shaft had bent saving the prop shear pin from damage as dictated by Murphy's Law.

These problems were, however, relatively minor and easily corrected when compared with the reliability problems that were to follow. If these units are to carry divers on long explorations they needed to be reliable. Early experience, however, resulted in a substantial number of failures many directed primarily at the sophisticated variable speed control electronics. Briefly, the system works by pulsing 48 volts to a 24 volt motor through three power transistors. These power transistors are turned on and off by a timer circuit. The longer they are left on during any period of time the faster the DPV will go. Normally, they are only on less than half the time to keep from seriously overloading the motor.

One common failure encountered included shorting out of one or several of the power transistors. When this occured, 48 volts was provided to the motor continuously, seriously overloading it. Even worse, releasing the dead man's switch would not stop the DPV since it only controls the timing circuit which the shorted transistor had bypassed. A diver's only recourse is to reach back and turn off the main power swich, hopefully before the DPV now running at super full speed crashes into something or burns up the motor. This happened once to Jamie Stone in Devils

Eye. When, unexpectedly, the unit went to full power he immediately shut off the main power switch. Later, perhaps hopeing that something else had gone wrong, he tried to reactiviate it. When he did so the main power relay, now having no resistance across the circuit, arced as it closed and welded itself in the on position. Now Jamie was roaring around Devils Eye at full speed, unable to shut the DPV off. What to do now? He couldn't go through the several restrictions between him and the exit at warp factor 5, nor could he bring himself to jettison a $2000 piece of gear. Bewildered, his dilema was solved when a nylon drive gear to the propellor failed under this overload.

In an effort to solve these and other electronics problems aid was sought from Roger Miller and Frank Fogarty both experienced cave divers and with the requisite experience in electric motors and electronics. Primarily through their efforts modifications were made to correct some of the problems we all had experienced. Changes included installing a fan on the motor to provide better cooling, installing a spark suppressor in the power relay circuit to prevent a recurrence of problems such as Jamie had encountered, changing to different power transistors, and modifying the timing circuit to limit power somewhat and to provide better timing control at low battery voltages. As a result of these modifications reliability has been considerably improved.

Another problem associated with the DPV was the limited battery power and battery life span of the standard motorcycle batteries. These batteries are not designed for the deep discharge cycles required by a DPV thus resulting in a decreased life span. Additionaly, they lack sufficient capacity for many dives. At higher speeds, owing to the relatively high internal resistance of these batteries, even more of their limited power is consumed in overcoming this resistance. This problem of limited battery power can be compensated for partly by running slower since the batteries will provide more electrical power at lower discharge rates. However, instances of high current or carrying stage bottles would necessitate higher power consumption. Such a situation occurs in the Manattee Spring Cave System. Trips upstream from the Friedman Sink entrance of 4000 feet were possible using double 100's. When an attempt was made to extend this range with stage bottles, it was found that the increased drag caused by the bottles necessitated

using higher power which exhausted the batteries without gaining any appreciable extra distance. If the DPV was run slower then increased air consumption due to the longer dive time and the need to swim to help the DPV along combined to limit penetration. Clearly, additional battery power was needed.

This power problem was investigated in depth by Jamie Stone and John Harper. After carefully surveying the market for available batteries, it was determined that sealed nickel cadmium cells offered the highest power density within a reasonable cost range. With help from General Electric who manufactured the cells a 48 volt battery consisting of 20 two cell 4.5 ampere/hour battery sticks would work. Since five of these batteries wired in parallel would fit within the existing DPV hull, approximately two and a half times more battery power would be available. Unfortunately, these cells would also make the DPV about twenty five pounds negatively buoyant and, therefore, would require the installation of buoyancy tubes to offset this additional weight. Thanks to their efforts this two year project of selecting, procuring, and assembling these batteries has now been completed. This additional power has proved useful in the further exploration of Hornsby Spring, Fish Hole and Emerald Sinks as well as elsewere here in Florida.

To insure diver safety when using a DPV, particularly on a long dive, it was necessary to completely reevaluate diving procedures in the light of this new capability. In particular it was imperative that procedures to deal with DPV failures during a long dive be developed. Some early tests showed that it was possible, indeed relatively easy, to swim with a DPV. Remaining mounted on the DPV one could simply fin out of a cave, particularly if aided by an outgoing current. This, however, should hardly be necessary since your buddy will most likely have a functioning DPV. In this case your buddy can simply tow you and your DPV out of the cave provided there is sufficient battery power remaining. Towing another diver and DPV is best aided by a short tow strap between the diver and towing DPV T-bar since towing with a diver hanging directly onto the T-bar, or elsewhere will tend to pull the towing DPV off course and make control more difficult.

