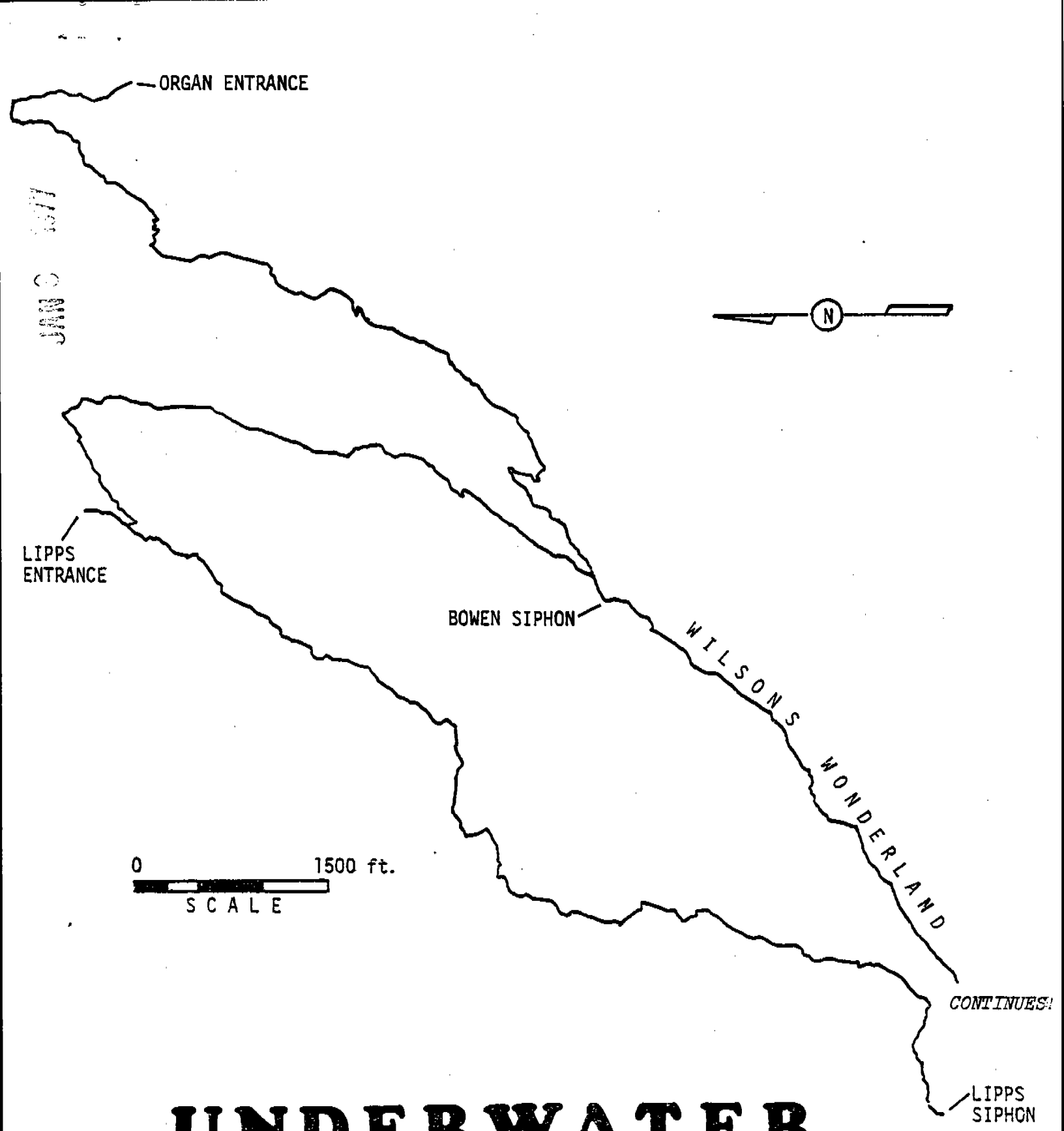

UNDERWATER SPELEOLOGY

OFFICIAL NEWSLETTER OF THE CAVE DIVING SECTION OF THE NATIONAL SPELEOLOGICAL SOCIETY vol. 3, no. 5

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 1976). 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 Steve Maegerlein, Rt. 14, Box 17, Bloomington, IN 47401.

