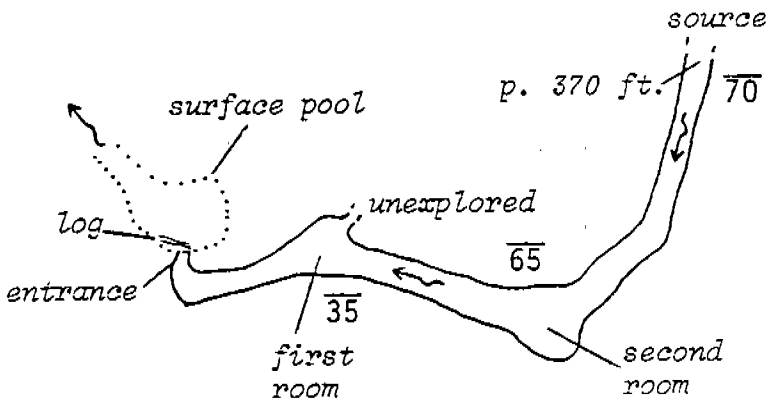

BLUE SPRINGS CAVE

WASHINGTON CO., FLORIDA

Survey by Cave Diving Section of the
National Speleological Society

T. COOK, G. M. DONAHOO, S. EXLEY

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underwater speleology

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UNDERWATER SPELEOLOGY

published bi-monthly
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Membership in the NSS Cave Diving Section is open to any NSS member in good standing that is interested in cave diving and has paid the dues ($3.00 for 1979). Immediate family of members not wishing to receive a newsletter may also join for $1.50. Persons not wishing to join may subscribe for $5.00 per year. Checks should be made payable to "NSS Cave Diving Section" and sent to the treasurer, Stephen Maegerlein.

Deadline is the second Friday of the preceeding month. Send articles and correspondence to the editor, Gene Melton.

Opinions expressed herein are not necessarily those of the NSS Cave Diving Section.

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COVER

Our cover map is of Blue Springs near Ebro, Florida. An early cave dive in this system is described on page 3. Looks like a place for more possible exploration.

CALENDAR

May 26-27, 1979: 11th NSS Cave Diving Workshop, Branford, FL (Contact John Zumrick - address above)

July 29-Aug.4, 1979: "Cave Rescue Operations and Management Seminar" Albany, NY. (Contact National Cave Rescue Seminar, 834 Louise, Petaluma, CA 94952 (707) 763-4884)

Aug 5-12, 1979: Cave Diving Session & Annual Section Meeting at NSS Convention Pittsfield, Massachusetts

Sept. 1981: 5th International Cave Diving Camp, Bowling Green, Kentucky (Contact Joseph Lieberz - address above)

CAVE DIVING COURSES

April 21&22 : Course to be run on weekends. (Contact Sheck Exley, 1591 S. Lane Ave., 118 Coventry, Jacksonville, FL 32210 (904) 786-7204)

June29-July 8 : Week long course. (Contact Lewis Henkel, P.O.Box 13226 Orlando, FL (305) 857-2822 evenings)

Please send any information on other courses being planned to the editor, by the deadline above and we will be happy to publish them.

ATTENTION!!! NEW FEATURE!!!!
****
If you or any one you know has gear they want to sell let us know & we'll publicize it for you.

EBRO BLUE SPRING

by Gorham M. Donahue
(NSS19232)

(Mac Donahue is a member of the mapping team for Blue Springs Cave. This is the story of an early dive he made there, a "make-a-believer" type of dive. Each one of us has probably logged such a "moment of truth" dive. Mac is now a certified cave diver.)

Monday morning 1/02/78

Driving through a drizzle of sleet, Sobe observed, "We're crazy diving in this." Secretely I agreed, but then I am always down before a dive. I think too much and have learned to ignore it most of the time.

The rain and sleet continued to Blue Spring though the clouds seemed to be breaking over Ebro, Fla.

At Blue Springs we all got out of the 4WD and walked to the edge of the bluff. The spring pool was clear through the mist rising off the surface into the cold air. I pointed out the boil.

"Great," said Paul, "Let's get down there."

I had changed into my Farmer John at Sbe's before the trip. It was cold at the bluff and I did not see the reason in being cold twice in one day if I could prevent it. While the others dressed out I assembled gear and went down to the spring pool. In the pool I shucked my tank and vest and snorkled over the spring, then dove down to the entrance. It was the same.

On the surface Paul was in the water. I suggested he dive to the entrance, look around so he would know what to expect. Sobe and Kim came into the water then. Paul surfaced. "Yeah, you gotta a current there."

"Okay!" Sobe said, "I'm going to dive the entrance and see."