Since use of DPV's result in a greatly reduced rate of air consumption, a reevalutation of the traditional air rules was also needed. Falling back to the basic principle that all divers should have enough air for both him or herself and buddy to exit the cave, various models to allow computing safe air planning rules for use with DPV's in various current situations were devised. For example, if the diver is aided by a strong outflowing current such is encountered in Devils Eye Spring or Manattee Spring an air rule based on thirds, one third in, one third out, and one third for safety, may be appropriate. However, if a DPV is used in slack current such as found in the Peacock Springs Cave System than the traditional rule of thirds does not hold, since a swimming diver will use more air to exit than was used entering with the aid of a DPV. In some cases exiting from a strong syphon after a DPV failure may allow using as little as a sixth of the available air supply if sufficient air is to be held in reserve. To insure the models worked it was, of course, necessary to test them. Unfortunately, the early lead acid batteries resulted in speed variation at the same setting depending on the battery charge level. Due to this variation in speed it was not possible to test these models.

Instead many DPV users have let experience dictate air planning. Initial dives using a DPV are conducted conservatively and the actual air used monitored and compared with that used on a normal swimming dive. Thus, for example, if experience shows that 1000 psig is needed for a swimming exit from a particular point within the cave, then the exit must begin with at least 2000 psig remaining. For dives beyond this point a conservative dive procedure is followed. On stage dives, tanks are placed as they generally would be for a swimming dive, insuring adequate air once these tanks are reached on the return. By carefully modifying these rules as more experience is gained at a particular dive location, adequate air is quaranteed and a DPV failure becomes more of a nuisance than a major problem.

The end result of all these efforts is that DPV's are now being used routinely in furthering the exploration of many cave systems where the previously strenuous dives had slowed exploration. Newer more powerful batteries and electronic modifications have extended the range and improved the reliability of DPV's so they can safely be used in these pursuits. There is little doubt that the use of DPV's represents one of the most significant equipment advances for cave divers in the last decade.

DIE POLDERS: THE REOPENING

by Bill Fehring (NSS 19079)

Spring 1980. A time of sadness. A most gracious and entertaining lady had passed away, and a unique dive site had been lost.

The discovery and exploration of the DiePolder sinks are described in the previous article. Access to this property was acquired mostly through the personal ability of Will Walters and the other divers to establish a very real friendship with the DiePolders. A guide system and operating manual were established by these divers to regulate intrusions on the owner's privacy and to insure that divers were adequately experienced and equipt to successfully cope with the extreme depths which might be experienced. This sytem worked successfully for several years after the caves were discovered.

In 1979 Larry DiePolder, well into his 80's, passed away. The nature of the man, his wife, and their relation to the divers is perhaps best demonstrated by an anecdote concerning that event. A group of divers had driven up from Tampa that evening to dive and to camp out overnight. We learned Larry DiePolder had recently suffered a stroke and was gravely ill and had only a short time to live. However, when we offered to leave, we were told that Mr. DiePolder would have wanted us to dive and to go ahead.

We dressed in the moonlight. While going through our checkout on the surface someone mentioned the ring which encircled the moon, to which Will Walters responded, "Mr. DiePolder is dying and is going to heaven - its an old indian legend that when someone good dies a ring forms around the moon to guide him to heaven." We all dumbly nodded as if understanding the myth and proceeded with our dive, a tour around Cavern Number Three.

On surfacing after the usual two hours of decompression, we found Larry Roberts, Mrs. DeiPolder's son, waiting on the surface with the news that Mr. DiePolder had died. Needless to say, Will's reputation as a shaman was suddenly elevated. Again we offered to leave, but we were again told we could stay.

Mrs. DiePolder survived her husband by somewhat more than a year, passing away in late spring of 1980. during this period diving continued, mainly through an agreement with Larry Roberts. As a result of Larry DiePolder's will, title to the 1200 acre portion of the ranch which contained the sinks passed jointly to the Gulf Ridge and Florida West Coast Councils of the Boy Scouts of America on January 1, 1980. Mr. DiePolder was determined that Deltona Corporation, which owns land on three sides of the ranch, would never gain title to the property and that it would be developed as a scout camp. However, so long as Mrs. DiePolder lived she could stay on the property and had control of access to it.

