Bill Stone in the Abyss

His life's obsession has been to get to the bottom of the world's deepest cave.
Two team members have already died. How much farther is he prepared to go?
By Craig Vetter

Early last may, members of the U.S. Deep Caving Team who had quit the Huautla expedition began to arrive back in the United States from the mountains of Oaxaca, Mexico, with reports of bitter dissension among team members and news of a death. There were rumors that the team's leader, Bill Stone, was planning to salvage something of the troubled expedition by diving alone into the unknown depths of Sistema Huautla, through flooded passages nearly a mile below the entrance, into territory so remote and so dangerous that if anything went wrong there would be little chance of recovering his body, much less of rescuing him. The word *suicidal* was used. The name Kurtz came up, evoking the Conrad character who was finally overtaken and destroyed by madness on the ragged upper reaches of an African river.

Those who knew Stone could hardly have doubted that his 18-year obsession to prove Huautla the deepest cave in the world might well have pushed him into the mindset that would choose death over outright failure. He had been born to map this cave, he told friends: to explore its shafts and great rooms; to ford its underground rivers, whitewater canyons, and waterfalls; to dive through the still, dark pools, called sumps, that had stopped all the other cavers who had tried to follow this monstrous labyrinth from the light at the entrance through the long dark to the light at the other end, where the system emptied into a gorgeous jungle canyon. Above ground, the distance from entrance to exit was eight miles. Below ground, nobody knew. For Stone--a technical wizard, a physical warhorse, proud and driven--the mystery of Huautla's unseen depths fit his ambitions perfectly: a cave as hard as Everest. Maybe harder.

It was the middle of may when I made the six-hour drive from the city of Oaxaca up into the cloud forests of the Sierra Mazateca, where the town of Huautla floats on stilts atop ridges overlooking the sinkhole valleys of these beautiful blue mountains.

Huautla (pronounced "wowt-la"), a town of 30,000 or so, is the Kathmandu of caving. It lies within striking distance of several large cave systems, and during the months between January and the onset of the rainy season in June, caving teams from all over the world gather here to provision their expeditions, to use the telephone and mail service, to spend one last night in a hotel.

Huautla is also the market center for the large population of Mazatec Indians who have lived and farmed in these steep hills for more than a thousand years. They speak an ancient language, Mazateca, which they supplement with a vocabulary of whistles as musical and complex as the birdsong that fills the forest. Their spirituality is a weave of Catholicism and old beliefs that they saw no need to abandon when the Roman faith stormed in with Cortés. They are among the few Mexican tribespeople who still practice the sacred psychedelic mushroom ceremony to cleanse their souls and keep them in harmony with the world of spirits and myth that surrounds them in the clouds, trees, rivers, and especially the caves that make lacework under their limestone highlands. According to legend, Huautla is the underworld from which the first Mazatecs walked into the light and were born. For centuries they buried their dead in the caves, where the gods they still revere make their immortal home. They do not go into the caves these days, nor do they take it lightly when others do. In 1969, a Mazatec used his machete to chop the rope from which American caver Meri Fish was suspended. (She fell, uninjured, onto a ledge.) Stone himself had a brief scuffle with locals at the cave entrance on one of his early expeditions. The Indians retreated, hurling curses that Stone was a *brujo,* a warlock.

I spent the night in one of Huautla's small hotels and the next morning drove half an hour up a steep rock-and-dirt road to the pueblito called San Agustin, perched on the rim of the sinkhole that holds the primary entrance to the Huautla cave. The fog that is generated each morning when the mountain air meets the atmosphere of the cave hung in the crater like milk in a blue bowl.

It had been more than two weeks since any news of the expedition, so I had no idea as I rolled slowly into the village whether the team was in the cave or out. Then I spotted team doctor Noel Sloan washing at a standpipe along the road. His face and upper body were the pale color of a salamander's belly. His greeting was affable but tired. The team had come up that morning, he said, a ten-hour trip with heavy loads after a final underground push that had lasted 14 days. "Everybody's in the kitchen shack," he said, pointing 50 yards down the hillside to a small wooden hut with a tin roof. "We haven't slept yet. It's been an extremely intense expedition."

Inside the hut I found the tatters of the team seated around a large makeshift table taking their first aboveground meal. There were seven of them, and they were a picture of dirt-eating exhaustion. Stone's face was gaunt and filthy. His fingers were wrapped in duct tape. He stopped a forkful of salad halfway to his mouth as I came in and greeted me with words that reflected the sullen, almost surly mood that seemed to be on him in the wake of his great adventure. "My God," he said. "There's only one person I'd be more surprised to see down here, and I'd have to kill that person."