Sobe blew negative. "I'm going down with him Paul," I said, and blew negative. I stayed a few feet above the entrance and watched Sobe work his way into the entrance. His light disappeared and I waited. A minute later I grew worried. Yet, the flow is so swift that two people in that small entrance could have problems. I stayed out. After another minute Sobe's light showed and he came out.

On the surface --- "Quite a flow," I said.

"Okay, we go down," Sobe said.

" At 1200 we start back, the first to reach 1200," I said.

"I thought 100," Sobe said.

"1200 gives us more safety margin."

"Okay."

"Is Kim going?" Iasked.

"No way! Kim, we can dive the spring after we get out of the cave," Sobe said, "Have you got a watch?" he asked Kim.

"No."

"Well after about 30 min..."

"No," I said, "40 min."

""Well, at about 30 or 40 min. call the law on the CB."

"Hey, don't say that," Kim said.

"Ya'll ready?" I asked.

"Yeah."

"Uh um."

"Let's do it," I said submerging.

I was down first and first in the cave. This I did because I had been there before. I am not a leader by nature. In the cave I moved to the left and to the safety lines. While I waited for the second diver I mad a brief survey of the foyer of the cave. There are more than a few catfish in the first part of the cave. They stay hidden in small erosion niches in the clay and limestone. The foyer is large enough for four, possibly five, divers if two teams dive the cave. Paul followed me into the cave. I shined my light toward him at the floor just ahead of him. He came over to the safety lines. Sobe followed quickly after.

Everyone gave the OK signal and I started into the cave. I traveled quickly thru the first narrowing into the first room. There is a chimney there which reaches higher than the beam of a super light. I paused to look closely at the cave wall. It seems to be a light red clay with some sort of black material coating sections of it. We continued to the end of the first line. This took us through at least one other widening of the cave with a chimney. The average depth is 35 to 40 feet. At the end of the line there is a quickening of depth down a gradual slope, thru a narrowing of the cave, into another room. At this point the floor seems to be like coarse sand. The flow is strong. Large flakes of clay from the wall lie about. No silt to speak of.

The water remained clear to me, but in frequent checks over my shoulder I could see that some of the floor was stirred and Paul and Sobe were not getting the clear water. Sobe at the end was getting agitated material from both Paul and I.

Approximately 10 yards beyond the end of the first line I motioned Sobe forward and asked him to lead. We were in another room. Sobe began leading into the cave. We approached the furtherest point Dave Edsell and I had reached. Sobe went beyond this point thru another narrowing of th cave and into another room. Paul came up to Sobe, and I left the line to go to the far right of Paul. Sobe was proceeding slowly. Then quickly he turned, gave the return signal, as his arm and the bottom half of his body became obscured by a swiftly growing cloud of silt. Paul turned to me. I gave a victory sign for two, pointed to him and then to me, giving a sign for three. Paul went to the line as the cloud grew and Sobe started back. I crawled a couple of yards further into the cave for clear water, found the lines, grabbed one loosely and started into the cloud and toward the surface.

In clear water the lines seemed good enough to follow. In the silt cloud they seemed very frail. My super light cast a feeble loam of about 10" in diameter. The silt hid everything and made the surface seem like a climb through putty. There was no evidence of the flow which had kicked me rapidly to the surface on Dive #11. I felt like pulling on the line to make my way but that was not good sense I knew. As long as I held the line the flow would nudge me forward. The greater problem was to not run into anything and knock myself away from the line. I would not find it again, I felt sure.

At the turn to the left of the cave (entering) I had an anxiety attack. It was not a bad one. It was imagination but my breathing rate increased markedly and I became confused.

STOP!

Whoa!

I stopped and began to breathe deeply at my four count respiration per minute rate. Stopped I began to think again. If I or Paul or Sobe panicked and used the lines to pull us along, one might separate and there would be a deaddiver. I trusted them not to panic, and I felt by

then in no real danger as long as I had air and my good sense. I started forward again.

At the turn the cave became narrow and the ceiling pinched where the lines ran around the turn. I had to reach to pass through the narrowing while holding the line. I passed after a couple of bumps.

Ahead I could see no sign of either Paul or Sobe. Both carried powerful lights and back-ups. There was a chance that they or at least one of them had lost the line. No way to know until I arrived on the surface.

I arrived at the slope going up to the end of the first line and ascended. Soon I was going up very fast. I turned around and kicked into the current and purged my vest completely. Then I turned and continued to the crest of the slope and found the end of the first line by sight. The silt seemed to be thinning out. I could see the line from ten or so inches away.