Deadline is the second Friday of the preceeding month. Send articles and correspondence to the Editor, Sheck Exley, 1591 S. Lane Ave., Apt. 118C, Jacksonville, FL 32210.

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

CALENDAR

July, 1977: Cave Diving Session and Annual Section Meeting at NSS Convention, Alpena, Michigan

Sept. 6-9, 1977: 3rd International Cave Diving Camp, Bristol, Great Britain. (This is just before the 7th International Speleological Congress - contact B.E.C. Travel Limited, 63 Dun Keld Road, Ecclesall, Sheffield, S11 9HN England.)

1979: 4th International Cave Diving Camp, Mexico. (Contact Eduardo Castro Ruiz, Cerro de Tezonco 117, Mexico, D.F.)

STILL AVAILABLE!

Volume 2 of Underwater Speleology is still in print. The prices are the same as for Volume 3. Individual issues are 90¢ a piece. This may be your last chance to replace lost issues! Send your order to Stephen Maegerlein.

COVER

The big news for this issue is Forrest Wilson's successful push through Bowen Siphon in West Virginia's Organ Cave (Greenbrier Cave System), already ranked third longest in the Western Hemisphere at over 32 miles. Right offhand we can think of no sump dive in America that has been more productive in terms of passage found other than Dave Jagnow's discovery of Cold Water Cave, Iowa. Read all about it on page 49.

The line map on the cover, furnished by Forrest Wilson, shows the plan relationship of the main passages in the southern half of the cave. Incidentally, the name "Wilson Wonderland" is supplied by the editor... we haven't received word of the official name yet.

CAVE DIVING TAPES AVAILABLE

Cassette tapes are available of Session S of the 7th International Conference on Underwater Education for $5.95 including postage. This session, entitled "Cave Diving," included three papers, two of which were by members of the NSS CD Section, John Kessler (NSS 13411) and Sheck Exley (NSS 13146). They can be ordered from Convention Seminar Cassettes, 13356 Sherman Way, North Hollywood, CA 91605.

NEW MEMBERS - ADDRESS CHANGES

Terry More, 1302 Altmont St., Marquette, Michigan 49855

J. Billy Young, 110 Coventry Rd., Athens, GA 30601

Daniel Woolf, 5018 Kerle St., Jacksonville, FL 32205

Aubrey E. Melton III, Rt. 1, Box 175-M, Vero Beach, FL 32960

REVIEW: Cave Diving Group Newsletter

reviewed by Sheck Exley (NSS 13146)

CAVE DIVING GROUP NEWSLETTER, printed quarterly by the Cave Diving Group, Dr. Oliver C. Lloyd, editor, Withey House, Withey Close West, Bristol, Great Britain BS9 3SX. Aprrox. 38-52 pages per issue. $10.00 per year (4 issues).

Anyone not subscribing to this periodical is really missing out. With two of the most significant explorations in cave diving history now in progress in Great Britain - Wookey Hole and Keld Head - I can hardly wait for the latest issue to arrive so I can read about the latest efforts.

In the October issue (new series no. 41), which chronicles recent explorations in a total of 17 cave diving sites, Martyn Farr and company have pushed on beyond Wookey # 25, the "Chamber of Gloom" (they number their air spaces at Wookey) into deep water, reporting at one point "an incredible void" in the 50-foot-plus visibility. In Keld Head, more akin to Florida-style cave diving, O.W. Statham has pushed on to a measured distance of 2750 feet, and predicts a 3500-foot dive soon using the "Hypersystem." These are penetration dives in a totally submerged passage similar to our efforts at Manatee Springs (except that their water is not as clear and far colder).

A subscription rate of $10.00 was set last year; however, the ever-changing exchange rates between the dollar and the pound probably cause this rate to fluctuate some. It's best to mail Dr. Lloyd an international money order for $10.00 or more with the request that he convert it and deduct the price of each issue plus postage from that sum.

For a general review of the content, format, etc. of the Cave Diving Group Newsletter, see vol. 2, no. 4 of *Underwater Speleology* (Aug. 1975), p. 28.

