THE TECH TROGLODYTE

A JOURNAL OF THE VIRGINIA TECH GROTTO OF THE NATIONAL SPELEOLOGICAL SOCIETY

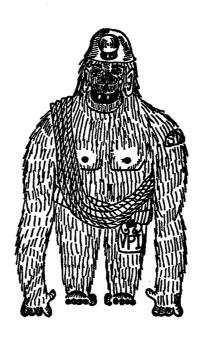
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FALL QUARTER 1969



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THE TECH TROGLODYTE JOURNAL OF THE VPI GROTTO OF THE NATIONAL SPELEOLOGICAL SOCIETY PALL QUARTER 1969

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Please Note: This is the last Trog to be published until a new Managing Editor can be found.

PRESIDENT'S COLUMN

THE VPI CAVE CLUB-THE MOST ACTIVE CAVING ORGANIZATION IN THE WORLD. That's what we're supposed to be. Most active caving organization--active in what? Do we really do more caving than anyone else or do we do more partying? The purpose of the Club is "to promote interest in, and to advance the science of speleology; to encourage fellowship among those interested in spelunking; and to promote conservation and safety." If you are wondering where I found these words of wisdom, they are right on the front page of the Cave Club's constitution, you don't even have to read the whole thing, just half of the front page.

I want to say a few things about the change in the club since I came to VPI, but more than that I want to point out to you, the club members, the problem which is present in the club at this time. When I ame to VPI the Cave Club was the most active caving organization in the world. Sure, we had Friday night "speleo-seminars" (and there were some good ones), but the club as a whole put in more hours underground in one quarter than we have in the past two. There is a big difference in the Cave Club then and the Cave Club now; there was a lot more activity in caving and cave related areas. People were always doing something and did not live for the Friday night "orgy"; and I think that more people now are interested in promoting fellowship (which is good to a certain extent) rather than caving, speleology, conservation and safety.

In other words, this "most active caving organization in the world" has turned in to the most active socializing organization in the world. Even with this, the parties, or whatever you want to call them, have become an all-out, raise hell, beat 4em up drunk. The parties of a few years ago were very nice: we sang, got drunk and had a very good time. After the guitar playing stopped, people had a chance to sit and talk, plan trips for the next day and tell war stories, or whatever they wanted to do, as long as they did not disturb the others at the gathering. Now the noise is so loud, you can't even hear yourself think, and there is absolutely no respect for any of the other people present. Stealing of food and drinks, destruction of property and the general "I don't give a damn" attitude is the feeling that seems to prevail at most of our gatherings. Naturally, what I'm saying in this article does not apply to everyone in the club. There are a few members who still go caving and work and care, but the few are lost in the many. Consequently, the many supress the few, the end result being a back up in the system. When this occurs, nothing gets accomplished and apathy sets in.

Apathy, according to Webster, is "1: lack of feeling or emotion, 2: lack of interest or concern." Think about it. Think about a club meeting when there was a job to be done or a committee that needed a chairman. Did you say you would do the job? If so, then I'm not aiming this article at you. If you did not say anything, just sat there and thought "someone else will do it", then you are the one I want to reach. Impassiveness is one of the main enemies of any organization. Without interest in the club it will die (or at best, go into hibernation). There are organizations that I know about, and probably you too, that have folded for this very same reason. Specifically, there was a grotto that folded when their main concern became partying instead of caving, which is supposed to be our primary interest. The problem that we have in the club is apathy and trying to overcome it is something that should concern each and everyone of us.

The solution to this problem is one that everyone is going to have to work out in his own way. I suggest going caving, but more than that, working at something when you do go caving: conservation, mapping, land owner relations, or anything related to the club and its activities. I found that sport caving lost some of its appeal after a while, and subsequently I started mapping or some other work related to caving. If sport caving is all you like and want to do, that's fine and dandy, I'm not condemning or belittling anyone who primarily goes caving for the fun of it. But if caving has lost some of its appeal, try working. Try going on a trip that is going to be mapping, doing conservation or something on that order; trying to open closed caves and improving land owner relations is a job that needs people desperately. Do something, you may find that the rewards are more than you would expect.

What I suggested in the previous paragraph should help some of you despondent members. The best way to inspire interest in the club, however, is through the trainees. These people are new, interested and most of them really want to know what this activity is all about. But, I think that they have gotten the wrong impression of our club, and atlot of them come to the meetings strictly for the party afterwards. These trainees are the growth potential for our club, and I think the overexposure to partying, socializing and the like, is not only detrimental to ourselves as a grotto, but also to the trainees and even to the regional and national organizations to which we belong.

This is what has happened to the club as I see it. We have moved from an organization with caving and speleology as our main concern, to one with socializing as our primary interest. To those whose first and/or only interest is partying, I would say that if that's what you are looking for, go find someone else because we are not the one you want.

To the others who have seemed to have forgotten the other areas encompassed by the Cave Club, I suggest that you stop and take a look at yourself and the club. Then move in the direction that you feel is the best for both the grotto and yourself.

I know that there is a problem in the club at the present time and I feel that this article brings it out into the open, if not, then let's hear from someone else. If we fail, or are afraid to recognize our deficiencies and troubles then the club is on the way out. In any event, let's make the VPI Cave Club back into the most active caving organization in the world, we have the personnel and I know we can. Let's do it NOW!

Jim Dawson

* * * * *

EDITOR'S COLUMN

For some reason there seems to be little enthusiasum shown towards The Tech Troglodyte until the last few weeks until it is printed. When this enthusiasum does appear it seems to be the type of enthusiasum that advocates getting the job done no matter how sloppy the end product. Now I am not saying that all the errors that a journal of this sort has should be blamed on the haste in which it is compiled. A lot of the blame lies on me, the editor.

The editor of a publication such as this should have a very well organized staff. He should promote general interest in the publication and keep this interest on a high level all the time. The editor should have a very good knowledge of the fundamentals of managing a publication. The editor should be imaginative, creative, and orginal. The only trouble with all of the above statements is that there are very few people who display them.

Fortunately there is still someone who will take the job of editorship when it is vacant; most of these people turn out to be good editors. The point I am trying to make is this. Try to put yourself in the editor's place, find out what he has to do to get out your publication, and next time it doesn't come out on time find out why instead of complaining. "People who live in glass houses shouldn't throw stones."

THE EDITOR

1969

WHY A TRAINEE PROGRAM?

As people on campus start appearing with wooden plaques draped around their necks and bags of candy in their hands, one sometimes hears the question, "Why doesn't the Cave Club do something like that?" The answer, of course, lies in our name. Whether you choose to call us the Cave Club or the VPI Grotto, NSS, we are a caving organization. and all of our recruitment and training efforts must be directed towards that end. A pledge system does not teach people how to cave safely, nor would outlandish initiation procedures. However, we do have a system that makes people do some work to become members, while teaching them something at the same time. This is what is known as our "trainee system." In general, it provides an opportunity for prospective members to show that they at least meet our standards for membership and, if they do not, it gives them a chance to learn. Now that we have seen the basics, let's look at it in a little more detail.

In our system, a prospective member is first required to cave with the club for a minimum of forty hours. This, frankly is to make sure a person wants to stick to caving as a sport, as well as to insure a minimum amount of experience. A person who has no interest in speleology, but merely wants to collect a patch, is wasting his time as well as ours. If you want patches, join the army, not the Cave Club.

