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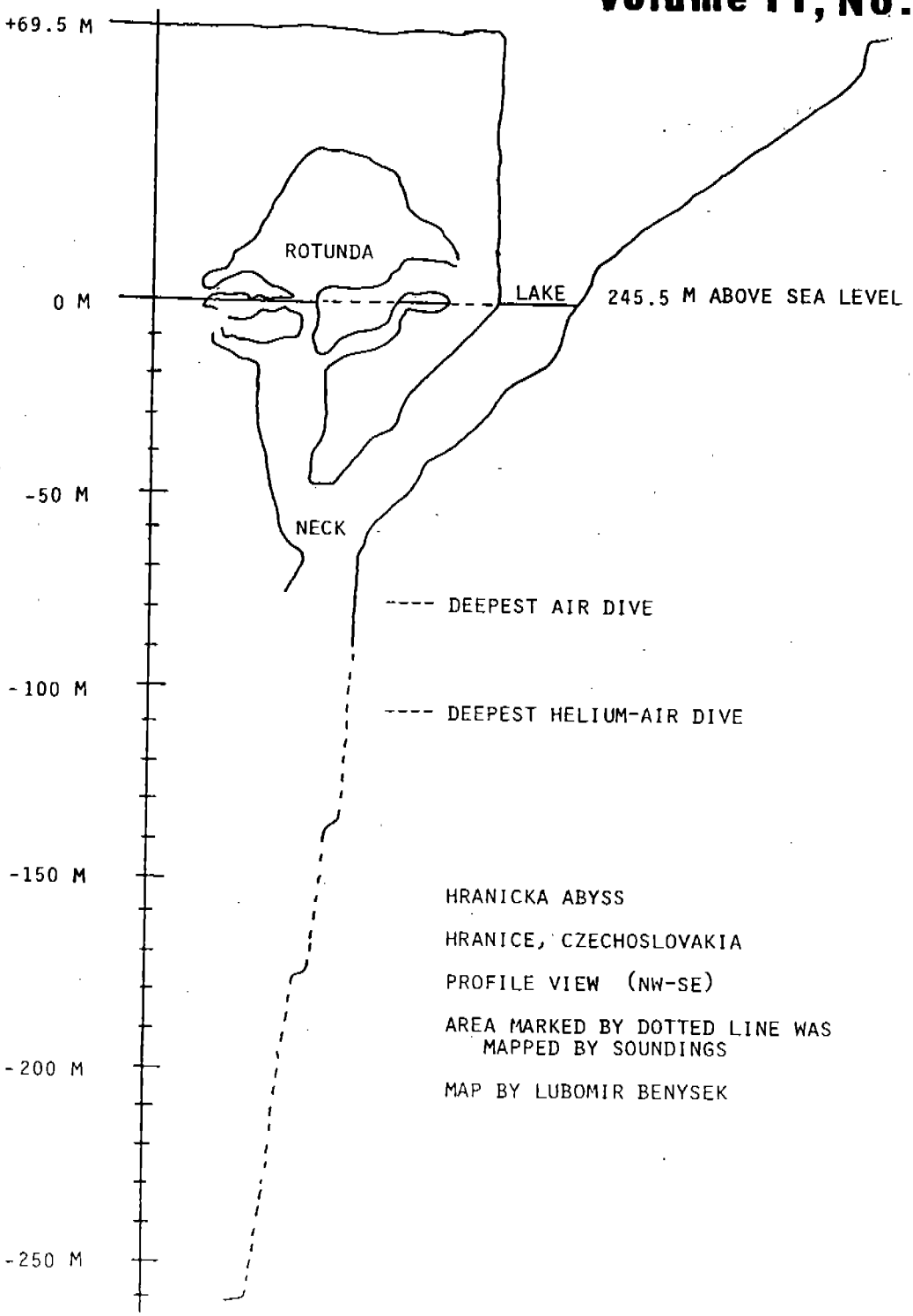

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* * * NEWSLETTER SUBMISSIONS * * *

All submissions to the newsletter are gratefully accepted. We will mail you a notice that your article has been received and the estimated time of publication only if requested. Since all articles must be re-typed anyway, all we want is a readable copy. It is not necessary at all that the article be typed. Further, we need short notes to fill in spaces at the end of articles as well as longer works to more thoroughly explore certain subjects.

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NI-CAD BATTERY CHARGER

by FORREST WILSON

Ni-cad batteries are most fully charged when the charging rate is low and constant. Most manufacturers seem to agree upon C/10 for 16hrs. This means you should divide the rated capacity in amp-hours by ten, and charge at that rate for 16 hours. This would be 6/10 amp for 6AH, 12 cell systems and 1.2 amp for 12AH, 6 cell systems.

There is a common mis-conception about gassing (bubbling) while charging ni-cads. Excessive gassing will dry out a battery quickly, but cells are NOT fully charged when gassing first starts. The rule of thumb is to let them charge for 150% of the time it takes them to start gassing.

