Chapter 9

The Sinkholes of Australia

The vitality of thought
is in adventure. Ideas won't keep.
Something must be done
about them.

— Alfred North Whitehead

After the *Coralita* docked in Yeppoon, David, Annie and I flew back to Melbourne from Rockhampton, exchanged our warm-water wetsuits for very cold-water wetsuits, and flew to Mt. Gambier in South Australia.

Mt. Gambier is a small town built around a volcano, located about halfway between Adelaide and Melbourne. It is a friendly place where locals trip over each other to get an earful of Yankee accents and where sheep ranchers in terry cloth hats meet at the end of each day in country pubs to swap stories. The countryside of Mt. Gambier itself is a composite of sheep stations, pine forests, lakes and the sinkholes we were going to explore.

Our guide to the deep, flooded caves of Mt. Gambier was Rodney Fox, a well-known Australian diver who had miraculously survived the savage attack of a great white shark. After his attack Rodney had tested his lungs—which had been severely lacerated by the shark—by free diving in the deep underwater chasm of Piccaninnie Ponds, one of the principal spots of our story.

When we arrived at "Pics", as the locals call the hole, we were met by a croaking chorus of half submerged frogs in a marsh swamp surrounding the jetty. The South Australian sky was ominously grey and bitter cold air blew from the Southern Ocean two miles away. I pulled my collar up around my face and walked

out onto the jetty of the pond, past the frogs which quickly withdrew into their shallow puddle of slime and broken reeds.

We unloaded the camera equipment and diving gear from Rodney's Land Rover, then changed into our diving suits standing on a tarp. Without the tarp we would have been ankle deep in mud.

Soon we were swimming away from the Piccaninnie jetty across the first pond. I dropped down to ten feet into a mystical world of green algae. A school of tiny trout-like fish swam by and proceeded to pick on a floating clump of moss. The water was cold and so crystal clear that I could see to the far edge of the pond.

The three of us followed David toward a neat row of reedy plants that were so perfectly aligned they seemed planted on purpose as a sort of underwater stage curtain. We swam through the reeds.

On the other side, we were instantly suspended over an enormous flooded crack in the earth—100 feet deep, 150 feet long and 20 feet wide. The water was so transparent I felt suspended in air, as if I were soaring through a Grand Canyon of deep blue. The drop-off was so unexpected and surprising that I yelled into my regulator, but no one heard. We were in the Piccaninnie Chasm.

I swam past the filamentous yellow-green algae which hung down on either side of the precipitous walls of the chasm. In the deep, blue abyss below me I saw the limestone teeth that jutted out from the walls. I free-fell past the teeth to 90 feet. To the right of me a cave slanted off at 45 degrees. In the cave I turned on my light and saw a series of narrowing slots that dropped to 187 feet. This was what the locals called the Dog Leg. I sank into the dark crack and stopped at 125 feet. My light created eerie shadows and pockets in the blackness below. There was no bottom to be seen. I'd heard of the diver who died in this hole at 177 feet, tangled hopelessly in the monofilament line he'd been using as a safety line. I turned back and swam toward the light.

I caught up with the others at the far end of the chasm and we swam inside the Cathedral, a huge, moonlike cave. A tiny fish swam in front of my light, casting a giant shadow on a limestone wall. I looked at Annie. She was photographing something on top of a limestone pinnacle near the entrance of the cave. It was the partially exposed shell of an ancient, fossilized sea urchin embedded in the limestone.

Russell Kitt arrived in Mt. Gambier the next afternoon, excited and ready to lead us into some of the more restricted holes of Mt. Gambier. Russell is president of the Cave Divers Association of Australia, and no one without a permit from the CDAA goes into the holes of Mt. Gambier. If a diver is caught in Piccaninnie without a permit, the park ranger confiscates his equipment. Most of the other holes around Mt. Gambier are on private property, but landowners don't allow divers into their holes without permits either.

Photo by Hillary Hauser

The approach to Piccaninnie Ponds

Photo by Hillary Hauser

A topside view of the ladder leading down into the Shaft

Why the restrictions? Because divers have died. Two in Kilsby's, two in Piccaninnie, three in Death Cave, and finally, four in the Shaft. The Shaft incident in 1973, which took all four lives at one time, was the last straw. The Australian government threatened to shut down all the holes of Mt. Gambier completely when the CDAA organized in 1974. The group proposed a special training/permit system for cave diving which they insisted would be effective. The government agreed to give it a try. So far, the system has worked. Russell Kitt insists on strict adherence to the rules. No one can bypass the tests necessary to get permits. No one. We'd gone through a special process to get permits in Melbourne.

