

# Underwater Speleology

*Journal of the Cave Diving Section of the National Speleological Society*

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**Abe Davis, Nicholson, and  
Exley Awards Presented**

*Volume 46 Number 3*

*July/August/September 2019*



## 2019 NSS-CDS WINTER WORKSHOP AT HART SPRINGS

**SAVE THE DATES!  
WATCH FOR DETAILS**

Saturday - December 7th 2019 - Main Workshop  
Sunday - December 8th 2019 - CDS Instructor Workshop

**MORE DETAILS COMING SOON!**



# DEMA 2019 ORLANDO, FL

by Renée Power

DEMA is right around the corner...literally! DEMA is Diving Equipment and Marketing Association. If you're an industry professional, this is your time to come and inquire about the latest and greatest in diving products, education, safety, and travel. You can purchase passes at [www.demashow.com](http://www.demashow.com).

NSS-CDS members have joined forces to staff our booth. This year's show will be held at the Orange County Convention Center West Concourse in Orlando from November 13-16, 2019. The NSS-CDS booth is upping its game with new merchandise, new training, and a new look. A big shout out to everyone who's volunteering time to support our organization at this annual industry event. Please stop by booth #2621 in the Technical Diving Resource Center.

**NSS-CDS  
BOARD OF DIRECTORS**

CHAIRMAN  
TJ Muller  
(732) 674-6550  
chairman@nsscds.org

VICE CHAIRMAN  
Brett Floren  
vicechairman@nsscds.org

TREASURER  
Jason Black  
(386) 466-2113  
treasurer@nsscds.org

SECRETARY  
Renée Power  
secretary@nsscds.org

DIRECTORS  
COMMITTEES AND VOLUNTEER  
Al Clements  
committees\_manager@nsscds.org

PROPERTIES  
Ken Sallot  
property\_manager@nsscds.org

TRAINING DIRECTOR  
Reggie Ross  
(352) 333-3170  
trainingdirector@nsscds.org



**ADMINISTRATIVE MANAGER**

Adam Hughes  
295 NW Commons Loop  
SUITE 115-317  
Lake City, FL 32055  
(561) 704-3038

CDSManager@nsscds.org

Please mail Section business to:  
NSS-CDS  
295 NW Commons Loop, Suite 115-317  
Lake City, FL 32055

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July/August/September 2019**

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Cover Photo: ©Kim Davidsson. Katy Fraser swims in Sac Actun

## EDITOR

Barbara J Dwyer

cavedivingwomanSF@gmail.com

## PAST EDITOR:

Cheryl Doran

## ADVERTISING SALES

cavedivingwomanSF@gmail.com

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*Underwater Speleology* (UWS) is printed quarterly (four times yearly) by the NSS-CDS, 295 NW Commons Loop, Suite 115-317, Lake City, Florida 32055.

UWS is a membership benefit. Information on membership fees and registration can be found at [www.nsscds.org](http://www.nsscds.org).

Please send address changes to [cdsmanager@nsscds.org](mailto:cdsmanager@nsscds.org) or to 295 NW Commons Loop, Suite 115-317, Lake City, Florida 32055.

Please submit letters and articles to the Editor at [cavedivingwomanSF@gmail.com](mailto:cavedivingwomanSF@gmail.com) or at 295 NW Commons Loop, Suite 115-317, Lake City, FL 32055.

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Dear friends old and new,

It's a great honor to be serving as your current Underwater Speleology editor. I've enjoyed collaborating with many of you during the years I've written for UWS, and I look forward to working with many more. Please share your thoughts about what you'd like to see in these pages. It is your member magazine.

My first full issue is dedicated with gratitude to outgoing editor and board chair Cheryl Doran. Cheryl has patiently put up with me over the last two months as I learn to use the computer programs that format the magazine for publication. It's a learning curve, so please bear with me.

Few people tell better stories than do cave divers. Everyone is welcome to contribute adventures, explorations, tall tales, and discoveries. There's new cave being explored in Florida, Europe, Mexico, Russia, South America, and elsewhere. Share your stories, photos, and new maps if you're involved. Tell us about pushing the passage you thought had pinched out or about finding an overlooked lead. Exciting dive reports or close calls/lessons learned all have something to teach us. Please keep the stories, photos, and maps coming.

The magazine could use a few hands and pairs of eyes. I'm looking for a proofreader and copy editor. These positions could involve writing and/or rewriting of stories for the right person. If you are a journalism student or want to build your résumé, this is an opportunity. I'll be happy to work with you and to show you the ropes. I'd welcome a photography editor because that is my weak suit. Finally, if you'd like to contribute to regular columns (rebreathers, conservation, training tips and techniques), please let me know. You will get to talk with some adventurous and interesting people, make new friends, and see cave diving from many points of view.

You can reach me anytime at [cavedivingwomanSF@gmail.com](mailto:cavedivingwomanSF@gmail.com). 'Looking forward to seeing you at DEMA and around the springs and cenotes.

Barbara

# from the chairman

—by TJ Muller

First, I'd like to say that it has been an honor to be chosen to serve as the chairman of the NSS-CDS; giving back to the community is very rewarding at a personal level. Second, it's a good time for the NSS-CDS in general. We are now solvent, and we are strong with robust membership numbers. At this point, the CDS should be around for a long time.

The previous board protected our properties by ensuring that we will not have to go through another lawsuit like we did with School Sink. There have been a few recent events of note, and I can see some refreshing changes coming our way. I feel that this new board has a lot of potential.

- Thanks to Brett Floren, our Vice Chairman, we've gained an annual grant of \$5000 for use of the Azure [cloud computing] platform. This will allow us to bring in house all of our IT hosting and credit card processing, etc. Because we are a volunteer organization, we had a hodgepodge of different platforms. But thanks to Brett and his 35+ years of IT experience, the CDS will be modernizing its IT structure to better serve the members, certified divers, and award recipients.
- Grant funding will also allow us to advertise with Google for about \$100,000 worth of advertising a year — again thanks to Brett Floren.
- We've freshened up the CDS logo and our graphics so that they will better suit a digital media format. Many thanks to Harry Averill for working hard on that. This will also tie into the new Azure platform.
- We've updated our training standards to better suit new divers. Thanks to Reggie and the training committee for moving us forward on that.
- Thanks to Renée Power for designing a new line of women's shirts for members and for spearheading volunteers for DEMA outreach. I hope to see all of you there.
- I would also like to thank Brett Floren for getting the CDS the GuideStar Bronze Seal of Transparency. This means we are a nationally registered 501(c)3 charity and allow us to receive Amazon Smile contributions, among others. It took a long time to achieve this, and it will benefit the CDS for years to come.
- We should all thank Forrest for his many years of service to the NSS-CDS. He always had what he felt were the best interests of the CDS at heart. We wish him all the best in his new ventures.