The entrance was a straight shot, with a slight down-sloping to the end of the line.

I ran into Paul's fins at the end of the line and slowly recognized Paul in fact. He was stopped at the end of the lines. I stopped too. He turned and I nodded. The cave opening was about 10 or so feet to the right, but I could not see it. Paul released the safety lines and started forward. I followed with his fins in my light.

I turned my head for a moment thinking to go back to the lines. The flow is very strong at the mouth of the cave and it would not do either one of us any good to become tangled at the narrow entrance. When I turned back Paul was no where in sight. The flow had caught him I felt sure. I dug my hand into the floor of the cave and waited.

After I reckoned or hoped would be enough time for Paul to clear the entrance, I released the bottom, relaxed and moved. First I saw the branch end that sticks out of the bottom. It has been sawed and I wondered how it got there. It came into my light and I knew I was in the entrance. I turned off my light, looked up and saw a faint blue glow of light. From there it was a matter of not becoming tangled in the tree trunks that lay across the entrance.

As I cleared the tree trunks I saw Paul hanging in the water above me. He gave me an OK sign and I nodded.

We surfaced.

Sobe was waiting. As I broke water he turned to me and shouted in the stillness and across the mist coming off the water.

"You are crazy!"

Ismiled and took a loverly deep breath of cold fresh air. "Makes you glad to be alive, don't it?"

"You're crazy!" Sobe repeated.

I grinned feeling free and happy. I fully inflated my vest, lay back and looked up into the beautifully dreary gray clouds.

After a few minutes we all reluctanly left the water. Kim had waited on the surface. The silt we had kicked up now clouded the pool and the shallow run to Holmes Creek. Any plans to dive the pool and run were cancelled.

Sobe and I climbed back to the 4 wheeler and began changing to dry clothes after putting away the equipment.

Paul and Kim began to swing on the rope over the pool. I was tempted but one chance per day is my limit, if I have anything to say about it. That log was uncomfortably close to where they were landing and I looked at the rope, finding a few frayed places.

After a good play in the pool, Paul and Kim climbed into the vehicle and changed into dry clothes.

We left after 40 minutes following the dive. I took one last look at the pool then and found it clear again. The flow apparently clears it very quickly.

On the way back Paul said he wants to dive the cave again. Sobe said he was going to walk into his house, fall down on the rug and kiss it. I agreed with both intentions. I will dive the cave again, but much more prepared. This time I was lucky and you have just so much luck!

HOW 'BOUT THEM CAVE DIVERS

by Debbie Foster

How 'bout them cave divers
Ain't they neat?
Love that gettin' wet
And a-doin' it deep.

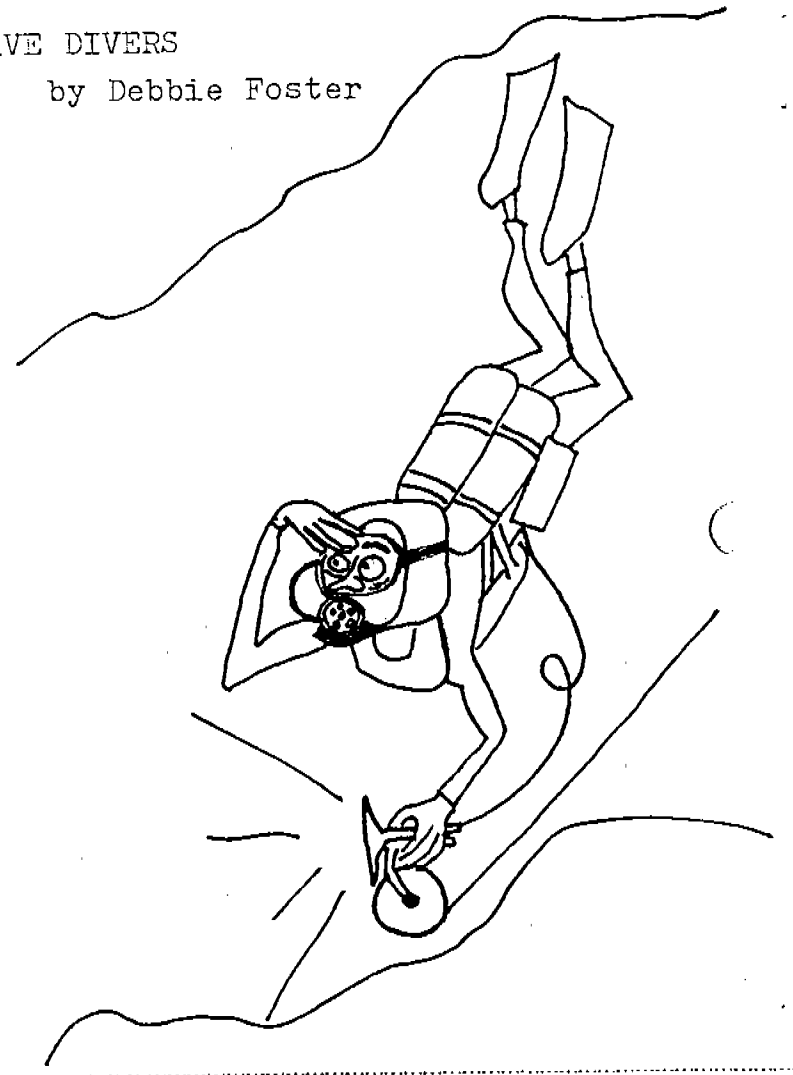
How 'bout them cave divers
Ain't they cute?
Dressed to kill with mask and fins
And they O'Neill Supersuit.