Knowing that Mrs. DiePolder would not live long, initial efforts to contact the Scouts were made by Bob Gomez. While the Scout Executive of the Gulf Ridge Coucil was cordial, he was noncommittal, and expressed serious concerns about our diving on the property. During this same period the guide program was formalized and the operating manual worked on further, both as steps to help us approach the Scouts formally when the time came.

On the day Mrs. DiePolder died several of the divers happened to be traveling to the ranch to dive. On arriving they found "a bunch of dudes in business suits, including one who flew in by helicopter", all looking the property over. Understandably shaken by this show of corporate pomposity and the death of Mrs. DiePolder, they returned home to report the news and their impression that "things looked bad" for the future of diving at the site.

An immediate effort to contact the Gulf Ridge Council was made. The author was asked to undertake this effort because he had some contact with council members through his job. Maps, copies of the operating manual, explanations of the guide system, etc. were forwarded. However, we found out that the property had been given jointly to two councils, each with separate corporate boards, and that both councils would have to be involved in any decision.

In early July we received a letter stating that a joint committee of the councils had ng met and that diving at the ranch must be suspended. We learned further that a ranger had been hired for the ranch to prevent trespassing. So there we were, out on our collective ear. To understand our frustration one must realize that DiePolders is the only dive site within a two hour drive of Tampa which had te easy access and consistently good visibility. Its loss put a big dent in the diving of local NSS members, particularly with the increased gas prices. The most frustrated of the divers involved were Jamie Stone and Dale Sweet, whose determination to regain access e to the ranch became the driving force behind much of what followed.

To appreciate what we were up against one must know that each Scout council is a separate corporation with its own board of directors comprised of volunteers from the business and legal communities. Being volunteers with "deep pockets" these men are very wary of any exposure to liability which they might incur as members of the council. Further, they generally could not care less about any bunch of kamakazee deep freak cave divers and are not the slightest bit impressed by the ploys successfully employed to gain access to numerous other dive sites.

In addition, the councils operate under strict rules of the national Boy Scout organization regarding liability and the use of scout property by outside groups. All factions of the organization are extremely image-conscious, and even without regard to possible financial liability, the prospect of a headline reading, "Diver drowns at Scout Camp", sends a shudder throughout their organization.

Recognizing the importance of being judged a proper group for use of scout lands, it was decided that all efforts to reopen the sinks to diving would be made as a function of the NSS Cave Diving Section. Further, every effort to utilize inside contacts would be made. Since the author and his wife Sandy knew several members of the Gulf Ridge Council through their jobs, they were selected to be the primary contacts with the scouts. However, we soon discovered that the Florida West Coast Council would be the group actually developing the property and with whom we must deal first. Unfortunately, we did not know anyone connected with that council.

In August 1980 a fortunate incident occurred. Two Australian divers, Peter Stace and Phil Prust, toured Florida following their slide presentations at the May 1980 Section workshop. Jamie Stone was showing them a number of the more exceptional sites and wanted to show them the DiePolder caves. It was decided to approach the Scouts for a "one-shot" approval for this occasion. A written request was forwarded to the chairman of the Gulf Ridge Council, citing the unique opportunity at hand for sharing important cave information on an international basis. Fortunately, the chairman had a somewhat remote business relationship with Sandy Fehring, was suitably impressed by our request, was a diver himself, and approved diving on two separate dates.

The dives with the Australians went off without a hitch. Much time was spent impressing the Scout's ranger, who viewed the operation, with the preparation, professional approach, and safety-oriented attitude which is part of our activity, along with the uniqueness of the DeiPolder caves. Following the dives, profuse letters of thanks were sent to both councils and the ranger.

Soon thereafter a formal request was submitted to the Florida West Coast Council for permission to resume diving under a tightly-controlled guide system closely coordinated with the Scout's staff. While the Scout Executive of the council was at least cordial in receiving our request, he was unable to get the Council to even consider the request until November.

Bill Fehring was notified that the matter would be put to a vote at the November meeting and was asked to present the proposal. Unfortunately, he had a business trip on the appointed date. Quickly, it was arranged that Jamie Stone and Dale Sweet would attend the meeting. Further, Tex Chaukley was asked to contact the Scout Executive to discuss the question of legal liability.

Jamie, Dale and Tex did a great job of representing the Section and the full Council approved resumed diving for a period of one year subject to three conditions:

1. The Section provide the council with a hold harmless agreement and each diver sign a release prior to diving.

2. The Section provide the council with a $500,000 indemnity insurance policy covering the deductable of their umbrella liability coverage.