In addition to the successes and kudos, we also face some challenges and opportunities for further enhancement. We're negotiating with the county on the conservation easement for Alachua Mill Creek Preserve, as well as for potential new development above the upstream tunnel. Looking forward, I'd like to see the NSS-CDS add new sites to enhance member value by allowing divers to access new caves. We are also discussing a Mexico conference.

I know I would like to go and see some cenotes.

It's been a great year for the NSS-CDS, and it's only going to get better. I am looking forward to seeing everyone in person at the winter workshop, where we'll have our final board meeting of the year. And finally, I want to give a big shout out to Brett Floren and Adam Hughes for stepping up and chairing the 2020 International Cave Diving Conference, which will be held in Lake City.

Warmest regards,

TJ



# Questing for Cave Diving's Holy Grail Connection

by Barbara Dwyer with Robbie Schmittner

*After making the long-sought connection, Yucatán team continues its archeological mission and preservation efforts*

Last year, divers of the Gran Acuífero Maya<sup>1</sup> Project connected the Sac Actun and Dos Ojos cave systems near Tulum on Mexico's Yucatán peninsula and established the record for the world's longest underwater cave (353 km/219 miles). GAM exploration director Robbie Schmittner has been seeking this link for nearly 15 years. UWS sat down with him to talk about the project.

—Editor's note

**Robbie, you've been diving in Tulum for more than 20 years. When did you start looking for this connection?**

Gunnar Wagner and I started exploration at the Tux Kubaxa and the Dos Pisos systems in 1999. I remember lying in our hammocks out in the jungle, talking about how Tux Kubaxa might connect to Dos Ojos and then to Sac Actun, all the way down to the city of Tulum. Even as we were just kidding at the time, there was a wish this idea could become true one day.

In 2003, I focused on the Sac Actun system. I concluded that several systems should connect, based on my knowledge of the systems and general flow direction. Bil Phillips, who with Dan Lins had just connected the Sac Actun and Naval systems, joined me. Continuing where the first generation of explorers left off, we squeezed through restrictions to find more cave and links to outlying systems. Our first connection was between Sac Actun and Naval downstream. The Temple of Doom and the Abejas systems followed. The 2007 connection of Sac Actun and Nohoch Nai Chich made Sac Actun the world's largest underwater cave at 155.4 km/97 miles for the first time. Ox bel Ha surpassed it in length just two weeks after our connection.



Left: ©Herbert Myri. *The Grail beckons.*

Above: ©Brian Wiederspan: *Stalactites above and below.*

**Who was on the exploration team with you?**

Marty O'Farrell, Jim Josiak, and Sev Regehr were the regulars. Guillermo de Anda<sup>2</sup> headed up the anthropological identification. All of us dived the whole year, exploring almost on a daily basis, except Guillermo. He came in to sight the archeological finds and register them.

**How did the Gran Acuífero Maya project (GAM) get started? At what point did INAH<sup>3</sup> get involved?**

Guillermo de Anda, Karla Ortega,<sup>4</sup> Bil Phillips, and I founded GAM to finally have explorers and scientists

<sup>2</sup> Director of GAM, cave archeologist, INAH investigator, National Geographic Explorer, and cave diving instructor

<sup>3</sup> INAH: México's Federal Instituto Nacional de Antropología e Historia (National Institute of Anthropology and History)

<sup>4</sup> Director of communication and logistics

<sup>1</sup> Great Mayan Aquifer



© INAH: Instituto Nacional de Antropología e Historia, México.  
*Mask of Mayan god of commerce found in Sac Actun.*

working together. Explorers find all this amazing stuff, and scientists actually know about it and can study it. Previously the relationship between explorers and scientists had been somehow damaged. It was the first goal of GAM to fix this relationship, do great explorations together, and have them well documented scientifically. Guillermo presented the project at INAH headquarters. They loved it and approved it.

### **You came close to connecting Sac Actun and Dos Ojos once before.**

Yes, in 2008 Steve Bogearns and I got very close. According to our maps, we were missing only five feet to unite the two systems! So, one day we timed our dives. Steve started from the Dos Ojos side, and me from the Sac Actun side. We planned to meet at the possible connection point hoping we could see each others' dive lights through a crack in the wall. Or perhaps sediment could be stirred up by one diver and carried with the current to the other one. Unfortunately none of this was happening. But I was able to hear Steve on the other side of the wall. We never found the connection there!

### **So how did you organize the final push?**

In 2015, Bil Phillips and I put a new team together. Further out into the jungle was where we had to go. We had to carry our gear 5 km through thick bushes to reach a “new” area of exploration, where we had found 15 virgin cenotes. The first five cenotes did not go anywhere. Frustrated, we abandoned the area for the next two years. But I never forgot about the other ten cenotes, sitting out there, waiting for us to come back!

Bil and I returned to these in 2017 with a new constellation of exploration divers. By then, Bil didn't feel strong enough to do the daily hiking into the jungle, so

he took care of data collecting and mapping. Next to the ten cenotes we had left untouched, we found another amazing one. We called it the “Mother of all Cenotes” (MOAC). It is a huge cenote with an enormous dry cave room, half filled with an extensive lake in it. The underwater cave entrance is the biggest I have seen in this region..All cenotes ‘must’ have been born here! We quickly decided to position our exploration camp there.

The team worked hard from the beginning of March till November, alternating dive days. We found a little over 18 km of new passageways. The “downstream” section of the MOAC cave was splitting up, and two “power cave” branches headed directly towards the Sac Actun and the Dos Ojos systems — right toward the “Holy Grail” connection. But about 40 meters before getting to Sac Actun and 60 meters from Dos Ojos, our way was blocked by breakdowns.

We spent all of November and December trying to get past those breakdowns, performing dives up to six hours, squeezing into small cave, poking and probing, all without success. I even released a bag of glitter hoping I could find some of it on the other side, inside the other system. We tried everything!