We require that a person have a "working knowledge" of belaying. This means that you should definitely know how and be able to catch a person if he falls off a ladder or traverse. When you belay a person, you are the only thing between the climber and a funeral if he slips. For this reason, evaluation of belaying ability must be honest and factual; no personal sympathy can be allowed. You may have to depend on that person sometime.

Rappeling, climbing and prussiking must be done in a cave for Cave Club credit. This, again, is to insure that the trainee can do these things under cave conditions, and not on cliff faces outside a cave where conditions usually are a good deal better than those in a cave. We are not specifying distances in rappeling because it is up to the individual member's judgement as to whether a person's qualifications are good enough for membership. Although many, including myself, like for a person to prussik a one hundred foot drop at least once before coming up for membership, it must be admitted that a trainee can show whether or not he has the ability to prussik on somewhat shorter drops. The deciding factor in any case is the standard by which the member judges prussiking. In all cases it must be kept reasonably high.

Knots and their uses must, of course, be known perfectly. By this I don't mean being able to tie them right the first time every time, but the trainee should be able to catch his own mistake if he makes one in tying a knot and correct it without being told to do so by the tester. I personally like to get prospective members to tie their knots at randomly selected times (like at dinner, etc.) so as to reduce the chance of some just memorizing them for the test and forgetting them later. One must know how to tie the knots at any given time in the cave and should know them thoroughly before becoming a member as well.

The conservation requirement is now on the trainee sheet in order that the new member will better appreciate the need to practice conservation while caving. It also gives us a source of manpower for cleaning up the more heavily traveled caves in the area. This, of course, is not something done just by trainees. Members, too, accompany these trips to lend a hand. In short, it is useful work that must be done every so often in a great many caves. Also, we are now trying to impress upon all cavers, both old and new, the importance of land-owner relations.

The trainee and carbide lamp tests let us know what the trainee doesn't know. If enough questions are missed in the equipment, techniques, and safety sections, further training is usually recommended. However, the test is mostly to give us an idea of what people have picked up in the way of caving knowledge during the time that they were trainees. Hopefully, taking the test will be a learning experience, with it providing an opportunity to learn a few new things. I have even learned things from some of the people taking the test.

As you have now seen, most of the trainee requirements deal with learning the skills of caving. This is necessary if we are to remain one of the best grottos in the world. We are in the position of having to train most of our new members from scratch. In the past, we have done an amazing job. We can in the future, too, but the future rests on us today. If we maintain high standards for the people coming in today, then we can be sure that they will be as proud of becoming members as we were when we came in, and that VPI will retain the title as "The world's most active caving organization."

Doug Perkins



A COURSE IN VERTICAL TECHNIQUES

In the course of the last several years I have become interested in various aspects of training courses designed to introduce novices to the sport of caving. I have been in frequent contact with "Blinker" Glock in pursuit of ideas concerned with this matter, Doug Perkins, the vice-president of this grotto, and R.E. Whittemore, a past vice-president. The ideas that have been presented vary, but all agree that extensive training in the form of supervised caving presents the best means of aiding a developing caver.

One aspect that has drawn my special attention has been the training of novices in the use of vertical equipment and techniques. I have an affinity for vertical work, hence this special interest. I am willing to go vertical caving frequently, and, when not involved in underground activities, I frequently find a few people of like inclination and go somewhere to play around on the ropes. The "I's" of this introduction should warn the reader that the individual behind this typewriter has a definite prejudice toward vertical caving, and this article may be read with this in mind. However, it is intended that a viable plan of training be set forth for grottos that are primarily horizontal in their activities, as well as for those who do a great deal of vertical caving.

The 1965 edition of the Speleo Digest contains three very interesting articles that suggest two extremes of philosophy for cavers, and a middle ground. The articles are "What Verticle Caving Techniques are Suitable for the Average Caver?" by Ross Eckler (p3-13), "Ladders or Leaders?" by Bill Plummer (p3-17), and "The Quest for a Vertical Hero" by Ed Yarbrough (p3-19). These present what Mr. Eckler calls "the Joe Caver-Roper Technique dilemma." There are two types of cavers, he states, that lie at opposite poles in the caving world: horizontal types, or Joe Cavers who just want to get into a cave and around in it with the minimum of trouble, and vertical people, or Roper Techniques, who are happiest with a cave that has a pit, or several pits to challenge them. Mr. Plummer opposes Mr. Eckler, as a Roper Technique as opposed to a Joe Caver. Mr Yarbrough seems to prefer a middle ground between the two.

The Joe Cavers, postulates Mr. Eckler, rate their techniques for vertical caving according to the following order of values:

- 1. Safety;
- 2. Convenience of use of a particular technique;
- 3. Ease of learning;
- 4. Rapidity of ascent and descent;
- 5. Cost of equipment;
- 6. Weight of equipment.

We note first that safety is paramount. Mr. Plummer offers a slightly revised order of values, but he agrees that safety is supreme in any order that may be chosen. He observes,

"Danger is to be met with respect. Beginners in one's care should be taught that respect, and the necessary knowledge."

Mr. Eckler notes that

"Both rappeling and prussiking can be terribly unforgiving of apparently small mistakes by the less experienced caver."

It may be stated that "vertical caving", rather than just the techniques of rappeling and prussiking can be "terribly unforgiving" for novices. It may be stated as well, however, that crossing a street can be equally unforgiving of small mistakes as in not taking the precaution of looking. Mr. Yarbrough, Mr. Eckler, and Mr. Plummer debate the question of ladders versus rope, and vertical caver versus horizontal caver, and compromises between the two extremes. They do not, however, note the importance of training as fully as perhaps should be done.

Ross Eckler states that Joe Caver is

"...not interested in practicing techniques...once or twice a year. He is likely to prefer techniques which require a minimum of learning."

By implication, Joe Caver has no basic interest in vertical techniques. Mr. Eckler states that pits are an inconvenience to these folk, and suggests that vertical training be reduced to ladder technique. Mr. Plummer holds out for the use of rope exclusively, countering the argument of difficulty of mastery of techniques by stating,

"If Joe Caver is not suited for vertical techniques early in his career, he may well be later."

He suggests that Joe Cavers have a close connection to the Roper Techniques in that eventually the average caver will blend the two extremes to achieve a happy medium.

Mr. Yarbrough seeks this middle ground by suggesting that the caves of a particular area dictate the kind of training given the cavers of that region. He asserts.

"It seems obvious that if a vertical technique has worked well for one man it will, with a few adaptations, work reasonably well for anyone. Work well' means not only effectively but safely."

"...many of our vertical cavers are living proof that only one method learned well can be used exclusively.."

This seems to be one solution to the problem of what has the greatest merit in the arena of countless techniques. There seems to be another alternative to the problem, however. What prevents the teaching of two techniques, one for ladder and one for rope, so that the cavers may go outside their own boundaries and enjoy themselves more fully?

For some years now the VPI Grotto has been evolving a systematic training program of training novices in underground skills. The emphasis has been placed upon producing "graduates" who are capable of handling themselves in any cave rather than restricting themselves to only horizontal caves, or allowing a false sense of pride to restrict them to visiting only pit caves. The caves in the area of VPI have a delightful variety of passage types, and caves run from small, strictly horizontal ones to pits in excess of two hindred feet. To visit a variety of caves is the aim of all cavers, and there is pressure here, more than in some other areas of the country, to adapt training to meet this variety.