It was a reference to one of the people who Stone thought had let him down, one ancillary player in the many disputes, disappointments, and disasters that had befallen him on the long way to this bittersweet--and perhaps last--Huautla expedition.

Huautla put its spell on Stone in 1976, the first time he climbed into it. He was a 23-year-old engineering student at the University of Texas, a member of an expedition that pushed the cave to a Western Hemisphere depth record of 2,624 feet. Another team that same year got only 200 feet deeper before it was stopped by a flooded room, a dead-end that the cavers called the San Agustin sump. The only way past it was to dive, and in 1981 Stone took measure of the barrier by swimming a thousand underwater feet before the limits of his open-circuit scuba gear turned him back.

Three years later he led an expedition that attempted to connect the cave from the opposite direction: from the jungle plateau up to the high entrance. The probe took three months and turned out to be a logistical nightmare: 600 dives through six sumps using 72 scuba tanks. The team mapped six cave miles, which covered only a quarter of the aboveground distance to the San Agustin sump.

Stone returned from that trip to the drawing board with another idea: to design and build a "rebreather," a sophisticated piece of machinery that would give him greater range than ordinary scuba gear and allow him, perhaps, to dive through the unknown distance of the San Agustin sump into the air bells that he expected to find farther down the cave.

He began work on his high-tech backpack in 1984 in the basement of his Maryland home. He and several friends built the machine by hand on weekends, in the early hours before Stone went to his job as a structural engineer at the National Institute of Standards and Technology, and in the late hours after he got home. By 1987 they had a prototype: a 195-pound, computerized gas-processing plant that would scrub and remix exhaled air, making it possible for a diver to stay underwater for up to 48 hours. Stone called his backpack the MK1R, and it was a testament to his great problem-solving aptitude, his tenacity, and his two-headed passion for science and adventure. It was a rare and powerful combination: a kind of tough brilliance that took the mapping of a circuit board to be the same as the mapping of a cave. In the summer of 1987 Stone began testing the rebreather and looking for teammates to train for an all-out assault on Huautla's last secrets.

I met Stone and four members of his prospective team five years later, during a training mission at northern Florida's Jackson Blue Spring. For three weeks they had spent their days tinkering with the rebreathers and diving with them into a long, deep, clear-water cave at the head of the spring. Tagging along on one of their practice dives, I tried to imagine the double whammy of climbing nearly 3,000 feet into the earth and then diving through a flooded snakehole. I decided I'd sooner light my hair and try to roast hot dogs over the flame.

As it turned out, the combined job of caving and diving was going to be one of the most serious challenges Stone would face in building his team. The underground athletes of the world tend to fall into two distinct groups: Dry cavers, who have mastered the climbing, rappelling, and hauling techniques necessary to live and travel underground, and cave divers, mostly from Florida, who park their trucks at the edge of cave-ridden springs like Jackson Blue, wade in, and spend the limits of their air in purely submarine explorations. The Huautla team needed members who could do both, and bridging the gap between the mole people and the eel people was going to be difficult.

On his 1984 expedition Stone had discovered that because most cave divers didn't take well to the spartan and spooky experience of life underground, it was easier to turn skilled dry cavers into divers than the other way around.

"Easier, but not safer," according to team member Tom Morris. A 35-year veteran of cave-diving expeditions, Morris talked about the dangers of underwater caving from close, bitter experience. "I personally know 15 people who have drowned in Florida," he said. "And dry cavers are at particularly high risk when they dive, because they're at home in caves, at ease, which is no way to be underwater."

Rolf Adams, a strong and experienced caver, put the proportions of the Huautla challenge into perspective one morning at Jackson Blue as he lugged the cumbersome rebreather out of the water and over a small seawall. "In Huautla," he said, "this single step is going to be a rock climb."

Adams was one of the five international members of Stone's team: a 26-year-old Australian with a wry spirit and a willing attitude, he was in Florida trying to make the conversion from dry caver to cave diver. Along with his rebreather training, he was spending several days a week completing a basic cave-diving certification course. He was learning fast. Stone expected that when the expedition got to Huautla in February 1993, Adams would probably be one of the lead team. Then, on their last day at Jackson Blue, Adams was lost in the kind of accident that is every cave diver's nightmare.

