UNDERWATER SPELEOLOGY

VOLUME TWELVE, NUMBER FOUR

Second NEW design ("Two Divers") by TAPS Graphic Designs (Terri Skiles) - NOW AVAILABLE! (NSS-CDS Publications, P.O. Box 950, Branford, FL 32008-0950; all orders must be pre-paid; make checks or M.O.'s out to "NSS-CDS")

Short-sleeved T-shirts $8.50 + $1 p/h
- S - navy, green, light blue
- M - teale blue, green, orange, black, light blue, white, gray
- L - navy, green, orange, maroon, light blue, teale blue, white
- XL - navy, green, orange, light blue

Long-sleeved T-shirts $10.50 + $1 p/h
- S - light blue
- M,L,XL - light blue, teale blue.

CHAIRMAN'S MESSAGE

An enthusiastic review of the events and explorations by the members of the CDS was well received at this year's NSS Convention held in Frankfurt, Kentucky. It is well worth noting that the presentation spanned a vast amount of our globe, from the Great Lakes, to the Caribbean, to the western Pacific. Aside from entertaining our fellow cavers with spectacular photos of many exotic caves, a wealth of information regarding many facets of caving was made available. Safety, biology, and training were just a few of the aspects covered.

Dennis Williams presented a delightful view of biology collection and exploration on the islands of Palau, Guam, and Hawaii. The spectacular caves of Puerto Rico were equally well displayed by Wes Skiles and Kevin Downy. Slide shows by Steve Straatsma and Wes Skiles of cave diving throughout the southeast and the Bahamas demonstrated training, techniques, exploration, and certainly many beautiful underwater visuals. Discussions on sump diving (Dale Purchase), the interaction of the CDS and the NACD (Milledge Murphey), a closer look at Remipedia (Jill Yager), and mine diving (Steve Ormeroid) rounded out the programs by CDS members.

Aside from reviewing these many fine presentations, I would like to point out a more obvious interaction among the wet and dry sections of the caving community. Several of the CDS presentations demonstrated the necessary use of dry-caving techniques to make the cave diving possible. Many conversations with newly trained cavern and cave divers (with a dry-caving background) prior to and during the convention show without a doubt a sincere interest in "total" cave techniques. I feel it is this type of interest that demands a much stronger cooperation between all caving organizations, sections, etc. Regarding cave training and safety standards, I say this not to imply a lack of cooperation but to state that a true progression of total cave training does not exist. There are many excellent safety and training groups within the NSS. But we have not established a link between these groups. Cavers do not need their desires to seek out and explore our subterranean world hampered by training through accident. The CDS will continue to be an integral part of training and safety education programs for the caving community.

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 per year. Subscriptions for non-members are $7 per year. Membership/subscription information, applications, and status may be obtained by writing to the Secretary/Treasurer c/o the Section's permanent address:

Joe Prosser, Treas. NSS-CDS
P. O. Box 950
Branford, FL 32008-0950

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

H.V. Grey, Editor, UWS
P. O. Box 575
Venice, FL 34284-0575
bus (813)484-8150
res (813)488-4672

All other official dealings with the Cave Diving Section, including general information inquiries, publications orders, and training certification matters, should be directed to the Section's official, permanent address (POB 950, Branford, FL 32008-0950). Specify, if possible, which officer or program coordinator should handle your request in order to speed up the forwarding process. (For example, publications orders should be addressed: "H.V. Grey, NSS-CDS Publications, POB 950, Branford, FL 32008-0950.")

26th NSS-CDS WINTER WORKSHOP - December 28, 1985

The Winter Cave Diving Workshop will be held in Branford, FL, December 28, 1985, at the Branford High School. The Theme is "The Science of Cave Diving." Workshop Co-Chairmen are Mark Long and Wes Skiles.

Preliminary Report:

METHODS OF PROMOTION:

1) Magazines (Skin Diver, Ocean Realm, Underwater USA, Florida Scuba News, NSS News, Underwater Speleology, NACD News, NAUI News, PADI Journal)

2) Individual Mailings (all past trained NSS-CDS students)

3) Special Advertising (UWS announcements and pre-registration)

4) Announcements in local newsletters and club news (Ginnie Springs and FSDA News)

5) Distribution of announcements and pre-registration flyers (Branford Dive Center, Spring Systems Dive Center, Ginnie Springs, Steamboat Restaurant)

LIST OF DESIRED TOPICS AND SPEAKERS (Morning talks in auditorium at Branford High)

1) Sonny Cockrell - Project Director. Warm Mineral Springs Archaeological Project

2) Jill Yager - on Remapedia and other cave critters

3) Peter Horne - Australian caves and geology

4) Dennis Williams - Research in South Pacific

5) George Wilson - Nature's Conservancy - Peacock Slough

6) Mark Long - Scootering Techniques & Safety Rules

7) Tom Illife - Speleobiology and Bermuda

8) Wes Skiles - New Exploration in North Florida

9) Dick Clarke - Asceptic Bone Necrosis

10) Don Landis - Sonar and Video Techniques in cave diving

AFTERNOON ROTATING MINI-WORKSHOPS (Classroom sessions)

1) Panel Discussion: Sonny Cockrell, Tom Illife, Jill Yager - Science and Cave Diving

2) Cave-diving Photography: lighting techniques, exposure methods, modeling

3) Emergency Procedures: new methods and approaches to emergencies

4) Locating New Caves - use of topographic maps and other resource tools

EVENING PRESENTATIONS

1) Prize drawings (must be present to win)

2) Election results

3) Awards presentations

4) Evening Film Festival

a) Ned DeLoach - UNDERGROUND UNDERWATER, a vintage film on the early exploration of Peacock Springs.

b) Don Landis - SPELEOAQUATIC VIDEO, a special video projector will bring this unique sequence to the big screen.

c) Wes Skiles - EXPLORATION '85, a music-slide journey through caves and underwater caves explored during 1985.

NACD CAVERN WORKSHOP FOR OPEN-WATER INSTRUCTORS

The 4th Bi-annual NACD Cavern Diving Orientation Course for Open-Water Instructors will be held Oct. 26-27 at Manatee and Ginnie Springs. Pre-registration fee is $60. For more information contact: Steve Gerrard, 5714 Ed White Ct., Tallahassee, FL 32301, (904) 656-1223.

ELECTIONS

The Cave Diving Section's corporate by-laws provide that the CDS shall be governed by a Board of Directors consisting of seven members, each serving for a term of two years. Elections are to occur every year, alternating between electing three and four board members, with the fourth member to serve as Training Chairman.

This year the two-year terms of Steve Ormeroid, Mark Long, Dale Purchase, and Wes Skiles (Training Chairman) expire. So we will be voting on three general board members and a fourth Training Chairman/board member.