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REVIEW: A CAVE DIVER'S TRAINING MANUAL

reviewed by Sheck Exley (NSS 13146)

A Cave Diver's Training Manual, by Oliver C. Lloyd, M.D., July 1975, The Cave Diving Group, Technical Review No. 2, 88 pp. + index, 16 illustrations; £1.00 in Great Britain plus postage. Order from the Editor, C.D.G. Publications, Withey House, Withey Close West, Bristol BS9 3SX.

As noted in the introduction to the *Manual*, the book is intended for "cavers who wish to dive rather than for divers who wish to cave." Therefore, a Florida diver desiring to check out the caves in his own back yard is better directed to NACD's *Safe Cave Diving*, for example. But for the caver desiring to learn the complicated skills necessary to push those disappointing sumps at the ends of his favorite "dry" cave passages, there is no finer effort in print than *A Cave Diver's Training Manual*.

Dr. Lloyd takes the prospective cave diver from a detailed description of open circuit SCUBA and accessory gear, through equally enlightening explanations of training, dive logs, procedures and physiology to sections on related aspects of rescue. I have found particularly interesting discussions

on "Cold and Exhaustion" and "Treatment of Hypothermia" - important aspects invariably ignored in American cave diving manuals (including my own). Further, the techniques described on pp. 37-39 on "Surveying Submerged Passages" are more practical and in fact much closer to what we now employ than those described in Exley and Friedman (*Mapping Underwater Caves*, 1972). Also, the addition of a helpful index at the end is another improvement over American efforts.

The American reader will experience a slight initial difficulty with the British terminology ("gags" and "bottles" instead of "mouthpieces" and "tanks"). On the other hand, I was happily surprised with the use of the more familiar English system instead of the metric, the only exception in the entire manual being temperature measurement, which is in degrees Celsius.

A Cave Diver's Training Manual will not brighten your library shelves with its physical appearance: stapled together with no photographs whatsoever, it is far from being a volume of great beauty. However, this reviewer commends Dr. Lloyd and the Group for not wasting expense on such frivolities, which certainly would have driven the price of the *Manual* well above the bargain price.

Speaking of price, since no overseas ordering instructions have been given, I would recommend sending Dr. Lloyd an international money order made payable to the "Cave Diving Group" for about $10.00 with the request that any excess be spent on the latest back issues of the *Cave Diving Group Newsletter* and airmail postage (to greatly speed up delivery and minimize chance of damage).

In summary, if you want pretty pictures, get Waltham's *Caves*; if you want adventure stories, get Burgess' *The Cave Divers*; but if you are a caver and want as much applicable information about cave diving as possible, by all means get *A Cave Diver's Training Manual* by Dr. Oliver C. Lloyd.

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OTHER PUBLICATIONS ON DIVING SUMPS

-- Sheck Exley (NSS 13146)

In addition to *A Cave Diver's Training Manual* (reviewed above) there are also at least two very good sources of information on the topic. *Cave Diving* by one of our members, Rick Rigg (NSS 7236F), while only 5 pages in length, is nevertheless a very valuable and concise treatise on the problems of pushing sumps.I have personally found the discussions of the problems in tranporting diving gear to the sump particularly useful, since as a Florida veteran I was totally unprepared for them when I started diving farther north. Rick's effort is number 27 in the "Caver's Information Series" and available from our national office (NSS, Cave Avenue, Huntsville, AL 35810) for 25¢.

Underwater Speleology also contains a lot of useful information, particularly a couple of articles by Tom Cook: "Cave Diving In The Northeast Region" in vol. 2, no. 4 and "Northeast Cave Diving" in vol. 2, no.6.

BOWEN SIPHON -

PART III

by Forrest Wilson (NSS 16631)

(see "Organ-Hedricks Cave System, West Virginia" in vol. 2, no. 6 of Underwater Speleology; *and "Bowen Siphon Strike Two" in vol. 31, no. 4 of the* D.C. Speleograph*)*

The third attempt to push the Bowen Siphon was Nov. 13, 1976. The support team consisted on Dennis Seekins, Carl Cowart, David Morrow, Harold Goldstein, Ron Tilkins, Mike Dyas and Harold Herring. These men did a fine job carrying in 120 lbs. of diving gear plus vertical and personal gear. The divers were Sheck Exley and Forrest Wilson.