“Go out there and connect these f\*\*\*ing caves!” were Bil Phillips' last words to me. Bil left our exploration team forever at the end of November 2017. This day we lost a great explorer, and I lost a friend—one of the two or three real ones you have in life.

The connection didn't happen from the MOAC side, so we started diving from Sac Actun and Dos Ojos, pushing toward MOAC. One day I was cutting a jungle path to get to a cenote located within Dos Ojos. I stumbled over a small unknown chimney-like cenote. We built a ladder to get down to the water. A nice-size dome room, which we named Tatich Kep, opened up at the bottom of the shaft. Performing one dive only, we were able to connect to the Sac Actun system. Our survey data showed that we were also very close to the Dos Ojos system already.



©Brian Wiederspan. *The moment of connection. Robbie approaches from Dos Ojos (left), while Marty O'Farrell and Jim Josiak swim from Sac Actun (right side).*



©Instituto Nacional de Antropología e Historia (INAH), Museo Nacional de las Culturas, México. *The Mayans were noted for exquisite pottery, examples of which were found on exploration.*

In a few more dives, we reduced the distance between the systems to 26 meters. We searched meticulously for any possibility to head north, where we knew the closest lines of the Dos Ojos system must be located.

**When we spoke last year, you said that you were nowhere near the connection. What happened?**

At the end we found the connection between Sac Atun and Dos Ojos directly. At the end of one dive I found a small hole, maybe a meter wide and 30 centimeters high. Current pulled strongly into the hole, but I was at the end of my dive and could not risk anything. So I cut a few meters of line off my exploration reel and dropped

it in front of the hole. The current pulled the loose line straight into the hole.

I started my next dive from the Dos Ojos side, following a line I installed in 2011, to search where the current would come out. It disappeared into the hole at the other side. About 50 minutes into my dive I found a crack in the wall. Water was pumping out of it. After an unsuccessful attempt to find a bigger opening, I decided to dive into the small lead.

About a body length inside the crack I had to remove my first tank and place it in front of me to go on. My feet were still inside the restriction when I was faced with an even smaller restriction. This forced me to take my second tank also in front of me. Passing through I found myself in a narrow passage that was all blocked by dripstone formations. I turned my head to the right and saw the loose line that I had dropped on the Sac Actun side, dancing up and down in the current, beneath a natural rock shelf!

The final dive to establish the Holy Grail connection was conducted by the whole team. Marty O Farrell and Jim Josiak entered from Tatich Kep (Sac Actun). I started from the Dos Ojos side. We decided to use Bil Phillips' favorite exploration reel to install the last bit of line to unite the caves. Marty carried Bil's reel to the restriction and passed it through. I received it on the other side



©Brian Wiederspan. *Marty O'Farrell explores beneath a virgin stalactite ceiling.*

and brought it back to the surface with me. We dedicated this achievement to our friend and mentor and would like it to be known as the “Bil Phillips connection.”

<https://vimeo.com/255220468/cf05d7b34a>

### **Tell us about your archeological finds.**

As of now we know of 248 cenotes that are entrances to Sac Actun. We identified nearly 200 archeological sites, and about three quarters of these appear identified with the Mayans. There are burnt human bones dating back at least 9000 years in at least two sites. We found skeletons of extinct animals, including the giant sloth, bears, gomphotheres (an extinct elephant-like creature), and more. Some sites contained Mayan pottery. At one we discovered a shrine to the god of trade. The scientists are excited and hope that these discoveries will provide information about the Maya’s customs and rites. Guillermo [de Anda, PhD] believes that Sac Actun is the most important submerged archaeological site in the world. It contains more than a hundred archaeological contexts, including evidence of the first settlers of America, of extinct fauna, and of the Maya culture.

### **What other discoveries have you made along the way?**

I was able to connect Aktun Hu and Caracol Cave to Sac Actun in 2011. This added 33 km to the total length of the system and pushed Sac Actun for the second time to the world’s longest water-filled cave record. The link to Aktun Hu was an amazing find. Hoyo Negro (“black hole”) is a huge sinkhole inside the passageways, which contains a significant amount of remains from the last ice age. The MCEP/GUE team made a great discovery, the human skeleton of a young girl who they named Naya.

### **Did you have leads that proved false but led to other passage?**

Sure. Back in 2015 we moved to a new “virgin” area north of Sac Actun, in the White River area, west of Dos Ojos (Conch Hope) and southeast of Koox Baal (Tux Kupaxa area) with the hope that all three caves would connect. This is where we had found the virgin cenotes but none of the first four had “going cave.” ‘Really frustrating! So we abandoned the area. But I always thought “you have to go back out there!” In 2017, I went back and found a looooooof of cave! We explored over 18 km of new passage way split in three different systems:



©Richard Schmittner. *Magnificent formations define the newly found passage.*



©Karla Ortega. Tanks and other gear had to be hiked into the jungle by the divers and their support team.

Red Pool, Cenote de los Metates, and the Mother of All Cenotes (MOAC). The caves grew bigger and bigger and closer to each other every day, and they grew towards the three giants surrounding them.

<https://vimeo.com/276531527>

MOAC is missing 700 meters to connect to Koox Baal on the north side, 40 meters to connect to Sac Actun on the south, and 60 meters to connect to Dos Ojos to the east. But it did not come together. Desperately we started diving from Dos Ojos and Sac Actun, pushing exploration towards the new systems. Red Pool, Cenote de los Metates, and MOAC remain unconnected. So you could actually say our whole year's work was "false" leads (laughs). But it is new cave, wonderful cave, artifacts, and our next connections

Our exploration keeps going deeper into the jungle, which means hiking more gear for longer distances. For the northwest cenotes, we use 30 tanks per day. As the caves got deeper this meant hiking in two compressors, scooters, rebreathers, and more gear even farther in. It's totally worth the effort, as there are some gorgeous cenotes and caves. Three in particular are pushing close to each other, including a new one, Burning Wasp, and

even moving toward O'Ho Tucha (Vanilla Sky Project 2018) and the MOAC system.

Burning Wasp is enormous. On a preliminary look-see dive, I found a nice room with two possibilities for exploration. I went left, and it opened into a big borehole tunnel. I went around a corner and there were two tunnels, one to the right and one to the left. We found lots of power cave - big passages 40' - 60' wide with an average depth of 60'-70'. That is when we started hiking in the rebreathers and scooters. The rebreathers allowed us to shorten decompression times drastically.