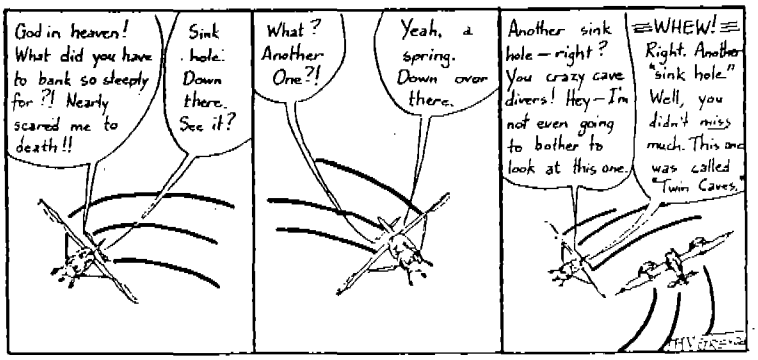
WHO MAY BE NOMINATED: Any Cave Diving Section member may be nominated for one of the three general board positions, and any CDS-certified Cave Diving Instructor (also, of course, a CDS member) may be nominated for the Training Director position. All candidates must be current, dues-paid members of both the CDS and NSS. People who only subscribe to Underwater Speleology or whose dues to the NSS and/or CDS have not been paid, may not be nominated.

WHO MAY MAKE NOMINATIONS: Any Cave Diving Section member (see above). If you are a CDS member, you can nominate yourself. Nominations do not have to be seconded.

HOW TO NOMINATE: All nominations must be made in writing and received by Joe Prosser, Secretary/Treasurer (P.O. Box 950, Branford, FL 32008-0950) no later than September 30, 1985. You may wish to send a duplicate under separate cover or send your nomination by certified mail in order to make sure that your nomination is not vetoed by the U.S. Postal Service.

ANNOUNCEMENT OF THE NOMINEES: The nominees, after being verified as bonafide CDS and NSS members (and current certified Cave Diving Instructors, as the case may be), will be listed in UWS. They will be contacted and given the opportunity to accept or decline their nominations. If they accept, they will be asked to provide brief biographical information (even a picture if possible) and some statement of experience, training, interests, philosophical attitudes, and other qualifications relevant to performing board-member duties. This will be published in UWS with the hope that this information may help members make more intelligent decisions. The Section has grown so large and has members from all over the U.S. and several foreign countries, that it is no longer possible for all eligible voters to be personally acquainted with all the candidates.

VOTING: Ballots will be sent in a separate mailing to all CDS members. Steve Ormeroid, Chairman, will supervise the tabulation, and the results will be announced at the Winter Workshop in Branford, FL (Dec. 28) and published in the next subsequent issue of Underwater Speleology.



NACD HALF-DAY MINI-WORKSHOP and GENERAL MEMBERSHIP MEETING

The National Association for Cave Diving held a morning mini-workshop in Branford Saturday, July 13, at the Branford Women's Center. Speakers included Wes Skiles on the "Legal Aspects of Cave Diving Recovery," Mark Leonard on "Cave Diving Lighting Systems," George Bortnyk on "NACD participation in DEMA Orlando 1986," Judd Sheets on the "NACD Cave Diving Equipment Technology Committee," and Roger Werner, also on cave-diving lights and equipment. Unfortunately, two of the scheduled speakers, Ron Menke (on the new NACD Training Manual and certification cards) and Dr. Norwood (on "Contributing Factors to Decompression Sickness") were involved in an automobile accident and were not able to make it.

The afternoon was left open for cave diving and then that evening there was a social dinner at the Suwannee River Cove Restaurant (with Branford Dive Center providing spirits). Afterward there was a General Membership meeting. Steve Gerrard reported on the status of the NACD's new cave-diving text, The Art of Safe Cave Diving, and Indian Springs. The new manual is complete except for a few remaining chapters and will shortly go into the editing stage, and the YMCA has agreed to let Steve Gerrard and Paul DeLoach meet with its board of directors to discuss the situation.

Dr. Milledge Murphey of Gainesville, FL has been confirmed as the NACD's new General Manager and Editor of NACD News. Also, a new issue of the NACD Journal is well under way. Approximately 50-60 people attended the workshop. Hopefully, we can look forward to many future workshops sponsored by the NACD.

NSS-CDS PUBLICATIONS - Order through: NSS-CDS Publications, P. O. Box 950, Branford, FL 32008-0950. All orders must be pre-paid. Make check or money order payable to "NSS-CDS."

NSS Cave Diving Manual - $10.95 (1-4 copies). $7.50 (5-29 copies); add 5% post/hand (minimum of $1). $7.00 (30 or more copies; no p/h).

Basic Cave Diving - $2.50 (1-9 copies), $1.75 (10 or more copies); no post/hand.

Instructor's Training Manual - $45.00 (no p/h)

Decal - $1.00 Patch - $3.00
"I Support Safe Cave Diving" Bumper Stickers - Orange - $1.00 Yellow - $2.00

BACK ISSUES OF UNDERWATER SPELEOLOGY - @ $1 (includes post/hand). NOTE!: with the last complete order of back issues, yet another issue went under the minimum and is no longer available. Now is the time to order if you would like to have this "history of American cave diving" for your personal library.

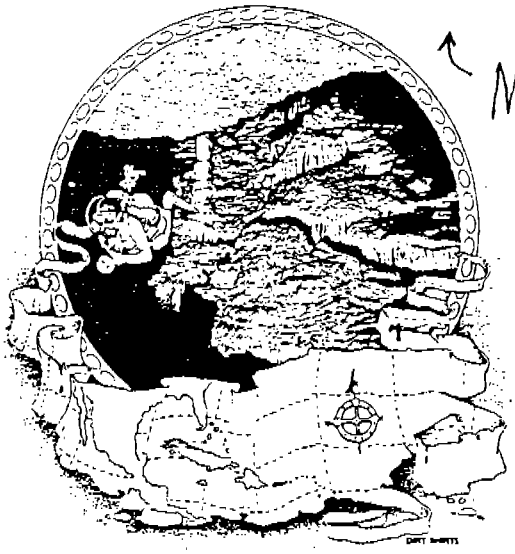
1974	V. I	1,2,3,4,5,6	80	V. VII	1,2,3,4,5,6
75	II	1,2,3,4,5,6	81	VIII	2,3,4,5,6
76	III	-	82	IX	1,2,3,4,6
77	IV	5,6	83	X	1,2/3,4,5/6
78	V	2,4,5,6	84	XI	1,2/3,4,5,6A,6B
79	VI	1,2,3,4,5	85	XII	1*,2,3,4

*(not in possession of Pubs. at this time)