Sheck led the first attempt this trip. He pushed to the end of his safety line (200 feet) and tied the line to a rock. Sheck had a small spool of 1/16" (ed. - nylon seine twine no. 18) line with him. This small line, although used very much in clear Florida water, is considered by many to be too light for siphons where the visibility may be zero. Forrest led the second push by tying the smaller line to the end of the larger line and continued from there. After about 50 ft. the passage began to pinch down, but after 5 or so feet more it abruptly opened up and went up into a small air-filled room. The size of the room was disappointing after so much trouble and three trips, so Forrest began to check out every possibility. He found a crawlway to a larger passage 25 feet away. This passage was about 5 feet high with water on the bottom. It continued for 200 feet or so and appeared to stop, but on closer examination went up at a 40° angle. At this point the divers went back to inform the group of the find.

It was decided to make a rough survey with a diving compass and pacing. The support team asked for an estimate of the time necessary to do the survey. Since only 200 or so feet had actually been seen, an estimate of 1.5 to 2 hours was given. One hour and forty-five minutes and 1403 paces later, the divers still had not reached the end or even a tendency to narrow! Since 2 hours was the maximum estimate and the possibilities of rescuing a hypothermic diver remote, they reluctantly turned back.

After measuring the "pacer's" step with tape, it is estimated that they went 3500 feet, probably the longest cave found beyond a sump in the eastern United States! The cave passage in general looks like Organ mainstream in places with much breakdown, and like Bowen Canyon in others with little breakdown. Most of the passage has a stream at the bottom with layers above. Two good leads go off high and to the northwest. The passage generally tends southwesterly and roughly in the same direction as Bowen Canyon. A waterfall also comes in from the northwest, and the water becomes deeper and requires swimming at one point.

At one point the passage leaves the stream for several hundred feet but rejoins it later. In many places the passage is 40 feet wide and 25 feet high, with one area even larger. The walls aren't very decorated but there are occasionally some very pretty formations, one section rivaling the white sta-

lactites in Bowen Canyon. Most of the passage is fairly straight with only a few bends and jogs. The average station distance was about 100 feet with several shots ranging nearly 200 feet.

The end of the survey looks very promising as they stopped because of time and not an obstacle. At the turn around point, the width was about 15 ft. and the ceiling height about 20 feet. The water at the bottom was about 3 feet deep. A pencil was left stuck into a crack in the right (northwest) wall as a marker.

A rough sketch added to the existing line map shows the passage tending toward and not far from the Lipps Siphon.

It has been suggested that the tanks be left at the end of the next dive, since very little air is used, and a following trip be made soon after. The lack of diving cavers in the area make this somewhat economically difficult but a good idea nevertheless.

* * * * *

INTERSTATE CAVE, UTAH

It seems that Florida is not the only state with problems of having cave diving sites sealed off. Vol. VII, no. 5 of *Inner Mountain News* chronicles the discovery, exploration and blasting shut of Interstate Cave, a small cave near Wendover, Utah, by members of the Salt Lake City Grotto in early 1975.

In "Easy Come-Easy Go," Dale Green describes how the 320-foot-long, two-level cave was discovered when construction crews working on a section of the Interstate Highway System cut through a low hill near the Great Salt Lake. At the lowest point in the cave the explorers found a pool of clear, warm fresh water. Mike Ware and Gary Willden organized a group of divers and explored 172 feet of underwater passage extending to a water depth of 80 feet, at which point (30 feet below the surface of the Great Salt Lake) a narrow crack stopped progress.

