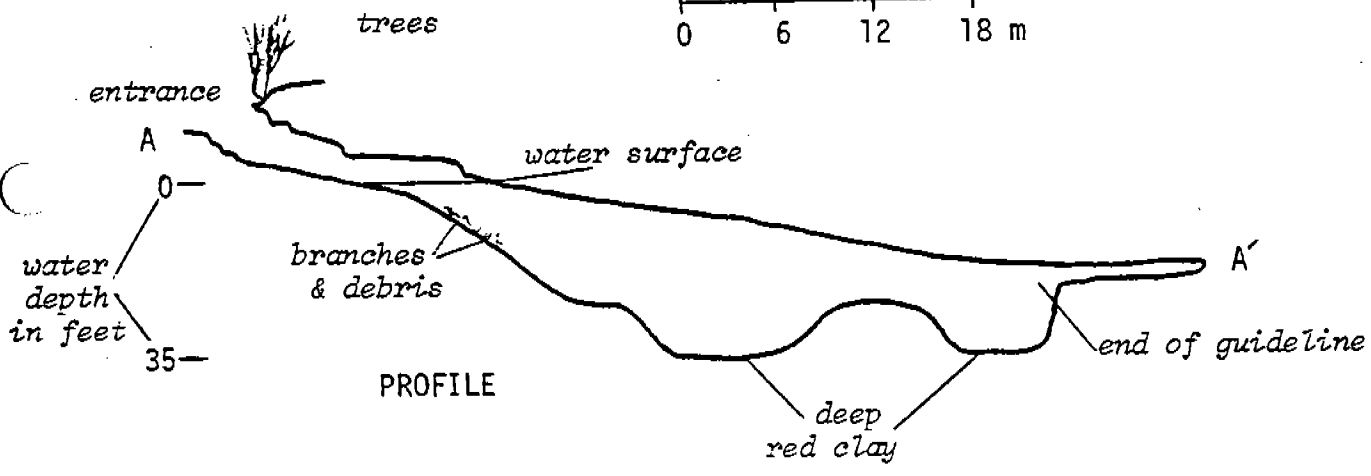
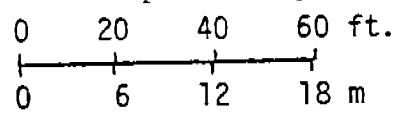


CAVE SPRING CAVE

TISHOMINGO COUNTY, MS  
 Survey by Sheck Exley  
 N.S.S. CAVE DIVING SECTION

water depths are given in feet



# underwater speleology

# UNDERWATER SPELEOLOGY

published bi-monthly  
beginning in February  
by

The Cave Diving Section of  
The National Speleological Society

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 1978). 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, Sheck Exley.

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

## NEW MEMBERS

Gary C. Bremer, 316 Coppinger, Ferguson, MO 63135

George S. Brkich, 1535 Cunningham Ave., Merritt Island, FL 32952

John B. Burdiss, 917 N. Ivy St., Arlington, VA 22201

Carl R. Cowart, 6608 Midhill Pl., Falls Church, VA 22043

William A. Donahoo, 2205 Chatham Dr., Albany, GA 31707

Monte L. Evans, 5651 Crestmont Ave., Clearwater, FL 33520

John J. Fisher, Dept. of Geology, Univ. of Rhode Island, Kingstar, RI 02881

William K. Fehring, 1526 River Dr., Apt. 100, Tampa, FL 33603

Bob Friedman, 18578 S.W. 89 Place, Miami, FL 33157

Robert C. Gomez, 7540 N. Hanley Rd., Tampa, FL 33614

James Grattan, 205 Bluegrass, Apt. 66-B Newport, KY 41071

## COVER

Our cover this month celebrates a little bit of speleological history that was made by Sheck Exley with Paul Smith on the way back from Arkansas last fall. More on page 16.

## LARRY DIE POLDER

Section members will be greatly saddened to learn of the loss of Mr. Larry Die Polder, who passed away recently. Florida members in particular recall fondly how they were welcomed in the home of Mr. and Mrs. Die Polder, who were always happy to let us dive in the fabulous underwater caves that are named for them. In Mr. Die Polder's passing the cave diving community lost a great friend.