It has been the experience of the author that dive lights do best when run on the "dry" side. Don't overfill the cells. dd water only when cells are fully charged and then only to the line at the top of the plates on most cells. (ED. NOTE: It has also been noticed that the once recommended procedure of washing out cells with distilled water can significantly reduce the long-term life of the individual cell. - GWM)

The accompanying schematic and parts list are for a constant current Ni-cad charger. It will charge at any rate up to 1.5 amps, selectable by a resistor.

INSTRUCTIONS

1. Get all the parts together first and lay them out in the box to best utilize space.

2. Mount transformer near one end of the box. Identify the primary (115 VAC) and secondary leads. Orient the primary leads nearest the end of the box. You will need a drill and screws to mount it. Drill a hole into the box, near, but not into the transformer, for the power cord.

3. Mount a terminal strip near the secondary side of the transformer. Leave room to put the capacitor and diode bridge on the strip.

4. Mount the regulator on the end of the box opposite the transformer. The metal part of the regulator MUST NOT touch the box due to the shorting hazard if it is installed improperly.

Use the mounting kit to isolate the regulator. This requires drilling a hole just large enough for one of the nylon bushings in the end of the box. a) Put the bushing in the hole with the large part outside. Put a screw through the bushing with the head outside the box.
b) Put a thin coat of silicon grease on both sides of one of the round mica washers. Place the washer on the screw inside the box.
c) Next install the regulator with the flat side against the box and put on the nut. It wouldn't hurt to check for a short with an ohmeter at this point. There should be no electrical connection between the box and the regulator.
d) Gently bend the legs of the regulator away from the box, and slightly apart. Be careful as they will break easily.

5. At this point you must decide upon charging current. A single 1 ohm resistor (as shown) is perfect for six cell, 12 AH lights. For twelve cell, 6 AH lights use two 1 ohm resistors in series. You could use a switch to select between one or two resistors.

6. Connect the parts according to the schematic. Be sure not to use the post of the terminal strip that is used to attach it to the box. Put the power cord on last. You may have to loosen

the mounting screws to reach the solder lugs. NOTE: the center lug on the transformers secondary side is not used.

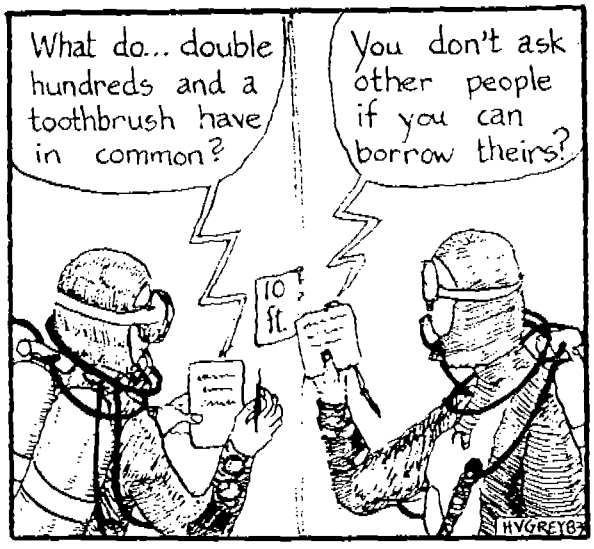
There are several ways to customize your charger if you know anything about electricity. You can put a 2 amp meter in series with the positive lead. The + side of the meter should go towards the regulator. A pilot light could be placed in parallel with the capacitor. The pilot light should be 24 volts. A fuse and switch in series with the power cord would be nice too. (ED NOTE: If a switch is not included in your design, you should NEVER connect or disconnect your leads from the battery pack with the charger plugged in! The resulting spark could cause an explosion of the gasses that have accumulated as a result of the charging process. THAT will definitely get your attention!! - GWM) If you use a six volt light, (or have a 24 volt battery in your vehicle) you can put a cigarette lighter plug in parallel with the + and - of the diode bridge and use the charger in a car or van. Be very careful with this one as the plug will be hot when used on 115 volts! (ED. NOTE: Marine supply stores have plugs with a rubber cover that might be ideal for this plug fitting. They are called bulkhead fittings and are usually used for searchlight connectors on the cabin top or dashboard of a boat - GWM)

After you have put all of the above on the charger, a burglar alarm might not be a bad idea.....Have fun!

