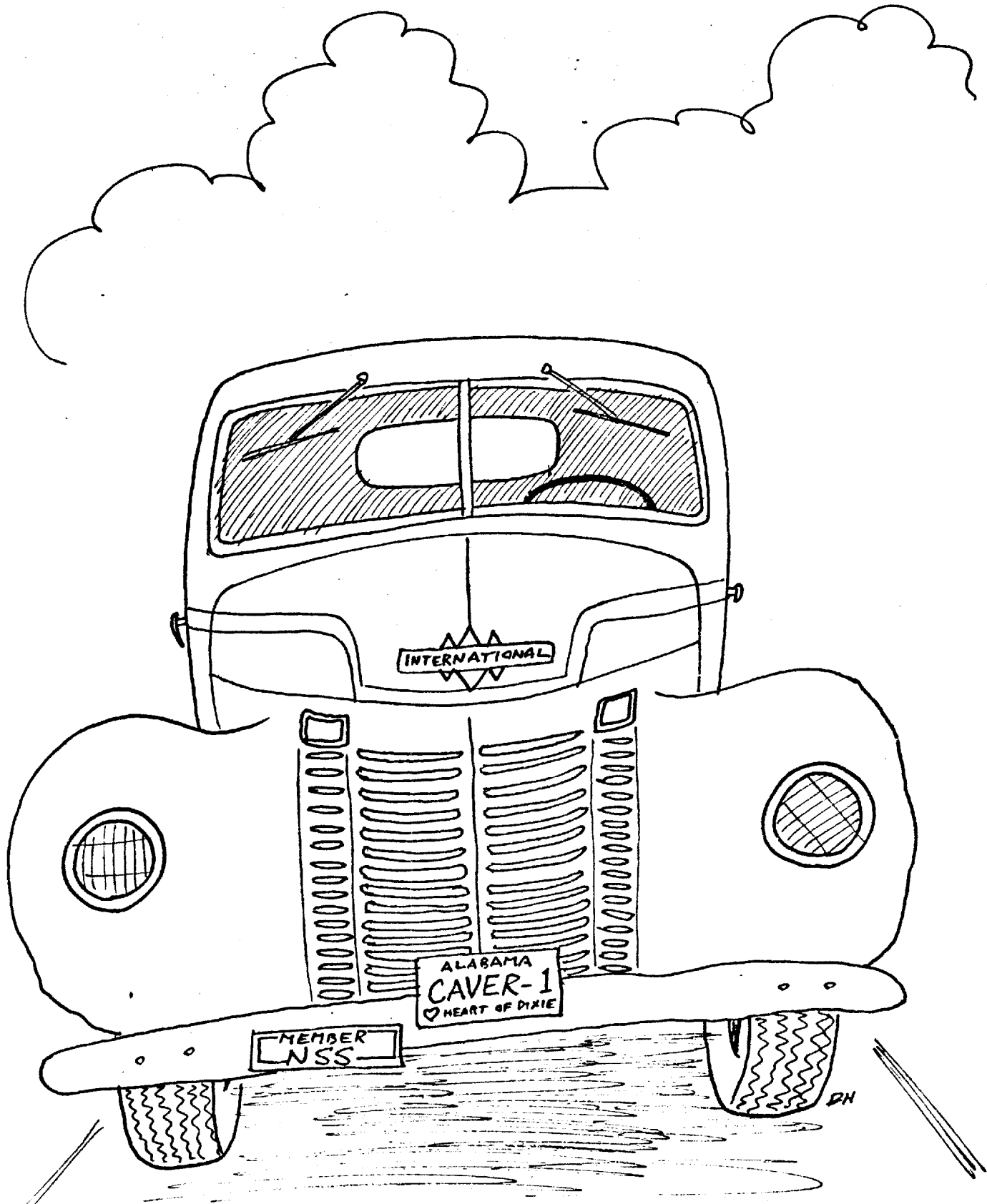


BIRMINGHAM GROTTIC NEWSLETTER
NATIONAL SPELEOLOGICAL SOCIETY
SEPTEMBER 1978



THIS COVER SALUTES
INTERNATIONAL CAVERS



Editorial on Cave Owner Relations

by David Howell

Within the last few months, FALLING CAVE and the entire hillside on which it is located was placed off limits by the owner; numerous "no trespassing" signs have been placed at the beginning of the old incline road that leads up the mountain and past the cave. When approached recently by cavers, the landowner (who lives only a few hundred yards away from the beginning of the incline road) said that he'd never had any trouble with cavers, that the trouble he'd had was with hunters and redneck "sightseers." He said that he had tried a selective trespassing policy to allow cavers to visit FALLING CAVE but not to permit anyone else on the land, but this had been ineffective, so he was forced to place his land off limits to everyone. He further stated, however, that if things went well and the situation "smoothed out" after one year passes, he will consider opening the area again to cavers.