## CALENDAR

- June 3 -4, 1978: 8th NSS Cave Diving Workshop, Branford, Florida. (Contact Sheck Exley, 1591 Lane Ave. S., 118C, Jacksonville, FL 32210.)
- June 12-16, 1978: 1st National Cave Rescue Seminar, San Antonio, Texas. (Contact Terry G. Jones, Deputy Director, 16240 San Pedro #257, San Antonio, TX 78232.)
- June 18-24, 1978: Cave Diving Session and Annual Section Meeting at NSS Convention, New Braunfels, Texas.
- July 8-9, 1978: Cave Diving Course (1st of 4 weekends), Branford, Florida. (Contact Sheck Exley.)
- Dec. 30-31, 1978: 10th NSS Cave Diving Workshop, Branford, Florida.
- Aug., 1979: Cave Diving Session and Annual Section Meeting at NSS Convention, Massachusetts (?)
- Sep., 1981: 5th International Cave Diving Camp, Bowling Green, Kentucky.

# MY CAVE

by Forrest Wilson (NSS 16631)

My Cave and Simmons-Mingo Caves are located near Mace, West Virginia, near the Elk River. Some time back Bob Thrun put the maps of the caves in the Dry Branch area on the same piece of paper to check for possible connections. One of the more interesting ones was from the siphon in Simmons-Mingo to the resurgence in My Cave. He approached the local cave diving nuts late in the summer of 1977. A team of five divers finally got together on October 15, 1977.

After a week-long trip cave diving in Arkansas, Carl Cowart and Forrest Wilson met Barney Burdiss, David Morrow, Sylvia Catinella and a support team recruited from both the D.C. Grotto and Potomac Speleological Club consisting of only Bob Thrun. It is difficult enough to get diving gear to a sump with a large support team, but one man? So, after drawing straws three divers joined the support team and carried gear for only two divers into the Broken Nothing entrance to My Cave. Fortunately it isn't far to the water from the entrance so it only took a couple of hours to get the gear in place.

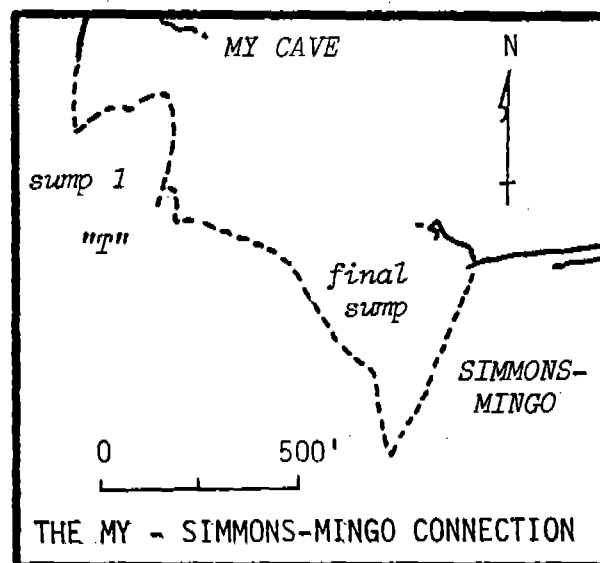
David led the push and found a wide, shallow sump about 200 feet long. This sump came up in air after turning acutely to the left. From here he walked an additional 200 ft. in the stream to a "T" junction. At this "T" he tied off the line and went back to the sump to return to the support team and report his find. When he attempted to re-enter the sump he found that the line was too taut and had pulled into a portion of the passage too small for a diver. It took him some time to re-tie the line and come out. Meanwhile the support had become cold and worried. When the divers finally returned the group voted to come back another time with more help.

On December 31, after again asking DCG for help, Barney, David and Forrest met at My Cave. This time no-one showed up to help. They decided to go on anyway. It took them over three hours to get their gear to the sump.

After reaching the "T" where David tied off the first trip they began to survey to the left (east) in the direction of Simmons-Mingo. After a few hundred feet they found the passage to be very low and narrow. At this time Barney asked, "Why didn't we try the sump to the right?"

"What sump?" was the reply. It seems that only Barney had noticed that the main stream was coming from the right at the "T." So, they went back to dive that sump.

Forrest went upstream about 300 ft. in the right-hand sump only to find it



got very tight and silty; however, it curved back to the left (east) in the direction of the other passage and Simmons-Mingo.