(ED. NOTE: I for one really thank Forrest for this timely and very well written article. We all have a need for this type of HOW-TO-DO-IT information. Anyone else out there in Hodag land that has ideas of this type is remiss for not having all ready sent them in! I hope your tanks get 10 pounds heavier! - GWM)

PARTS LIST FOR NI-CAD CHARGER

PART NAME	RADIO SHACK CAT. #	PRICE
Transformer	273-1512	$6.29
Diode Bridge	276-1146	1.39
or	276-1171	1.59
Capacitor (47mf at 35v)	272-1015	.69
or(100mf at 35v)	272-1016	.79
Regulator (LM-317)	276-1778	2.79
Resistor (1 ohm 2 watt)	271-131	2 for .89
Box	270-252	3.79
or	270-253	4.79
or	270-273	6.99
or	270-274	7.99
Power cord	278-1255	.79
Mounting kit	276-1373	.49
Terminal Strip	274-688	.89
Alligator clips	270-34	4 for 1.79
Wire 16 or 18ga.	278-1292	55 ft. 2.19
	Total less than.....	$25.00



NEW DIVING RULES FOR MANATEE SPRINGS STATE PARK

1. ALL DIVERS must register at the entrance station prior to any diving.

2. Open Water scuba divers are prohibited from using lights or entering the cave or cavern system.

3. Scuba classes are restricted to open water and prohibited from using lights. Scuba classes must have a certified instructor with them at all times.

4. Cavern divers are prohibited from entering the cave system and MUST present their certification. Failure to present certification will prohibit the diver from entering the cavern system.

5. Cave divers must present their certification. Failure to present certification will prohibit the diver from entering the cave or cavern system.

6. All diving is prohibited after sundown.

7. The removal of artifacts, plants, fossils, and minerals is strictly prohibited.

8. No diving in the Spring Run.

9. Do not wash Diving Gear in Restrooms.

10. Failure to comply with the above regulations is subject to the penalties outlined under Chapter 258 of the Florida Statutes and 16d-2 of the Florida Administrative Code.

"I am very pleased to see the florida Dept. of Natural Resources continue to take positive steps toward controlling the Open Water Divers in Cave Diving environments. This is certainly a far better situation for all divers than to lose the diving privilege entirely. After all, if the open water diver wishes to view the cavern, they should take a qualified course from the NSS/CDS or NACD to do so."

Steve Ormeroid, CDS Chairman

"It is my very strong desire to see the leadership example of Capt. Perras, Superintendant of Manatee Springs State Park, followed up by the Superintendants of Blue Springs State Park in Orange City and Ichetucknee Springs State Park in High Springs as well. This no light rule is the greatest thing to happen to the cave drowning problem ever. We fully support Capt. Perras and his staff and ask that all responsible Cave and Cavern Divers assist them in any possible way to implement these rules."

Wayne Marshall, Editor

A LETTER FROM THE CHAIRMAN

Steve Ormeroid

The underwater world has been called the last great frontier. There can be no doubt the subterranean aquifers are part of this claim. Man's exploration u/w has always been hampered by his own physical limitations and the current technology of equipment. The desire to see and know more about our world has placed us in a struggle to push these barriers to their limits.

If we take a moment and examine the brief history of cave diving, exploration is our foundation. It is a small group indeed who truly have the the call to see the unknown; press on where others have quit or been halted by the barriers before them. As in many areas of exploration, cave diving has a small group who have strong feelings about the methods and techniques used in these pushes into the unknown.

The cave diving community and its efforts have certainly grown, struggled, organized, and often been misunderstood in our endeavors. All the while, we cave divers have accomplished many goals. Our explorations, surveys, collections, and photographs have become valuable tools conservation oriented agencies. Many highly specialized diving techniques and equipment modifications have been accepted by open water divers, helping us to make their portion of our sport safer.

The NSS/CDS has grown to become the largest cave diving organization in the world. We should not forget however, that the Section is only a part of the larger whole of the N.S.S. and that larger group of pioneers and explorers. The accomplishments of many of our members are shining examples of dedication to exploration and conservation. The NSS/CDS Training Program has been extremely beneficial in educating the sport diver not only in how to dive in caves, but also why not to dive in caves. It is this unselfish commitment toward man and nature that make most cave divers unique in their commitment.

I am very proud to be a part of an organization that has so many active and concerned members. The adverse reactions and bad press that cave diving in general has received over the years could certainly influence many people to not even attempt our goals.

It is for all these reasons that one of my major goals as Chairman of the CDS is to work toward reconciling any practical or philosophical differences with our sister organization, the National Association for Cave Diving (NACD). As a whole, cave divers are too small a group in this world of turmoil to have conflicts amongst ourselves. Terry Leithauser, Pres. of NACD, and Steve Gerrard, V.P., have been very willing to work with me in this effort.

However, I feel I must take a moment to address a recent editorial in the NACD News. This editorial, in my opinion, was the absolute unprofessional use of an organization's newsletter to mount a personal attack on another cave diver. The article even stooped so low as to attempt to bias the vote of CDS members in our annual election! If there are individuals who wish to continue with this sort of journalism, I urge the NACD not to participate by its publication. If an individual persists in this type of counter-productive activity, I urge all cave divers to try and steer them toward more positive actions.

One of the important lessons that I learned in a Cave Diving course was not to let ego (yours or your buddy's) stand in the way of making a rational decision. With that thought in mind, I can say that my goals and commitments for the CDS will remain the same. That commitment still includes a very strong desire to improve, with the help of NACD's leaders, the atmosphere of full co-operation and acceptance between the two agencies. I would also like to see improvement in the acceptance of our various personalities and activities.