It was Easter Sunday, and the team was packed to leave. Adams was anxious to make a last dive, purely for the practice, in a cave called Hole in the Wall, about half a mile up the spring from camp. He and veteran cave diver Jim Smith donned traditional open-circuit dive gear and then, using the fixed line on the cave's bottom as a guide, swam about 2,000 feet into the tunnel before making their turn for the trip out. Halfway back, Smith looked to see Adams on the ceiling of the cave, struggling to switch from his primary regulator to his backup. That done, he gestured that he was OK, and Smith led on, only to be overtaken moments later by a panicked Adams, who was signaling that he was out of air. Smith immediately put his regulator into Adams's mouth and deployed his own backup as the two sank to the cave floor, where they were enveloped by a blinding storm of silt. They rose again to the cave ceiling; then the regulator fell from Adams's mouth, and he pulled loose from Smith's hold, fell away into the murk, and was gone.

Smith made it out with virtually no air in his tanks. Sheck Exley, the world's most respected cave diver and a friend of the team, was called in to recover the body. The postmortem found ample air in Adams's tanks and blamed the accident on "pilot error" rather than equipment failure. Stone, who counted Adams as one of his best friends, flew to Australia to deliver a eulogy at the funeral and then postponed the expedition several months.

It would not be the last delay. In fact, two years would pass between Adams's death and the team's arrival in Mexico. Over that time, Stone would beg money and gear from sponsors, redesign his machine, recruit and train team members, go into debt, and watch a contract for a documentary film fall into contention and then ultimately collapse under an injunction that would prevent him from making any film at all. It was the sort of run-up that tests the perseverance of an explorer before he ever reaches the unknown territory, a gauntlet of personal and logistic struggles that required Stone to fold salesman, accountant, clerk, teacher, politician, and adventurer into a single fierce and unstoppable personality.

We call him the bulldozer," said Sergio Zambrano that first day in San Agustin. Zambrano was one of two Mexican members of the team. A seasoned mountaineer, diver, and caver, he had been responsible for obtaining the expedition's permits and for acting as liaison with federal, state, and village officials. And though he is a soft-spoken, gentlemanly spirit, Zambrano made it plain that being Stone's diplomat was not easy work.

"He went from a D-9 to a D-10 on this trip," he said, emphasizing Stone's big-tractor, get-out-of-the-way leadership style.

I'd seen what Zambrano was talking about on my visit with the team at Jackson Blue Spring. Stone rarely walked anywhere. Instead, he moved from task to task at a lope that made everybody else look slow and lent a general feeling of impatience to his manner. He talked fast and rarely yielded a point, no matter what the subject. And when he got rolling on one of his pet harangues--the bureaucracy at NASA, for instance, through which he had made it to the final cut as a candidate for astronaut training in 1989--he sprayed a sorehead kind of judgment that cast any approach but his own as the work of fools and incompetents. He could have gone to the moon on one-tenth of what the space agency spent, maybe less, he told me, and someday he was going to prove it by organizing a group of disgruntled former NASA employees into an independent team that would make it into space. Given Stone's technical abilities and the obsessive lens through which he focuses on the job at hand, I couldn't help thinking that he might just do it. The only thing that might stop him would be the kind of personality problems that bedeviled him throughout the Huautla expedition. Over the week I was in San Agustin, nearly all of the team members took me aside to grumble about the personal tensions that had plagued the expedition almost from the day they crossed the border at Reynosa. "We were a crew, not a team," was how one of them summed it up.

The affinities and differences within the team showed themselves early. The pairs that formed on the drive to Mexico remained partners throughout the expedition. Kenny Broad, 27 years old, an anthropologist at Columbia University and a veteran of ten cave-diving expeditions, rode with 29-year-old Ian Rolland, a jet mechanic for the Royal Air Force and one of Britain's most experienced sump divers. Noel Sloan, a 40-year-old anesthesiologist in Indianapolis and one of the team's founding members, rode with Steve Porter, a 40-year-old property analyst from Minnesota, and Don Broussard, a 46-year-old Texas mathematician. Stone made the drive with 34-year-old Barbara am Ende, the only woman on the expedition, a Ph.D. candidate in marine geochemistry at the University of North Carolina, and a dry caver with 20 years' experience. The two of them had met on a cave rescue two years before, and their romantic involvement had evolved naturally into her training as a cave diver and her inclusion on the team. Jim Brown, an accomplished cave diver from Pennsylvania, along with Mexican cavers Angel Soto and Sergio Zambrano and British cave diver Rob Parker, completed the 11-member core team.