### **Is the connection site open to other cave divers?**

These cenotes are not easily accessible. Divers would need to hike in 2-5 km hauling all equipment. Permissions of land owners would need to be requested.

### **So what's next?**

Our team is back out in the jungle. We're working on connecting the Ox Bel Ha system to Sac Actun. We've found gorgeous cave with artifacts and possibly our next connections. The Yucatán peninsula still hides an incredible amount of treasure for science and

and incalculable potential for exploration. We'll keep exploring!

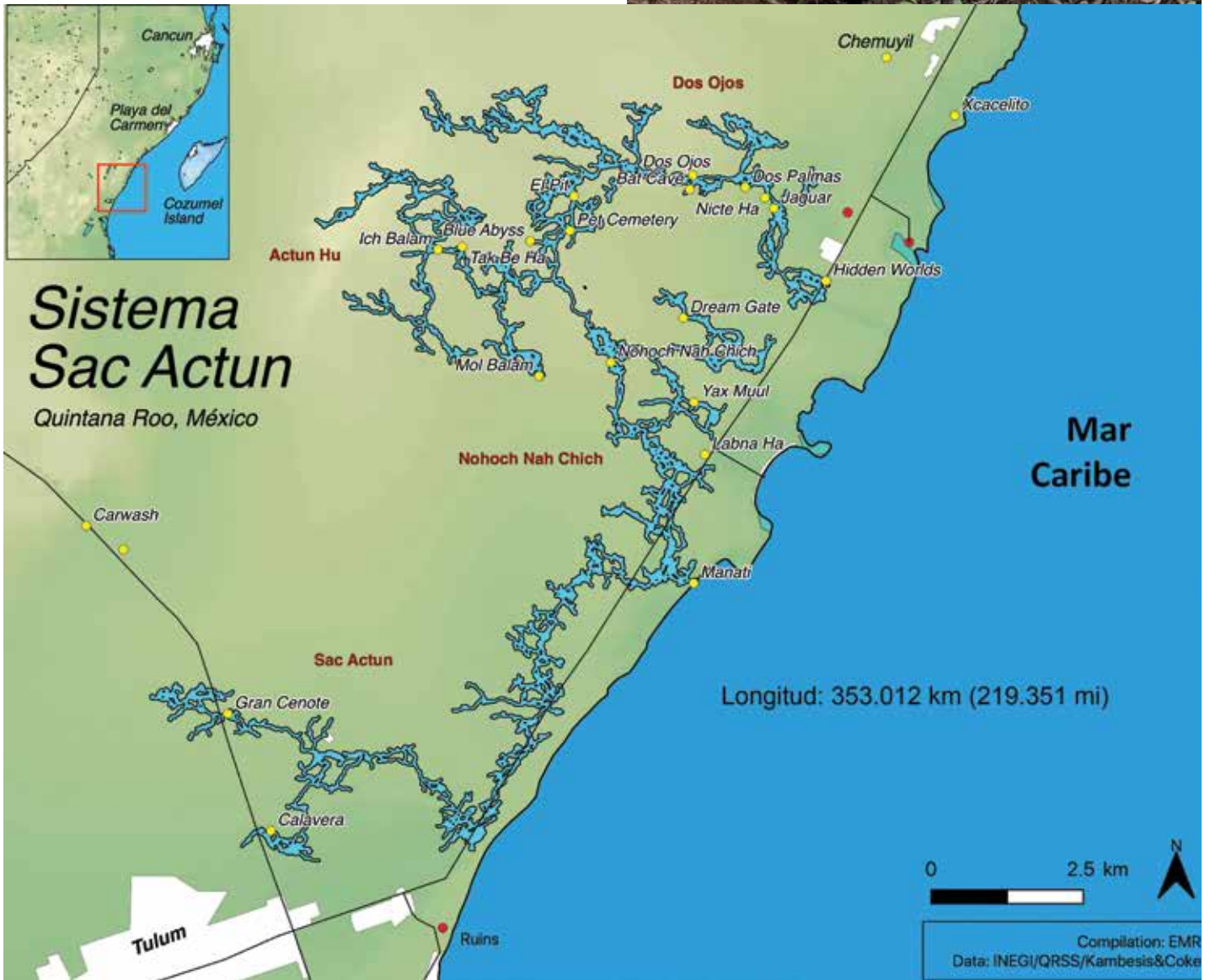
Making the Sac Actun-Dos Ojos connection was an effort of more than 20 years, traveling hundreds of kilometers of submerged caves in Quintana Roo. I dedicated more than 14 years to exploring this monstrous Sac Actun system. Now, we all need to conserve it.

Robbie Schmittner is an underwater cave explorer. He lives and dives in Tulum, Mexico.



Immediate right: ©Brian Wiederspan. *Jim Josiak, Marty O'Farrell, and Robbie Schmittner celebrate after connecting Sistemas Sac Actun and Dos Ojos. Absent: Sev Regehr and Guillermo de Anda.*

Below: ©Quintana Roo Speleological Society (QRSS). *Pre-connection map.*





©Richard Schmittner. *Robbie swims amid the spires and artifacts in Sac Actun.*

# Old Timers' Tall Tales

—by Mark Long

A few months ago, Renée Power messaged me asking if I would participate in a panel discussion. This was going to be a Friday night event, along with a social kicking off the NSS-CDS International Cave Diving Conference to be held in Lake City, FL, on Memorial Day weekend. The panel would consist of people considered to be “legends” of the cave diving community.

Of the eleven individuals pictured below, some began cave diving in the 1960s. Others started during the '70s and a few of us in 1980 or '81. Combined, these guys have made (conservatively) more than 25,000 cave dives. They are also responsible for the original exploration of hundreds of miles of underwater caves mostly in Florida and some in other states and other parts of the world as well.

I'm very proud of the fact that in a 39-plus year cave diving career, I've made numerous cave dives with all but three. In the case of Tom Morris, Woody Jasper, and Lamar Hires, we've made hundreds of cave dives collectively as they were some of my primary diving buddies.

I feel quite honored and privileged to have been invited to be a part of this group. Father Time finally catches up with all. None of us do the dives we did back in the day that were considered “out there” and on the cutting edge. There are new generations of cave divers doing dives we could only dream about. It's a nice feeling to know that in our prime, we were considered some of the best.