The first stage of training is to institute a "standard" set of techniques, if there is such a thing where cavers are involved. The ladders are standard in themselves; belaying procedures are those set forth in the MIT Handbook, Fundamentals of Rock Climbing, (MIT Outing Club, Cambridge, Mass., 1968). By ease of access, Goldline has become a generally used line within the Grotto, and thus special care of manilla is eliminated. The care of rope is a continuing subject of instruction. Test procedures have been set by the Grotto constitution at five-man pulls on both rope and ladders. A standard selection of knots has been made part of the material on a quiz that is a requirement for membership.

Ascending gear is somewhat less standard, as there are at least five types of knots being used in the Grotto, and several mechanical ascending devices. The basic four-turn prussik is taught, in a three-knot prussik ascending rig. The cavers who are then interested in other ways to get up a rope observe other members and their gear, and then receive independent instruction in other forms. The important thing here is that in this case there is no formal class held, where it is said that "This is the only proper and correct way to do this". There are "formal" training sessions held several times a year at a local sinkhole, but there are informal lectures by people who are training novices, along the lines of "This bowline is used to rig in because...; the prussik rig that I use is this...". The instruction is mainly demonstration. The idea is extended to actual caving situations when the novice is shown the rigging process, and given a commentary as the rigging and exploration procedes. Since the rigging is allotted to various people at different

times, the procedure frequently includes innovations, and the commentary will differ, all contributing to a varied program of training.

The descending gear is even less standard, with half a dozen ways to get down a pit or slope in current use in the Grotto activities. The basis of the gear and training is double brake bars, that seem to lend themselves in the safest manner. Thorough testing of ropes, rigging, belay from below, (NOT the use of a belay from above), and checking of the novices as they rig in makes the training safe, and instills a sense of caution. As in the case of prussiking, the novice will note the gadgets used by others around him, and will ask for a demonstration and instruction in their use.

It has been noted thus far that the group involved here is one of some size, and thus the instruction is readily available in many forms. With the case of the small group, the situation is much the same as far as study of basic techniques is concerned, with the adaptation of "standard" procedures coming first. The choice of a "Standard" procedure is made on the grounds of safety, ease of learning and use, with rapid ascent or descent more or less disregarded.

The point of speed is made frequently in caving, especially in pit caving: the faster one can get up or down a drop, the better, seems to be the current fallacy. method for moving up or down a rope should be chosen along lines of convenience and adaptability to the individual. One should be able to move down a rope at a firmly controlled speed, and with a smooth steady motion. The man who flies down hell-bent-for-election is all too likely to loose con-In climbing up a rope, or a ladder, it is important that a fairly expedient method is chosen, in order to move the group with a minimum of waiting. As in the case of rappelling, however, the goal should be that of smooth, steady motion with a minimum of stopping and resting. Those who climb in short bursts of speed, and then collapse periodically to rest are more likely to delay the party than the man who climbs steadily, although at a slower rate.

The point of all the emphasis of choosing both rope and ladder training is to allow the use of both in some caves, or to vary rigging to fit the situation. At VPI, drops of up to about sixty feet are commonly rigged with cable, while deeper drops are accorded rope. The members are capable of using both, although the prejudices draw lines for and against rope only, or ladder only. Adaptability, however, demands that lines of prejudice for a particular method be dispensed with, in order that the cave be explored with the greatest ease. No one method may be chosen, for the reason that no one condition prevails in any cave, or in any one area. The capability of the caver to adapt his training and skills will greatly enhance both his safety and his enjoyment of the underground.

TRAINEE PROGRAM OF THE VIRGINIA POLYTECHNIC INSTITUTE GROTTO OF THE NATIONAL SPELEOLOGICAL SOCIETY

THE TECH TROGLODYTE

Section 2 of By-law II of the VPI Cave Club enumerates the various requirements that a trainee must meet in order to qualify for full membership. These requirements are set forth and strictly enforced in the interest of Speleology and for the safety and protection of the individual caver. It is strongly urged that each step in your training be a knowledgeable and meaningful one.

A. Remain a trainee for at least one quarter during which time he spends at least 40 hours in a cave on at least 6 club trips, and submit a written report on at least one of these trips.

Date	Cave	Leader	Hours	Experience
				and Comments

B. Hawe a working knowledge of a carbide lamp.

Carbide lamp quiz score:

C. Demonstrate elementary climbing skills.

Comments by a qualified leader on trainee's ability to handle himself while caving.

D. Has working knowledge of belaying methods as outlined in the MIT training manual.

Where belaying was practiced and comments by leader on trainee's ability.

E. Demonstrate a working knowledge of rappeling and prussiking with knots in a cave.

Where rappeling and prussiking were practiced and comments on trainee's ability.

F. Know how to tie and the uses for: a bowline, bowline on a coil, prussik, fisherman's knot, butterfly, clove hitch, sheet bend, square knot, and figure of eight knot.

The test on these knots will involve the tying of the knot and an explanation of each knot's application. Comments by tester.

G. Complete satisfactorily a comprehensive general information quiz,

Test score and comments by testor:

- H. Be endorsed by a member in good standing.
- I. Be approved by a two-thirds majority vote of the members,

When this trainee program has been completed he will be nominated for membership into the club as a full member and his entry will be voted on.

Amendment

J. Participate in a conservation trip of a clean-up or mapping nature.

Conservation trip and comments by leader.

* * * * *

NEWBERRY'S OR DINGLEBERRIES

On October 25, 1969 the infamous Steve Hall, better known as "Pig Pen", the dynamic duo, Danny and Lynn, Jack O'mera of "Friggin' Falcon" fame and I, "Apple Jack", proceeded to discover and exploit the mysterious hole in the Triple Wells. We were not yet in the cave when the first disaster struck. The dynamic duo had a quick change of plans as the fearless captain's lamp blew its bottom. Undaunted, Danny proceeded with the order, "give me your lamp woman!"

After entering the cave we reached the Triple Wells in no time. Danny the fearless was the first to decend and he went over the brink screaming in aspiral of speed, the reverberations of which were heard for the next five minutes. He discovered the mysterious hole but was unable to reach it due to the foreboding width of the well. In no time "Hell bent Hall" was down the rope glarring into the dark hole. His team mate now on the bottom pulled the rope from side to side to help fling his companion into the hole. "Hell bent Hall" growing dizzy thrust his body into the hole in a last desperate effort. Danny on the bottom and O'mera and myself still at the top waited in suspense. The hole went all of seven feet!

Still unsatisfied we regrouped (except for Jack who was to meet us at the top of the straddle pit) and sought further adventure. We went up the Devil's Staircase after rescuing remains of a dead fish the odor of which sped us swiftly on our way.

Our next challenge was the Wimper Point which is a darring traverse at the top of the 140 foot Straddle Pit. Danny was the first and proceeded fearlessly across in no time. Hall was next and after a wimper or two because his arms were too short he made it. I, after refusing at first to make the darring ascent, proceeded with no dificulty. We had been the third, fourth, and fifth persons ever to make the traverse with the help of Jack who belayed us from the top.

At this point the party regrouped. Since the most dangerous parts of the cave had been challenged we proceeded with great speed, driven on by the dynamic duo -1, Danny. It seems another odor was soon to errupt with disasterous results. As Danny passed overhead on the chimney out we noticed the tell' tale spot on the seat of his pants. Yes, the Greenbriar Two Step had struck again. As he ran down the mountain we heard him yell, "Get the T.P. woman!"