3. The Gulf Ridge Council approve the diving.

Stipulation one was quickly met with the cooperation of Chairwoman India Young. Dale Sweet located an insurance agent who felt he could get us the required coverage. However, the third stipulation proved the most troublesome.

For several months our parallel request languished at the Gulf Ridge Council. They were "too busy" to deal with such a minor matter. Fortunately, about this time one of Sandy Fehring's employers was appointed to the council, and further, was appointed to their property development committee in view of the fact that his family had previously donated at least two other camps to the Scouts. With a little coaching from Sandy, this "insider" brought up the matter and the resumption of diving was approved in February 1981.

This left only one hurdle, how to pay for the insurance. It was decided that the simplest way to raise the $500 premium was to assess each of the ten proposed guides $50 apiece. Some consideration was given to asking "guests" to contribute $5 per day to the Section to defray this cost, but no final policy on this was established. It took several additional weeks to obtain the required insurance policies, but in the Spring of 1981 all the requirements were finally met and diving resumed. A new release specifically for this site was developed by Tex Chaulkley.

The guide system of access remains in effect today, and the approval of the Scouts has been extrended for an additional year. The main problem at present is coming up with another $500 insurance premium for the next year and establishing a method for raising these funds in future years.

The insurance policy and the release protect the N.S.S., the Section, and both Scout councils against suit by any participating diver or their estates. As a result, access has been limited to Section members. The "host" divers have the responsibility for insuring that each "guest" diver is properly equipt, trained, and has appropriate experience. Requests for access must be made by the "host" divers a week in advance and are funnelled through a diving coordinator. Bill Fehring currently serves as coordinator. Section members interested in diving these caverns should contact one of the following "host" divers: Will Walters, Jamie Stone, Dale Sweet, Sheck Exley, Tex Chaulkley, Bill Fehring, Steve Straatsma, Vaughn Maxwell, or Paul Heinerth.

As a result of these experiences some general conclusions might be drawn which may be applicable to efforts to obtain access to other dive sites:

A. The use of the organization and prestige of the Section and of the NSS can be extremely helpful;
B. Use of the highest possible level of professionalism in approaching groups such as the Scouts is very beneficial;
C. Extensive preplanning of such matters as guide programs, coordination, insurance, releases, etc. is most beneficial. Give every consideration to the owner's convenience;
D. If you make commitments, follow through quickly. It is good to establish an image as an efficient, dependable group;
E. Knowing someone "inside" the subject organization sure doesn't hurt.

MANATEE SPRINGS MANAGEMENT MEETING

On January 16, 1983 representatives from the Cave Diving Section and N.A.C.D. met with Capt. Paul Perras, Superintendant of Manatee Springs State Park. Representing the Section were Mary Ellen Eckhoff, Sheck Exley, Wayne Marshall, Henry and Beth Nicholson. There were approximately 8 representatives from N.A.C.D. as well.

In a nutshell, the Park Management is very concerned with an increase in use of the Park by both Open Water and Cavern/Cave Divers. While Capt. Perras is very much in favor of continued use by divers, he is understandably concerned about preventing any possible accidents or incidents in the future. After considerable discussion, several points of agreement seemed to evolve. There was unanimous agreement that one of the best preventative measures that could be taken is to restrict the use of lights to only those divers that can produce a Cave or Cavern Diving certification card. This would prevent the rangers from having to listen to the song and dance of Open Water Divers that say their Open Water Card is sufficient. It will not be recognized any longer for Cavern Diving. In fact, we are putting together a booklet of approved cards from all agencies that offer Cavern or Cave diving cards for reference by the Rangers.

The second item that had unanimous agreement was that some less visible approach to Friedman's Sink is needed. This would allow cave divers to be less conspicuous to the general public and thus decrease awareness of this site to the Open Water diving public. It was presented that both the Section and the NACD would provide volunteers to help the Park personnel cut a new road into the back of the site to create a more controlled access to the sink.

The final decisions will have to be made at the State offices of the Dept. of Natural Resources. However, any members that have suggestions on improved management of this site are requested to send them to me at;

WAYNE MARSHALL, EDITOR, UNDERWATER SPELEOLOGY
2623 TULIP TREE CIRCLE
SEFFNER, FL 33584

NSS CAVE DIVING SECTION
C/O SANDRA FEHRING
3508 HOLLOW OAK PL.
BRANDON, FLORIDA 33511