At this point it seemed that the only reasonable thing to do was to go back out and return another time, but they decided to push the dry lead and try to find the stream again.

David and Forrest began to survey in the direction of the water while Barney looked around. Just about the time Forrest found the water in an 8 in.-high crawl, Barney found a much easier way to the same stream. This stream passage is nice walking passage at least 10 feet high and as much as 20 feet wide in spots. It winds southeasterly for over 1000 ft. to another sump. The now-very-tired divers somehow found renewed energy to return to their tanks and drag gear some 1300 feet to this sump. After all, Thrun's map only showed the caves to be 1000 feet apart, and they had come farther than that already. Surely it was only 50 feet or so farther to the connection they were looking for!

Barney won the coin toss (or actually rock toss), so Forrest did the dive. He went up stream for over 350 ft., reaching a depth of around 20 ft. He ran out of line, so began to check out the passage to the sides as far as his line would reach. The sump is over 10 feet wide with a flat ceiling and silt floor. Floor to top height is 5-7 ft., and the walls are layered and fragile. When Forrest decided to leave he found that all that searching around had managed to wrap his line around something and stir up so much silt that he couldn't see what that something was. Fortunately he was able to free the line and return, but without taking any compass bearings.

The group decided to leave at that time and spent several long and difficult hours dragging themselves and their gear out. When they were back in My Cave they found that the resident pack rats had made off with their food, making the final pitch out very unpleasant.

The latest trip was Feb. 18, 1978. Ian Lewis from Australia joined Carl, Barney, David, Sylvia and Forrest. They might have waited until spring, but the chance to take an Aussie diving in the snow was too good to pass up. It seems that Aussies never get the chance to camp out in 2 ft. of snow.

By now the group had come to expect to carry their own gear, but asked anyway. You guessed it. Dragging six sets of gear through the narrow crawlway took a lot of time, not to mention energy, but with six divers, carrying gear for two between sumps would be easy, besides they all wanted to see the new cave passage.

Forrest and Sylvia were going to be the first through sump one. Just as they got their gear on and were ready to dive, the tank "O" ring blew on Forrest's tank. Without this "O" ring there was nothing holding the air in the tank, so Forrest was forced to abort. There were three tanks in the group with the same tank-valve combination that were potentially dangerous\*, so all three of these divers were forced to back out. This left Barney, David and Ian to do the dive.

---

\* (name omitted) tank with (name omitted) valve. The initial valves sold have a lip machined under the hex part that is used for tightening. This lip holds the valve away from the "O" ring so that the ring can be seen. The newer valves have been corrected by the manufacturer.

The three remaining divers somehow managed to drag two sets of gear between the sumps (over 1300 ft.) to make the last dive. By this time Ian was feeling poorly (not a good thing with no exit except through water) so Barney led the dive. He got to the point where Forrest had turned around on the previous trip with no difficulty, and found that the passage had turned more than 90 degrees to the left. After a distance of 500 feet the sump came up in a small air room, from which another underwater passage led for another 50 ft. to a larger room with a domed ceiling. Barney was afraid that it ended, but there was a small "near siphon" out of this room into bigger passageway.

Barney returned to the others with only two words:

"Simmons-Mingo."

In the bigger passage he had seen the rope used to climb down to the water by previous visitors to Simmons-Mingo.

\* \* \* \* \*

#### OUTSTANDING CONVENTION PLANNED FOR CAVE DIVING SECTION MEMBERS

The 1978 NSS Convention will offer our section members some truly outstanding cave diving experiences. As far as cave diving goes, Texas is much like Florida - the ground water is *warm* (frequently nothing more than a swim suit is needed) and *clear* (often as clear as air).

Officially the activities of the Cave Diving Section will take place at the Guadalupe River (which runs through the campground) on Friday, June 23 from 8:00 AM to 12:00 noon. This will include a cave diving workshop session of practical water work and papers and also the annual section meeting. Gene Melton and Sheck Exley will be giving papers. Any other member who wants to give a paper should contact Tom Cook right away (address inside front cover).