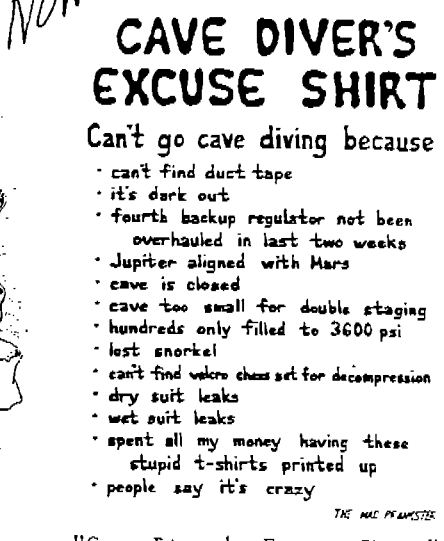
MAPS of LITTLE RIVER and BONNET SPRINGS now available! $5.00 + $2 (p/h rolled) or $1 (p/h folded). You MUST send a copy of your cave-diving level certification card (cavern not sufficient) unless H.V. Grey knows you personally, and is certain of your C level.

Collared Sport Shirts (CDS logo on front pocket)- NOW AVAILABLE again in both NAVY and WHITE - M, L, XL. $13.50 + $1 post/hand.

NOW AVAILABLE!!!

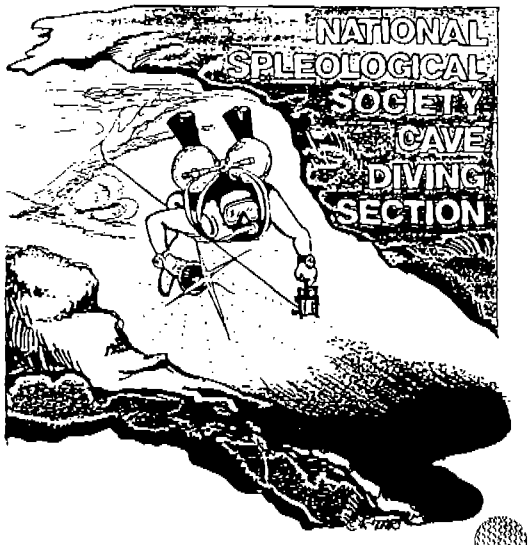


Old-style T's with pocket logo
S - navy, gold
M - navy, tan, orange, yellow
L - tan
XL - tan, navy
Ladies - XL light blue
$6.00 ($1 post/hand)



"Cave Diver's Excuse Shirt" T's
S - royal blue
M - maroon
L - royal blue
XL - maroon
$7.50 ($1 post/hand)

MORE SHORT-SLEEVED SHIRTS ON ORDER!!!



"Single Diver" New-style T-shirt
Long-sleeved shirts only:
S - light blue
M - light blue, teale blue
L - light blue
$10.50 (plus $1 post/hand).

"MOTORING ANYONE?" - by Dustin Clesi and Steve Straatsma

Photo by Mario Mitchell

It's 11:05 a.m. Saturday morning as we break out of the "Cornflakes" into open passageway. Humming by the "Mapleleaf" interchange, we are rapidly being overtaken by intermittent blue flashes from the rear. "Uh-oh, it's the C.M.P." (Cave Motor Patrol). As we pull over onto the karst, I'm thinking, "Gee, hope we don't get written up on this one... I've got thirty points already!" "O.K., fellas, that was a restricted zone. You were clocked at 'eight.'" After a rigorous inspection of our equipment, power levels, and S.P.G. verification, we got off with a mere warning notice.

Seriously folks, technology is upon us. The availability of relatively inexpensive, compact, and highly functional diver propulsion units is on the increase. The TEKNA model DV-3(X) is becoming increasingly popular among wet vers. This unit has proved its dependability, durability, and utility under varied conditions. With a nine-speed, adjustable-pitch prop and a burn time of 45 to 85 minutes (depending upon the prop setting), penetrations are no longer limited to the old pull and glide. Weighing 48 lbs topside and 3 lbs submerged, little practice is required to "get acquainted." Deadman-type throttle releases stop motor function instantaneously. The DV-3(X) differs from the DV-3 in that the dual-rate charger, adjustable prop, and fan guard are included. (The DV-3's prop is a constant #5 setting with no quick-charge option.) Cost? $950.00+.

In average-flow systems, a speed of 2 knots with a fully equipped cave diver can be attained. The authors have found that reduction of drag and superior planing are essential for maximum efficiency Independently sealed compartments suggest a maximum operational depth of 160 feet, although the forward light casing has been flooded and crushed at excessive depth with no damage to the unit's motor function or flooding through either battery or motor bulkhead compartments. Propulsion is delivered by a barium-ferrite, permanent-magnet, direct-drive motor, delivering 600 R.P.M. (according to factory specs). Energy levels are maintained via two sealed gel-cell, rechargeable batteries. The system is 12-volt, 15 amp-hours, providing a range of up to three miles. Outer shell construction consists of high-impact xenoy resin which is reinforced. A dual-rate charger (offering 4- or 12-hour charge cycles) and two-piec carrying case are standard with the (x) model.

Several modifications have been made by NSS divers. These include adding quick-clip harnesses from vehicle to diver that completely eliminate arm fatigue. In fact, the unit can be easily operated with one arm.

Photo by Mario Mitchell

Another modification entails the diver's primary lighthead mounting atop the vehicle fan guard or on the nose for convenience. Should the vehicle be "parked" at the line during the dive, it can be quickly disconnected for swimming purposes. Some owners have inserted cotter pins in the "trigger" throttle to eliminate hand fatigue on extended dives, although this is not a recommended practice for obvious reasons. Other modifications are still in the workshop. These include optional battery packs for extended motoring, and the installation of an instrument console. Staging with the unit is slightly awkward in that the weight is not ideally centered, coupled with minor (prop) thrust interruption. Sidemount diving systems appear to hold promise--Ohh.... Woody?

Photo by Mario Mitchell

Photo by Mario Mitchell

Some notes on maintenance: The original DV-3's and DV-3 (X)'s are now being retrofitted with four more hydrogen catalysts in the battery compartment for an additional safety margin. As with all rechargeable batteries, one could wait a period of 30 to 40 minutes after turning off the charger to allow the gasses produced to be vented. Battery, catalyst, and front lamp-bulb replacement is suggested every 200 charges at an approximate cost of $150. This service can be performed by an authorized TEKNA service dealer. The authorized shop will have parts, repair manual and most importantly, a small-volume test pump to determine if the unit has been resealed properly after service. Maintenance after each dive should include freshwater soaking (if

IMPORTANT NOTICE FOR TEKNA SCOOTER OWNERS

Tekna Corporation has instituted a retro-fit procedure for some of its early scooter models. There was apparently a serious problem with the catalyst mechanism which prevents the build-up of explosive gasses by the batteries. Scooter owners are encouraged to check with their local dealers to see if their models fall within the range of applicable serial numbers.