As a final note, I will comment on the article published in Tropic Magazine concerning a dive made at Devil's Eye by Wes Skiles and others. I feel it very important to consider a few facts and put everything in proper perspective. First, the article was written by Steve Lucas (who is a diving Journalist by profession) and it may have been editorialized by the newspaper after he had submitted his version. Second, the article was written for the 99.99% of the world that are not cave divers and probably would not understand the finer points, anyway. Third, the article DID

project a very positive image for cave diving, cave diving research, and exploration to the general public. Next time your favorite spring is closed because of the sensationalism in cave diving drowning types of articles, just remember who wrote the positive articles.

I am looking forward to working with the CDS as Chairman again this year along with the Board of Directors and Wes Skiles as our Training Director. I urge any cave or cavern diver to write me with comments or suggestions.

SAFE CAVING -- STEVE

THE REAL CULPRITS

Wes Skiles, Training Chairman

The sport of cave diving faces many challenges today and in the future. Probably the largest of these challenges falls in the area of our educational responsibility and commitment to improving cave diving safety. Within this realm we must closely study the problems that have involved both the trained cave diver and the untrained cave visitor.

The CDS has classified these problems within a set of causes as a result of extensive accident analysis. Surprisingly, there are only four key factors responsible for a loss of life in cave diving. In many cases, a combination of the four had been violated but never any factors outside these key four that govern accident analysis.

Where does this information lead us? Well, I believe there are several are several areas we should focus our attention to. Foremost among these is our posture as relates to the open water diving public. Unfortunately, all too many times, we the trained cave divers have had the oppurtunity to talk with the uneducated diver only to then miss the chance to present the real facts about the problems associated with cave diving. The "i'm an expert and you need to do what I tell you." approach used by many cave divers is patently unsuccessful at winning friends and influencing people to pay attention to our safety message.

As a way of better presenting our message so that it will be better received, let's examine the four rules established by violations. I will head these up by our most important statement of all.

1) BE TRAINED IN CAVE DIVING

2) ALWAYS RUN A CONTINUOUS LINE TO OPEN WATER

3) CONSERVE 2/3 OF YOUR AIR SUPPLY TO EXIT THE CAVE

4) AVOID DEEP DIVING BELOW 130 FEET

5) USE THREE LIGHTS APIECE

The next time you have the oppurtunity to speak with an uneducated diver about cave diving, try sticking with the above format. It follows the approach used in our diver warning signs installed in many popular springs. This approach can help create uniformity in our message about the most important facts about cave diving without alienating divers and causing ill will toward cave diver training in general.

The next focus falls on the "educated" cave diver. I choose the word educated carefully. Although the NSS/CDS has benn fortunate enough to not have had a diving death occur in its membership ranks, the cave diver community has suffered the tragedy of losing some of our friends. These divers had received some form of training or had at least been initiated into cave diving by a tutoring buddy.

Once again, it is interesting to note that among the rules that could have been broken, the only ones that resulted in diving deaths were the same four as for inexperienced open water divers. We can surmise from this that the energies of the cave diving community need to be concentrated on the refinement of our knowledge and techniques in these four critical areas.

It makes little sense to waste energy and emotion criticizing any individuals specific diving approach if;

1) They have received a nationally recognized form of Cave Diver training.

2) They are properly equipped

3) They are following the rules which are dictated by accident analysis.

4) Their actions do not endanger others not at the same skill level.

In order to help already educated cavern and cave divers better understand and refine their knowledge the NSS/CDS Training Committee will be writing a regular column in UNDERWATER SPELEOLOGY on safety and common etiquette shared among the members of the cave diving community. For now, remember ACCIDENT ANALYSIS identifies the real culprits of past accidents in cave diving. SAFE CAVING

EXPLORERS and VILLIANS

By Wayne Marshall

This is the 2nd in a series of articles on attitudes and practices within our Cave Diving Community. - GWM

It has been my lot in life to have spent a lot of time in the counselling and training of hard core juvenile delinquent boys and girls. This experience represents over 2000 youngsters spread over a period of almost nine years. This population of misfits has taught me a few important lessons about human relations. One of those lessons that has been reinforced in normal life is that we cannot afford to pronounce judgement on the actions of others. The implication of this is that "I am Better, therefore I judge." Another lesson has been that adults sometimes revert back to the actions of their less mature times as children.

I consider myself to be reasonably proficient in several aspects of cave diving, but not so much so that I can pass judgement on one of my peers. I am obviously not speaking of those situations where I am playing the role of Cave Diving Instructor. That is a training event that is not relevant to the topic at hand.

It causes me much frustration to observe first hand and hear of other incidents where one individual passes judgement on another. By way of example let me relate an incident which I observed a few months ago at Peacock Springs.