Russell wanted to show us some of the holes designated "Category Three." Category One describes the safe holes open to the sky. Category Two holes contain some submerged passageways (Piccaninnie is a "Cat Two"). The Category Three holes have more complicated submerged passageways and silting conditions. It's not hard to get lost in a passageway underwater when one cannot see. For Category Three holes, you have to have lights and safety lines. And you have to know what you are doing.

Bullock Hole, so named for a cow that fell into it at one time, was a fairly big pit in the middle of the Barnoolut sheep station and is designated as a Category

Photo by David Doubilet

Reaching a sinkhole could mean a 30 foot climb down a rope ladder (right). Divers explore an area called "The Cathedral" and Piccaninnie Ponds. Nine strobe lights were required to pervade the darkness (opposite page).

Three hole. Russell and I drove out together in his lime-green station wagon, with Rodney Fox and the Doubilets following close behind. As we bounced over the sheep pasture, Russell talked animatedly about what we were going to see. He was excited about everything. He is a high-strung, Australian version of Giancarlo Giannini—dark, bearded, his mind working all the time.

It was a 30-foot drop to the water. Russell rigged up a mountaineering ladder attached to the fender of Rodney's Land Rover, draped over the ledge of the hole and down toward the water. Inside the hole birds flew in and out of their nests, crisscrossing each other just above the water's surface. A dead bird floated in a film of pasture grass blown in by the winds. Broken eggshells were strewn about at the base of the walls.

David, Russell and I geared up in our heavy wetsuits, in the heat, in the middle of a sheep pasture, to dive in with the dead bird and floating pasture grass.

When I started down the ladder, I realized it was not going to be such an easy situation. I realized, too, that it was going to be even worse climbing out. The ladder started to swivel and turn, and my legs became weak and wobbly. In my heavy wetsuit I could feel the perspiration pouring down my back, my legs and my chest. It was almost 100° outside, the hottest day of the year.

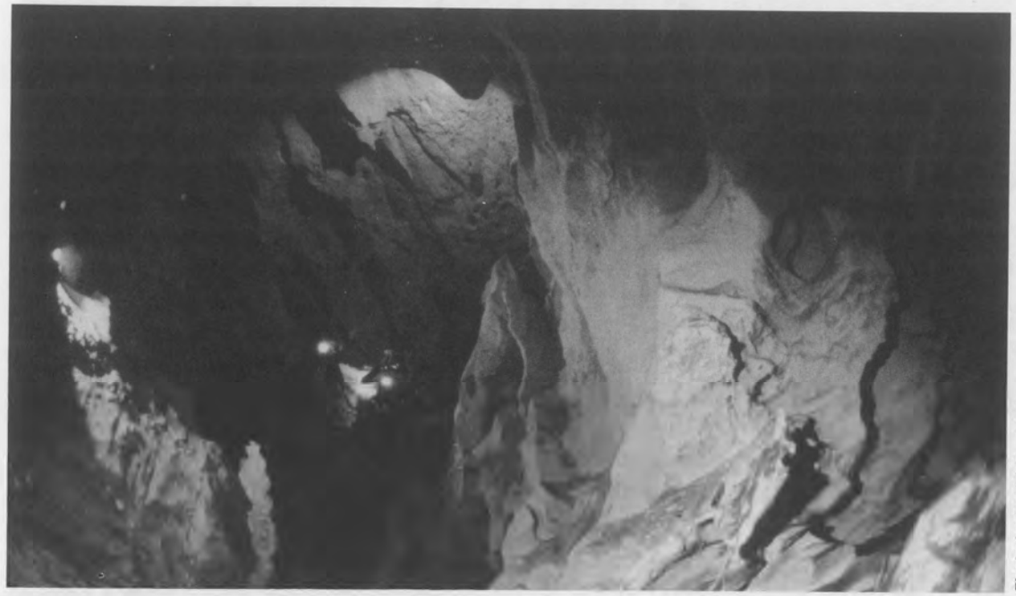

Photo by David Doubilet

Our equipment and David's cameras were lowered down. After we strapped ourselves into our tanks and regulators, we dropped beneath the surface. We were in an enormous chamber of transparent water, so clear that I could see the bottom below me at 100 feet. We sank down to 50 feet. I looked up and through the water saw the outline of the top of the hole with Annie standing at the edge of it. It was like being in an encapsulized, magical world of Beowulf—a chamber beneath a lake where heroes and dragons live out imaginary lives.