From the moment they arrived in San Agustin, Stone set the team to work at a feverish pace: unloading gear, digging latrines, building tables and benches for their aboveground camp. On March 3 they went to work rigging the cave with fixed rope that began at the entrance and descended 2,824 feet to camp five at the San Agustin sump. Visiting cavers who dropped by on their way to or from other expeditions volunteered to hump 35and 40-pound loads on the 12-hour round-trip to camp three, the huge room that stood 750 vertical feet above the sump and served as the main bivouac. Altogether, visitors and team members made more than a hundred antlike trips into the cave, carrying nearly two tons of gear and food. Through it all, Stone pushed as if he were late for something, as if he were Hannibal crossing *under* the Alps.

"I've never seen him so possessed," said Sloan. "If there was a minute when gear wasn't being hauled, he went crazy."

By the middle of March, with camp three in place, Stone and Ian Rolland began to rig camp five, a 12-by-four-foot platform they had designed to hang above the water in the narrow rock chamber of the sump room. This cramped space, a difficult hour-and-a-half rappel from camp three, was where the dive teams would work, eat, and sleep. The roaring noise of an upstream waterfall provided a nerve-racking bass note, exacerbating the restless energy already on them as they anticipated slipping into the cold, murky water that led they didn't know where, or how deep, or how far.

Stone chose Sloan, Porter, and Rolland as the point team, and on March 23 they began a series of dives that lasted three days. Each man went alone into the water, laying guide line on the cave floor as he went. The decision to make solo dives was based on the worry that if they dove in pairs and one man got in trouble, there would be a double drowning as the second man tried to save his partner.

Stone visited them during their first probes and returned to camp three saying that the short, tentative dives they were making were an indication that they were scared. In three days they had laid only 750 feet of line. He expected a breakthrough, and was getting impatient.

Kenny Broad, who was waiting in camp three for his turn in the water, wasn't surprised at the timid first efforts. "They were not bold dives," he said, "except for Ian, who was pushing ahead well. Noel was freaked-out, but I'm not knocking that. The water was cold, and the visibility was poor. And we had just beaten the shit out of the rebreathers, dragging them to the center of the earth."

By the time the lead team returned to camp three, the expedition had been underground for 13 days, and the tension was beginning to unstitch things. Jim Brown, who had the most experience on the rebreather after Stone, had decided he wasn't going to dive. "I just didn't like the feel of the place," he said. "It was just one thing after another. And Bill was pushing the whole way. He'd yell at you not to do something, then turn around and do the same thing himself."

Meanwhile, Sloan and Porter, rattled and exhausted by the initial dives, told Stone that they needed R-and-R time out of the cave before diving into the sump again. Stone took their request badly. "He just couldn't believe that we wanted to take a break," said Sloan. "He wanted us to stay down there forever, and when I told him we were going up, he became despondent. He sat there for ten minutes totally speechless. I have never seen him so depressed."

The two of us were standing on the road above the kitchen shack watching the Mazatec farmers scattered here and there in the steep cornfields, carefully hoeing each plant.

"I just had a really bad feeling that something was going to happen," said Sloan, remembering his unease after those first dives. "It was the same feeling I had before Rolf died on Easter Sunday in 1992. I mean, I knew when he asked to borrow my regulator that he was going to die."

With Sloan and Porter back in huautla and Brown serving only as support, the work of cracking the sump fell to Broad and Rolland.

"I was itching to dive," said Broad of the moment Stone gave him the nod. "I hadn't gone to Mexico to sleep on the rocks. I went to dive, and I was particularly happy to be diving with Ian. He and I had become very close friends by then. He was a great dry caver, which I'm not, and he took great pains to teach me the ropes. And he was a fine cave diver, too, the only one on the team, really, whom I felt comfortable having as my support down there. And he told me the same thing."

Broad's reading of Stone's leadership was by turns understanding and critical. "As the leader of an expedition, you have certain things you want to get done and you're going to piss people off regardless," he said. "But Bill can be hyperinsensitive in the way he says or does things. He doesn't back down on things. He's not a people person."