> A diver was observed to be decompressing in the spring basin without a buddy. The person that I feel acted inappropriately called attention to this fact in quite a loud manner to anyone that would listen. When the diver surfaced, he was met by a most vicious verbal assault by the same individual. My quarrel was not with his motives, but his methods.
>
> As the encounter dragged on, I became most uncomfortable with the fact that this argument was attracting quite a crowd of bystanders, another very disturbing fact. My attempts to

get the two people to calm down and to quiet down for the benefit of our posture and image as cave divers, were not successful.

Regardless of my feelings in the matter, the solo diver made the telling blow in the argument when he pointed out that had the loud one conducted himself differently, the whole episode could have been discussed in private and not have attracted all the negativity and public attention that had occurred.

Let me hasten to add that I do not condone the solo diver's actions in any way. I feel quite strongly that solo recreational diving is inappropriate for many reasons. That is not the point of this article, however.

The point is that the air of disapproval that seems to be prevalent in certain circles of cave divers is destructive. Our efforts to present a professional image to the general public and to open water divers cannot be compromised due to the lack of discretion of a few malcontents. There have been episodes where I really DID have questions about someone's motives as well as their methods!

My personal philosophy is to be very tolerant of the faults, peculiarites, and personality differences of others. This tolerance saves me an awful lot of frustration and stress. It sometimes even helps me to avoid sticking my foot in my mouth!

You see, dear readers, I recognize everyone's right to be different and to do whatever they wish, as long as those actions do not endanger or adversely affect others. My reasons for being so tolerant of others is that I have a few faults of my own, and I am grateful for the tolerance of others!

What just bugs the heck out of me is that a small portion of the group of cave divers in Florida (by the way, I am certain this is a local problem) can't ever seem to quit bickering among themselves and go out and present a united front for the good of cave diving safety and enjoyment. Sure, we all see attitudes and actions in others that we wish they would change. There is something about living in glass houses and throwing stones that comes to mind every time I find myself the unwitting audience of one of these negative types.

The biggest problem is that there is an unfortunate few individuals that refuse to move into the present and keep re-living the problems of the past. I have been involved in cave diving for lots of years, as have many others. If there exists a "hot potato" type of issue, I almost always find that I have close friends on both sides of the issue. I use as an example that both the CDS and NACD seem to have a vocal minority that for unknown reasons continue to perpetuate the ill will of many years ago between these two fine organizations. I am not trying to stir up silt here, but it seems to be such a waste of good useful energy to sit around and gripe about the past. ... OR even to gripe about those things that you cannot change in the present!

All cave divers are really special in the overall scheme of things. We are all very self-motivated and achievement oriented individuals. We are certainly not cast in the common mold! It is impressive to observe such a high concentration of winners in such a small population group. I may never understand how this group, AND CAVE DIVERS REALLY DO REPRESENT JUST ONE GROUP, can allow such negativity from a few individuals to continue unabated. It only drags us all down and away from our goals of public education and safety through training.

I do not have my head in the sand about all of this friction by any means. I know that certain episodes and events have taken place over the years that have caused feelings to be hurt and/or personalities to clash. My response is SO WHAT! THAT'S LIFE. Why let what should be a small, temporary, and RECONCILABLE situation dictate your thoughts and actions for YEARS.

I am in no position to lecture anyone about their conduct unless it affects me personally. I have used this podium to present a personal peeve of mine because it does affect me personally. I care about my friends on both sides of the controversies, and it detracts from my enjoyment of cave diving to have to listen to all the negativity and B.S. that sometimes goes on. It is such a waste! To anyone that sometimes lapses into the trap of passing judgement and criticizing the actions of others, I say to have hope. It does not have to be a permanent affliction.! You are joined by a cast of millions, including the author. We all do it from time to time.

To those who seem to want to dwell in the loser's world of negativity, do not be surprised if, when the topic comes up some of us try to change the subject to something that really matters.... or to something positive. If I cannot be successful in my efforts to get you to shift back to positive topics, please do not get your feelings hurt if I leave for a while to let the air clear.

You see, I have just so much emotion to use in my life. I have chosen to try and use it in enjoying life and experiencing joy, amazement, and satisfaction rather than tension, stress, and negativity. I have also chosen to associate with winners rather than losers. That is what attracts me to caving, all the winners, all the nice folks, all the achievers, all the doers.

WON'T YOU JOIN ME, ...PLEASE LET THE WINNERS PREVAIL. LET THE SOUNDS HEARD FROM CAVE DIVING BE ONE POSITIVE AND UNIFIED VOICE, FROM NOW ON!

AN OPEN LETTER TO CAVE DIVERS

Danny Brass

Cave diving in all its forms, takes on a rather unique character and meaning for each of us. We all dive in different places, with different people, using different styles, and for different reasons. Probably one of the few things that most of us have in common is that we have been trained by a highly proficient cave diving instructor associated with either the NSS/CDS or the NACD, the two most respected cave diving organizations in the world.