Paul Heinerth was recently involved in an above-ground explosion of a Tekna scooter, that is thought to have been the result of the faulty catalyst mechanism. The scooter was shattered into pieces and Paul received a mild concussion (but he's okay now). Steve Gerrard says that this is the third explosion of Tekna scooters that he's heard of.

* * * * * *

Congratulations are in order to STEVE HUDSON, of Lafayette, GA, and DIANE COUSINEAU, of Atlanta, GA, who had an "exchanging of golden carabiners" on August 3.

"MOTORING ANYONE?" (cont'd)

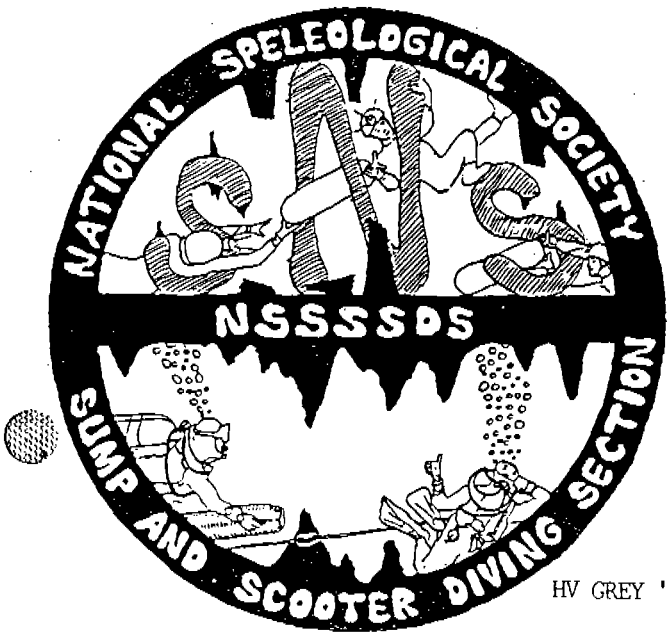
used in saltwater), and occasionally the user will [illegible] to remove the stator and hand-grip panels to clean out sand and accumulated debris. This insures smooth cable/pulley operation on the motor and light trigger/magnet assembly.

The logistics of the unit are favorable. In contrast to the larger, homemade and FARALLON models, the DV-3(X) can be carried by one diver to the site with relative ease. The low profile offers some advantages in certain systems. Typically, the unit can go where the diver can go, barring a few exceptions...however, great care must be used in low, silty areas. Swimming the unit is imperative under these circumstances.

Redundancy is best maintained in groups of two to four units, as the towing function is quite capable in spite of battery-level depletion. The authors routinely carry towing straps specifically designed for this purpose. Of course, towing another fully equipped cave diver [illegible]e from the outset of the dive greatly reduces the [illegible]ety margins. Although official air rules governing the use of scooters have not yet been endorsed by the Section, many extremely good and practical suggestions have been made by experienced users within the overhead environment. One approach suggests the classification of a particular system's flow into three grades: 1--Low, 2--Medium, 3--High; versus the planned penetration distances using the "third rule" to the "sixth rule." Further experimentation under actual conditions will warrant future comment within this publication.

So, you want to dive Orange Grove to Peacock via Waterhole tunnel in just under 50 minutes, surfacing with 2200 P.S.I.G.? How about an Indian single-stage 4500' into the "Wakulla Room" and back in 70 minutes? Maybe the "Henkle" at Devil's Ear in 35 minutes....consider the Diver Vehicle 3(X). These scenarios have been routinely performed and seem to be a prelude to what's to come. Safety should be of primary importance in the utilization of these and other diving technologies, and the Section will be in the forefront with safe diving guidelines.

(Authors' Note: Special thanks to Mario Mitchell for all photo credits and the TEKNA Corporation for its valuable assistance.)



HV GREY '85

RESCUE/RECOVERY TEAM members are reminded to advise the NCIC of any change in address or phone numbers. NCIC: (904) 633-4159

CDS APPLICATION FOR TAX-EXEMPT STATUS - reported by Joe Prosser, Secretary/Treasurer

Last April, Joe submitted to the State of Florida the forms necessary to obtain a State sales tax exemption. After three months, the State determined that the CDS did not meet the required criteria.

The primary advantage of the "non-profit" status is the tax write-off should an individual or corporation decide to donate money and/or land to the Section. This has not occurred in the past, and Joe thinks that, should it occur in the future, the donation can be sent to the NSS, which is a recognized non-profit corporation. An alternative method is the "not-for-profit" designation. This subtle change indicates to the State that we are not in business for the profit of our directors or any individual within the organization. This allows us to legitimately avoid paying State sales tax on items we purchase for resale. Just about everything we purchase is close enough to this definition to meet the criteria for "resale." But the other side of the coin is that we must collect tax on items sold in the State of Florida and report same on a regular basis to the State. We would utilize the same forms and methods for submittal as a profit-based corporation, which suggests that there is no difference between the CDS and K-Mart as far as the State is concerned.

Last December we took certain steps to present a more permanent look to our organization, including a permanent Post Office box in Branford. The Skiles' home in Branford was listed as a local "structure" in order to obtain the box, as well as Joe's address in Miami. (When another treasurer is elected it will be extremely easy to substitute his/her address for Joe's.) But it is now necessary for us to start playing down all other addresses associated with the CDS except the Branford POB. If we do not begin to address this we are going to expose ourselves to some nit-picking bureaucrat one day.

Joe says that as Chief Financial Officer of the CDS, which is a viable corporation, he can direct products and services to be shipped from anywhere he wants. Publications in Venice can still continue to handle shipments and order processing, and Training in Branford can still mail C-cards, etc. All that changes is that orders for all of these things must appear to an outsider to be originating through a single source (our primary Post Office box). Otherwise, we may be requested to produce records for each of these apparent "branch" offices. Therefore, we are now requesting that all monetary dealings with the Section (membership/subscriptions, training certifications, and publications) be handled through POB 950, Branford, FL 32008-0950. Information queries and more personal communications with the various program coordinators can still go directly to their personal mailing addresses. And newsletter submissions should absolutely go directly to the editor!

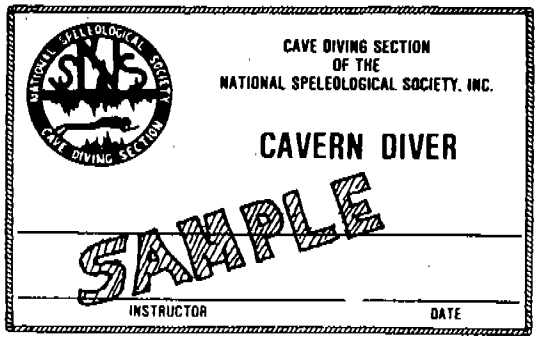
(Joe says as a final note, to put things in perspective: consider that since June 1, 1985 over $7000 has passed through our checking account.)