Earlier this summer, three Tennessee cavers discussed over breakfast one Saturday a visit to FALLING CAVE. One of their number reminded his companions that FALLING CAVE was off limits, but his words were disregarded with the reply, "Well, we'll just go on up there anyway and hope he (the property owner) doesn't see us." The first caver declined to violate the no trespassing signs, and departed; the other two, both highly experienced cavers of a mature age and one a fellow of the NSS visited FALLING CAVE.

The stupidity of this action is monumental, and when one considers the experience and qualifications of those individuals involved, it is inexcusable. Relations between cavers and the owner of FALLING CAVE, which have always been friendly and cordial, are jeopardized because two people who most certainly should have known better did not exercise some very basic common sense and courtesy. It is truly distressing to discover that there are people in the NSS who would do something like this. They are not to be

tolerated, for not only do their actions destroy in a moment the fragile cave owner relations which many others have built at considerable expense of time and effort, they also cast reflections on all cavers everywhere.

DATES TO WATCH ~~*****~~

NEXT GROTTO MEETING:

Monday September 11 at 7:30 p.m.
(Remember Labor Day)

Red Mountain Museum Auditorium
15th Avenue South

Let us know of any trips going out between grotto meetings and help fill up this space!

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Submit materials for publication directly to the Editors. Deadline for receiving materials is the 20th day of the month preceding the month of issue. Materials received after this date will be published in the following issue.

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COMPUTERS IN CAVING

By John R. Moore

Before we get into the meat of this article, let me explain what I mean by survey plotting and why one would use a computer in the first place. Survey point plotting is simply locating on a coordinate system, points with relation to one another. These survey points are the points used in mapping the cave. Advantages of using a computer are permanent storage capabilities, ease in creation and updating output format. Speed is not really an advantage here. For a rough survey plot, a person with graph paper and a calculator with trig functions can usually beat the turn-around time for preparing and entering data and receiving the results. And while the machine is reliable, key-punching and standardization (converting to one common format - this is written into my program) add extra steps, therefore offering another chance for something to go wrong.

This program was originally written in BASIC and run on a PDP-11/20 minicomputer. I am currently running version 5 of the program on an IBM 370/158 in FORTRAN. The program was based on flowcharts and a program description for the program in use by the West Virginia Association for Cave Studies (WVACS) described in the NSS Bulletin (1974, 36(2): 7-17). Many references to that article and that program will be found herein. Please do not get the idea from what I say about it that my program is inferior to theirs; WVACS's program has been developing and growing since 1964 and has had many people working on it. My program cannot boast that much time or experience. And now, on with the article.

Before writing any code, some things must be decided: How will you calculate the coordinates? What data are necessary for this calculation? Will you calculate only x- and y-coordinates (horizontal plane), or go with the vertical also? Will you work in British units (feet and inches) or metric? How will your data be read in? What format? How will it be laid out on the card? I have chosen to borrow from WVACS's experience and follow their

program and card format.

The program calculates coordinates in all three dimensions in the British system of measurement. The program requires the length of the shot, the azimuth bearing, and the coordinates of one of the 2 stations to calculate a new set of coordinates. If a vertical angle is not included, my program assumes 0° (and forcefits loop closure through 3 dimensions: WVACS will not close z-coordinates in loops without vertical control. More on this later). Shot length may be read in feet-inches, feet-decimal (e.g. 14.7), or metric; angles in degrees-minutes, degrees-decimal, mils (or, in WVACS, quadrant notation (azimuth) or percent grade (vertical)). Conversion to degrees-decimal and feet-decimal is carried out by the machine.

One feature of the WVACS program I especially liked is the so-called "two-way data card." By requiring both stations (more correctly, station names; these may be up to 4 characters long, any symbol allowed) to be identified on a card, a card may be completely interpreted without reference to any other card in the deck. It also allows for the free use of fore-and back-sights within a branch. I have endeavored to keep as much of this versatility as possible.