Although a common core technology embraces the entire cave diving community, there is still considerable room for free style expression. Some of this expression stems directly from the technology itself, while others are extensions of our own creativity. We have, for example, passed beyond the open water issue of octopus vs. pony bottle vs. buddy breathing The 5 foot hose and dual valve manifold are, I believe almost universally accepted by safe and responsible cave divers. We merely adapt it to our own personal style. Should it go around the neck, under the arm, strapped to the tank, or hidden beneath our B.C.? In conversation with other cave divers relative to how they set up their equipment, I have never heard any proclamations on this particular subject stronger than - "that doesn't work for me" or "I'm not comfortable with that setup."

A question that often does evoke a stronger response, however, is one that

asks where the business end of that 5 foot hose should be. Should we be breathing through it, thereby ensuring our buddy of a fully functional air supply should he need it. Or, is it wiser decision to breathe through our short hose - insuring that there will never be a time during an out of air crisis when both members of a two man team are devoid of a life support system!?

I have found a large number of advocates of either position. Some of these people have formalated their beliefs based upon sound armchair logic, while others have field-tested each option in practice sessions before deciding on the best method for them. Still others have had the misfortune of discovering the efficacy of their particular setup in genuine out of air emergencies. Despite the apparent wealth of opinion on the subject, it appears to be difficult, at best, to arrive at satisfying answer. Indeed, the veritable tonnage of rhetoric concerning these viewpoints makes it a rather formidable task if we are not so dogmatic as to reject outright any ideas that run counter to our own.

Despite the difficulty in readily finding answers to questions like this, it is imperative that they be asked. It is equally imperative that we seek our answers, at least initially, in intelligent discussion with our peers. It is only through the medium of discussion that we come to understand the viewpoints of others and to be cognizant of changes in trends and attitudes which may be on the horizon. Certainly, this is not to say that we should abandon our personal convictions and beliefs. I mean only to focus on the fact that by fostering extremes of opinion, without respect for other perspectives, we are condemning the cave diving community to a perpetual schism which is, at this very moment, stagnating our great potential for creative growth.

In an attempt to bridge the communication gap among the many opinionated members of the cave diving group, the author would like to provide something of a written forum for the forthright and responsible presentation of the various issues that are currently regarded as controversial or sensitive in nature. As such, I believe that the cave diving community has arrived at a point where public recognition of the full range of cave diving activity is in order.

In this regard, this writer is soliciting opinions on a diverse array of cave diving topics, such as: solo diving, multi-tank stage diving, deep diving, excessive penetrations, decompression diving, use of extended (extreme exposure) schedules, use of diver propulsion vehicles, public availability of cave maps, public access to information related to cave diving locations, proper use of the long hose regulator, teaching cavern diving courses, use of T'd lines, discussion of advanced topics in cave diving courses, and countless other timely and relevant subject matter. This list is by no means exhaustive. It merely represents those topics which I have found to crop up repeatedly in conversation.

If you have strong feelings on these or other issues of a similar nature that you would like to have voiced in a compilation of cave diver's views, I invite you to contribute to this project as often as you wish. If, in point of fact, you feel that such viewpoints should not be published at all, I would appreciate hearing that as well. In any event, this type of undertaking cannot possibly succeed without the cooperation of cave divers to provide the source for the myriad concerns that we all have.

It is hoped that this work will be a meaningful addition to the cave diving literature - fulfilling, as it were, several functions:

a)provision of a balanced discussion of issues not commonly touched upon by either cave diving courses or available literature. This would help both the neophyte and the more experienced cave explorer in the continual decision-making process associated with his natural progression in activity.

b) education of the cave diving community toward a deeper understanding fo the motivations which drive individuals to certain frontiers of exploration.

c) set a trend in and provide a medium for the elaboration of ideas long internalized by members of the cave diving group.

d) give us all pause to think

I would hope that the many experienced cave divers with strong opinions will validate their expressions of concern by contributing to this undertaking. Should it reach the state of publication, all contributions will be gratefully acknowledged, marking the project as a collaborative effort of the cave diving community.

Please address any correspondence (preferably a separate sheet for each topic) to:

Danny Brass
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College of Veterinary Medicine
Iowa State University
Ames, Iowa 50011

ED. NOTE - Our special vote of thanks to Danny for the tremendous example of positive leadership he has provided to us all. Our readers should remember Danny's response to the sensationalistic article about a dive at Peacock Springs published some months ago in SKIN DIVER magazine. His reply was extensive, accurate in every way, and in my opinion, should be required reading for all divers contemplating a cave dive. Once again, Danny has shown himself to be the kind of individual that I call a winner. We offer the podium of UNDERWATER SPELEOLOGY to him anytime, and would like to see a regular feature written by Danny, so that we can benefit from his perspectives more frequently.

I must end this comment on a sad note, however. This same letter was published in NACD NEWS as well, and as Jim Kasserman, the editor, said, it is unfortunate that cave divers as a rule do not choose to write responses to requests of this nature. It sometimes seems easier to gripe than to write!

