

The Sta Reta, Fiji, South Pacific

—Three's A Crowd

Although I often proclaim the splendors of some Caribbean dive destinations while thumbing my nose at others, I must admit that much of what we have nearby cannot hold a candle to many of the more remote spots in other tropical seas. We often settle for less exotic diving, in exchange for lower prices and shorter travel times. But now and then we must treat ourselves to more than a Bahamian patch reef or a Haitian aquarium of common tropicals, and drop a few bucks to expand our horizons! If such a venture is in your plans for next year, then you may very well wish to follow my bubbles to Fiji.

Fiji is a long ways away...from practically anywhere. (Even "nearby" Australia is 1,800 miles away!) It takes more than 24 hours from the U.S. East Coast, counting airport layovers; but if you can sleep on airplanes, or punctuate your trip with stopovers in California or Hawaii, it can be reasonably easy. The jet lag, however, can be a bear.

I selected Carl Rosseler, See & Sea Travel (680 Beach Street, San Francisco, CA 94109; 415/771-0077) to arrange my trip. Traveling half way around the world can be fraught with logistical riffs, so I figured if any trip could avoid misfortune, it would be one organized by Rosseler. Even though he charges top dollar --\$1900 for ten days, sans airfare. As it turned out, my experience was but a step short of perfect.

Since my boat left from Suva, Fiji's capital city, I spent my first day hanging out there. Fijians are gentle and polite people with broad smiles, great honesty and a wonderful sense of play. Indeed, Fiji is a fascinating multi-racial country, but I felt sad at not having known Fiji when it belonged to the Fijians. East Indians now comprise more than half the population, along with Chinese, Europeans and other Pacific Islanders. The Indians came generations ago to work the sugar fields. (Cane is still the largest crop, though mangos, taro, bananas, rice, breadfruit and coconuts are plentiful.) The contrast today between the Indians and Fijians is marked. In Suva's big Handicraft Center, for example, the Fijian shop owners would smile and say "bula" (welcome), as I passed. The Indians, on the other hand, give the marketplace a Mexican bordertown atmosphere, hawking

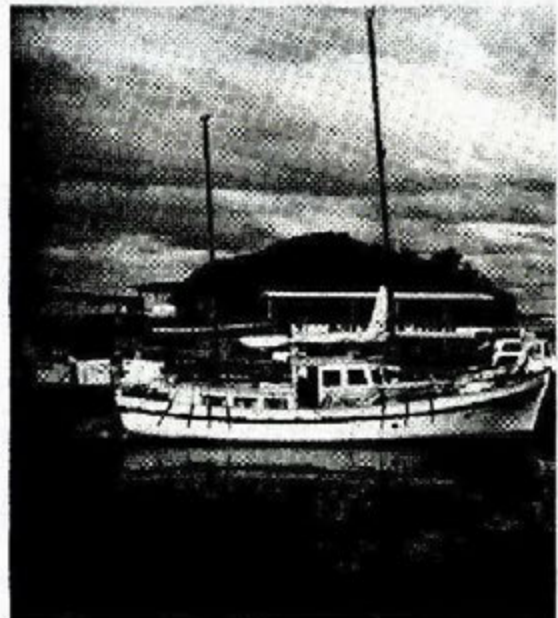
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their wares and begging me to step inside for wondrous bargains. I patronized the Fijian shops.

I overnighed at the Tradewinds Hotel just outside Suva. The food is adequate, the rooms fine, the beds too soft, the staff pleasant, the setting lovely. In town, the Grand Pacific Hotel proved perfect for a lunch of cold beer, hot curry and condiments. In the old-world atmosphere--surrounded by fine wicker furniture, broad verandas, lovely lawns, high, high ceilings and polished wood balustrades and moldings--I expected Humphrey Bogart or Sydney Greenstreet to appear at any moment.

See and Sea Travel puts together package deals by locating dive boats with knowledgeable captains in remote parts of the world. While Carl Rosseler insists on high standards, one must realize that luxury dive boats do not abound on the seven seas--and who can predict what conditions might prevail once under way? Indeed, I harbored a bit of apprehension about setting to sea for ten days. Once I met our captain, Eric Dowdall, who joined me and other divers for a drink at the Tradewinds, I knew I was in good hands.



THE STA RETA

A tan, handsome man in his early sixties, Eric spent 18 years in Africa as a British civil servant where he did considerable diving in the Indian Ocean. In his retirement, Eric works very hard providing first-rate charter service for which See & Sea has exclusive United States rights. Eric's mate and first mate Keresi is a happy, smiling Fijian woman who constantly extended herself to provide for our comfort. She cooked, made the bunks, hung out wet towels to dry, and offered hot or cold beverages and snacks after every dive. As much at home on the sea as is Eric, she also ran the boat, found the dive sites and hoisted anchor when Eric was otherwise occupied.