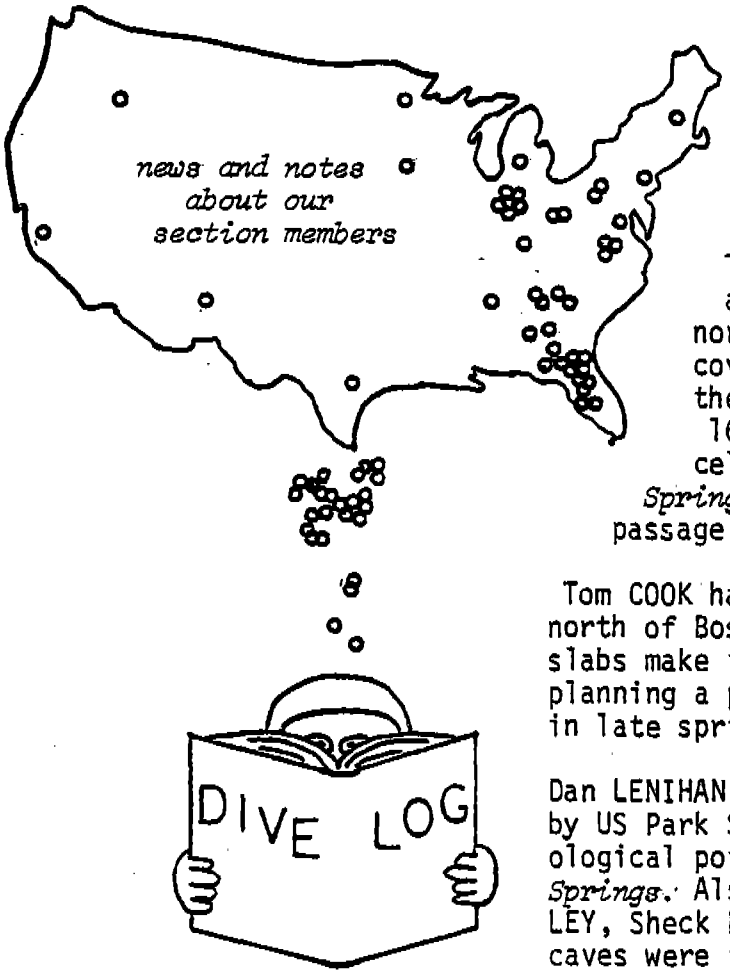
TV publicity over the find caused the local politicians to fear that someone might get hurt in the cave, so it was blasted and bulldozed shut.

* * * * *

BOTTLENECK SINK, MICHIGAN

Vol. III, no. 1 of the *Michiana Caver* (published by the Northern Indiana Grotto) includes a report on a trip to a deep pit in Alpena County, Michigan (site of the 1977 NSS Convention and Cave Diving Session) that has a possible cave dive at the bottom. In "Alpena Report," R.P. Geer describes how fluorescein dye introduced into the bottom of the 120-foot vertical pit reappeared several days later in Misery Bay along Lake Huron's shore.

In addition to Bottleneck Sink and its sub-lake resurgence described above, two "disappearing lakes" are mentioned in the same area.



Congratulations to Dave and Sue FISK, who "tied the knot" in St. Pete in September. Also to Mark and Midge CHESTNUTT, who wed recently.

Troy and India YOUNG and Karan and Sheck EXLEY traveled to north Alabama to do some pits, discovering a new underwater cave in the process. Troy and Sheck found 160 ft. of virgin passage and excellent visibility in *Boshart Creek Spring*, with good potential for vadose passage beyond (9/5).

Tom COOK has found a great practice area north of Boston on the coast, where granite slabs make tunnels 100 + feet long, and is planning a practice sump rescue in New York in late spring.

Dan LENIHAN recently led an investigation by US Park Service personnel of the archaeological potential of Florida's *Silver Springs*. Also participating were Tex CHALKLEY, Sheck EXLEY and others. Three short caves were investigated in the 14-spring group during the survey on 10/26 & 10/27.

Bob GOODMAN and Kirby SULLIVAN have "gone wild" exploring in the Tallahassee area, reportedly discovering a staggering total of more than 6000 feet of virgin passage in several new underwater caves in the area.

Terry MORE, India YOUNG, Troy YOUNG, Forrest WILSON, Ken HILLIER, Mark CHESTNUTT, Sheck EXLEY and others all participated in the search for a presumably drowned diver in the *Telford Spring System* (FL) on 8/27, 28, 29 &31. A total of 11 dives were made in this small, shallow cave, searching and re-searching all areas several times. If the accident did indeed occur, it's the first fatality ever recorded in that cave.