Thank you, Elisha Bragdon, for taking this picture.



©Elisha Bragdon. From left to right front row: Lamar English, Paul Heinerth, Steve Foreman, Forrest Wilson, and Guy Bryant. Back row: Court Smith, Bill Main, Tom Morris, Woody Jasper, myself (Mark Long), and Lamar Hires.

# 2019 International Cave Diving Conference Wrap

The 2019 NSS-CDS was held over the weekend of May 24th-26 at Lake City, Florida's National Guard Armory.

The traditional and well-attended Friday night social kicked off the event. Renée Power and her scarlet-shirted "Cavenger" volunteers kept people fed and the beer flowing. A hearty thanks to Dive Rite for sponsoring the food and to Lake City's Halpatter Brewing Company for the beer and ale.

The social's high point was a round table discussion featuring of many of our legendary "old timers" recounting their "tales from the back of the cave."

Saturday morning brought coffee and breakfast courtesy of Lake City Dive Shop. Paul Heinerth graciously emceed—he always does a fine job of organizing and introducing the expert speakers. State geologist and FL Geological Survey director Jon Arthur, PhD, briefed us on the aquifer's health. Derek Covington, MD, discussed immersion pulmonary edema (IPE) and whether exposure suits play a role. We heard about what lies beyond the Eagle's Nest restriction from Frank McNamara. Senior hydrogeologist Fay Baird discussed interaction between the Floridan Aquifer and North Florida's Suwannee River, then Florida A&M's Dr. Tom Sawiki talked about amphipod diversity in the Floridan Aquifer. Wrapping up the day, Edd Sorenson

told us about some of his rescues and recoveries, how recreational cave divers should respond if confronted with a missing diver, and what goes into recovery diver training.

The new NSS-CDS Board held a general meeting after Saturday's events. Member attendance could have been better.

Sunday was free for diving and included guided dives and opportunities to check out various rebreathers and DPVs. All in all, it was a very successful conference!



The NSS-CDS Board and members greatly appreciate our sponsors' and donors' support and generosity.

A heartfelt "thank you" to all, including:

Cave Adventurers  
cavediving.com  
Dive Rite  
Lake City Dive Center  
SDI-TDI  
Golem Gear  
Hidden Worlds Diving  
KISS Rebreathers  
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XOC-HA  
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Rum138  
Scuba Force  
Seide Realty  
Shearwater  
SF Tech Drysuits  
Ursuit Drysuits

# A Pristine Passage Dive for Sheck Exley Award

By Phil Short  
NSS-CDS Instructor #365

An early start found three of us crunching our way across the frosted grass of a farmer's field to the River Cele's banks in the Lot/Dordogne region of southwestern France. The air was a chilly 3°C/37°F. Approaching the river, we came to the spring and small head pool of the Source du Marchepied, our dive objective. We dropped off our sidemount cylinders and fins and walked back to the van to get dressed over mugs of coffee and to discuss the dive plan.

Arriving back at the head pool, we kitted up in the crystal clear spring water, considerably warmer at 14°C/57°F. We began our dive entering through the steep downward slope over boulders and passing a restricted low passage to enter the main cave.

The aim of the dive was a gentle swim as a team of three to take a good look at this incredible cave and to take photos. Diver #3 was taking photos, and divers #1 and #2 carried powerful film lights as well as their dive lights. The walls in the Marchepied are of clean white limestone, which reflects the light. The water is clear blue with zero suspended particulate on this dive, so it was a feast for the eyes.

On thirds we turned at approximately 400 meters/1312 ft from the entrance and made an enjoyable slow swim out savoring the site's stunning geology. It had been a great dive and produced some really great images. What better way to spend my 1000th cave dive in a region I love with good friends?



©Richard Stevenson. *Phil Short enjoys his thousandth cave dive in Marchepied, France.*

# “CDS Blue:” A Fresh Logo and Website for the Age

*by the Training Committee\**

Improvements to the NSS-CDS website and logo have kicked into high gear. The Board of Directors and the Training Committee have harnessed their combined IT expertise and educational savvy to update CDS' logo, website, and training standards. The upgrades sharpen our online image, make the web site easier to navigate, and allow ready access to new educational material and courses.

**Bringing the logo into the modern age.** Our old logo dates from the pre-software era. Its cluttered design featured odd colors and was difficult to read. Cave divers recognized it, but it dated the CDS. The sleek remastered logo is digital friendly and instantly recognizable. Both a circle logo and logotype make up the design. (When using both, the circle goes to the left). Colors consist of solid white, solid black, and a special color to be known as “CDS Blue.” The circle logo's design incorporates a blue gradient. These now are the approved colors for logo use. Red and other shades of blue are out.

Don't despair if you just printed business cards using the old logo. Use them as quickly as you can. The Board will eventually set a cutoff date for using the old logo. Meanwhile, instructors can log into the new training website at [www.cds-training.com/logo](http://www.cds-training.com/logo) to download the new artwork for digital or print use. Do not reprint any cards or brochures using the old logo.

**Authorized use.** Only the Board or its designated representative can authorize the logo's use. Active-status CDS instructors may use the logos to signify their CDS affiliation and their Section instructor status. They may not use the logos to suggest that they speak for the Section or represent it in any other official capacity. They

may not put the logos on hats, T-shirts or other items to sell or give as freebies. The logo's Design Policy and Style Guide will be available on the web site once approved.

**A more member-friendly website.** One of our first priorities was to launch a new subdomain devoted solely to training. It is up and running as [www.training.nsscads.org](http://www.training.nsscads.org). The new site separates education from the other activities, events, and resources listed at [nsscads.org](http://nsscads.org). Visitors can find what they want quickly (the two web sites are linked). Students will be able to select a course, find a US or an international instructor, replace lost c-cards, and contact the Training Department easily. The new website features a page for every course with a description, prerequisites, and an overview. Visitors can click to “find an instructor” from these pages and link to an instructor's web site, Facebook page, and email. They can sign up and pay without having to chase down several different sites. The pages are sorted by course type.

Instructors will be happy to know that the registration page is fixed and running. You can log in with your user ID and password. Students can be registered and pay on the same page. We hope to make it possible to renew your instructor membership online by making a single payment that covers your renewal and both NSS and CDS memberships.