One question still remains unanswered, was it Newberry's or dingleberries that drove our fearless leader, Danny, onward.

Hi Y'all!

How would you like to come to our perfect cave? A perfect cave-what's that?-foam rubber crawlways, 600 foot rappells with back door exits, 25 foot soda straws, and pay toilets. Sounds great doesn't it? But that's not all: the exit is only 500 feet by aerial tramway to Uncle Bill's Still on the Hill.

Seriously though, if you can make it over Blacksburg way stop in and see us anytime! Just call 552-0040 and ask for Mike, or 552-4993 and ask for 36-24-35 and we'll tell you where to find us. If you want unusual meeting, super parties and push-push caving, see you soon!

VPI'S PERFECT CAVE

TREE FOR RIGGING-INGERFORE KARST- RIDGE-RUNNERS DELIG HT FLETATOR TENTA TO 1504 ARM-CHAIR PARKING COVERS) TO THE LOT SHOWERS TO UNCLE BILL'S STILL The Sompleat

"I D Save 250' ENTRANCE DROP FOIW WISE MONTH FOR ORRMAPIC HTRO SHOTS) 21 SWILL DISPENSER CaC gource SPIRAL PADOFO GRAWL GUANO PILE "HAIRY" C FUR TRAINEES CHIMNE) INEATSY-COOL" MARE ACCRR LARGE FORM RUBBER CUSHION "MPOSSIBLE STRANGERITONS" (FOR THOSE IN A HURRY) MILES + MILES + MILES "I don't know, they might OF CAVE BE MUCH CAVE THERE! ARTISTER GYBUM ARM-CHAIR GAVER'S Ω FLOWE RAILROAD - 18" NARROW GUAGE SUPER-TRAINES

i. i.e.

EMERGENCY CALLDOWN LIST

In case of a caving emergency the following people may be called upon to arrange additional assistance. Contact one of the persons listed below and supply the following information:

1) Nature of the problem

2) Name and location of cave

3) Number in party

4) Condition of party

5) Special equipment needed (rope, stretcher)

6) Other information (where you may be reached, where you will meet the emergency party)

When all of this has been done, cool it. Our friendly, highly trained personnel are ready to serve you.

Jim "Moose" Dawson	119 Oak Forest Trailer Park Rt. 2 Blacksburg	951-1282
Mike Frieders	3040 Pritchard Hall, VPI	552-0040
Bob Barlow	3072 Pritchard Hall, VPI	552-9818
Doug Perkins	3039 Pritchard Hall, VPI	552-9858
Lynn Vinzant	1122 Ambler-Johnston Hall	552-4993

If none of these people are available, the Cave Rescue Communications Network (CRCN) at the University of Virginia may be called. The numbers are (703) 293-9546 or (703) 294-3055. Explain that you have a caving emergency and want additional help. They will contact a caver on a regional basis and he will call you back.

* * * * *

THE SOLE OF CAVING BOOTS

or

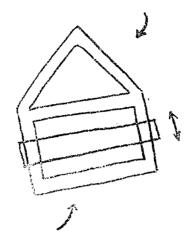
HOW TO BECOME TOTALLY TONGUE-TIED IN ONE EASY STEP AND KNOT EVEN NO IT

There I was, just sitting there mindin' my own business when up staggered this humongous, inebriated young man, looking rather like a brillo that had gotten caught in the VPI computer.

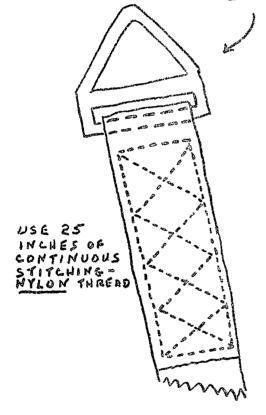
"Ya wanta go caving?"

Well, what could I say? He had thrilled my whole being all the way from my tough, rawhide exterior, down to

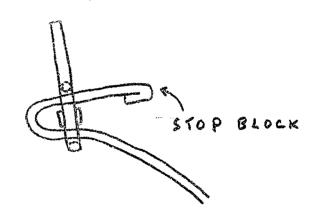
ADJUSTABLE RING



5000 POUND TEST RINGS



ADJUSTMENT END VIEW



FOLD STOP BLOCK OVER TWICE - STITCH THROUGH

FIXED END VIEW

The harness is a web belt that fits around the chest of the caver, with two rings at either end to allow a caribiner to be snapped through them and into a prussik knot, belay line, or what have you. The unique feature of the Maidenform harness is that one of the rings is adjustable, and permits the size of the harness to be varied, according to the size of the caver, and how tight he wants the harness to fit. Shoulder loops are added at the whim of the wearer to position the harness at a desired height.

The basic feature of the belt is the use of two inch wide nylon web. It seems that the hard webbing used in parachute harness makes a more easily manipulated harness. The next feature is the use of parachute hardware to allow the adjustments in size. Sewn into one end of the belt is a "V" ring of about 2,500 pounds test. At the other end is an adjustable ring that permits tension to be increased or lessened, but that will hold the harness firmly when the sizing has been completed. Other material includes the shoulder harness, either half inch nylon web, or avalache cord, according to the desire of the owner. The material for the Maidenform chest harness can be obtained either from a surplus parachute harness, or from Para-Gear Equipment Company, 5138 N. Broadway, Chicage, Ill., 60640. Para-Gear lists the "V" ring as No. 183, at \$.40, and the adjustable ring as No. 184, "V" Ring with Quick-Fit Bar, at \$.75. The total price for the first Maidenform harness was only \$2.00. including webbing costs, and using material for the shoulder straps that was already on hand. The stitching was done by hand with a sewing awl.

The first step of construction was to put in the fixed ring. The nonadjustable "V" ring was placed inside a six inch overlap of webbing, and the webbing stitched together with about twenty four inches of continuous stitching, using nylon thread. This length of stitching gives almost full strength of the webbing, and reduces the chances of breakage at the stitching to almost nothing. It is important that nylon thread be used. The job can be done by hand, or by a shoe shop, but the use of a thread of lesser strength will drastically reduce the safety factor in the harness system. The next step of construction consisted only of adding the adjustable "V" ring, and stitching a short section at the end of the webbing into a stop block to prevent the end of the web from slipping free. The straps were added, and the job was complete.

Detailed descriptions of the material and assemble used in the Maidenform harness has been omitted. When one holds the component parts in his hands, he can readily figure out what goes where. Sketches have been added to indicate what things look like at the ends. The use of the harness is simple. One simply decides on an approximate size, grasps the free end of the harness protruding through the

adjustable "V" ring, and pulls. This tightens the system around the user. If it is desired to loosen the harness, the adjustable "V" ring is pulled in the oposite direction. After the completion of the first Maidenform (Mark Two), there was a "tail" of about six inches hanging out of the adjustable ring, when four feet of nylon webbing were used. If anyone's chest is larger than thirty six inches, thought might be given to using a longer piece of webbing.

Tests of the harness have indicated that it lends itself well to the continual adjustment involved in the search for the "easier way" to get up a rope. A number of models of the Maidenform (Mark Two) have been used by members of the VPI Grotto for both personal use, and training equipment for novices learning ropework. The ease of adjustment and use makes the harness a good tool for use in getting up a drop. The Maidenform Mgf. Co. is still testing and refining the harness. Someday, we will find the perfect chest harness. Until then, however, the Maidenform (Mark Two) Chest Harness is a fair compromise.