Saturday, June 24 will present a unique cave diving experience to our section members - the cathedral-like beauty of fabulous Jacob's Well. Section member Paul Meng (who is also a cave diving instructor) is one of the only two persons permitted to take divers into that scenic spot, and has offered to make arrangements for section members who are certified scuba divers and successfully complete the practical session offered the day before. Some of the mouth-watering characteristics of Jacobs Well include: warm water approximately 70 ° F, white walls, unlimited visibility and a virtual absence of any silt other than heavy white sand which settles very quickly. Want to know what it would be like to glide weightlessly and effortlessly through a cave like a giant bat? Come to Jacobs Well!

Wayne Russell is also working on setting up several sump dives for the section, to take place during the week of the convention (June 19-23) in "undisclosed caves." The editor notes that a recent note in *NSS News* noted that Texas' longest cave, Powell Cave, is separated from another nearby cave by only a short sump and can't help wondering if that is one of the "undisclosed" caves. Want to find out? Come to the Convention!

Section members are requested to fly diver's flags from their vehicles again this year so we can find each other more easily.

# *Training or* **EXPERIENCE?**

by Jerry D. Murland

*We are indeed fortunate to have the opportunity of printing another contribution from our friends in the Cave Diving Group of Great Britain. This article is from the brother of one of our subscribers, Tony Murland. Jerry Murland is certainly one of the most active cave divers in Great Britain, making no less than 10 of the 35 dives reported in the most recent Cave Diving Group Newsletter. He is Hon. Secretary of the Derbyshire Section of the Group, also. - Editor*

What exactly does training cave divers achieve, how should we train them and who will do it? These are some of the questions which cave divers in the United Kingdom ask. Although we have a training programme (see *A Cave Divers Training Manual* by Oliver Lloyd) and regional examiners and training officers, training is still a topic hotly debated in some circles.

Our programme allows for the trainee diver to become familiar with the equipment he uses and proficient in its use underwater. Examination is carried out in "open water" which as far as possible allows maximum safety for the trainee. When the time comes for the trainee's first cave dive, our safety code states that a fully kitted up diver must be at base to cope with emergencies. However, what can the diver at base do to help a struggling diver in the confines of a narrow passage with visibility at zero? A recent fatality in Derbyshire illustrates this point; a diver entered a resurgence cave which is rather confined in places, descended a flooded pot and became jammed at about 150 ft. from base. Could the diver at base have helped him? Absolutely no, the most he could have done was to recover the body, and this took two days to complete! C.D.G. divers are trained to operate alone. This independence underwater gives the diver the correct attitude when faced with an emergency; knowing that rescue is usually impossible encourages the diver not to over-reach himself.

A friend of mine told me that training was to enable cave divers to live longer, I cannot accept this. Training finishes when the diver enters his first sump (siphon) on his first cave dive. From that moment on his survival depends on experience gained and instinct. When faced with his first emergency it is his experience that will see him out of it, not the ability to perform underwater tricks with his equipment.

Statistics show that most cave divers in this country, if they dive on a regular basis, will at some time be faced with a potentially dangerous situation. It is up to the more experienced divers in the section to make sure that this situation does not arise too soon; by monitoring dives the trainee diver undertakes, one can control the collection of experience. The only way to become a proficient cave diver is to cave dive.

Most of the divers in the United Kingdom dive two or three times a month and I am convinced that it is this habit of regular familiarisation with sump and equipment that sharpens the diver's instinct and adds to his experience.

There are few sites in the United Kingdom that rival your springs of the Florida variety and the obviously superbly clear water! Most of our diving

takes place at the end of a "carry" of kit to the sump and the visibility, although reasonable for the first diver, is usually reduced to zero on the return dive. Only in the larger sumps does visibility remain constantly good; and this depends on other factors. C.D.G. members are cavers who wish to dive and not the reverse, diving experience does not over-ride caving experience. Consequently the main reason we cave dive is to extend and discover new systems. If we had a number of clear, open springs I am sure we would have the same problem as you do with open water divers!

\* \* \* \* \*

*Mississippi's Deepest & 7th Longest Cave!*

### MISSISSIPPI'S FIRST (AND LAST?) CAVE DIVE

*by Sheck Exley (NSS 13146)*

My first look at Cave Spring, Mississippi, came on 9/11/75, when Court Smith (NSS 15394), Lewis Holtzendorff (NSS 14831), Karan Exley (NSS 16265) and myself were on the way back from a rainy and rather disappointing trip to the Missouri Ozarks. Our disappointment was to continue: after a brief conference, the decision was unanimous - Cave Spring (called Mingo Cave No. 1 in *Caves of Mississippi*) had to have the ugliest water we had ever seen. The water was such a *thick*, inky black that we actually wondered if the viscosity was similar to clay fill and a diver would have to dig, rather than swim, his way into it.