The new “Instructors Only” section contains links to a new generation of student and instructor forms, the latest Standards and Procedures and the new NSS-CDS logos. We hope that you'll like it and welcome your comments.



\*CDS Training Committee members: Harry Averill, Chris Brock, Paul Heinerth, Lamar Hires, Max Kuznetsov, Ted McCoy, and Ken Sallot.

# Training Update:

**By Reggie Ross, NSS-CDS Training Director**

The NSS-CDS Training Committee has been working to bring about fundamental changes in how cave students learn. The goals are:

- to further improve the quality of certified cave divers.
- to better meet the needs of today's students.

The steps students follow to become NSS-CDS Cave Divers have not changed substantially since the 1980s. However, the number of students seeking training has skyrocketed. Today's students have very different needs and abilities than did their predecessors. Equipment, procedures, and the technology available to train cave divers have changed substantially. And we know more about how people learn than we did 40 years ago.

It's time our training program reflects these changes. So how are we doing this?

## **Cavern Diver course: Back to its roots**

As originally envisioned, the Cavern Diver course was never intended to be one of the steps leading to cave diver certification. Instead, we envisioned it as a public safety and awareness course for open-water sport divers. There is still a demand for such a program.

Problems arise when students pair the old Cavern Diver course with the old Intro-to-Cave course. This creates a situation in which students can make it halfway through the 16 total dives required for cave diver certification without using sidemount or doubles. There is a broad consensus among instructors that before entering the training process, students should:

- have training and experience in sidemount, doubles, or CCR.
- be able to make the 16 required certification dives in complete cave diving equipment (no single tanks).
- demonstrate proficiency in cave-diver quality buoyancy, trim, and propulsion.

Many of today's students already meet these requirements. For those who don't, there must be a path that allows them to do so before cave training begins. The old Cavern Diver course doesn't provide this opportunity. This is why, from now on, the Cavern Diver course will neither be a prerequisite for nor will it count toward cave diver certification. It will also be a course that students may take only while wearing back-mounted single cylinders.

## **Getting ready for cave diver training**

Many students who enter cave diver training today already possess technical diver certification from organizations such as IANTD or TDI. As such, they may be able to document prior training and experience in sidemount, doubles, or CCR. Many also demonstrate the buoyancy, trim and propulsion skills we expect of students.

For those lacking this training and experience, the CDS will offer a non-certification technical basics orientation. This will provide open-water sport divers with the same equipment and skills that trained technical divers

# A new path to certification

should possess. It will help to put everyone who enters the cave diver training program on a level playing field.

The four-step process that used to lead to NSS-CDS cave diver certification has outlived its usefulness. Most trainees now complete their 16 certification dives either by:

- training in warm-water environments with little flow, such as Mexico. Students often complete their training in six to seven full days. The more benign conditions make this possible.
- training in harsher environments with colder water and high flow. Students typically break their training into two four-day segments.

Our training process should reflect this. From now on, it will. The new path will consist of two courses in place of the previous four.

The first step will combine the old Cavern and Basic Cave Diver courses into a single, eight-dive program. The difference is that students must be in full cave gear and meet the more stringent entry requirements just outlined.

The focus will be on:

- further perfecting buoyancy, trim, and propulsion skills.
- mastering basic guideline and reel use.
- practicing all emergency skills.

The limits of training for this level will be largely the same as before. The chief differences will be:

- penetration distance limited to 300 m/1,000 ft.
- usable penetration gas limited to 1,500 L/50 ft<sup>3</sup> or one-third starting volume, whichever is less.

The second step will be the final eight dives leading to full cave diver certification. This will be largely the same as before and focus on more complex navigation and, if necessary, limited decompression at the end of dives.

## **Timetable for implementation**

The Training Committee hopes to have revised standards ready for Board approval in early September. This means that by the time you read this, the new standards may be in place. The only things we have left to finalize as of this writing are names for the new courses.

If you have friends, family members, customers, or anyone else with whom you share information about learning to cave dive, make sure this information is up to date. You will find the new course descriptions on the NSS-CDS website.

# In Memoriam: Steve Boyer

Longtime cave diver gave selflessly of his time, skill, and generosity

—by Brent Booth



©Wayne Kinard. Steve takes in an afternoon on his porch shortly before his death.

In the winter of 2018, the cave community lost one of its longtime divers. Steve Boyer passed away after a battle with cancer. For those of you who never met Steve, I can tell you that he was a very unique individual. Not only was he a cave diver, but he was the “go to” guy when any construction needed to be done at our various dive sites and other locations. He worked closely with the North Florida Springs Alliance, repairing and replacing decks and steps, building changing rooms, and doing whatever was required to make things better for all of us who visit the dive sites. I don’t believe he ever accepted one penny for his work. If you ever helped out on one of the many projects he was involved in, then you know he was not above complaining and moaning and questioning who was running the show, but that was just Steve’s way of doing business. Truth be known, his antics were all in jest. He was always willing to do whatever was required to get the job done. Actually, Steve was in charge all

along and everyone knew that!

Over the years, Steve was recognized many times by both the CDS and the NFSA for his volunteer work. For Steve, doing something for the cave community was just another day at “his office.” When he wasn’t doing volunteer work at our dive sites, you could find him building barns, sheds, decks and so on for those of us who live here in North Florida. You had to take a number if you wanted something done, and then you had to listen to him complain about all the work he had to do! Once again, a very unique individual.

Steve will be missed by those of us who knew him, and all of us should appreciate the work he did to improve our dive sites. The next time you’re going down the steps at Madison, Peacock, or Cow, or using the many facilities that he helped build, take a second and give Steve your thanks.

# 2019 NSS-CDS Winter Workshop at Hart Springs

We're fortunate to be having our 2019 NSS-CDS Winter Workshop at Hart Springs. Videographer Wes Skiles once described it as "one of the premier underwater caves on earth." Admission is free to all CDS members but you must sign up. Admission does not include diving. Requirements below to dive in the cave at Hart are below.

Sign up for the workshop at <https://events.nsscds.org/e/1/2019-nss-cds-winter-workshop>.

## Saturday, December 7:

- Cave Cartography -Adam Hughes
- IUCRR Rescue/Recovery - Lamar Hires
- CPR (adult, child, infant), First Aid, and Oxygen Provider - John Bentley, \$10 fee
- 

## Sunday, December 8:

- Guided Diving (see requirements, guides, and fees at [www.divehartsprings.com](http://www.divehartsprings.com)). You must be a full cave diver with at least 100 logged dives and have dive insurance.
- Free CDS Instructor Workshop (registration required).