Bob Barlow, President

Maidenform Chest Harness Mgf. Co.

* * * * *

THIS IS GEORGIA ROUTE TWO

-OR-

THE DAY HENRY CRCAKED

Up the mountain and through the woods to the steep hill we go. Here Hixson first used the winch, and here the cable first broke. But by and by he winched his way to the top of the steep hill and proceeded onward, until he made a wrong turn and found the road blocked by a tree. Hixson backed up...into another tree, and jammed the side of the cab next to another tree for good measure. What masterful driving would it take to get us out of this one? Who would do it? But seven logical people should be able to figure out how to back a truck out of a level place that it drove into. An hour of thinking, drinking and manuvering did the trick. The truck was now at right angles to the road, facing downhill into the forest, with trees in front of and behind it.

Out came the chains. Hixson put them on the front wheels in order to get maximum traction from the front wheel drive unit. Boy, did he get it! Power!

He backed into the tree behind the truck. When it did not move, he hit it again, harder, harder. The tree didn't break (tough little S.O.B.) but the truck did. The front wheels stopped turning and it became apparent that the habs had sheared off from the force of hitting the tree with chains on the tires. "It's getting grim," remarked Young. Hixson ignored him as he went behind a tree to releive the tension.

"And Clifford and Boots are a leaving..."

Now that there were only five of us left, the desparation moves began. Putting the chains on the rear wheels had allowed us to dig beautiful ruts in the ground, but the truck hadn't moved. Now, by jacking up the truck, which was Ed Loud's favorite job, and thenpushing it off the jack, we manged to get the truck into a position where we could use the winch. The truck then pulled itself around 180° until it was pointing uphill, facing the road. The cable on the winch would hold no more, however, and the crew prepared to spend the night.

"How long do you think it will take Boots and Clifford to hike 20 miles?"......"%#%#%#%#%\$!" "Five people in a pickup cab!"......."Move over and give me some \$%#&\$# room, Young!"......"It's only 12 hours till morning." And it rained.

After four hours of this sort of thing, Mike finally returned. He had found a local man with a pick-up truck, who had driven up to within about a mile of where we were. We hiked down and froze back to Ducktown in the back of the truck to a belated spaghetti dinner.

The next day, Jim got another 150 feet of cable for the winch and up the mountain and through the woods went the "Rocket" and the Chuckwagon." We hiked up to the truck again and put the new cable on the winch. Hixson cranked up the truck and..... "the gears on his winch are a strippin'."

Back we came to Ducktown, after literally pushing the "Rocket" off Big Frog Mountain. The next day, Hixson found a fellow with a jeep, got a block and tackle, and using the jeep, pulled the truck back onto the road.

It made it back to Ducktown under its own power, but it was apparent to all that Henry had croaked on Big Frog Mountain.

"Will he ever return....."

THOUGHTS ON MAN AGAINST NATURE; A FROGGY MOUNTAIN BREAKDOWN

Twelve thousand years ago primitive man forsook caves as a permanent residence. He found something more comfortable. To early Homo sapiens a mountain was not a challenge to be conquered; it was a challenge to be avoided. By 1970 Homo sapiens have not evolved enough physically from cave men to be called anything but Homo sapiens. Two thousand generations is not really very many. But mentally man has progressed. He seeks challenges; he descends the deepest caves; he ascends the highest mountains.

Recently the author travelled incognito with five members of a Homo sapiens tribe from the karst foothills region. For convience I identify the members with these anthroponomenations: Old Dismal-a male which migrated from the Dismal Swamp; Moccasins Nice-a healthy female; Cripple Leg-a warped male; War Krout-a male resembling Procon lotor; and Mouth of Wind-a loud, non-industrious male.

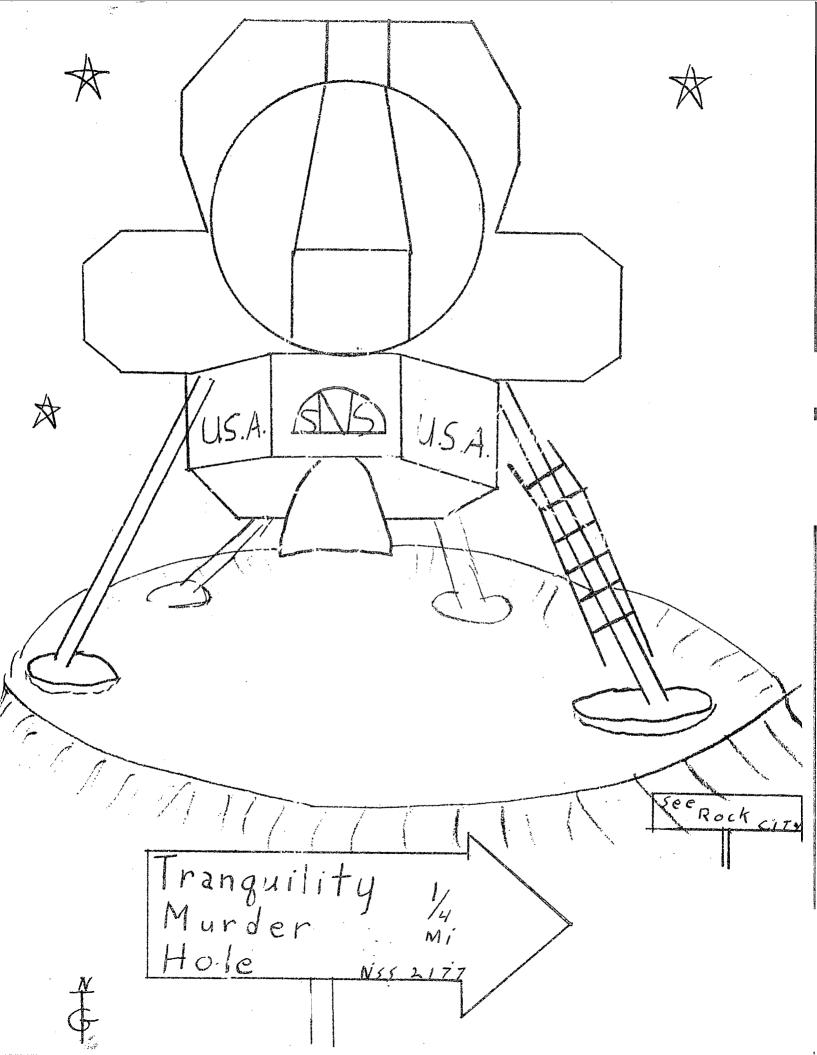
The group travelled south to visit a former member of their tribe named Two-Dog Lover who lived in the Great Ducktown desert by digging rocks. Already with Two-Dog Lover was Beer Nut, a male originally from the Northern Karst region.

The seven gathered together in the hut of Two-Dog Lover to decide what challenge they should conquer. "Let's sit and drink about it." grunted Beer Nut. "No" chorused the other naked apes. Two-Dog Lover spoke, "Let us conquer the Big Frog Mountain." It was agreed upon.

The seven rode their mountain elephent Henry many miles into the howling wilderness below the Big Frog-greatest mountain in Appalachia. Up, up they rode Henry, struggling to climb the sides, the back, and then up the slippery neck of the Big Frog. Every power of the Frog Mountain resisted; every muddy gland and stoney rib fought the human polluters. "The challenge must be met; the nature of Frog Mountain must be subdued" cried Two-Dog Lover. "Or the million years of our evolution will be for nought" screamed Cripple Leg.