However, after two years the historic moment could no longer be delayed. Amply protected by dry suit and hood (I just couldn't stand the thought of that gross liquid touching my precious skin!), I turned to my "official witness, Paul Smith (NSS 14385) and made the following historic statement, reproduced for posterity:

"I dedicate this dive to Tom Cook, who ignominiously sneaked off after the rest of us had left the NSS Convention so that he could hog all the glory of making the first Michigan cave dive. I wish he were here now instead of me..."

The fanfare concluded, I tentatively submerged and swam under the far wall of the sump. The object of the dive was clear: to attempt to get my entire body under a submerged cave roof so that I could log a bonafide cave dive.

Surprise! At a water depth of 5 feet I abruptly broke into pretty blue water with 15-20 ft. visibility. Gawking somewhat like a kid on his first Christmas, I quickly laid 200 ft. of line in search of an air space. No such luck. However, a tentative drop into the blue void below me revealed that the bottom extended well below the 5-10 ft. that I was mentally prepared for.

Returning to the surface, I made my report to a disbelieving Paul and grabbed a depth gauge. The maximum depth turned out to be 35 ft., which when added to the 15 ft. of vertical extent in the dry section added up to considerably more depth than anything described in *Caves of Mississippi*.

... And speleology marches on!

# THE TARPON TRIUMPH

by Sheck Exley  
NSS 13146

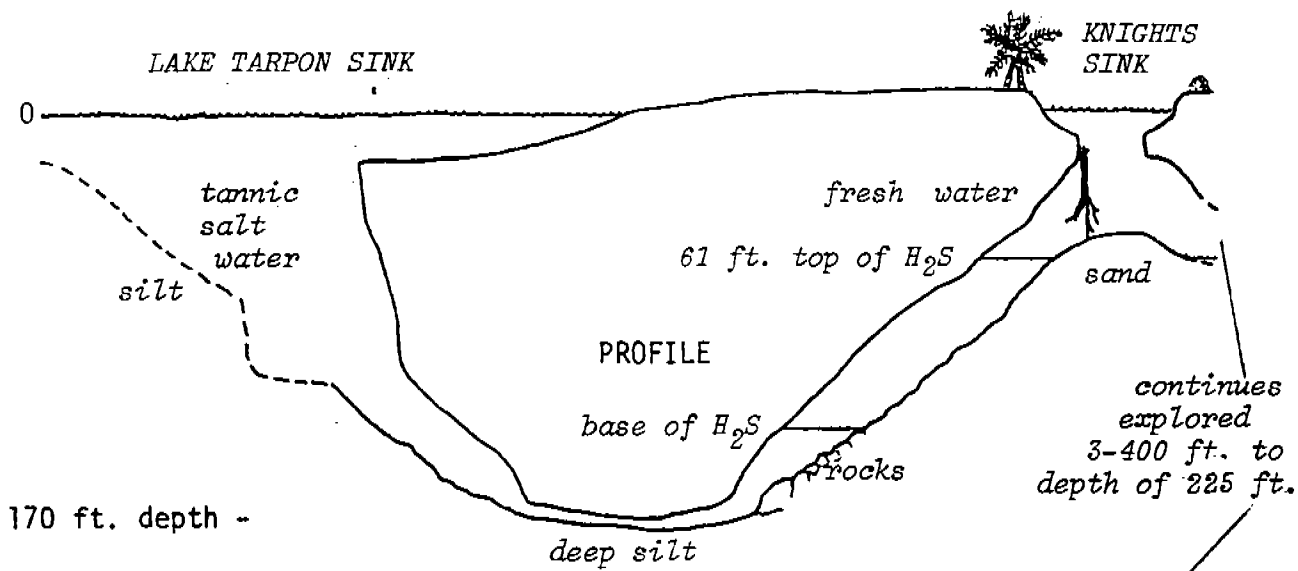
It had been cussed and discussed a long time - the supposed connection between Lake Tarpon Sink and Knights Sink, less than 100 yards away. In fact, ever since W. S. Wetterhall<sup>1</sup> had established a connection between both of them and Tarpon Springs 1.5 miles away cave divers had wondered about it. The 3 spots comprised a unique drainage system which would partially drain Lake Tarpon (Florida's 2nd largest lake) every 7-25 days with up to an incredible 1000 cfs discharging at Tarpon Springs, then the flow would mysteriously cease and reverse, causing salt water to enter Lake Tarpon.<sup>2</sup> The abrupt increase in salinity caused fish kills in the lake, which eventually prompted the U.S.G.S. to purchase Lake Tarpon Sink and separate it from the lake by a dike.