Another necessary consideration is what information should be stored to generate the output. WVACS uses a large array containing all the possible print positions (108,275 of them), storing the character to be printed in each member, and a smaller (25 element) "index" array to identify quadrangles to be printed. The system I wrote my first program on did not have enough space available to do it that way, so I altered the procedure to store the coordinates in an array, and, using an index, only printed the quadrangles with valid coordinates. I still use this procedure, although it is much slower than WVACS (my program includes few of their special functions, yet is almost 4 times slower than theirs).

Probably the best way to understand how the program works is to follow test data through the program. There are 11 survey shots, one of which is a back sight. One set of shots follows a stream, the other a crawl. The cave name and branch name are read from cards preceding the shot data.

When a card is read, a check is made to determine whether or not the first station

is 'END '. If it is, no more cards are to be read; if it is not, the program locates the first reference to that station in the survey shots. If the shot is a back-sight, the azimuth is changed by 180 degrees, and the sign of the vertical angle is changed.

All bearings are then standardized, and the next card is read. When the 'END ' card is read, a summary of the data is printed out:

NAME OF CAVE: GARBAGE
 DATE OF CALCULATIONS: 8/ 23/ 78
 TEST CATA - 1
 CAVE COORDINATES IN FEET

STA	NCRTH	EAST	UP	DIST
E1	60.	38.	0.	0.
E2	57.	42.	0.	6.
S1	47.	40.	0.	16.
S2	39.	31.	0.	28.
S3	26.	27.	0.	42.
S4	31.	56.	0.	72.
RM1	19.	54.	0.	84.
C1	49.	47.	0.	92.
C2	39.	60.	0.	109.
C3	27.	66.	0.	122.
RM2	20.	60.	0.	131.

Starting coordinates, read in from a header card at the beginning of the branch, are assigned to the first station. New coordinates for all points are calculated from here or from the first set calculated if more than one shot originates from one point. (Note that WVACS uses the last set of coordinates calculated.) A summary of uncorrected coordinates is then printed. If the branch is a loop, coordinates are force-fitted and a summary of corrected coordinates is output. Each quadrangle with valid coordinates is then printed. (A copy of this output should follow the article.) A summary of corrections is printed last, if the branch was a loop.