On and on the seven fought the mountain from Henry's back. Rain, the Frog Mountain's ally, poured relentless aid. "Man against nature-the eternal struggle," gasped Old Dismal as Henry spun upwards. "Nature shall never conquer our human spirit and stamina." screeched Moccasins Nice. But nature disagreed.

The Big Frog Mountain had captured a fly. Henry slid from the trail and smashed downslope to its forested grave. Big Frog Mountain laughed; the <u>Homo sapiens</u> croaked.



WERE YOU THERE WHEN THIS WAS SAID?

- "You guys are really raring to go, aren't you?" Mike Kayes
- "I LOVE the Devil's Staircase." Jan Nelson
- "It's obvious who's in a better humor after a long trip"

 Ed Day
- "A red beetle! Two red beetles! Look at all the red beetles!" John Holsinger, recent trip to Eternal River of Darkness.
- "Moose! Moose! Moose! Moose!" Cave Club
- "Doug, stop drinking; all the beer" . " Sarah Critzer
- "Now that we're here, we might as well do the Cross-over again" NRVCC
- "Let's sing 'Charlotte' and 'The Big Wheel'." Pig Pen
- "Whoa mule, whoa, whoa mule I say" Mike Clifford
- "I'd like to amend that" Ed Morgan
- "Not on your life, Charley" Tom Speers
- "It's intuitively obvious." Cletus Lee
- "Let's finish the trunk channel before we do the side leads."
 Whitt
- "I'll do it next quarter provided the draft doesn't get me"
 Paul Broughton
- "I heard crickets." Dan Kline
- "Who ate my peppermint patties?" Frank Garrett
- "The Speleo-seminar will be at the Young Men's Chowder and Marching Society" Vig
- "All girls are no good." Mike Frieders
- "Go away. We're double-parked" "T"

Annie Whittemore

* * * * *

Rocky Raccoon shaved off his mask last week and we're still trying to find him.

FIRST TRIP TO HIGGENBOTHAM'S #2
or
HOW TO GO CAVING WITH NOTHING TO DO
AND GET IT ONLY HALF DONE*

Higgenbotham's #2 of Tazewell County has a reputation. It seems that about 60 years ago a local newspaper reported that a flashflood had been diverted by a big deep hole in the ground (Hig-2), thus saving the countryside from a raging torrent. Whether this noble deed can be attributed to this modest cave, or the local journalists had a fieldday of storytelling, is not known for sure. But at any rate, this cave has been pretty much steered clear of by cavers. This trip was originally designed to continue some survey work started the year before, but this plan (due mainly to a late start) was eventually scrapped. So the crew, consisting of Gene ("Mom") Harrison, Gary ("Gary Moss") Moss, Mike("The Guru") Kayes and I decided to take a leisure trip to the lowest section and do a little exploring.

The owner told us of some people down the hill who had been drilling a well recently. A problem arose when, several hundred feet down, the drill bit fell out and into a 14 foot cavity. Verrry Interesting. So, while playing around with the farmer's dog and making faces at his cows, we figured out that it could be very possible and very profitable if we came across a certain piece of valuable equipment. Gene, being the late Safety Director of the Club, said that it would be feasible to run a rescue for the drill bit, providing, of course, that we could find it. (For those with adventure in their hearts and money on their minds, we haven't found it yet.)

Finally, after a good bit of tail dragging, we rigged the entrance with Mike's 200+ and rappelled on in. The entrance is a total of 168 feet, offset by a 30 foot drop. It seems to be a rule of thumb in this cave that where you find one pit, you will usually find another just below it.

While the guys were touring the large breakdown room, which is scattered with 90 or so foot pits, I did a little sightseeing on my own. I came across a rather large log wedged straight up in a crevase. It made me wonder about the authenticity of the flood story and also if there was any rain forcast. Anyway, we rigged the next drop which was close to 100 feet with Gary's 250. So much rope was needed because below this one is another drop which goes down another 75 feet. With this, I got a first hand demonstration of the Harrison way to rig a drop using miles of rope. (I have always wondered how one hogties a 30 ton rock.) But, I can say that I really did have confidence that the knots would hold.

*This appears to be a completely illogical statement, but when caving with an illogically logical person like Mike Kayes, it somehow makes sense.

I questioned Mike if this hole had a name. Getting a somewhat negative answer, I suggested calling it the Peach Pit. No one seemed too enthusiastic about this, and as a matter of fact, the name was in imminent danger of being tossed down the newly named drop. It got even worse when down at the bottom of that pit, I offered calling the second drop the Prune Pit. (On a subsequent trip this drop was renamed Janet's Pit, after a certain clumsy and troublesome girl who smashed up her knee while chimneying down to the drop, thus cutting short a mapping trip.) Anyway, the engineers were designing a set up so two people could be on the rope at once, thus speeding up the job of getting everyone up both drops.

Down in the main lower passage we worked our way down gradually, accomplishing all sorts of heroic feats as scrambling, walking, jumping into streams, (falling in my case), crawling, climbing, etc. Off on the side someone discovered a mutilated peice of metal that looked as if it had been attacked by a fleet of Mack trucks. Considering that we were somewhat off the local truck route, it was evident that the aluminum pail had been mangled by the raging torrents of lowest Hig. Pleasant thoughts.

Anyway, while taking a breather Mike asked Gene what would he do (concerning a rescue) if someone, then pointing at me, broke a leg right there. After going into all sorts of procedure and "Gruesome Rescues I Have Known", he concluded that it would be a helluva lot simpler to utilize one of the essential items of a rescue kit, namely a .45. The reasoning was that one could go about recovering the victim at one's leisure. Needless to say, I was being very careful not to do myself any serious bodily injury.

After checking just about every hole, crack and side lead, it was concluded that there wasn't a whole lot down there that had not been seen before. But this wasn't too disappointing considering that there were some unchecked drops in the breakdown room. We reached what was believed to be the lowest stream level and I got the impression that there wasm't any future in pushing it further.

Starting back out we retraced the pattern of antics to the bottom of the Prune Pit. Like most cavers I have pretty good faith in nylon webbing, but this should not be disillusioning. When Mike was about two thirds up the drop, a large string of Polish obscenities rang out, and was immediately followed by the lower portion of a Jumar sling hitting the ground. But somehow, with pieces of string, chewing gum, and other things Polacks usually have with them, he was able to get up to the ledge. This makes one wonder how often people check out the strength of their slings.

At the bottom of the Peach Pit someone observed a faded arrow pointing upward with "VPI 57" near it. Mike, being the brave and foolhardy soul that he is, investigated the little path of arrows up through this rather precarious chimney. It was apparent that some early explorer had found a climb up and around the Peach Pit. This was obviously good for future parties on speeding up the trip out. Since there is something definitely lacking in my climbing abilities, I chose the rope, which are very nice things to have around.

Loaded with rope and tired bods we got to the bottom of the entrance. Looking upward and feeling how tired we were, it was decided that first man up would go all the way up to the tree and then from the ledge at the bottom of the sink he would toss the next guy a line and pull him over. If this worked. it would cut off 40 feet of ropework. The system worked pretty well with Gene getting Mike over, but I could feel that something would go wrong when I got on the rope. About halfway up the carabiner taking up slack on my lead sling got hooked onto the locking biner on my seat sling, which enabled me to get two inch bites with the Jumar. If this wasn't enough, a cramp was working on one leg, my lamp had died and I felt like ___ (you know the word). The only thing the people from the top could give me was an encouraging word or two and a chorus of Exodus. I finally got out though, but not without a few more bruises added to the already large collection. Gary made it up alright and the trip was wrapped up after 12 hours. We felt the need for a long recuperation, but I know that you know how great it feels after a hard but good trip, and to watch the dawn break over the mountains.