CDS PROJECT REPORTS

Sump-Diving Course - Program Coordinator Dale Purchase reports that he has sent letters out to ten people who are involved in and knowledgeable about sump diving. He said that he had the chance to talk with Dr. Noel Sloan (NCRC Central Region Coordinator, Huatla Expedition physician) at the NSS Convention and that Noel will be sending him material on equipment and techniques. Dale also hopes to obtain material from Dr. John Zumrick (NCRC Medical Officer, Huatla Expedition physician, NSS-CDS Cave Diving Instructor) on the sumps in Mexico. Dale plans to be in Florida in August and will get input from Wes Skiles.

Cavern Diving Manual - Copies of a partial draft of the cavern text being authored by John Zumrick were sent to the members of the Cavern Manual review committee (Dale Purchase, Wes Skiles, Joe Prosser, Mark Leonard). The reviewers are in the process of reading through the manuscript, and a few of the first criticisms and suggestions have been sent back to John. After the manual is complete and has been revised to the satisfaction of the training review committee, copies will be made available to key members of the NACD for additional review.

NSS Membership - the CDS won first place in the NSS membership recruitment drive. The Section brought 63 new members to the NSS during the past year. The Section was awarded a $100 gift certificate from cave-suppliers Bob & Bob and 150' length of sport rope from Pigeon Mountain Industries. Both gifts will go to the Rescue/Recovery Team's equipment caché. Thank you, Bob Liebman and Steve Hudson!



NEW CERTIFICATION CARD (report by Joe Prosser) - Effective July 13, 1985, the CDS began issuing new-format certification cards. With ever increasing quantities of students participating in NSS-CDS cavern and cave-diving classes, the backlog of unprocessed certification cards began to overshadow other activities of the Training Committee. A new format was sought to overcome this emense backlog. New C-cards (and student registration forms) are all now color coded for quick identification. Cavern Diver cards will be blue, Basic Cave Diver cards are green, and Cave Diver cards are yellow. Specialty cards, like Rescue and Recovery, are orange. Instructor cards are also included in this format change and are likewise color coded. If any past students wish to update to this new format, they should just send in their old cards, a self-addressed stamped envelope, and a check for $5.00 (payable to "NSS-CDS") to: NSS-CDS Training Chairman, POB 950, Branford, FL 32008-0950.

HOUSECLEANING AT LITTLE DISMAL - by Steve Gerrard

Discovered by the persistent and famed exploratio[n] of Kirby Sullivan and Bob Goodman of Tallahassee du[ring] 1973, the lower cave system of Little Dismal, located in south Leon County (Tallahassee) in the Apalachicola National Forest, has always been considered by veteran cave divers to be one of the "gems" of cave dives. Offering consistently clear blue water, white limestone walls, and spectacular beauty and "aura" with its series of five rooms, this dive has always been one of my favorites!!

My first time was during one cool November evening of 1975 with two good friends, Matt Levin and Mitch Potter. After several months of cave diving together we felt we were ready as a "team" to safely dive what I would call an "advanced" cave dive. Why? Simple! This system presents at the beginning the sight of a tight and mentally challenging restriction. Having heard the man "stories" from various individuals about this unique and beautiful cave dive, our appetites were whetted with curiosity!!

The excitement and adrenalin that flows through your body as you plan and execute your first dive in a new cave system, can be shared and relished by everyone involved with our sport as this was certainly no exception. The restriction begins in 40 feet of water on the northwest side of the sink, or approximately 35-45 feet right of what most people call the "upper" cave system, that actually dead-ends some 350 feet back in distance at a depth of about 55-60 feet. Right off the bat, you are staring from a slope of silt at an orifice that tells you one thing.....no way! With the [c]lear water begging you to approach, you notice a h[uge] limestone boulder that seems to butt against the arch sink wall, forming an entrance that just tolerates a diver with double 100's to enter--barely. Worming through like a mole, you immediately silt-out the tunnel. Now, if you are careful enough, the first diver of a team can usually minimize silting to the point of viewing and appreciating the entire passage-way, but unfortunately for those behind.....it is plain silt-out and feel your way!

Once through the beginning entrance you have then passed the "critical" point or worst part of this restriction, and now only have to deal with slowly pulling yourself along through organic silt and bumping against the sink wall on your left and the huge limestone rock on your right. Approximately 12-15 feet past the critical point you seem to go through another tight orifice, but it's really not that bad. Here you enter a wide plane area of 25-30 feet in width and ranging from 12" in height on the left to approximately 30-36" of height gradually to the right. Again, you swim down a very mild slope with very soft organic silt, but with good technique, silting should be kept to a minimum. Swimming or propelling another 40-50 feet in distance, you come upon a relatively large slab of limestone rock and then....."pow"... ...you realize you are about to emerge or "pop out" into something spectacular and beautiful--a huge room! At the limestone slab a spike has been driven into the rock, and a permanent line begins following the ri[ght] wall of this very large room that eventually bends and actually seems to be shaped like a peanut. The permanent line eventually dead-ends some 400 feet later.

(Cont'd on page 12)

CONTROVERSIAL ISSUES SURVEY Danny Brass

In a recent issue of the NSS News, there was a short book review of Richard Mitchell, jr.'s Mountain Experience - The Psychology and Sociology of Adventure. For a mere ten dollars, the paperback edition was not that far beyond my means.

The author presented some rather interesting perspectives concerning the motivations of mountaineers. Centralmost among his ideas was the notion that climbers are generally individuals with some sort of training in a scientific/engineering discipline, who have become disenchanted with the lack of creativity that they had expected to find in their work. He goes on to explain the driving role that this has in fostering an interest in mountaineering. I find it interesting to note that almost all of the climbers of my acquaintance are, indeed, either engineers, computer scientists, dentists, physicians, or veterinarians. Of course, I suppose it is entirely possible that this merely reflects my own questionable taste in company.

There are a great many similarities between climbing and caving. It is, therefore, not uncommon to find a large number of persons who participate in both activities. In fact, the trilogy of caving, climbing, and scuba diving is also not as uncommon as one might believe. I wonder how many parallels might be drawn between the various aspects of Mr. Mitchell's climber and the caver/diver.

Thus it is that I find myself, once again, undaunted in my attempts to understand the pulse of the cave-diving community. It is, therefore, time to pester you all once more. Let me reiterate that my principle concern is to educate myself on the spectrum of cave-diver attitudes, not to make value judgements concerning them. I am resonably certain that many of my fellow cave divers are equally curious about the impetus that underlies certain activities. Since whatever information I gather will be returned to the cave-diving community, these others can be educated as well.