©Mark Long. *Annette Long dives among the crags in upstream Hart.*



# 2019 Cave Diving Awards

by Brett Floren, Vice Chairman,  
NSS-CDS Awards Manager

**Congratulations to our safe cave diving award recipients. The following divers have received awards since 2018:**

**Abe Davis Award for 100 safe cave dives**

Michael Barnette  
 Scott Brinkley  
 Derek Covington  
 Robert Dankert  
 John Dillaire  
 Chelsea Dinon  
 Andrew Donn  
 Douglas Ebersole  
 Christopher First  
 Theodore Garlock  
 John Dominick Ghesling  
 Jennifer Gifford  
 David R Green  
 Matthew Griffith  
 Gale Hall

Matt Hensen  
 Arthur William Johnson Jr  
 Edward Lyden  
 Tom Lenfestey  
 Brice McMinn  
 Dane Motty  
 Johnny Nunley  
 Chet Parzych  
 Ben Paterson  
 Brian Sheppard  
 Steve Smith  
 Jennifer Strange  
 Tatiana Sevortyan  
 Christopher Valero  
 Connor Watterson  
 Cameron Wheeler  
 Rick Witter

**Henry Nicholson Award for 500 safe cave dives**

James Baldwin  
 Richard Blackburn  
 William Gregory Brown  
 Al Clements  
 Derek Ferguson  
 Gabrielle Proper  
 Marvin Purdue  
 Roger Williams  
 Marvin Zaske

**Sheck Exley Award for 1000 safe cave dives**

Joel Clark  
 Martin Robson  
 Phil Short

# Current NSS-CDS Instructor Listing

Reggie Ross, Training Director, [trainingdirector@nsscds.org](mailto:trainingdirector@nsscds.org)

**Johan Asplund 399 Cave**  
Sweden

**Harry Averill 218 Cave**  
High Springs, FL, USA  
Cave, DPV, Sidemount  
[www.cavediving.com](http://www.cavediving.com)  
[sinulogic@gmail.com](mailto:sinulogic@gmail.com)

**Jon Bernot 378 Cave**  
High Springs, Florida, USA  
[jbernot@me.com](mailto:jbernot@me.com)

**Brent Booth 241 Cave**  
High Springs, Florida, USA  
Stage, Sidemount, DPV, Overhead Nitrox, Sponsor  
[bcb241@aol.com](mailto:bcb241@aol.com)

**Chris Brock 392 Cave-**  
Training Committee  
Florida, USA  
Cave, DPV, Stage  
[cbrock1412@gmail.com](mailto:cbrock1412@gmail.com)

**Peter Butt 186 Cave**  
High Springs, Florida, USA  
Stage  
[kes@atlantic.net](mailto:kes@atlantic.net)

**Juan Carlos Carrillo Cave 342**  
Mexico DF, Mexico  
Cave, Sidemount  
[undergrounddiving@gmail.com](mailto:undergrounddiving@gmail.com)

**Ricardo Castillo 386 Cave**  
Mexico DF, Mexico  
[www.rangoextendido.com](http://www.rangoextendido.com)  
[ricardo@rangoextendido.com](mailto:ricardo@rangoextendido.com)

**James Draker 395 Cave**  
Fort White, FL USA  
Cave, CCR Cave, Deep Cave, Stage, DPV, Sidemount  
[www.dive-caves.com](http://www.dive-caves.com)  
[j\\_draker@hotmail.com](mailto:j_draker@hotmail.com)

**Bill Dunn 170 Cave**  
Conyers Georgia, USA  
Stage, Sidemount, DPV, Training Committee  
[bill.dunn7@gmail.com](mailto:bill.dunn7@gmail.com)

**Van Fleming 296 Cave**  
Kernersville NC, USA  
DPV  
[scubiedo@aol.com](mailto:scubiedo@aol.com)

**Steve Forman 106 Cave**  
Winter Haven, Florida, USA  
Stage, DPV, Training Committee  
[scubaetc@aol.com](mailto:scubaetc@aol.com)

**Mark Fowler 379 Cave**  
Lake City, FL USA  
Cave, CCR Cave, Deep Cave, Sidemount, DPV  
[www.markfowlerscuba.com](http://www.markfowlerscuba.com)  
[dolfinmsdt1@aol.com](mailto:dolfinmsdt1@aol.com)

**Georges Gawinowski 369**  
Live Oak, Florida, USA  
CCR Cave, Stage, Sponsor, Deep Cave  
[www.cavedivertraining.com](http://www.cavedivertraining.com)  
[info@wdtdive.com](mailto:info@wdtdive.com)

**Jill Heinerth 340 Cave**  
High Springs, Florida, USA  
CCR Cave, Survey, Stage, Sidemount, DPV  
[www.IntoThePlanet.com](http://www.IntoThePlanet.com)  
[JillHeinerth@mac.com](mailto:JillHeinerth@mac.com)

**Paul Heinerth 165 Cave**  
Hudson, Florida, USA  
CCR Cave, Stage, Sidemount, DPV, Sponsor, Training Committee  
[www.heinerth.com](http://www.heinerth.com)  
[paul@heinerth.com](mailto:paul@heinerth.com)

**Lamar Hires 191 Cave**  
Lake City, Florida, USA  
CCR Cave, Sidemount, Stage, Sponsor  
[www.diverite.com](http://www.diverite.com)  
[lamar@diverite.com](mailto:lamar@diverite.com)

**Tom Iliffe 156 Cave**  
Galveston, Texas, USA  
Cave, Sidemount  
[www.cavebiology.com](http://www.cavebiology.com)  
[iliffe@cavebiology.com](mailto:iliffe@cavebiology.com)

**TJ Johnson 368 Cave**  
Orlando, Florida, USA  
Survey, Stage, DPV, Deep Cave, Sidemount  
[www.dayo.com](http://www.dayo.com)  
[TJ@dayo.com](mailto:TJ@dayo.com)

**John Jones 321 Cave**  
Lake City Florida, USA  
Stage, DPV, Survey, Deep Cave, CCR Cave, Sponsor, Sidemount, Training Committee  
[www.jpjscuba.com](http://www.jpjscuba.com)