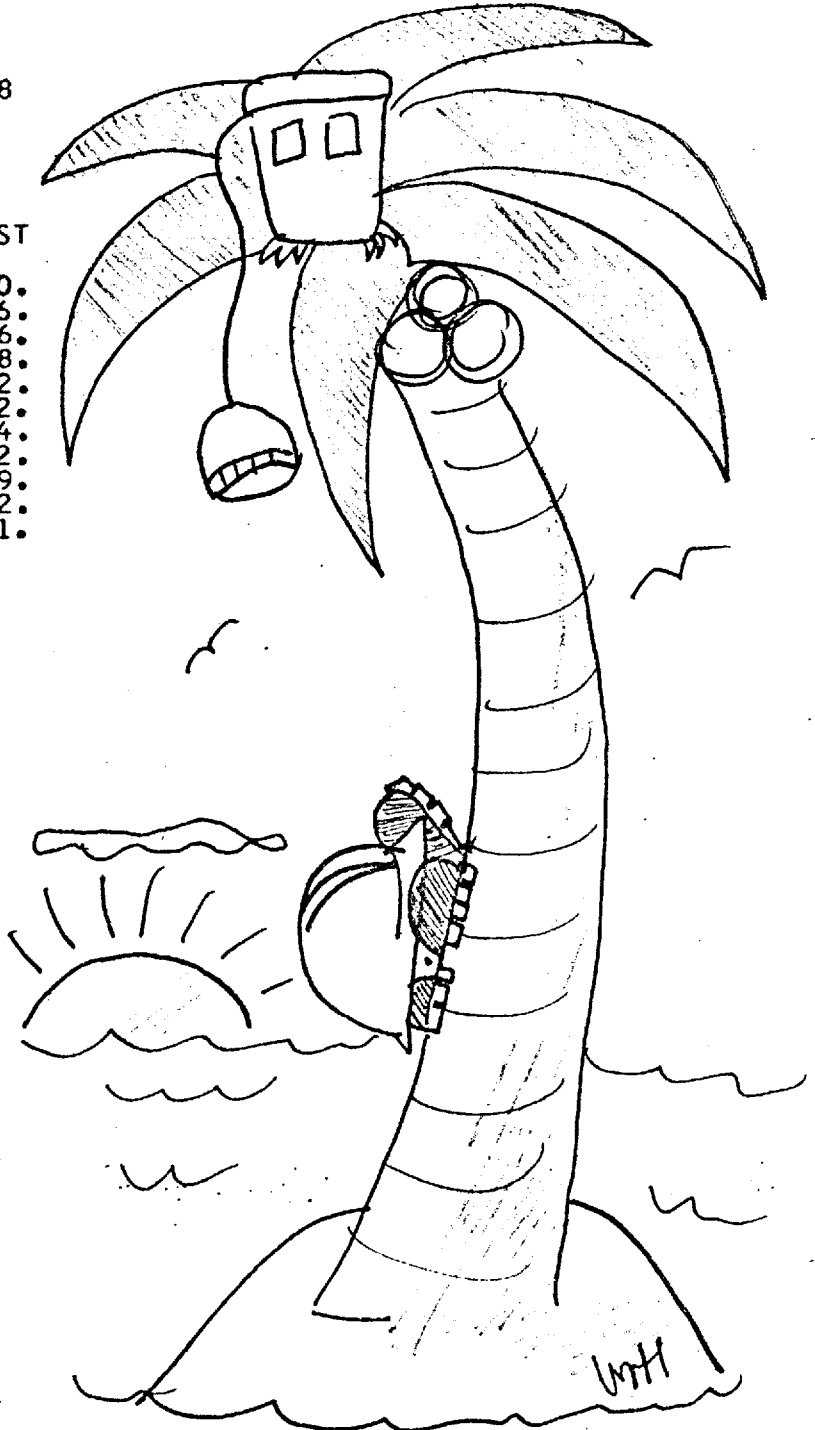
Further information may be obtained from NSS Bulletin, 1974, 36(2): 7-17, or John Moore. You may also see John if you have survey information you would like printed (forms for supplying necessary data to John are available on request).

Is the strain torsional rather than tensional? Send in the answer, and perhaps save a life.

submitted by Jet Thomas

4. Given a tree with no low branches, does anyone know a nondestructive way to prusik up? Spikes are, of course, not acceptable.