A geologist had projected mathematically that the maximum depth of the conduit interconnecting Tarpon Springs and the sink to be 210 feet, which Dana Turner (NSS 15167) and I immediately confirmed upon making the first dive into the cave on April 22, 1973. We also found that the construction of the dike at Lake Tarpon had made the spring's hydrologic characteristics identical to that of a Bahamian "blue hole" - inflowing and outflowing with local changes in tides. It was a strange experience, diving in the center of the Tarpon Springs city park where every spring the Greek orthodox priest hurls out a gold cross for the young would-be sponge divers to dive for in the Epiphany ceremony made famous by TV (*Sea Hunt*) and films (*Beneath the 12 Mile Reef*, etc.). As a matter of fact, legend has it that one of the solid gold crosses was lost and never recovered, an item which certainly didn't hurt our appetite for diving there. Unfortunately, on May 15, 1973, a malfunctioning regulator precipitated an accident in the spring and our diving efforts, which had pushed the cave passage an estimated 1000 feet, ceased.

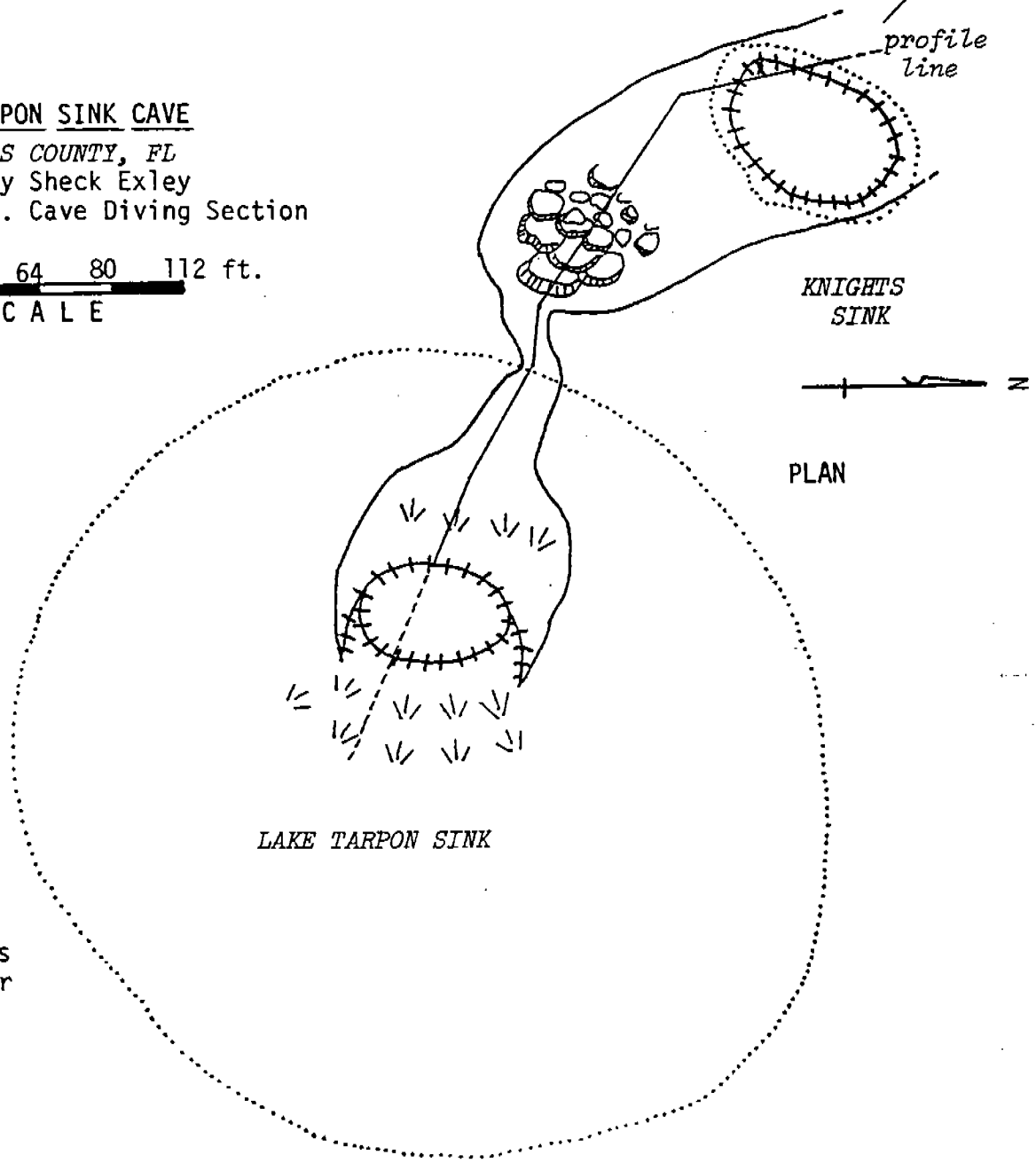
Our first trip to Knights Sink and a humorous incident with an alligator was the subject of an article in vol. 2, no. 5 of *Underwater Speleology*.<sup>3</sup> We somewhat surprisingly descended to a depth of 220-230 feet, which suggested that the Knights Sink passage was not involved in the main drainage from Lake Tarpon to Tarpon Springs (if the geologist's calculations were correct). A tentative dive in the briny, whiskey-colored water of Lake Tarpon Sink by Lewis Holtzen-dorff (NSS 14831) and myself to a depth of 60 feet discovered nothing except that the visibility improved somewhat at depth. On a more recent dive in Knights Sink by Court Smith (NSS 15394) and Lewis Sollenberger (NSS 17583), Court related that he thought a cave passage to Lake Tarpon might exist on the opposite side from the tunnel we had earlier explored, despite the fact that we thought we had already checked that possibility out.