Court SMITH and Lewis SOLLENBERGER have logged dives recently in the *Peacock Spring System* (FL) where they discovered virgin passage near the Waterhole and Challenge entrances. They also dived the Dorffen Hole entrance to the *Falmouth Spring System* (FL).

Paul SMITH and Sheck EXLEY found a new Underwater Kinetics "Halogen Light" in *Little River Spring* (FL) on 10/21. If you think you lost this light, get in touch with Paul.

Paul DELOACH's recent move to Albany, Georgia, to take over the local Boy's Club, puts him right in the "backyard" of *Radium Springs*... where Paul, Billy YOUNG and Sheck EXLEY explored 800 feet of passage on 12/1/74. Radium is Georgia's largest spring in discharge, so has excellent potential.

NIGHTMARE IN DARKNESS

by TERRY MORE (NSS 15798)

(Ed. note: The following fictional account, inspired by the recent search at Florida's Telford Spring, is one of the most chilling descriptions of drowning in an underwater cave that we've run across. If you know of some foolhardy soul who has decided to "prove himself" by diving in caves without adequate preparation, a reading of "Nightmare In Darkness" might be in order... it may save his life!)

The night Florida air was warm and muggy and the water felt cool and clean. Moonbeams shimmered across the spring's crystal basin and fireflies danced among the live oaks. Eric Morgan checked his equipment one last time, donned his mask and switched on his diving light. Silently he and Dick Rogers sank beneath the surface and into a submarine world where there is no traffic or noise or mundane job, only tranquil beauty and silence.

Morgan attached the safety line to a submerged log and together he and Dick swam to the mouth of Murdock Spring. Ducking under the entrance Morgan slowly pulled himself downward, the white safety line unreeling behind him, tracing their path back to the surface. Reaching the floor of the spring, he turned and watched as Dick floated down the sixty foot chimney, his powerful diving light cutting the darkness and projecting shadowy figures on the cave walls. Adjusting his buoyancy Morgan turned and continued into the spring.

Morgan had been diving this spring for years, but he still felt a tingle in his stomach every time he swam past the sign warning of the dangers beyond. He enjoyed diving, especially cave diving, for it provided an escape from the routine of teaching school in nearby Jacksonville.

Morgan reminded himself that this dive wasn't for enjoyment. He and Dick were here to recover the cave's latest victims. For the third time this summer the sheriff's department had called, asking him to recover the bodies of divers who, unknowingly, swam for the last time into the many springs and sinks of Northern Florida. The deaths of these three would bring the summer's total to seven.

Most of the bodies he had found on previous recoveries were within two or three hundred feet of the entrance and Morgan paused, searching the darkness for the glint of metal or glass. Under a ledge, not far from the main tunnel, he found the first body, lifelessly wedged in a crevice near the ceiling, swaying in the current. Nearby in the silt was the diver's face mask. Morgan could almost see the lost diver ripping off his mask in panic trying to breathe where there was no air.

Signalling Dick by waving his light, he pulled himself toward the body. A feeling of revulsion and pity swept through him as he reached for the tank harness. It was only a kid, maybe 16 or 17 years old. Looking away from the lifeless eyes, Morgan pushed the boy's body toward Dick and together they carried it toward the surface.

Sheriff's Deputy Billy Howard, who was waiting on the bank, reached down for the body. "Find the other two yet?"

Morgan replied, "No, but they are probably not far from where we found this one."

"Well, I hope you find them soon, these mosquitoes are so bad I'll need a transfusion before long."

Morgan slipped back under the surface, the current gently pushing at him as he swam back into the spring. Continuing his search Morgan thought how senseless it was for anyone to drown here. Murdock is considered a safe dive by experienced cave divers, but all too often these underwater mazes, easily accessible, become a deathtrap. Most of the deaths are due to a lack of knowledge of the dangers inherent to cave diving. Sadly, a majority of the victims are young, and many, who are unable to afford proper equipment, enter the springs without even a safety line. Relying on their egos, these super-divers - jackets covered with diving patches, French Navy stocking caps pulled over their ears - disregard the warnings. Drawn by the mystery of "what's around the next corner" they are soon into the cave much deeper than intended. Hopelessly lost they now have the rest of their lives to find the way out. Perhaps a patch reading, "Caution, diving can be hazardous to your health" should be given out along with the certification card. If only enthusiasm could substitute for skill and equipment.