Broad and Rolland made the trip back down to camp five the same day that Sloan and Porter climbed out. Broad made the first dive, laying 280 feet of line beyond the 750 feet already in place, and came up with news that the flooded passage was growing larger. This was a sign, he thought, that they were nearing an air bell. Rolland made the next dive and came back with further signs that they were about to break through: The ceiling of the sump was beginning to slope upward more drastically, and the sediment on the bottom was getting deeper.

"We were pretty excited," said Broad. "This was what the expedition was all about for me: good friends alone down there, things going like clockwork. Ian and I really knew each other by that time. He talked a lot about his wife and his kids, and we ran a spectrum of philosophical issues. When you're with the right person, you open up pretty fast in an intense situation like the one we were in down there."

Broad went back into the sump on the second day of their push. In just under 50 minutes he covered a distance of 1,411 feet and poked his head up into a long, narrow room full of air.

He was the first person ever to see the lonely rock chamber that lay beyond the San Agustin sump. A sandbar ran down the middle of the room--three feet wide, 100 feet long--but he didn't climb onto it. He knew that Rolland was better equipped to survey the room, and he was excited to get back to tell his friend that they had cracked the seal on Huautla's dark heart.

Meanwhile, at camp three, Stone, Brown, am Ende, and Parker waited for news. Broussard was off on one of his many Sherpalike trips to camp five and arrived on the afternoon of the breakthrough. He found Broad and Rolland rigging the rebreather for a second dive, chatted with them for a few minutes, and made the climb to camp three to report that the sump had been cracked.

According to Broussard, there was no particular celebration at the news. "It wasn't joyous," he said. "The crew expected it. Everyone breathed a sigh of relief that we were finally on the other side, but the attitude was more like, 'Yes, the sump has been pushed. Now we can start the next phase of the work.'"

Sloan and Porter were in Huautla on their break as Rolland began his dive to the other side at about four o'clock on March 27. Sloan, still spooked by his experience in the sump, hired a *curandero,* a shaman, to read the tarot for him. "It was kind of weird," he said. "He dropped the cards in four piles. The first three were for yourself, your family, and any question you had. When he dropped the fourth, which is for friends and those around you, it was the death card. That was four o'clock in the afternoon. Which is when Ian died."

By seven o'clock that night, Broad had begun to worry. He had boiled tea water in expectation that Rolland's dive would take two, maybe three hours. Their agreement was that if Rolland wasn't back in six hours, Broad would go for help. As the fourth hour passed, Broad began to fix the platform pulley system so that Rolland could get himself out of the water should he return while Broad was gone. Then he turned off the teapot, left a carbide lamp within easy reach, and on the stroke of the sixth hour quickly began the climb to camp three to organize what he still expected to be a rescue.

On the way up he considered the possibilities. Rolland was an insulin-dependent diabetic, and although he was extremely vigilant in monitoring his blood sugar, Broad thought it possible that he had become hypoglycemic in the air bell, decided not to risk the swim back, and was waiting for help to arrive.

Broad reached camp three at about 11:30 that night. Anxious to return to the sump, he woke the sleeping crew and told them that they needed to begin rescue preparations immediately. Stone argued that the

exhausted team, including Broad, needed sleep before they began the technically demanding work of putting a second rebreather together. He reasoned that if Rolland was trapped in the air bell, he would be on the sandbar and in no danger of hypothermia. He consulted Broussard, also an insulin-dependent diabetic, and decided that if Rolland had suffered a low blood-sugar reaction, the candy bars he was carrying would sustain him overnight. Broad left the discussion angry and frustrated, but he was eventually calmed by Broussard, who agreed with Stone that the team needed rest. "No one slept too well," said Broussard. "But it was better than nothing."

At five the next morning the team was up and at work: Some of them went to the surface to summon further help, including Sloan and Porter and a group of British cavers who were camped at a cave nearby. Stone and Broad assembled the second rebreather at camp five and Broad began his dive. He made it through the sump in 30 minutes and surfaced in the air bell calling Rolland's name. When there was no answer, he began to swim around the sandbar and noticed footprints going over the top and then back into the water. Moments later he spotted Rolland: motionless on the bottom in ten feet of water, the regulator hanging from his mouth, the lights on the rebreather flashing. Broad dove fast in the hope that perhaps he had arrived just in time. Only when he touched his friend's arm did he know for sure that the worst was true.