On June 19, 1977 Will Walters (NSS 18801) made the necessary arrangements and he, Roger Miller (NSS 14394) and I arrived at Lake Tarpon Sink for another try. We knew by now that it would be necessary to dive there to make the connection because of the poor visibility at that end (daylight is not visible below about 30 feet even under ideal conditions). Unfortunately, our old friend the alligator had moved from Knights and taken up a new residence in Lake Tarpon Sink. True to form, he submerged as soon as we entered the water, leaving our imaginations to run riot with visions of gigantic teeth emerging from the inky darkness to mangle our poor, foolish bodies.

A preliminary compass bearing I had taken on the surface between the sinks



LAKE TARPON SINK CAVE  
 PINELLAS COUNTY, FL  
 ©1977 by Sheck Exley  
 Survey by N.S.S. Cave Diving Section



SURVEYORS  
 Will Walters  
 Roger Miller  
 Sheck Exley

prior to the dive had indicated that we had to head approximately 300° to hit Knights. Fumbling my way down through the murkey water in that vicinity we hit the bottom of the sink at a water depth of 130 feet amid deep fluffy silt and scattered breakdown. We felt our way on down the breakdown slope to the 165-foot level, where we encountered a low but wide, silt-floored passage with a complete absence of current scallops in the rock. Feeling that there was no way that this tiny passage could have transmitted 646 mgd, I continued to the left with the reel but only found myself going back up the slope and considerably away from the 300° heading we needed to get to Knights. With an uncanny sixth sense of direction born from years of exploring the vast caverns of the Chassahowitzka Swamp, Will felt that the small passage was "going" and signalled to me with his light to give it a try. With no other alternatives readily available, I somewhat pessimistically wandered into the dismal tunnel, which leveled off at 170 foot depth.

Suddenly my hopes increased when after a scant 30 feet I abruptly saw house-sized boulders ahead of me and a breakout dome shot the ceiling up out of sight. Scampering upward, my light fell upon a large log at 150 feet and I excitedly signalled the others. At 100 I spotted daylight streaming down and celebrations were in order. A moment later we ascended out of the salt water and the hydrogen sulphide layer into the cool and clear azure fresh water of Knights and it was all over except the decompression, thankfully away from our pal the alligator.