How 'bout them cave diver's
Ain't they fine?
Breakin' cave records
Just a-layin' that line.

Ain't they excitin'
Explainin' fundamental diving.
Ain't they a bore
Talking "bout snorkelin' more.

How 'bout them cave divers
Ain't they a pair?
Depending on nuthin'
But breathing they air.

How 'bout them cave divers
Diving after dark
Totin' gear and haulin' tanks
But callin' it a lark.



MORE BAHAMA'S BLUE HOLES

Seems that those Bahama Islands are just like swiss cheese. More and more Blue Holes are being found every day. Lindsay Warren writes that she has found several virgin Blue Holes that look "very interesting". Lindsay is doing her explorations in the southern Exuma Islands in the Bahamas. She has explored one to a depth of 205 feet and it's still going. Several offshoots between 120' and 160' have been spotted. Early explorations reveal varied stalactite formations, pencil thin to very large.

KNOTTED LINE

A NEW CARTOGRAPHIC TOOL
by John Zumrick Jr. (NSS 18788)

Most of the largest caves discovered in Florida are entirely underwater. The systematic exploration and mapping of these systems is both tedious and time consuming. The mapping of the Peacock Springs Cave system, the world's largest underwater cave, took several years to complete due to the effects of adverse water conditions and inefficient surveying methods. During this survey, fiberglass tapes were used to measure distance between stations. However, underwater it is difficult to use these tapes accurately, and at times lead to wide buddy diver separations. Clearly a better way was needed!

Primarily, through the efforts of Sheck Exley (NSS 13146), a new method involving the use of knotted line has come about. As new passages are explored, line knotted at 10 foot intervals is installed, and mapped on exiting the cave. Distances between stations can be measured by counting knots and estimating remaining distances. When coupled with estimated cross-sectional sizes and depths, remarkably accurate maps with minimum closing errors can be drawn. If during the initial survey cave landmarks are defined, mappers may add additional detail at a later time without having to resurvey the cave.

Another method using this technique to survey cave systems already having permanent lines installed was used by Robert Goodman (NSS 17260) and Kirby Sullivan (NSS 17261) during the survey of the Emerald Sink Cave System. Instead of laying knotted line parallel to the old line and removing it later, they removed the old line. Since the system was known, the knotted line could be installed for optimum safety and efficiency of mapping. The old line can then be knotted, checked for damage, bleached white and reused. This approach is not only efficent and inexpensive, but insures the proper maintenance of permanent lines.

The installation of knotted lines provides additional benefits to the non-mapping cave diver. By counting knots, the diver can arrive at penetration distances. Subsequently, he can calculate his swimming efficiency and speed. Long term as well as dive to dive changes in swimming efficiency and air consumption can be evaluated. The knots in the line will limit sliding of gap lines along the main line, perhaps preventing it from sliding into a fissure. Additionally knots will prevent Holtzendorf markers from sliding out of position. Thus, knotted line offers significant safety advantages to all cave divers.

Actually, knotting the line is a simple and rapid process. Stretch a tape measure between two stakes 100 feet apart. At each 10 foot interval, grasp the line and loop the spool through a loop of line and draw the knot up to the fingers grasping the line. At each 100 foot interval, the knot should be placed for maximum accuracy. Using this approach, 500 feet of line can be knotted in less than 15 minutes with errors of less than 3 inches. Since most errors cancel out, accuracy greater than 99% can easily be achieved. At each end of the line, a loop about one foot in diameter is tied with a bowline knot. Care should be taken that the distance from the end of the loop to the first knot is 10 feet.

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The use of knotted line has proven its value over the last few years. It is hoped that all lines installed in the future will be knotted and the unknotted lines replaced. Editor