The play of Dick's light jerked his mind back to the job at hand. Morgan stayed near the ceiling, trying not to disturb the silt lining the cave floor. By reaching out and grabbing the cream-colored limestone walls he pulled himself along. Ahead the tunnel turned downward forming a vertical chimney. Kicking off the ceiling and deflating his buoyancy compensator, Morgan fell downward against the current. Nearing the bottom of the shaft he injected a little air to maintain proper trim. Morgan thought back to the days when he used plastic jugs to keep up off the bottom. Now with buoyancy compensators, octopus regulators, submersible pressure gauges, better lights and the like gaining wide acceptance, cave diving should become safer. Trouble is, too few visiting divers use what's available.

The tunnel narrowed and Morgan felt secure in the close confines of Mother Earth. From the ceiling silt loosened by his exhaust bubbles rained down, the gold flecks dancing in the light. Looking backward through spread legs Morgan checked on Dick. Receiving the "okay" sign he entered a small chamber with several tunnels branching off in different directions. In the center of this peaceful trap, lying in the mud, were the other two divers.

As he swam toward the bodies Morgan imagined the nightmare which had faced the lost divers as they tried to determine which passageway led to safety. In his mind he saw their breathing becoming more rapid and shallow, wasting what precious little air remained in their tanks. Frenzied gestures passed between divers as hearts pounded and unseeing eyes searched the darkness frantically for some avenue of escape. Suddenly one diver abandons his buddies, taking flight down the nearest opening. Another diver out of air and white-eyed with terror turns on his friend. In a desperate struggle for life, fumbling hands grab for his partner's regulator, knocking it from his

mouth. Instinctively he bolts for the surface, his escape interrupted by the grotto's rocky ceiling. Frantically he claws at his vault, but it is too late. Time has run out. Sinking to the floor, his still body raises a curtain of silt in the darkness.

Gathering the inanimate forms, Morgan and Dick head for the entrance. Morgan dreaded the welcoming above, the crowds of officials, the reporters, the distraught families, here only because of this foolish sacrifice. When will the sport diving public realize cave diving is serious business? Angrily Morgan pictured the morning's headlines: "Underwater Labyrinths Kill Cave Divers." Again he will have to defend against the cries demanding that the state close the springs.

Morgan surfaced with his burden beneath a moss-covered canopy, its peace broken by the harsh red glare of the revolving beacon on the awaiting ambulance.