Jet Thomas

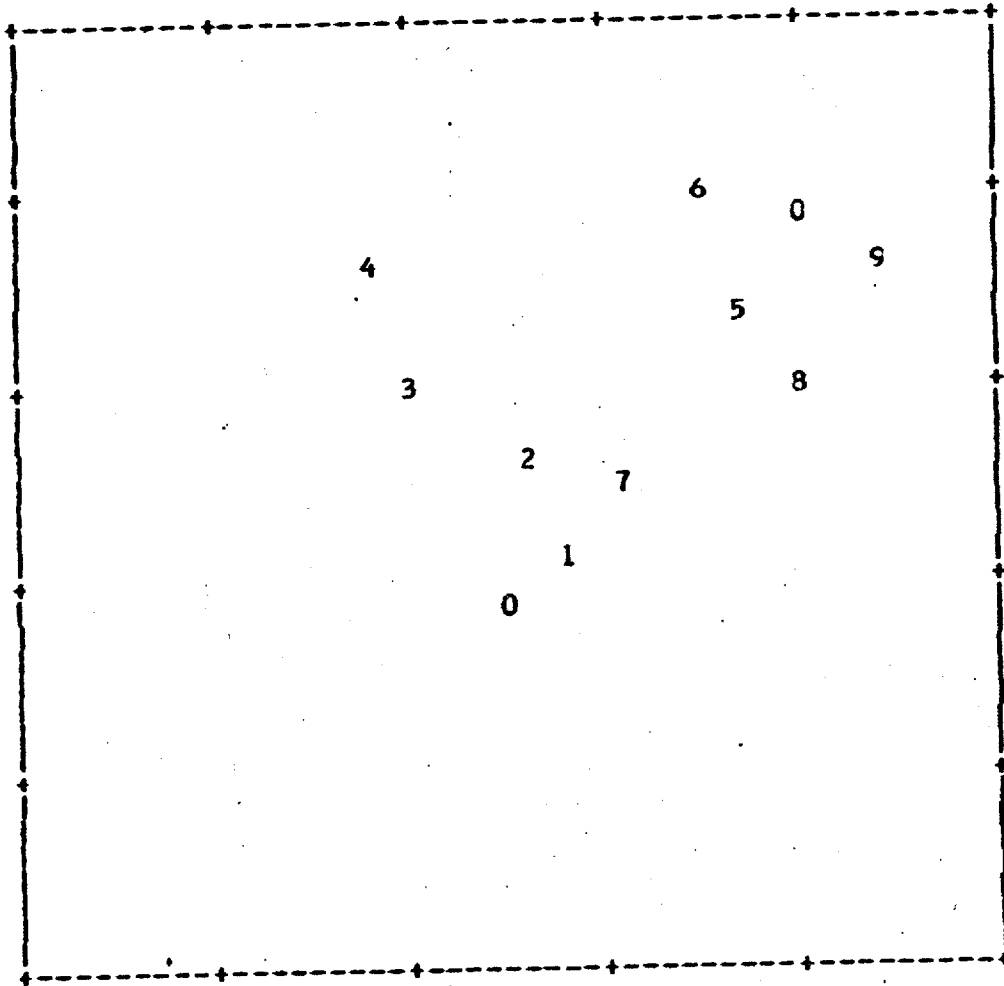


NAME OF CAVE: GARBAGE

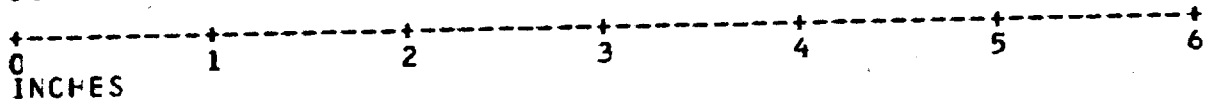
DATE OF CALCULATIONS: 8/ 23/ 78

TEST DATA - 1

1-1



SCALE IS 15.0 FT/IN, OR 1:180.0



HORIZONTAL
SCALE
1.5

VERTICAL
SCALE
2.5

DECLINATION
CORRECTION
0.0

VOICES FROM UNDERGROUND

LICK FORK CREEK AND MAXWELL MTN. AREA *

Friday, July 28, 1978 *

Tom Chamblee - Reporter *

Taking advantage of a couple of days vacation time, I headed for the beautiful, rugged Cumberland Mountains in the Paint Rock Valley area. Approximately 3.5 miles north of Princeton, I arrived at my planned destination, the valley of the LICK FORK CREEK. At a point where Jackson County #3 crosses the creek before ascending Putman Mountain to the west, I parked and proceeded upstream afoot. Almost 2 miles upstream one comes in line with Racepath Hollow, a large gulf incised into Putman Mountain. Directly in front stands Beshears Point towering 1100' above the valley floor (elev. 1720' MSL). This view of Putman Mtn. presents a very impressive scene indeed!

Walking at many points in the stream bed, I was able to collect some very nice specimens of Paint Rock agate. The LICK FORK has plentiful and diverse deposits of cryptocrystalline quartz throughout its length.

At approximately 1 mile upstream, I encountered a beautiful spring discharging at the base of Beshears Point. The limestone talus and bluffs are covered with moss and surrounded by large hardwood trees, making the spring a real photogenic place.

One repeatedly crosses the bed of LICK FORK and at one spot, looking upstream, one can see where the stream has incised a "meandering" trench into the bare, smooth limestone pavement of the creek's bed. This would make a unique photograph to say the least. At a point just beyond Rochelle Hollow (gulf), I searched for a cave shown on the King Cove Quadrangle. I could not locate it and in a later phone conversation with Bill Torode, he informed me that this cave did not exist! They had searched for it, could not locate it and in checking with the USGS found that it was probably a mapping error. From here, I ascended Maxwell Mtn. to the top (1800' MSL). The forests along the upper bench and on top are tall, straight broadleaf trees with very little underbrush (there are lots of white oak, poplars,

and shagbarks, etc.).

From here, I proceeded approximately 1 mile north to a point overlooking King Cove, a large sink valley at the head of Rocky Branch Creek. I then turned and proceeded south along the west bluff of Maxwell Mountain peering through the tall trees that often stand 30' - 35' above the crests of 70' sandstone bluffs. (Many of these hardwoods range from 80' to 115' tall along the bench and top of the mountain.) There are several gross "bald" areas along these bluffs which add to the sylvan majesty of the area. At a point 1½ miles south of where I turned around, I stood upon a bluff looking south down Reid Cove to Paint Rock Valley far below. This view, especially in the winter, would afford a spectacular panorama to the enthusiastic mountain lover.