He made a visual inspection of Rolland's body and equipment, but disturbed nothing. "That's standard," he said. "You don't move anything unless you're taking detailed notes on a slate. Essentially, you treat it like a crime scene." From what Broad could see, the rebreather seemed to be functioning perfectly, a verdict that was later confirmed by three hyperbaric physiologists who analyzed the machine's black-box computer readouts.

As Broad surfaced below the platform in camp five, he could see on Stone's face the realization of what had happened. "I don't remember what I said or what his reaction was," said Broad. "It was just numbing. We stayed on the platform that night, and Stone and I talked for a long time. He was sad for Ian's wife and kids. And the death had the added dimension for him that he had lost an important cog in the expedition machine. As for me, I could have given a rat's ass about a hole in the ground compared to my friend's life."

Stone himself recovered the body from the air bell. It took five days to make the hard, sad trip to the surface. Twenty-five people, including cavers from nearby expeditions, converged to help, and on the morning when they finally lifted the body over the lip of the sinkhole, they were greeted by a scene that was, for Broad, touchingly surreal. "It was amazing," he said. "The Mazatecs were waiting for us with flowers in their arms, incense burning on a little altar. They'd cut hundreds of steps in the steep hillside, and they helped carry Ian to their church, where they had a memorial service with singing and prayers. I'm an anthropologist, so I'm used to analyzing rituals. I don't really take part in them. But this was different."

"I was very proud of my people," said Sergio Zambrano, who along with Rob Parker accompanied the body to the Oaxaca airport, from which it was flown to London. "Bill didn't want the Mazatecs to hold the service. I had to talk him into it. I told him, 'These caves have belonged to them for thousands of years. They have deep and sacred beliefs about them. And in a way, those who die here belong to them as much as they belong to their friends and family.'"

A few days later, as Stone spoke to a gathering of officials in Huautla, he heard again how deeply the Mazatecs are connected to the mythology of their caves. One of the town's mayors listened to Stone's report of the accident, then rose to chide what he felt was the caver's gringo arrogance. You come down here with all your technology, he said, and you still don't understand why you have suffered this tragedy. Perhaps it is because you did not ask the permission of the god of the caves to enter the sacred domain. This death might have been avoided had you made peace with the gods of the mountain, had you asked a *curandero* to make the proper sacrifice.

Veteran cave photographer Wes Skiles, who was on assignment to photograph the expedition for *National Geographic,* arrived with a crew the day before Rolland's body reached the surface. Skiles photographed the

Mazatec memorial service and then went into Huautla and made a phone call during which he learned of another cave-diving death: Sheck Exley, the best-liked and boldest cave diver in the world, mentor to Skiles, Stone, and many others, had drowned just days before while trying to set a deep-diving record in a cave called Zacatón in northern Mexico.

By the time Stone's shattered team met in the kitchen shack under the weight of the double tragedies, morale had reached its nadir. Everyone except Stone and am Ende was of a mind to end the expedition. Stone, in fact, had already pushed a second sump--which began at the end of the air bell--by himself. On April 8, while the rest of the team had been struggling to pull themselves together emotionally, he had left am Ende at camp five and dived past the room where Rolland drowned. He'd made it 557 feet through the second sump and surfaced on the other side into a dry passage large enough to pitch a camp from which to explore the low end of the system.

There were those who took his quick return to the sump as a sign of callousness, a lack of grief. For Stone, the opposite was true. He believed that to abandon the project in the wake of Rolland's death would have rendered the death a waste. It was a question of debt: huge financial debt, to begin with, and then a deeper sense that as leader you owed it to a lost team member to accomplish something with what had been spent. For a man like Stone, to quit with no payoff was impossible.

"I figured I had to set an example," he said. "We had to keep this thing going." He returned from his successful reconnaissance dive suggesting to the team that they were on the verge of accomplishing what they'd come for; all they really needed was some time off before a final do-or-die push. He proposed a trip over the mountain to the jungle resurgence of the Huautla system, where everyone could relax, think things through, give the depression and the personal hostilities that were haunting the group a chance to dissipate.

Just before leaving for the jungle canyon, Broad told Stone that he couldn't go on with the expedition, that he would be a danger to himself and the rest of the team if he did. He would stay, he said, long enough to help his friend Skiles get photographs, and then he would leave. Stone said that he understood. He respected Broad--the work he'd done, the trauma he'd suffered--and though his absence was going to leave the team desperately short of people willing and able to make the dives beyond the sump, Stone acquiesced gracefully to Broad's feeling that he had reached his limits. Porter, who had come to feel that the expedition was operating under a dark cloud, said that he would stay on as part of the support team but was not going to dive again. That left Stone facing what he felt could well be the utter failure of the expedition. Time was running out; further dives through the sump would be on hold while the team helped Skiles haul his gear and take photographs. The crew members who remained were tired and depressed, and some of them were angry. And the rainy season was only six weeks away.