Janet Queisser

* * * * *

QUESTIONS ADDRESSED TO OUR FOUNDER:

Dear A.I.,

I have a very delicate special problem. I love a person who only lives to rappel(?), prussik, and push tiny passages. How can I make her notice me?

S.S. Jock

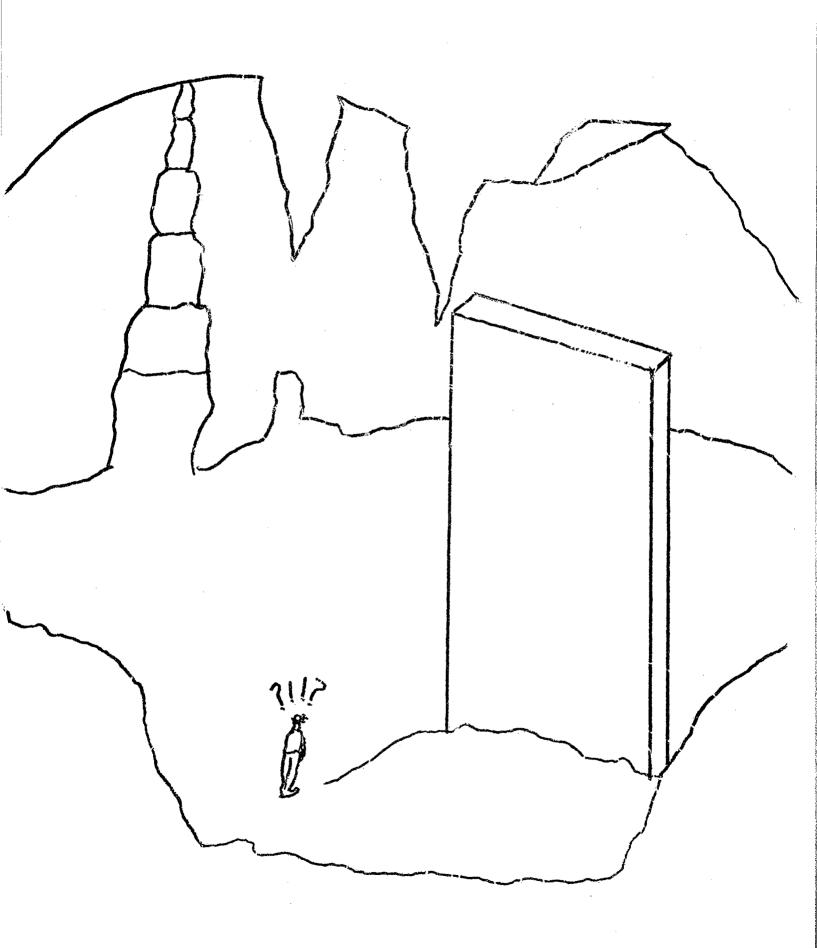
Dear S.S.,

Tell her you know of a virgin pit in the area.

Dear A.I.,

When exploring Breathing Cave I have trouble negotiating the Nutcracker Passage. What should I do?

Joe Hunglowe



Dear Joe,
Consult Myra Breckenridge.

Dear A.I.,

When I go caving I get these terrible bruises; I'm really all banged up. Is there any solution?

Embarrassed

Dear Embarrassed,

Make it an all girl trip.

Dear A.I.,

Sweetheart, when I go caving my coveralls rip out in the seat. Please help me dear.

Frigid

Dear Frigid,
Wear pretty undies.

Dear A.I.,
I am a boy.

Dear boy,
Consult Bill Douty.

Please address all future inquiries to: A.I. Cartwright
Box 471
Blacksburg, Va.
24060

* * * * *

MIDDLE EARTH

"OK, you're all set."

 I_{r} stood on the edge, overlooking the precipice.

"How far is it down there did you say?" I mumbled.

"180 feet...you can go now whenever you're ready."
Don't worry. You have a belay."

What in God's name compelled me to come in here in the first place? Curiosity? Pride? I couldn't say what, but here I stood, trembling on the rim of a vast cavity, surrounded by rock and mud and space. Why was I there?

Two of us remained to make the descent. I could hear vaguely the sounds of the others far below, but I felt that they didn't exist at all.

"Anytime," I heard from behind me.

I glanced down at the thin rope harness around me - held only be a square knot. It sure takes a lot to have faith in a puzzle of rope. Attached was a little oval of steel which "locked" in place. But what really grabbed me were the 2 actual rappeling carabiners with their aluminum brake bars. Aluminum. It seemed to me that aluminum wasn't the strongest metal in the world. And the rope. Three-fourths of an inch of rope, slightly worn at places but still "almost" brand new rope.

"Remember, keep you control hand on the rope at all times or you're gonna have a bigger coffin than you'd ever dreamed of."

Ha-ha. Very funny. I would have to be left with the only jokester in the bunch.

Oh well, why not? (seems to me that's what I kept telling myself)

"What is it I yell?", I muttered. He told me and I squeaked out, "On Rope." Louder. "On Rope."

I was answered almost instantly by "On Belay."

I turned to my accomplice. He smiled and told me to have a good time.

Thanks, I thought. My pride said, "O.K.!" - but not too exuberantly.

I kneeled at the ledge and looked over - nothing. Calling "Rappelling", I gave myself to the abyss. I leaned back on the rope. Confidence - you must have complete confidence in these material objects. Oh God! The carabiners strained at my swiss seat and clanked as they straightened out with the direction of the rope.

"You'll have to move the rope into that little slot in the rock", he instructed.

"O.K. - if you say so." Then I noticed a well-worn place about two feet from where the rope lay tight against the edge. "How can I do that with my weight on the rope?"

"Just lift yourself up."

Oh. O.K. - I did it, much to my surprise it wasn't hard at all.

"Now, just ease yourself down - go as fast as you like - you're in control"..

Right! I pushed away from the rock face with my feet and started down, listening to the soft whirr of the rope as it shot through the "biners".

wow!" I shouted. Something happened to me. I felt a sudden thrill rush through my whole being. I went faster - complete confidence was mine. Pulling back on the rope, I stopped instantly, swinging like a pendulum 150 feet from the floor with at least 300 feet of space reaching to the ceiling above me. I looked down. Tiny specks of light pierced the darkness. My mind bent. I released tension on the rope, barreling through the timeless air, watching the lights grow nearer and nearer.

"It's wonderful!" I yelled, stimulated by a passion for what I did.

The rocks approached and all to soon I slowed myself to a stop on the floor of the cave.

The carabiners and brake bars, hot from the friction of the long rappell, opened finally, releasing the rope. The last person rappelled down in grand style - non-stop and with no tension until about 10 feet from the floor.

"Hey." someone suggested, "let's blow out all the lamps."

So we did. And all around me there was black, complete absence of light. And I knew. I knew why I was there, at the bottom of "the 180" as it was called. It struck me suddenly, as loud as "silent flowers" and my mind rested with an overwhelming sensation of serene peace.