I am convinced that the poor response to my earlier articles was due to the difficulty in responding to admittedly vague topics. So, I have considerably reduced the pain and misery involved by formulating a sort of questionnaire. I say "sort of" because, as you will see, the questions are of an essay nature. This is the only type of question that allows for a thought-provoking and meaningful answer. I am hopeful that I will not be forced to resort to multiple choice questions and fill in the blanks. I will most certainly throw in the towel at true/false.

Under more favorable conditions, I would provide each of you with a self-addressed, stamped envelope for your convenience. But since this would almost totally wipe out my savings account, I'm afraid you're on your own as far as that's concerned.

Be as brief or expansive in your replies as your time and interest allow. Feel free to respond anonymously, if you prefer. If the response is favorable, I will continue to provide questions on varying topics for future issues of both Underwater Speleology and the NACD newsletter. If there are any suggestions for other topics, I'd appreciate hearing your ideas.

EDUCATION

There seems to be an interesting schism in the teaching process, which both disturbs and interests me greatly. On the one hand are those instructors who will withold information from students in order to insure that they do not exceed their safety limitations at an early stage in their cave-diving careers. However, it is obvious that this concept of teaching may result in multiple gaps in student training. The NSS-CDS and NACD are essentially the same with regard to the finished product that their courses produce, but since there are no truly advanced cave-diving courses (the "advanced" course offered by the NSS-CDS is, in essence, identical to the basic course offered by the NACD), the student with educational holes is left to seek out his information "on the streets." It is, in my opinion, incorrect to think that by not teaching a student about advanced topics, such as stage diving, he will remain blissfully ignorant of them and, therefore, never be exposed to their dangers. Quite the contrary; the novice diver may learn his stage-diving technique from one who is neither as competent nor as concerned as an experienced instructor.

It is, of course, immediately obvious that all topics relevant to cave diving cannot be discussed in a single cave-diving course. The education process will always be an ongoing one. The fact that some instructors will refuse to discuss certain aspects of cave diving with their students, however, disturbs me and leads me to wonder if, by limiting the dissemination of information, they are not, in fact, inherently building a greater hidden danger into their training programs.

On the other hand, it is equally apparent that other instructors are more than willing to provide students with a wealth of information regarding advanced cave-diving techniques. Increased knowledge means increased awareness and, I believe, a greater potential for safety. When these students make their first tentative stirrings toward stage diving, will they not have a fund of knowledge and understanding to fall back on? Will they not have a ready foundation upon which to progress and a basic concept upon which to design their own systems and procedures? On the surface, it would appear that a great potential for safety exists in such a philosophy. But is this potential realized in actual practice? In reality, are these instructors not walking a double-edged sword with regard to their students' safety?

Once the understanding is there, is it realistic to assume that a novice cave diver will avoid advanced diving until it is well within his capability? Or, is it more likely that the added knowledge will fuel an already eager desire to begin exploring, sending a student beyond his current level of training and competence? As wilderness travelers, we are all familiar with the well-worn cliche found almost universally in wilderness-technique books--the one that stresses that "this book is not to be substituted for competent instruction." By detailing advanced techniques to inquiring students, does an enthusiastic instructor really provide any substantive information that a student could not gleen from a book (assuming such a book existed, which it does not)? It is my opinion that a lecture, however extensive or inspiring, is no different from the written word regarding student information gathering. Yet, this is not to say that there is no place for instructors. The instructor can provide two important components not found in books--a source of information to answer questions and clarify misunderstandings and, more significantly, the ability to provide a safe framework for practical training. Without concomitant practical training in advanced cave diving, I cannot help but wonder if this teaching philosophy also has built-in pitfalls.

So, we have the makings of what seems to me to be a rather interesting dilemma; one which has, no doubt, been discussed at great length among the upper hierarchies of both the NSS-CDS and the NACD, where major organization policy decisions are made. It is, perhaps, often overlooked that similar discussions take place at all levels of cave-diving activity from students and novices up through experienced and expert participants. Oftentimes, however, there is not a freely filterable dialogue and exchange of information through these different levels, leaving many of us in the dark about various aspects of some of these seemingly sensitive political issues.

This constitutes the extent of my understanding of the problem. I would like to resolve it (at least in my own mind) if a resolution, in fact, exists. In order to do that, however, I must understand the rationale of the many cave-diving instructors who fall into one or the other of these categories. By disseminating such information more freely, wouldn't we all be just a little more tolerant of other points of view?

QUESTIONS - Please indicate whether your thoughts are being expressed as a cave-diving instructor, certified cave diver, or student cave diver.

1) As an instructor, how do you deal with such questions if brought up by a student in class? Out of class? Do you tend to eagerly answer such questions, answer in limited and guarded phrases, or do your best to discourage further

SURVEY - Danny Brass (con't)

discussion? Why?

2) How often are such questions asked in classes?

3) Do you encourage student questions and discussions on advanced diving topics? Why or why not?

4) If your attitudes, in this regard, vary depending upon the nature of the students, what criteria do you use to motivate you in one direction or another?

5) Would you broach a discussion of a topic such as stage diving to your students? Why?

6) Do you feel that your teaching philosophy varies from your personal diving philosophy? If so, is that because of legal considerations or is it based upon your sense of morality and ethics?

7) Ultimately, which of these two teaching philosophies do you think is safest in the long run? Why? Is there another way to deal with this issue besides the two alternatives suggested above?

8) Over the last decade, a major evolution in the open-water scuba industry has seen the literal explosion of dozens of advanced and specialized training programs. As a specialized form of non-commericial diving, cave diving stands alone among the diving specialties in its wide departure from conventional equipment, technique, and ethics. Perhaps it has grown sufficiently in scope to warrant the organized teaching of subspecialties (stage diving, sump diving, etc.) or the development of advanced training programs. Clearly, a similar train of thought must have wracked the open-water agencies, before they settled on what is generally regarded as an elegant solution to the problem. Do you believe that such advanced courses in cave diving should be offered? If yes, what do you feel should be the experience requirements for student enrollment? for instructors? What topics should be discussed and to what extent? What type of practical water work should be involved?

9) Has such discussion been initiated by either the NSS-CDS or the NACD? With what results?

10) If you do not believe that such courses should be offered, what are your reasons? How do you think this issue should be handled? Or, do you not perceive this to be a problem of realistic concern?

11) Do you think it is safe to teach cavern-diving courses, or do you believe that this provides a limited education, while motivating students to think they have the requisite skills to go poking around just one more corner?

12) As a student cave diver, what did you feel was the predominant attitude taken by your instructor with regard to this issue? Was your instructor primarily affiliated with the NSS-CDS or the NACD?