**Brian Kakuk 366 Cave**  
Abaco, Bahamas  
Stage, Survey, Sidemount, Advanced Cave  
[www.bahamasunderground.com](http://www.bahamasunderground.com)  
[bahamacave@aol.com](mailto:bahamacave@aol.com)

**John Kieren Cave 397**  
Mexico  
Cave  
[john@kierentechical.com](mailto:john@kierentechical.com)

**Elena Kryzhanovskaya 382 Cave**  
St. Petersburg, Russia  
[elena.spb@gmail.com](mailto:elena.spb@gmail.com)

**Maxim Kuznetsov 352 Cave**  
Gainesville, FL USA  
Cave, DPV, Stage, Sidemount, CCR Cave, Sponsor, Training Committee  
[www.vodalaz.com](http://www.vodalaz.com)  
[max@vodolaz.com](mailto:max@vodolaz.com)

**Jeff Loflin 360 Cave**  
Bonifay, Florida, USA  
Sidemount, Stage, DPV, Overhead Nitrox, Deep Cave, Sponsor  
[www.JeffLoflin.com](http://www.JeffLoflin.com)  
[jeff@jeffloughlin.com](mailto:jeff@jeffloughlin.com)

**Mal Maloney 374 Cave**  
Bermuda Dunes, CA, USA  
Sidemount  
[www.divetri.com](http://www.divetri.com)  
[Mal@divetri.com](mailto:Mal@divetri.com)

**Ted McCoy 391 Cave**  
High Springs, FL USA  
Cave, , CCR Cave, DPV Cave, Sponsor, Training Committee

**Michael Silva Netto 398 Cave**  
Brasil (Brazil)  
Cave, CCR, Sidemount  
[www.gotecxalac.com](http://www.gotecxalac.com)  
[rebreathertraining@gmail.com](mailto:rebreathertraining@gmail.com)

**Timofey Novikov 393 Cave**  
Moscow, Russia  
Cave, Sidemount, DPV, Stage  
[sergeyevtimofey@gmail.com](mailto:sergeyevtimofey@gmail.com)

**Bill Oestreich 253 Cave**  
Crystal River, Florida, USA  
CCR Cave, DPV, Sidemount, Sponsor  
[www.birdsunderwater.com](http://www.birdsunderwater.com)

**Daniel Patterson 353 Cave**  
High Springs, FL USA  
Stage, DPV, Deep Cave, Sponsor, Training Committee  
[www.danpattersondiving.com](http://www.danpattersondiving.com)  
[divetraining@yahoo.com](mailto:divetraining@yahoo.com)

**Luis Augusto Pedro Cave 318**  
Lake City, FL, USA  
CCR Cave  
[info@iantdbrasil.com.br](mailto:info@iantdbrasil.com.br)

**Mark Pergrem 319 Cave**  
Dallas, Georgia USA  
Cave  
[www.atlantatechnicaldivers.com](http://www.atlantatechnicaldivers.com)  
[mpergrem@comcast.net](mailto:mpergrem@comcast.net)

**Conrad Pfeifer 287 Cave**  
Mars, PA, USA  
Advanced Cave, DPV  
[conrad2@zoominternet.net](mailto:conrad2@zoominternet.net)

**Renée Power 383 Basic Cave**  
Altamonte Springs, FL  
[renee@divebydesign.com](mailto:renee@divebydesign.com)

**Martin Robson 350 Cave**  
Egham, Surrey, UK  
CCR Cave, Stage, DPV, Survey, Deep Cave, Overhead Nitrox, Sponsor, Sidemount  
[www.eau2.com](http://www.eau2.com)  
[martin@eau2.com](mailto:martin@eau2.com)

**Reggie Ross 286 Cave**  
Gainesville, FL USA  
Cave, Stage, Sidemount, DPV, Sponsor, Training Director  
[www.ReggieRoss.com](http://www.ReggieRoss.com)  
[reggie@reggieross.com](mailto:reggie@reggieross.com)

**Evgeny Runkov 371 Cave**  
Ekaterinburg, Russia  
Cave  
[jekadiver@gmail.com](mailto:jekadiver@gmail.com)

**Ken Sallot 390 Cave**  
Gainesville, FL USA  
Cave, CCR Cave, Deep Cave, DPV, Stage, Sponsor, Training Committee  
[www.divegainesville.org](http://www.divegainesville.org)  
[Ken@Sallot.org](mailto:Ken@Sallot.org)

**Luis Sanchez 387 Cave**  
Mexico DF, Mexico  
Cave  
[www.rangoextendido.com](http://www.rangoextendido.com)  
[luis@rangoextendido.com](mailto:luis@rangoextendido.com)

**Phillip Short 365 Cave**  
DevizesWilshire , UK  
Cave, CCR Cave, Sidemount, DPV, Survey, Stage  
[www.philshorttechnical.com](http://www.philshorttechnical.com)

**José Mario Ventura Cave 389**  
Brasil (Brazil)  
Cave  
[www.munaexo.com](http://www.munaexo.com)  
[jmventura@munaexo.com](mailto:jmventura@munaexo.com)

**Sébastien Wilem 394 Basic Cave**  
Belgium and Luxembourg  
Basic Cave, Cavern  
[www.neotec.lu](http://www.neotec.lu)  
[wilem@mac.com](mailto:wilem@mac.com)

**Roger Williams 396 Basic Cave**  
Tulum, Mexico  
Basic Cave, Cavern  
[roger@xoc-ha.com](mailto:roger@xoc-ha.com)

**Pam Wooten 388 Basic Cave**  
Key Largo, FL USA  
Basic Cave, Cavern  
[wootpa5@hotmail.com](mailto:wootpa5@hotmail.com)

**Timothy Young 400 Cave**  
Florida, USA  
Cave, DPV, Stage, Sidemount  
[wscuba.com](http://www.wscuba.com)  
[timmyyoung@wvscuba.com](mailto:timmyyoung@wvscuba.com)

**Cristina Zenato 325 Cave**  
Freeport, Grand Bahama  
Cave, Sidemount, Stage  
[www.cristinazenato.com](http://www.cristinazenato.com)  
[czenato@gmail.com](mailto:czenato@gmail.com)

Cave Diving Section of the  
National Speleological Society, Inc.  
295 NW Commons Loop Suite 115-317  
Lake City, FL 32055

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