Boots

* * * * *

HOW TO REDUCE ROPE ABRASION BY PADDING

There is no rope currently available that completely resists abrasion. Some ropes resist wear and tear better than others. In general, synthetic ropes resist abrasion better than those made of natural fibers. Also laid ropes wear better than braided or plaited ropes and ropes whose fibers are tightly woven are more abrasion resistant than "soft" ropes. There are three major ways to abrade a rope. The first way is running a rope over objects that create a bend in the rope. (See example 1) The number and degree of e's one puts in the rope depends on the method of rigging the rope and the method of descent and ascent. This is excluded from this discussion. The second way of abrasion is running a rope over rough surfaces. This is usually

encountered at the lip of a drop or on protusions along the drop. The third way is allowing mud, grit, and dirt to grind away at the fibers.

In many rigging instances it is possible to position the rope so as to have a gentle bend, a smooth surface, and a surface free of mud or dirt. On the other hand, it is sometimes unavoidable to rig a drop that has a nasty jagged lip with a thick coating of gritty mud. Most drops can be categorized in between these two extremes but the point is keeping your rope from these demons will certainly prolong the life of the rope and will increase your safety margin no matter what type of rope you may be using.

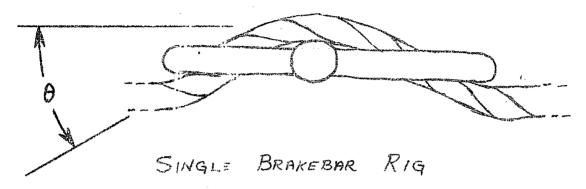
Judgement in rigging the drop will provide the rope with its best natural protection but usually some sort of padding is in order. Perhaps the simplest method of padding is to wrap some material, i.e. cloth, burlap, etc., around that portion of the rope that rubs against the wall or breakover. This will do the job but offers disadvantages. The pad probably will not stay in place and it may be difficult to go over, particularly if it is long.

Some cavers slit a section of garden hose and slip it onto the rope where it may be needed. This will probably stay on better but it too may be difficult to get over while prussiking or while on rappel.

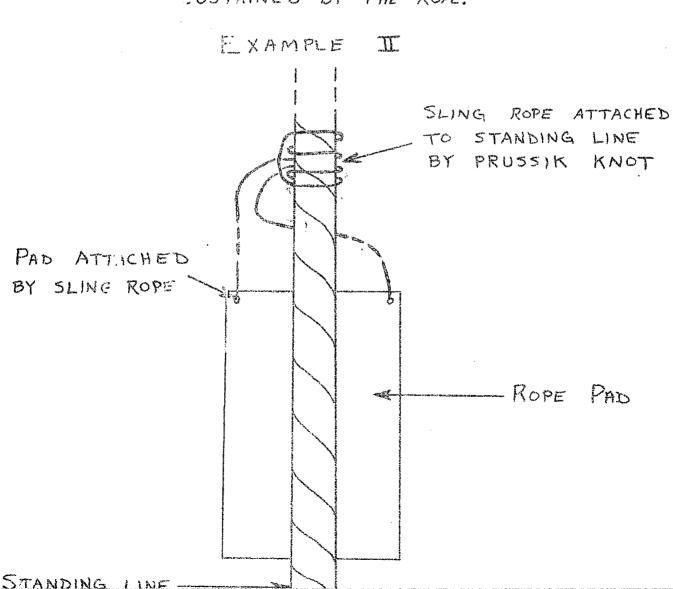
Perhaps the best rope pad is made such as to be tied onto the standing line in a prussik knot fashion. (See ... example 2) The pad may be made of cloth or burlap but the longest-lasting and most effective material is heavy leather. This may be impractical if the drop is deep inside the cave where the additional weight and bulkiness may be disadvantageous. One-quarter inch sling rope (synthetic type is best) is attached to the pad in two corners of one of the shorter edges. The sling rope is then, in turn, attached to the main line by means of a prussik knot. Once attached, the pad's position may easily be adjusted and the pad tightened to stay in place. The pad may be made in any length to accompdate the drop. The width can be kept to a minimum, usually on the order of 10-12 inches, to allow for some rope displacement. This pad is easy to go over. With Jumars one may simply clip over the knot but it is easy to slide the knot ahead or behind you. The length of the sling rope should be fairly long (3-4 feet from pad to knot) to ease pad placement.

When should one pad a rope? It never hurts to use a pad so when in doubt, use one. Most cavers using hard-lay Goldline do not use a pad. Goldline is probably the most abrasion resistant rope in use today. However, on one occasion this author was rappelling on Goldline and passed a place on the rope where one of the three strands was completely severed! However, in moderate conditions unpadded

EXAMPLE I



THE GREATER THE ANGLE O, THE MORE ABRASION SUSTAINED BY THE ROPE.



Goldline doesn't wear too fast. But an abrasion-sensitive rope such as Samson 2-in-1 braided nylon almost always requires a pad. It's your rope and you might not care how long it lasts but other lives may depend on the care you give your rope. Use a pad where needed.

Dale Parrott

* * * * *

VPI COLOR CODE LIST

NAME COLOR NAME		
	COLOI	3
Barlow, Bob y Mills, Berge, Karl r-y-b Mohr, F Clark, Roy b-bk-r Morgan, Clifford, Mike br-g Moss, G Coleman, Ned b-g-r Nelson, Conefrey, Mike g-bk-g O'Meara Cooke, Larry g-y-g Olson, Dawson, Jim w-b-w Park, E Douty, Bill g-w-g Parrott Eberhard, Jerry bk-br-bk Perkins Eddy, Carl o Queisse Ellenfield, Craig g-w-b Riordan Fagan, Joey g-r-o-g Roller, Frame, Mike g-w-bk Schnaar Frieders, Mike y-r-y Thorne, Good, Boots bk-pk-bk Turenne Good, Boots r Harmon, Winston p-o-b Weber, Harrison, Gene g-r-g Whitten	Dave br-y Bruce b-g-b Bruce b-g-b Bruce b-g-b Bruce b-g-b Bruce b-g-b Bruce b-g-b Bruce gr-b Sary r-b Niel r-bk-; A, Jack w-r-w Suzanne g-r-g Sill r-y-bl Bruce bk-y-l Bruce br-r-b Bruce br-r-b Bruce br-r-b Bruce br-y-r	v c c c c c c c c c c c c c c c c c c c

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LISTING OF PAST TECH TROGLODYTE ISSUES

Dear Exchange Editors

We have received many requests for our past issues. Below are all the Tech Troglodytes ever published. The early issues are few and far between, but the latter issues we have quite a few of. If you want any of the old issues please send enough money for postage and they will be sent to you as soon as possible.

Winter Spring Summer Fall	Vol. Missi Vol. Vol.	ng I,	No. No.	3
Winter Spring Summer	Vol. Missi Missi	ng	No.	1
Winter	Vol. Vol. Vol.	III III III	_	1 2 3 4
Fall Winter Spring Summer	Missi Vol. Vol.	IA	No. No.	2 3 4
Fall	Vol.	V	No.	1

Between the last issue and the next there is a considerable time laspe due to the absence of an editor.

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Vol. V
                  No. 1
Winter
         Missing
Spring
Summer
         Missing
Fall
         Missing
Winter
         Missing
        Vol. VI
                  Nc. 2
Spring
Fall
         Vol. VI
                  N_{\star}. 3
         Vol. VII No. 1
Winter
Spring
Summer
Fall Vol. VIII No. 1
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