While on the plateau, I walked upon a couple of moderate sized, red-coated whitetail deer and heard a grunting growl which reminded me of an east Tennessee black bear. I walked another mile along the top to a jutting sandstone table rock above Shores Low Gap. At this point, I proceeded down the steepest, meanest, orneriest ravine ever, to the floor at Lick Fork Creek, ¾ mile north of Racepath Hollow. From here, I proceeded battered, worn and torn, back to my Pinto another mile to the south. This walk is well worth every huff and puff of the way. Besides seeing tranquil forest beauty, spectacular views, interesting geologic features, I also saw some very unique looking plants along the way. Anyone who truly loves God's nature should take the time to enjoy a thrilling walk such as this.



A Stroll Up Clear Creek Valley
Saturday, July 29, 1978

Jim Chamblee - Reporter

After spending a refreshing evening at the Myrick Motel near Huntsville, I re-entered Paint Rock Valley and headed up the Clear Creek prong to Mr. Floyd Clemons' farm. Upon arrival, I conversed with Mr. Clemons about entering the Cox Sinks to visit TONY SINKS CAVE. He was extremely helpful, friendly and told me how to locate the cave one in Cox Sinks. Before I departed, I showed him a beautiful chunk of agate that I had found the day before. He told me that he would cut and polish it if he was availed the time to do so. Mr. Clemons has a diamond saw and an exceptional rock and mineral collection.

I started up the main road which leads into the Cox Sink 1½ miles to the north. At a point where the main road ascends the saddle, I took a side trip and walked along the old road at valley floor level.

A short distance beyond, I encountered MCFARLAND'S CAVE on the left. This is a large, beautiful entrance in a 45' high limestone cliff. The entrance measures 115' wide (wall to wall) by 15' high, and is strewn with moss-covered talus making this a very lovely spot. A short way beyond, one comes to an old log building at the foot of the saddle below Cox Sinks.

A path behind the log structure leads to a large entrance out of which flows a branch creek. The entrance is 50' wide by 10' high and the first room is adorned with mossy, weathered balloon stalactites throughout. 100 feet from the mouth one encounters a sloping waterfall which leads up into a high vadose passage beyond. Seeing that this pitch would need the most advanced climbing apparatus, I quickly proceeded outside and obtained a "sturdy" oak pole to aid in the ascent. After accomplishing this climb, I crossed a 4' deep clear pool to another sheer pitch approximately 10' high. This one looked a little too difficult to do alone.

The passage here is a smooth gray, massive limestone tube adorned with tan stalactites and shiny black flint nodules. I am not sure, but I have a feeling that this may be the outflow for the ENGLE DOUBLE system.

Upon leaving this cave, I climbed over the saddle and entered the Cox Sinks below. Crossing a thick soybean field, I walked into a steep walled incised clay gorge which leads into a deep sump which I believe to be the lower entrance to TONEY SINKS CAVE. This is presently filled with clayey sand wash and could not be entered. After leaving the sinks and the Clear Creek area, I headed for HERRING CAVE at the south end of Keel Mountain.

Usually the entrance to this cavern is deep in water (7' deep) but due to a very dry spell the pool was only waist deep. In this first section, the passage is flat roofed and approximately 30' to 35' wide. Along this corridor are profuse pendant nodules and also limestone ceiling pendants, a feature formed during initial enlargement of the cave in the phreatic zone.

Approximately 1300' from the entrance, one enters a very large, open rotunda-like room measuring 45' high by 100' wide by 150' long. From the ceiling of this room hangs a series of large stalactites, one measuring almost 20 inches in length. On top of the sandy clay bank in this room are three 8' tall "monument pillar" stalagmites adding more impressive character to this room.

From here, I entered a very long smooth elliptical conduit 35' wide by 5.5' high about thigh deep in the stream. Once through this tube, the character of the cavern changes to a flat roofed, more square shaped hall of quite large proportions (dimensions range from 35' to 75' wide by 15' to 45' high). In numerous areas, there are profuse white to tan stalactites which dramatically contrast against the medium to dark gray massive Monteagle limestone ceiling and walls. At one area there is a forest of long, dainty soda straws of great photographic potential.