NACD-NAUI CAVERN DIVING WORKSHOP

Steve Gerrard, V.P. of NACD, in conjunction with Charlie Vallance, NAUI's South Atlantic Branch Manager has organized a much needed workshop for Open Water Instructors, Asst.Instructors, and Divemasters. According to Vallance, there is a need within the sport diving community to make recreational divers aware of both the pleasures and dangers of cave and cavern diving.

"The NACD was approached with this project," Vallance said, "because in many ways the educational philosophies of NAUI and NACD are very similar. Both associations adhere to strict guidelines and training standards and present quality educational programs." Vallance also indicated that Walt Hendrick, Sr., NAUI National Training Director, enthusiastically supports the program and plans to attend as a participant.

The workshop will take place April 14-15, 1984 at Manatee Springs State Park near Chiefland, Fl. and will be open to representatives of all sport diving instructional agencies. Participants successfully completing both lecture and water work will receive an NACD Cavern Diver certification.

For further information, contact: Charlie Vallance, Florida Institute of Technology, 1707 N.E. Indian River Dr., Jensen Beach, Fl. 33457, (305) 334-4200 or Jim Kasserman, General Manager, NACD, P.O. Box 14492, Gainesville, Fl. 32604, (904) 377-1766.

NOTE - This article was reprinted from NAUI's NDA In-House News - GWM

23RD CAVE DIVING WORKSHOP

IT'S COMING!!!! Yes folks, May 26th is just around the corner, and with it comes the 23rd Cave Diving Workshop sponsored by the National Speleological Society Cave Diving Section. The workshop will be held in Branford, Florida, just outside of Gainesville. Once again the workshop will be held at the Branford High School.

The theme of this summer's workshop is "Exploring Frontiers", and will include presentations on cave exploration, new developments in equipment and techniques, and other topics. If you have been working in these and other areas, and have information you feel the cave diving community would benefit from - now's your chance!

Submit your topics for consideration to the workshop chairman at the address below. You should include the topic title, a short description of the material, and the amount of time you need for your talk. The standard time for talks is 25 minutes, including a few minutes for questions at the end.

In conjunction with the workshop will be an applied diving seminar on May 27,1984 at Ginnie Springs. Activities will be available for divers of all skill levels, ranging from an "An Introduction to Cavern Diving" for open water divers to "Advanced Surveying Techniques" for cave divers.

Also being held in conjunction with the workshop is the general meeting of the NSS Cave Diving Section. That event will occur on the evening of May 26th, after the workshop presentations.

Pre-registrations must be received before May 15th, 1984. Prices are;

Pre-registration
CDS members ----------$4.00
Non-members ----------$6.00

Registration at the Door
Members ----------$6.00
Non-members ----------$8.00

For further information contact;

Jeffrey Bozanic, Chairman
23rd Cave Diving Workshop
P.O. Box 490462
Key Biscayne, Fl 33149-0462

(305) 361-8059 (home)
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CAVE DIVING IN CZECHOSLAVAKIA

By Tom Iliffe

The 6th U.I.S. International Camp of Cave Diving was held in the Moravian Karst of Czechoslavakia from September 4th to 10th, 1983. Over 80 participants representing 13 countries including Canada, France, Belgium, Italy, England, Hungary, Czechoslavakia, Romania, Yugoslavia, Poland, East Germany, Russia, and the U.S. attended. I was already in Eastern Europe working at the Emile Racovitza Institute of Speleology in Bucharest, Romania as part of a scientific exchange program jointly sponsored by the U.S. National Academy of Sciences and the Romanian Academy and thus attended as the only American representative.

The camp was well organized thanks to the efforts of Tom Piskula, Chairman of the UIS Cave Diving Commission, and the Czech Speleological Society. Participants stayed in a modern hotel in the small village of Lipovic located on the edge of the Moravian Karst in central Czechoslavakia. Presented papers were delivered in a conference room at the hotel utilizing simultaneous wireless translating via headphones into English, French, German, Russian, and Czechoslavakian languages. These presentations included information on cave diving explorations as well as discussions of techniques and equipment.

The Moravian Karst is the largest (more than 100 sq. km) and best developed karst region in the Bohemian Massif. The Devonian limestones form karst plateaus with sinkholes and chasms, with more than 1000 caves, blind valleys, karst canyons, underground streams, ponors and resurgences. At present, the Moravian Karst has 4 commercial caves - Punkevni, Sloupsko-sosuvske, Katerinska, and Balcarka. The largest cave system of the Moravian Karst and one of the largest in Europe is the Amaterska (Amateur's) cave, a system of corridors eroded by underground channels of the Punkva River. Professor Karl Absolon predicted the existance of this 36 km long cave in th eearly 1900's, but its discovery had to wait until 1969 when members of the Speleological Club at Brno dug a way through the bottom of a sinkhole to the level of an underground stream at a depth of 110 m below the surface.