The direct route we found took only 15 minutes to traverse, which was considerably shorter than the "T" junction route we were searching for. However, the existence of such a route cannot be discounted entirely despite our inability to thus far locate any other conduits leading from Lake Tarpon Sink. We had emerged into the side of Knights directly opposite the large passage we had explored in 1975, which suggested that Knights was in reality a karst window perched directly above the former main flow from the lake to Tarpon Springs. Wetterhall's report of only slight flow into and out of Knights and the limited cross-section of our connection tunnel still suggest the existence of such a passage.

Later that day Roger and I made a second traverse to survey our find. The maximum depth of 170 feet here exceeded the depth of 165 feet at the Dorffzen Hole - Jade Hole traverse in the Falmouth system by Court and I on Dec. 26, 1975.

A dinner of Greek salad and fried squid at Chris' Restaurant at the famous sponge docks near the spring provided the perfect end to a beautiful day.

#### Bibliography

1. Wetterhall, W. S. - *Reconnaissance of Springs and Sinks in West-Central Florida*, Report of Investigations No. 39, Florida Geological Survey, Tallahassee: Florida Geological Survey, 1965, p. 12.
2. Heath, R.C. and Smith, P.C. - *Ground-Water Resources of Pinellas County, Florida*, Report of Investigations No. 12, Florida Geological Survey, Tallahassee: Florida Geological Survey, 1954.
3. Exley, Sheck - "Jaws...Florida Style," *Underwater Speleology*, vol. 2, no.5 (fall 1975); pp. 42-43.

you're invited!



# 8th CAVE DIVING WORKSHOP

---

where: **women's club, branford, fla.**

when: **june 3 - 4, 1978**

---

SCHEDULE OF EVENTS: Sat., June 3, 1978: 8:00 AM coffee & registration  
8:30 AM - 12:00 PM: lectures, discussions, etc. on  
BASIC CAVE DIVING  
1:00 PM - 6:00 PM: buddy-breathing workshop in near-  
by springs & sinks (open to all certified  
scuba divers that have registered)  
7:00 PM - 8:30 PM: slides and films on cave diving  
8:30 PM - NSS Cave Diving Section Membership Meeting  
(open to the public)  
Sun., June 4, 1978: 8:30 AM- 12:00 PM: lectures, discussions, etc. on  
ADVANCED CAVE DIVING  
1:00 PM - 6:00 PM: guided practice dives in nearby  
springs and sinks including sign installa-  
tion project as a public service

---

name \_\_\_\_\_ address \_\_\_\_\_

NSS # \_\_\_\_\_ certifications held \_\_\_\_\_

enclosed is a money order/check made payable to NSS CAVE DIVING SECTION for \_\_\_\_\_  
(Fee for both days and all events: NSS Cave Diving Section members- \$2.00; all others- \$5.00)

GENERAL INFORMATION

**LODGING:** Branford: Steamboat Motel; Mayo (16 mi.): Cindy's Motel;  
Lake City (21 mi.): many, incl. Piney Woods Lodge, Holiday Inn, etc.  
High Springs (23 mi.): Cadillac Motel, Alamo, others  
note: Mayo is near many good springs, High Springs is also near some

**CAMPING:** Ginnie Springs, Rt. 1, Box 153, High Springs, FL 32643; ph: 904-454-2202  
Blue Springs, PO Box 331, High Springs, FL 32643; ph: 904-454-1369  
many other primitive campsites along the Suwannee & Sante Fe Rivers, such  
as Telford Spring, Cow Spring, etc.  
note: Ginnie Springs is only 20 mi. from Branford and has two beautiful  
cave dives, including Ginnie Spring which is excellent for beginners

**MEALS:** Branford: Steamboat Restaurant, Branford Steak House  
also nearby: Suwannee Cove Restaurant, Sandy Point Restaurant  
note: Steamboat Restaurant has long been the traditional meeting place  
for divers in the area, has good food and is highly recommended

**AIR:** Ft. White: Stonedale, Rt. 1, Box 91F, Ft. White, FL; ph:904-497-4505

SKETCH OF AREA (NOT TO SCALE)