At what I would guess to be close to a mile from the entrance is the most awesome feature of the cave. To this point one has been walking through a very large flat-roofed hall 35' high by 60' wide. Suddenly, beyond lies blackness and there you are, standing in a chamber which staggers human comprehension.

I spent an hour here gazing and trying to ascertain rough measurements. I climbed the enormous talus pile to a level less than ½ way in elevation above the stream.

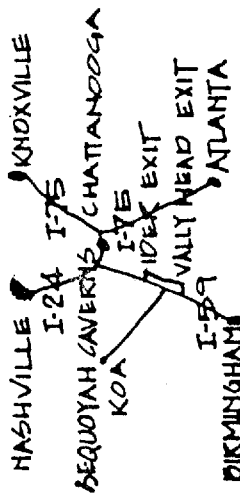
CONTINUED.....

OCT 13, 14, 15

SOLELY TO THE GENIUS OF DOGWOOD CITY GROTTO
ATLANTA GEORGIA:

THE **1ST ANNUAL**

T.R.G. FALL CAVE-IN
SEQUOYAH CAVERNS KOA
VALLEY HEAD, ALA

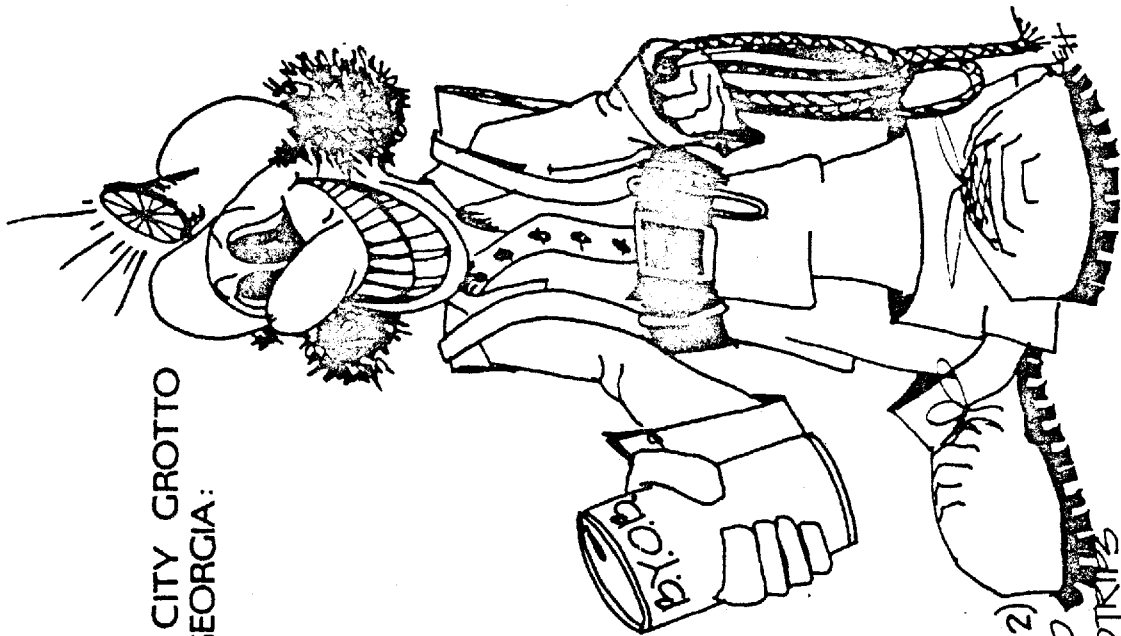


FOLLOW SIGNS TO SEQUOYAH CAVERNS

- ♦ 4.00 - PER PERSON (PRE-REGISTER)
- ♦ 5.00 - AT GATE UNDER 12 - FREE
- MUST PRE-REGISTER FOR BANQUET:
- 3.50 PER ADULT - 2.75 KIDS (UNDER 12)
- AWD RALLY GUIDE BOOK - BLUEGRASS BAND
- SPELEO OLYMPICS - DOOR PRIZES - GUIDED TRIPS

PLEASE PRE-REGISTER (BEFORE OCT 9)

SEND TO: MARY CROMER 2758 BENTWOOD DR MARIETTA GA 30067



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