13) Do you believe there are fundamental differences in thought along these lines between the NSS-CDS and the NACD? On what do you base your opinions?

SOLO DIVING

In the strictest sense of the term, we have all probably gone solo diving quite often during the course of our diving careers. Thus, we've all burned another 5 minutes of air out of our tanks after a buddy has surfaced, played about alone for some time while waiting for a buddy to enter the water, fidgeted about while testing a new piece of gear, or gone for a quick exploratory look to see if a new site is worth diving. For the purposes of this account, I am not defining these types of activities as solo diving. In the context of these questions, solo diving refers to a full tank (or greater) underwater excursion in a wild (non-pool) environment--for recreational, exploratory, scientific, or professional reasons.

Throughout our early dive training, we have been instilled with the concept of team diving. The buddy system has been thoroughly etched into our consciousnesses by a host of diver organizations, dive instructors, and diving colleagues. To some, the belief of safety in a buddy system has taken on the proportions of divine edict, solo diving being anathema to any rational concept of safe travel underwater. To others, it represents little more than a nuisance, a not so subtle hindrance of individual rights to free expression in wilderness enjoyment.

It would seem that two intertwined questions lie at the root of this diversity of thought. Is the buddy system, as currently taught in most training programs and practiced by most scuba divers, a safe system? Does advanced training, increased dive experience, and redundancy of equipment insure an adequate enough safety margin to dispense with d partners?

A great deal of rhetoric has been expended in denouncement of the buddy system, labeling it as an impractical system for safety because diver training does not really teach divers how to be safe and efficient buddies, capable of responding in a positive fashion to a variety of underwater emergencies. Perhaps, the many multiple drownings attest to the truth of these statements. And yet, the training agencies unanimously affirm the inherent safety in having a dive partner. Many dive instructors make solo dives, but still advocate the buddy system for their students. Are we seeing in these actions a blatant demonstration of the fact that solo divers recognize the unacceptable and unsafe nature of their dive activity? Or, are we seeing an instructor enslaved by the legal and ethical constraints of his profession?

QUESTIONS

1) Have you ever gone solo diving in open water, caverns, or caves?

2) If not, are you inclined to think that perhaps you might solo dive some day (not including emergency situations) or probably never will? Why?

3) If you do solo dive, do you do so on a regular, occasional, or rare basis? What is the average and maximum extents of your solo dives (how much is diving and how much is decompression time?)?

4) Do you perceive that there is any inherent difference in solo diving in open water, caverns, or caves in regard to safety? Or, do you believe that solo diving is equally safe or unsafe regardless of the medium?

5) Have your views towards solo diving changed in recent years? If they have, please explain?

6) Do you believe the buddy system, as practiced by most open-water, cavern, and cave divers, is optimally safe? I not, what deficiencies do you think exist and how could the be remedied by different training at various levels?

7) As a solo diver, do you prefer solo diving to diving with a buddy? Is this dependent upon circumstances, such as the nature of the dive, the attitudes of potential dive partners relative to yours, the experience and skill of potential dive partners relative to your own?

8) Have you ever experienced an underwater emergency when you felt you would have preferred to have a buddy present, but didn't, or wished you were alone, but weren't?

9) Do you believe that there are a sufficient number of instances wherein a diver of your own peer group increases the danger involved in completion of a particular dive to justify your diving alone?

10) Why do you solo dive? Do you feel less restricted in the type of diving that you can do or in the time frame within which you can get things accomplished? Do you enjoy or even prefer the solitude? Do you appreciate the feeling that you are not responsible, to some degree, for someone else or his not being responsible for you? Do you feel safer? Other reasons?

11) As a solo diver, do you believe that the risks attendant with any given dive are greater, less, or equal when diving solo as opposed to diving with a peer?

12) As a solo diver, do you believe that the complexities involved (depth, jumps, penetration, staging, etc.) are greater, less, or equal when you solo dive versus diving with your peers?

13) Do you believe that cave-diver training is a substitute for a buddy? Please explain.

14) Do you believe that years of experience at cave diving is a substitute for a buddy? Please explain.

15) Do you believe that a dual-valve manifold and redundant equipment is a substitute for a buddy? Please expla

16) Do you believe that a proper mental outlook, combi with all of the above considerations, is a substitute for a buddy? If so, please describe what that outlook is.

17) Do you believe that no amount of training, equipment, or experience warrents solo diving? If so, do you think that solo divers truly think they are safe or demonstrate an

SURVEY - Danny Brass (con't)

unmasked inability to recognize what safe diving really means?

18) As a solo diver, are you in agreement with the general ...id in diver education which stresses team diving? Why or why not?

19) As a non-solo diver, are you pro-choice or do you believe that the practice of solo diving is irresponsible and does a disservice to the diving community? Why?

20) As a solo diver, how would you justify your activities to those divers who think it a dangerous practice? Or, do you think solo diving does not have to be justified to these people?

21) As a solo diver and an instructor, do you advocate solo diving to your students? Is what you teach dependent upon the particular class?

22) Does your teaching philosophy vary from your personal diving philosophy? If so, is that because of legal, ethical, or other considerations?

23) Have you ever met previous students to whom you had advocated team diving while you yourself were solo diving? How did you justify your position?

24) Do you believe that there are fundamental differences in thought along these lines between the NSS-CDS and the NACD? On what do you base your opinion?

LIMITATIONS TO WILDERNESS EXPLORATION

Although our concepts of safety limits are a reflection of our foundation of experience, the degree to which our recognition of diving limitations acts as a safety shell is, of course, dependent upon our actively remaining within our perceived framework of safe operation. Our perceptions of safety attain, in part, from our own constructs and, in part, from an ever-varying and ever-present peer pressure, the nature of which is understandably difficult to assess.

QUESTIONS

1) In the realm of rock climbing, a rather refined sense of ethics, subscribed to by most of the climbing community, ...tates the mode wherein many routes may be climbed. Thus, ...e a route goes free (using only the rock face for handholds and footholds, and not relying on mechanical contrivances to support a climber's weight), it is considered bad taste to climb it with aid (use of mechanical devices to support a climber's weight). A similar concern has been voiced by some cave divers with regard to the use of DPV's to further the possible extent of exploration. Do you believe that the assistance of such mechanical devices demeans the progress gained by free-swimming divers and wrongly renders previously inaccessible places easy for cave divers of considerably less skill and experience to reach?

2) Do you believe the use of DPV's should be restricted to exploration of portions of cave systems that cannot be reached by conventionally used multitank stage diving techniques?

3) Do you believe the use of DPV's increases the prospects of safety in extensive cave systems and is, itself, a perfectly ethical means of cave exploration, falling in the same category as advances in life support or lighting systems?