It was almost the middle of April by the time Skiles and his team reached camp three. The morning after their arrival, they rose to what Broad thought was a louder roar than usual from a waterfall that was within earshot of the camp. In fact, it had rained hard that night, and the runoff surge had raised the level of the river gorges by six feet, making the way out of the cave impassable. On their first foray upstream, Skiles and the team got only 150 feet before the current they were battling turned them back. That night there was talk of rationing food and carbide for their lamps if the water continued to block the way to the top.

Stone, who had been delayed in a gear hunt on the surface, was stopped in his attempt to climb down to the group by five-foot standing waves in the passage called Upper Gorge. He left food and gear and a note that said he would begin rigging another route to camp three if the water continued to rise.

The next day, Skiles and his crew were turned back again, although the flood had begun to abate somewhat. By the third day, the water was low enough that the group decided to move out. It was hard, wet going, and especially dangerous for the diving specialists whose climbing skills were weak. At the top of one waterfall, Porter slipped and was trapped on the rope under the heavy flow. Sloan heard him yell, scrambled down, grabbed his chest harness, and managed to pull him from the powerful cataract. The team then decided to

abort its try and head back to camp three. As they began their rappel, Porter fell again, this time to the plunge pool at the bottom of the falls. No one on the rope was close enough to reach him. Long, tense moments passed before Porter was able to surface.

The team made it out the next day, but for Broad, Porter's close call was the last ominous straw. As he made his good-byes, Porter decided to go with him. Stone turned on Porter in a rage, telling him that he had signed on for the whole trip, that leaving would let the team down, that by damn he was staying, no matter what. Porter relented.

Skiles, who had other commitments, made a final photo trip into the cave before leaving with his team. It was the end of April. The known extent of the cave was barely past the point to which Broad and Rolland had pushed it a month before. And the expedition had dwindled to eight people.

As skiles and the others arrived back in the States with reports of the death and delay and the animosities that were loose among those who remained, it became clear that if Stone did make a final push beyond the sump, he would be working on a desperately thin margin of error. The team was down to three divers: Stone, Sloan, and am Ende, whose exploratory cave-diving experience was virtually nil.

Then Sloan demurred. He was still under the sway of his premonitions and had come back into the cave with a talisman called Ojos de San Pedro, a small paper bundle tied with straw and full of green dust and a garlic clove, that had been given to him by a *curandero* in Huautla. Since his first dives, he had been wrestling with the question of whether to go back into the sump. Finally he decided that the risks were too high and the support too thin for him to be comfortable on this kind of exploratory reach. He did agree, however, to remain in the cave as emergency backup for Stone's dive to the other side, which was to include am Ende.

As Stone's partner and the only woman on the core team, am Ende had worked long and hard to organize the logistics of the expedition. In the cave she had rigged and hauled with the straightforward energy and mental toughness that had seen her through 20 years of caving alongside men. "In a way, caving with these guys was frustrating," she said. "I ran, lifted weights, climbed stairs to get in shape, and some of the men on the team who didn't do anything to get ready for the trip were still faster and stronger than me. But I pulled my weight. I worked my butt off."

To many of those involved in the expedition, Stone's final push seemed a desperate and dangerous stroke. They were concerned with am Ende's lack of experience, about the fact that she and Stone were going to dive together instead of solo, about the slim chance that a rescue could be mounted if their equipment failed or if one of them so much as sprained an ankle in whatever lonely terrain waited for them beyond the sump.

"I was very concerned for their safety on that dive," said Broussard, who was to wait in camp three with Sloan. "Bill was pushing the equipment and personnel real hard at that point. And we didn't have nearly the backup that cavers like to have in risky situations. Barbara had only been diving for a couple of years, so no matter what, it took a lot of guts for her to do what she did."

Stone and am Ende got into their dive gear on April 30 at camp five, which was by then being called "camp fear." Am Ende was using Rolland's rebreather, which Stone had refitted after a careful examination convinced him that the machine had not been at fault. For her part, am Ende shared Stone's faith in the equipment and in her own abilities.