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LANES SPRING, GEORGIA

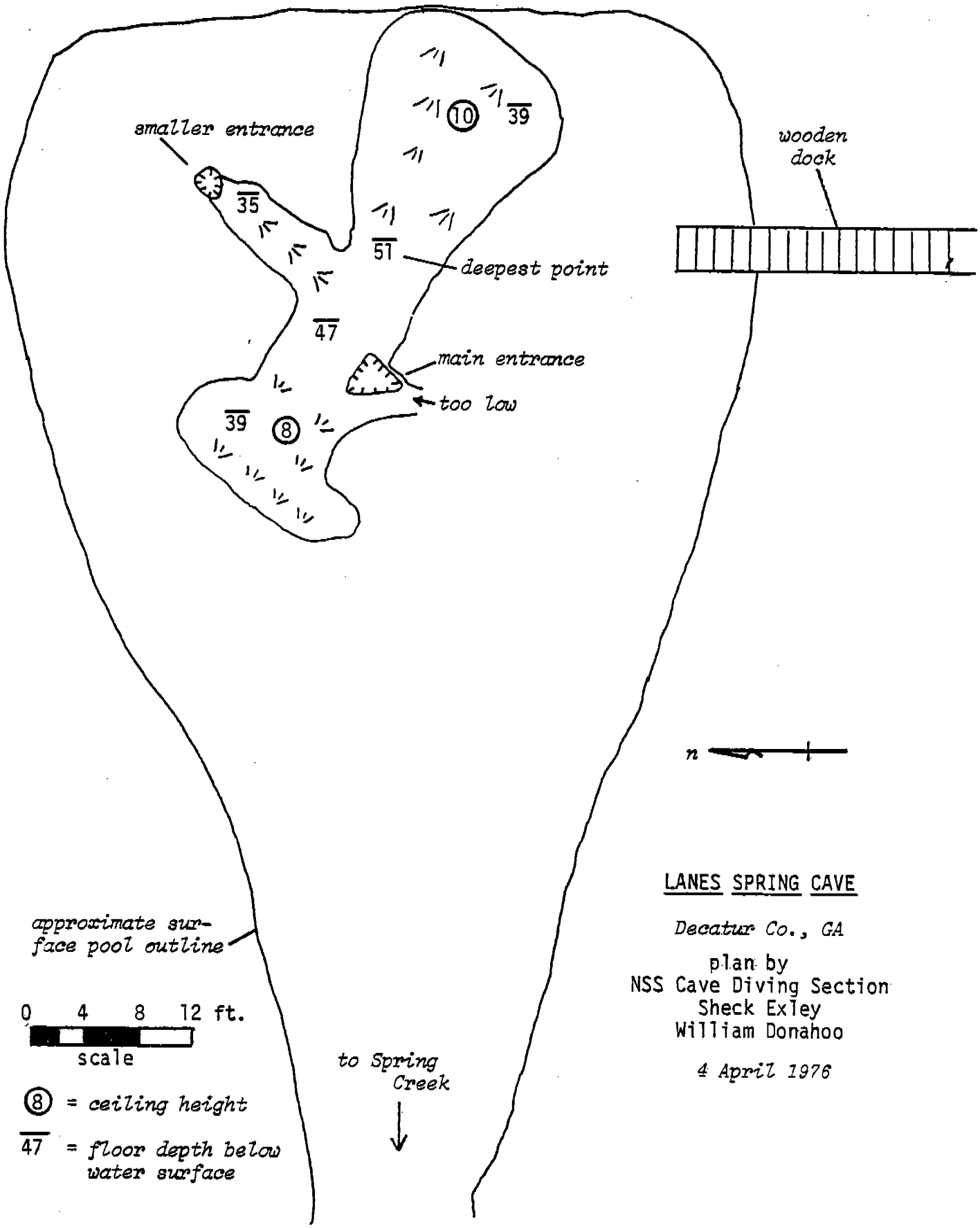
by Sheck Exley (NSS 13146)

Lanes Spring is a second-magnitude discharge spring that flows into the east side of Spring Creek, a tributary of the Flint River near Brinson, Decatur County, Georgia. A popular swimming and fishing spot for the locals, it is located in a swamp in the heart of a southwest Georgia cave diving area which includes Nancy Springs, Baxter Sink, Blue Springs, Brinson Sink, Yates Springs and Climax Cave.

On April 4 of this year Court Smith (NSS 15394), William Donahoo (NSS 17053) and myself had just completed an all-night trip in Climax Cave. We were hot, tired and filthy (to say the least). Recalling the mention of an underwater cave at Lanes in the *International Divers Guide*, I suggested that we swing by and check it out before the long trip home.

The stage of Spring Creek appeared to be up, submerging the dock providing access to the spring basin and reducing the visibility in the basin to about 40 feet. Court decided not to dive, so Bill and I did the honors, tying off on a handy high diving platform that happened to be underwater at the time. Deploying the measured guideline, we fruitlessly searched two depressions in the basin floor before finding the main entrance. As soon as we entered visibility zoomed up to unlimited and we had no difficulty whatsoever making a detailed survey of the cave with compass and survey line. Our survey was particularly facilitated by the fact that the cave was only 60 feet long, with a maximum water depth (at high water) of 51 feet.

The cave essentially consists of two rooms about 15 feet in diameter and 8-10 feet high, oriented in a NW-SE line. The main entrance, a 4 ft. diameter triangular shaft opening at a water depth of 18 feet, drops to 28 feet to enter the SE end of the NW room. Almost directly opposite this point (NE) a fissure-like branch extends to the smaller entrance, negotiable only with single tanks. No portion of the cave extends more than 25 feet from the bottom of the entrance shaft, though daylight is lost in the SE room.



LANES SPRING CAVE

Decatur Co., GA

plan by
NSS Cave Diving Section
Sheck Exley
William Donahoo

4 April 1976