4) Is stage diving an extreme activity that should be reserved for highly experienced cave divers breaking into unexplored regions or should it serve as a means by which all cave divers can safely (?) penetrate beyond the capacities of their current air supplies?

5) As a diver who routinely stage dives, would you draw a line beyond which a miltitank (stage) dive begins to press a diver's luck?

6) Have you ever made a long and arduous multitank stage dive? Did you feel a sense of accomplishment and pride in its safe completion? What would you think of an expedition to the same site being done in considerably less time, with considerably less effort, by divers of markedly inferior ...ll and experience using DPV's?

7) Do you agree with the standard 130-foot depth generally considered by the sport-diving community to be the safe limit for scuba diving? Do you consider cave diving and cave-diver training to be sufficiently more advanced than open-water diving so as to justify deeper diving amongst cave divers?

8) Do you adhere to this depth limit? Why?

9) As an instructor, do you advocate adherence to this limit by your students? Does your teaching philosophy, in this regard, differ from your personal diving philosophy? Why?

10) I am aware of numerous instances when cave-diving instructors have refused to take their students beyond a depth of 130 feet in cave-diving courses, but promptly did so once their students graduated. I am also aware of instances when instructors took their classes on dives to depths in excess of 130 feet, but told their students that it was not a class dive and they were not to log it. In fact, such dives "never happened." Clearly, a large percentage of cave-diving instructors and certified cave divers exceed the 130-foot depth limit. It is equally clear that there is great diversity in student skills and capabilities. As an instructor who has never participated in such actions, what comments do you care to make? As an instructor who recognizes these descriptions as being of a familiar nature, what comments do you care to make?

11) Although the 130-foot mark is held in esteem by training organizations, it is immediately apparent to anyone who has been diving for more than a few months that it is little more than a paper appraisal of safe limits, although certainly a reasonable place to start. A vast number of experienced cave divers routinely dive to depths well in excess of 200 feet, long distances from surface light. Do you believe such extreme diving is responsible? Why? Do you believe use of the extreme exposure tables, which is often necessitated by deep dives, represents the actions of responsible cave divers? Please explain.

12) Should the cave-diving community promote reasonable safety guidelines for cave divers? Should these guidelines mirror those which exist for open-water divers? Is there any such thing as a reasonable set of safety guidelines? Does this sort of mentality trespass on our personal freedoms and rights to experience the wilderness in our own fashion?

13) Do you believe there are fundamental differences in thought along these lines between the NSS-CDS and the NACD? On what do you base your opinion?

For statistical purposes, the following information would be helpful:

a) Through what open-water agency or agencies did you receive your open-water training? What open-water certifications do you possess? How long have you been diving for? How many open-water dives have you made?

b) Through what agency did you receive your cave-diving training? How long have you been cave diving for? How many cave dives have you made?

c) Are you an instructor? Open-water? Cavern? Cave? With what organizations? How long have you been an instructor for?

d) Do you consider yourself to be primarily associated with the NSS-CDS, the NACD, or both?

Please address any correspondence to:

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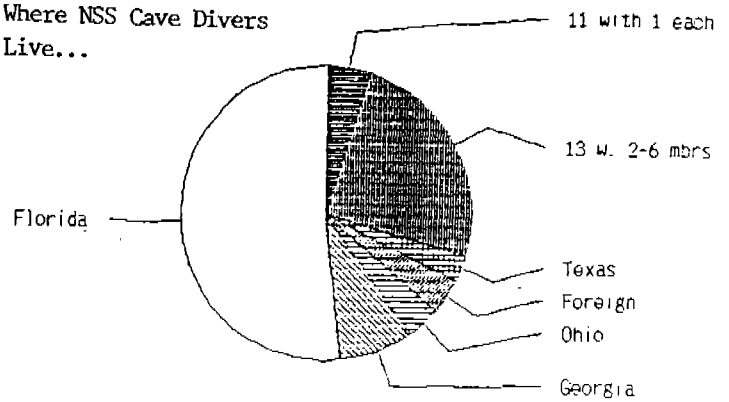
Where NSS Cave Divers Live...



LITTLE DISMAL - Steve Gerrard (cont'd)

Now to find the "real" permanent line, you swim beyond the limestone slab, and go down hill of this first room. At approximately 75-80 feet in depth you should find a rock about 3-4 feet in diameter, and here the permanent line begins, leading you and your competent buddy to the series of beautiful rooms!

But.....enough of describing this exciting dive, as only by experiencing it yourself can you really appreciate the unique beauty of this exciting cave system. The point of this article is the restriction. During a recent dive with my buddy, Mike Posky of Tallahassee, we were unable to squeeze through the opening--for the first time in nine years. Enough silt had settled through the years from the sinkhole to gradually fill in the restriction to the point that no matter how hard you tried, it was too difficult to make it through. And if we had been able to barely squeeze through....? It really makes you stop and think of what actually should be the most important aspect of the dive. THE EXIT! A safe exit.

One item that my buddies and I always consider is "exiting" a cave system under an emergency situation! This particular cave dive always stresses the imagination. If something were to go wrong, such as an air loss or gear malfunction, creating the need for the emergency procedure of sharing air out of this particular cave, how would my buddy and I handle it?? Use the Rimbach method?? How about face to face with the lead diver backing out? Well, the answer is simple....just use whatever is effective! But with a tight restriction, and time and air supply a critical factor, can this dive be performed under an emergency situation in a successful and safe manner?

Well, I am one who does not like to find out these things the hard way. So, we went back several weeks later with the only goal in mind being to clean out and widen the restriction so that swimming through with all your gear would be easier and safer. This was no easy task! First, we used a homemade dredge system made of PVC hose with an attachment for an air hose. After one dive of futile use it was abandoned, as we did not have enough length of hose to create the suction necessary to pull the silt out of the passageway. So we went back to the "basic" old-fashioned method of a gardon hoe! That definitely worked, as we were able to dig a trench at the critical point of the restriction and make it low enough so that cave divers with double 100's can scoot through without having to squeeze by like a worm! Now, mind you, we did not eliminate the restriction. All we did was to try to make it safer for the EXIT. And upon making another dive a week later, we both agreed we'd succeeded!

Little Dismal Sink is really a treat for the experienced cave diver, and all those who have dived it.....will AGREE. (Oh, another aspect one should consider is that during the warmer months of the year the sink basin is like Pea Soup, making the location of the entrance difficult to find; but during the colder months (November through early March) the basin is crystal clear.)

As a compliment, I tip my mask to both Goodman and Sullivan for their dedication and effort in finding this beautiful cave dive and other systems in the Tallahassee area. Thank you, as ALL safe and experienced cave divers will certainly enjoy these caves for years to come! SAFE DIVING.

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