Participants at the camp were able to choose from a dozen possible cave diving trips during the camp. Czech divers provided tanks, other diving equipment and use of 3 compressors. The first of my 3 dives while attending the camp was in a recently discovered sump in the Amateur's cave. An artificial entrance followed by 500 m of easy walking passage led to the sump which was an upstream side branch of the main river gallery. This sump was named Maly Pritok (Little River) after the well known Florida spring. My buddy for the dive was British cave diver Julian Griffiths. Water temperature was a frigid 8 degrees C. (46 degrees F.). The underwater passage began as a tube about 2 m in diameter, but came down to a minor restriction after a 6 m penetration. Past this, the passage became larger and soon divided forming a 100 m long loop. We swam along the right side of the loop to the far end where another winding, almost corkscrew shaped passage led off which we followed for an additional 200 m. At this point, we reached an impressive vertical shaft extending down 30 m or more and up through a narrow fissure into an air bell. We tied off to the permanent line which ended at this point and tried to ascend to the air bell but could find no place wide enough, so after reeling back in, we turned and exited the cave. Average depth of the dive was 13 m with 5-10 m visibility.

The following day, we made an hour long drive to the famous Hranicka Abyss, said to be the world's deepest underwater cave. Czech divers have reached a depth of 110 m in this cave, using open circuit scuba with Trimix (50% air, 50% helium) below 50 m. They have however plumbed the cave to a depth of 260 m. The cave is thermal with a water temperature of 16 degrees C. in contrast to the 8 degrees C. average for cave waters in that region. Also the water chemistry is quite interesting in that cave waters are saturated with carbon dioxide at all depths. The chasm is believed to have been formed by corrosion of the limestone by the CO2-rich thermo-mineral waters ascending from great depths. Only the final phase of roof collapse produced the open chasm. This carbonic acid solution is corrosive enough that the exposed skin on the backs of my hands and other tender body parts tingled throughout the dive. Our dive began in a lake open to daylight at the bottom of a 69 m deep pit. We descended the pit with our equipment, part way by steps and the rest of the way using a hand line. The surface of the lake was covered with leaves which hid a layer of murky green water. My buddy, Czech diver Frano Travenec, and I swam across the lake to the descent line and clipped to it with a carabiner attached by a short line to our tank straps. We followed the descent line to a depth of 47 m where it turned horizontal passing under a ledge for about 15 m before starting up again. Below was only darkness and very deep water. We continued up to the surface of a large air-filled fissure chamber called the Rotunda. This room contained considerable deposits of bat guano on the floor crawling with small spiders, springtails, and flies, although a direct connection from the Rotunda to the surface has yet to be discovered.

A survey has shown that this room is located only 7 m away from the lake where our dive began. We left the Rotunda, descending to a depth of 17 m before coming back up into a second air filled room with sparkling flowstone covered walls in contrast to the rotten stalagmites observed in the Rotunda. On our way out of the cave, we could see much better in the clear deep waters due to the light adaptation of our eyes. The underwater cave walls were nearly vertical with assorted huge breakdown blocks precariously wedged in place. While swimming, I used a fine mesh dip net to strain the cave water in search of any animal life and did find at least two species of copepods inhabiting this unique environment.

My third and last dive was in the Cervikovy (Worm's) Cave located at the bottom of the 169 m deep Macocha Abyss.
We reached this cave by taking on of the tour boats upstream along the underground Punkva River in Punkevni Cave and then walking through an artificial tunnel connecting to the bottom of the abyss. On the far side of the abyss, a short natural gallery led off, only to end in an 8 m deep pit descended by a steel ladder. Julian Griffiths and I kitted up on a wooden platform at the bottom of the pit and entered the small sump pool one at a time. We descended a narrow underwater rift to 15 m where the cave opened out into a much larger passage. Unfortunately, visibility was only a meter due to silty water from divers on prior days being carried downstream from the Amateur's Cave. We followed a permanent line for 300 m to its end in a small air bell but could not continue further owing to the low visibility. Despite the poor conditions, we did see a number of troglobitic amphipods in the water.

One of the decisions made at the Camp was to begin publication of a regular

international cave diving newsletter. A group of Romanian divers volunteered to edit and publish it. The first issue should be ready sometime in 1984. Copies of cave diving newsletters or notes on explorations, techniques, equipment, etc. should be sent to the editor: Serban Sarbu, C.P.-2-81, Bucharest 2, Romania.

It is hoped that a cave diving camp can be organized for either Spain or France in association with the Ninth International Congress of Speleology to be held in Spain in 1985. Another International Cave Diving Camp is planned for the caves of the Carpathian Mountains of western Romania in 1987.

A NOTE OF EXPLANATION TO OUR

READERS - WE NORMALLY PUBLISH

UNDERWATER SPELEOLOGY

BEGINNING IN FEBRUARY OF EACH YEAR

WE APOLOGIZE FOR THE DELAY,
BUT THIS ISSUE WAS DELIBERATELY DELAYED
SO AS TO INCLUDE EDITORIAL MATTER
WHICH WE FELT WAS TIMELY
AND APPROPRIATE

THANK YOU FOR YOUR PATIENCE - GWM