Unlike Piccaninnie Ponds, there is no life in Bullock's, but that was not the point. The entire adventure was to drop down into an underground, underwater chamber and explore. We were diving in a cavern that had been formed by the Miocene ocean that once had owned the land, an ocean that now lapped at the shores of Port MacDonnell over ten miles away.

The origin of holes like Bullock and Piccaninnie is an interesting geological phenomenon. In the Miocene epoch, 10 to 30 million years ago, the whole of South Australia was underwater. During those millions of years, sea animals lived and died. Their skeletons carpeted the ocean floor layer upon layer until the calcified carbonate material was transformed into an enormous mass of limestone. Then the oceans receded, the limestone layer became dry land, and the rains came down. In Australia, the rainfall from the Victoria and Penola Plains

to the north permeated the limestone, running toward the ocean in the direction of Mt. Gambier. Contained in rainwater is carbon dioxide, which dissolves limestone. As the water collected in ever-enlarging pools underground, the limestone bedrock dissolved. In some areas the surface land collapsed to form sinkholes, such as Piccaninnie and Bullock Hole.

We dived for over an hour in Bullock Hole, David taking pictures of Russell and me exploring the main cavern. The water was frigid, and I was glad for my heavy wetsuit, even if I'd nearly passed out from the heat on the way down.

When the three of us surfaced, the fun really began. We had to climb out—up that 30-foot ladder and over a ledge at the top. Even though our tanks, fins and weightbelts were hauled up separately, getting up that wild, bucking ladder was a monstrous feat. Each rung required a pull of one's total body weight by a single arm or leg. For the last five steps I could barely close my hands. They were freezing from the ice-cold water and paralyzed from hanging on so hard. My forearm muscles went into spasms. I was almost to the top of the ladder when I realized I might not make it, no matter how hard I tried. I yelled for help, but there wasn't anything anyone could do. Rodney stood at the rim of the ledge, taking pictures and laughing at my plight. I absolutely knew that I didn't want to fall 30 feet back into the hole. Finally Rodney realized I wasn't kidding and came over to the top of the ladder to encourage me on and up. I drew myself up until he could grasp my arms, enough to pull me over the top. The second I was on solid ground, I instantly collapsed into a heap in the grass.

Russell scaled the ladder unaided, as if he did it every day of the year. No telling what he thought of these flimsy Americans.

As Russell and I drove away from Bullock Hole, he made some suggestions as to what we should dive next. First, he said, we should dive One Tree. "I reckon that will really give you the feeling of what cave diving is all about," he said. "In fact, let's do it right now."

I agreed to the plan right away. We waved the others goodbye and a few minutes later, down the road, Russell pulled into the Bellum Bellum, a country pub near Mt. Schank where ranchers unwind after a hard day's work. He figured we'd find Peter Norman there, and it was from Peter Norman we needed permission to dive One Tree.

Russell figured right. Peter was there, wearing his characteristic terry cloth hat. "No worries!" he said. "She's all yours!" He not only gave us his permission to dive, but he invited us for a dinner of mutton the next night.

One Tree is marked by one big, lonely tree in the middle of an open field. The sun was setting as Russell and I climbed down to the water, about 15 feet below tree level. Russell put a line with a clip around my left wrist, then we sank beneath

Photo by David Doubilet

Hillary Hauser inspects the bubbling sands on the bottom of Ewens Pond.

the surface. I attached the wrist clip to the orange safety line Russell reeled out as he swam in front of me.

It grew darker and darker as we went down. Our flashlight beams searched the green-black water. When we reached 90 feet, Russell wrapped the safety line around the limb of a tree which lay on its side on the bottom. We looked up. All there was to see was a lighter murky green toward the surface and our safety line trailing up and out of sight. Then we turned toward the darkness again and swam along a ledge into a cave which went in for about 90 feet and down to a depth of 135 feet. It was black. And cold. We explored the cave, our light picking up the bottom and sides of the hole. Then we saw an overturned car. It lay on the bottom—eerie, dark, mysterious.

Russell now indicated that we were ready to turn around, so I unclipped myself from the safety line and swam behind him to follow him out. The only thing wrong with this plan was that Russell had the reel and there would be no line behind him on the way out. It took me a while to realize this. I was completely "narked" and didn't know it.

"Mate, if that wasn't nitrogen narcosis, what is?" Russell said later. He was amused by what had happened, but then became serious. "You should never, never unclip yourself from the safety line," he said. "*Never!*" Nitrogen narcosis, or "the raptures of the deep", is a serious problem in cave diving. It can cause misjudgment, and it is misjudgment that causes trouble—like getting lost or running out of air. It had killed the four divers in the Shaft.