"I know there were people who worried about my lack of cave-diving experience," she said. "And with Ian's death there were a lot of people with less than positive thoughts about the whole thing, and some of that rubbed off on me. But mostly, what I felt when I slipped into the water was great excitement."

Am Ende went ahead on the dive through the first sump. Stone followed, dragging the 150-pound duffel bag packed with their camping gear, food, lights, and ropes. It took them half an hour to swim the 1,411 feet to

the air bell, and Stone said he spent every minute of the dive rehearsing in his mind exactly what he would do if am Ende had a problem.

"Underwater, you think about the technology every moment," he said. "My eyeball was glued to the lights on her machine, the buddy display that goes from green to flashing red and then to solid red if there's a gas-mixture screwup. I knew that in the worst case we could have aborted to one of the open-circuit bailout bottles we were carrying or to one of the gas bottles that Ian and Kenny had stashed at 400 and 750 feet into the sump, but when you dive as a team the worry is always increased."

They spent about 20 minutes in the air bell where Rolland had died and then dove 557 feet through the second sump, surfacing into a dry passage that opened onto a large tunnel that became their base camp. They stashed their rebreathers on a high ledge so that the rigs they were going to need for the trip out would not be carried off by high water if the rains arrived ahead of schedule.

"The water level in the cave was way down when we got on the other side, which was very fortunate," said Stone. "If it had come up while we were beyond the sump, we would have had serious problems."

Just how serious a flood would have been became clear the next day as the two began their explorations: 15 feet above the cave floor they found the wrapper from a Snickers bar lodged against the rock wall of a tunnel. "That was the only thing that really spooked me while we were over there," said am Ende. "I knew that it could only have come from our group, and that it had been washed down there in the flood that trapped Wes. Seeing it that high on the wall was disconcerting."

Stone and am Ende spent six days exploring the lower reaches of Sistema Huautla. Altogether, they surveyed two miles of subterranean territory that no human had ever seen before. They traveled through large tunnels and huge rooms, past seven lakes and two waterfalls to a final sump that stopped them at a depth of 4,839 feet. "I never felt so remote," said Stone, "especially on that last day. We were 22 hours from camp five and I kept thinking, 'don't fall, don't make a mistake, because there ain't gonna be any rescue.'"

Sloan and Broussard waited at camp three for the duration of Stone's and am Ende's dangerous push. Porter had changed his mind again in the middle of the anxious vigil and had left Huautla.

"I was almost as nervous as Noel even though he was the primary backup," said Broussard. "We spent the time organizing camp and beginning to haul gear out to keep busy, but we were nervous the whole time. And when they finally walked back into camp with news of their success, we were tickled no end. It was a day to remember."

On my last day in San Agustin, Stone and I stood overlooking the valley as he prepared to make a final trip into the cave, to haul out the last of the gear. By then we'd already talked about the success of his last dive, which had established Huautla as the fourth-deepest cave in the world; about Rolland's death, which doctors would finally attribute to complications of diabetes; and about the bitterness that was even then evident among the bone-tired crew that remained. There were only seven of them now, and the feelings they confided to me about the expedition in general and about Stone's leadership in particular were not gracious. Stone himself was bitter about what he called the laziness of certain members of the group. "I wish it had been a military operation," he said. "There would have been a few people I would have keelhauled."

When we talked about another attempt to make Huautla's final connection, Stone said maybe: from the bottom, a dive into the resurgence and then upstream toward the sumps. Others on the expedition wondered where he would find a team. "The puzzle of Huautla won't be solved, I'd say, for a decade," said Sloan. "We looked long and hard to find people to put this expedition together, and none of them will want to come back and do it again. The thing is, you never know the cost of a world-class caving expedition until it's too late to ask for a refund."

"Good luck," I said as Stone turned down the steep trail for his final trip into the cave that had defined his life for 20 years.

"Luck," he said, "is not a factor."

It was a pompous remark in light of all that had happened. It had taken a million dollars, two lives, and the efforts of something like 50 people to see Stone's grand mission through. But perhaps it shouldn't come as a surprise that luck, or fate, or the blessings of the gods of the cave, held no place in Stone's own version of what he had experienced. His rough charisma and galloping hubris lay at the center of everything right and everything wrong about the whole Herculean endeavor. And in the end, it may be that prizes like Huautla go only to those who rarely ask anyone's permission for anything, and who rarely stop to count the price.

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