When I first saw the Shaft several days later, I laughed in disbelief. It is a hole with a tiny opening the size of a city manhole, in the middle of a pasture so large

there is nothing to see for miles but grass. Two other members of the Cave Divers Association had arrived to dive with us, since the Shaft had not been opened to divers since 1973 when the four deaths occurred. Mr. and Mrs. B. V. Ashby, who own the land there, were troubled deeply about that accident, which had claimed the lives of a brother and sister at one time. They still hadn't gotten over it. Even so, they were allowing us to dive.

I looked down the manhole-sized opening and it looked terribly dark and dismal inside. David looked up at the sky and surveyed the situation. Patches of clouds were flying by and building on the horizon.

"Let's hope for some sun," he said.

Russell was first into the hole and I followed him. It wasn't until I got down that mountaineering ladder 25 feet to the water that I got my first real look at where we were. We were inside a large, air-filled chamber lit by the daylight shining down that narrow opening and reflecting from the water to the ceiling. It wasn't dark and gloomy at all. Although clouds were blocking the sun, it remained light inside, the small opening to the surface a natural lamp in the enormous domed ceiling.

Suddenly the sun broke through the clouds, and Russell and I witnessed the phenomenon for which the hole is famous. A powerful shaft of light, thrown through the small opening at the top of the chamber, beamed through the clear, black water in a bright, iridescent blue. It shone all the way down to the first ledge below us at 120 feet. It was brilliant from above the water, but underwater it was almost blinding. With the dark water around it clear and in a chamber as big as a small coliseum, it was difficult to tell the depth we were in. I thought I was at 30 feet when I was at 60. At 70 feet I thought the bottom was just beyond my fins when it was actually another 50 feet down. I was beginning to understand about the four divers who disappeared in this hole.

Russell Kitt returned to Melbourne, and his assistant, John McCormick, led us on our next dive. The Pines is a Category Three hole set in the middle of a forest. The top of the water looked green and swampy, and while the four of us slogged around knee deep in mud, I was convinced that it would never be deep enough anywhere to dive. An overhang of forest floor loomed in front of us. Just at the foot of it, John sank down and disappeared. I followed, and underneath that ledge was a large opening which took us into a huge underwater cavern. The floor of this chamber sloped downward to about 60 feet. John, Annie and I explored the flooded room with our lights while David took photographs. The grafitti on the walls struck us as very odd, since we were deep underground, far from the reaches of average humanity.

John and I left the others and continued down into a crack at the far side of the cavern floor. The crack opened up into a narrow passageway that weaved

down, up and around to its end. John reeled out the safety line and I stayed close, the clip on my wrist sliding down the line behind him. We were in a narrow, flooded corridor. I wanted to see what was in front of John, so I beamed my strong underwater light over his shoulder as we swam.

I was exhilarated beyond anything I'd ever known. In cave diving there is a feeling of wonder, the excitement of finding a hidden nook somewhere, the tight squeezes, the feeling of hanging suspended in air, and more than anything else—discovery. It is the crystallization of every feeling one gets from adventure, the heart of what it is that propels one to explore something new.

John and I continued to dive as many holes as we could around Mt. Gambier. Together we dived the Ela Elap hole on Peter Norman's property and went into Allendale, a flooded cave in the middle of a road between two lanes of traffic. For the Allendale hole we had to gear up by the side of the road and run across the highway as cars passed by on either side. Since the hole was not visible from the road, some people slowed and stared unabashedly. To them we were only a couple of water-hungry people running around in the middle of a dry countryside in hopes, perhaps, of heavy rain.

The *coup de grace* came when I fell down the dirt embankment toward the hole as we were climbing out after the dive. Somehow I missed a step, and by missing a step with a scuba tank on my back, I was as helpless as an overturned turtle. I rolled downhill like a log cut loose, and by the time I got back up to the top of the embankment again, I was a towering statue of mud. To my great fortune, there was a faucet just outside the fence surrounding the hole, and John proceeded to provide me with a shower by filling up his fins and throwing water at me. A car went by, saw us and stopped down the road in Allendale to report at the general store that they had seen a couple of hard-up divers playing in the faucet. Vilma, the general store owner, laughed about it to us later. She said the people were really mystified. Their confusion was to be expected. How were they to know that underneath the highway was one of the underwater wonders of Australia?

The travellers, said Vilma, finally settled on the idea that we had been in the countryside too long and were lonesome for the ocean.

Suggested Reading

Hillary Hauser, "Exploring a Sunken Realm in Australia" (*National Geographic Magazine*, January 1984).