Their craft, the Sta Reta, is a 40-foot auxiliary ketch of 21 gross tons. A wooden hulled motor sailer with an 11½-foot beam and two 29½ horsepower, 2-cylinder diesel engines, she was built in 1950 as a private yacht, and later converted to a fishing boat. Eric bought her in 1970 and reworked her to accommodate six passengers and two crew. See & Sea, however, doesn't book more than four divers for a trip and for good reason. Our group was three when I first boarded. I was certain there would be insufficient room to store all our camera and dive gear--or even our clothes and toilet articles. But after 24 hours, we had organized our equipment, stowed whatever we could live without...and discovered that we could manage quite comfortably. Not luxuriously by any means, but comfortably. Fortunately, See & Sea provided forewarning, so I brought only several quick-dry bathing suits, a few T-shirts, three pairs of shorts and a sweatshirt and wind-breaker. But no razor. None of us, except Eric, shaved for 10 days.

In the Fiji summer, (the U.S. winter) the sea and air would indeed be more

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conducive to diving, but plankton blooms profusely, cutting the visibility. The Fijian winter (May-August) provides the best visibility for diving these islands, but both the air and water are in the "chilly" 70s. I wore a full 1/8" wetsuit, including Farmer John vest, which kept me comfortable for 3 or 4 dives a day. My two companions preferred their 1/4" suits.

Our journey began with a smooth 35-mile, 4½-hour sail to our first dive site on Great Astrolabe Reef. We were lucky, said Eric, this is often a crossing for Dramamine. When we arrived at 3 pm, Eric anchored on the NE side of the reef that encircles the Solo Lighthouse at the northern tip of Astrolabe. And you can bet I was delirious with desire to see what lay below in these virgin waters. As I slid off of the Sta Reta's small dive platform and began my descent I knew I had spent my money well. The Fijian sea was full of zinging color, brilliant, florescing corals and an enormous variety of fish. My two companions were saucer eyed. And so was I. We were grinning bubbles into our mouthpieces and continually making the OK sign to express our delight and enthusiasm.

On this dive--and every other dive--I saw at least 20 species of butterfly fish. All sizes, all colors, including the gaudy clown butterfly, which surely has no Caribbean counterpart. And speaking of buffoons, on this and several later dives we saw clown triggers, with their football size and shape, brilliant orange mouths, black bodies with dazzling white spots and lime-yellow tails! I saw many of the small golden-yellow blenny found only in the Fiji Islands. There were banded, easy-to-handle sea snakes. Sharks, morays, two species of lion fish and many, many Moorish idols, trailing their graceful, yellow dorsal filaments. Each day I saw species that I hadn't seen on previous dives: batfish, angel fish, (including many magnificent Emperor Angels), pelagic jacks, dozens of species of parrot fish, the classic clown fish (with bright iridescent blue stripes, instead of white) living symbiotically with their anemones, wrasses of all sizes and colors, including the multi-hued checkerboard wrasse and the gigantic Maori wrasse. One fish I still haven't been able to identify and, of course, I saw it on one of the 3 dives I made without my camera! A small, pure white blenny-like fish, about 2 inches long, with a brilliant, flame-orange saddle on top and a partially orange face. I also saw the only flame sergeant major I've ever seen.

THE STA RETA FIJI, SOUTH PACIFIC	
Diving for Experienced Divers	★ ★ ★ ★ ★
Diving for Beginners	★
Accommodations	★ ★ ★
Food	★ ★ ★ ★ ½
Moneysworth	★ ★ ★ ★ ★
★ poor, ★★ fair, ★★★ average, ★★★★ good, ★★★★★ excellent	

After our first dive we motored to Dravuni Island. Eric rowed the dinghy ashore to greet the chief and take him a small gift of tobacco. Permission from the native chiefs is required to sail and dive here. They so zealously guard their remote lives and pristine reefs that few people are granted permission. In 10 days we saw only one other boat--and it was not a dive boat.

Most of the underwater terrain around Astrolabe consists of huge mounts, some rising from 6,000 feet to break the surface, and others from 100 feet to remain submerged just below the surface. And each is spectacular. Eric and Keresi, who have been sailing and diving this area for more than a decade, know the reef intimately; the geography and topography, above water and below; the tides and moods and the winds. And they know the people.

After each dive, Eric would ask us if we wanted to stay in the same spot or move on. How does one decide between best and bestest? Yet we didn't want to miss any new wonders, so we moved from site to site, some Eric's favorite

Another U.S. Divers Regulator Recall

—Just When You Thought It Was Safe To Go Back In The Water

Just as we go to press, we've learned that U.S. Divers has issued its third product recall in less than six months—and the second recall of the "Performance Perfect" J.M. Cousteau Royal Aqua Lung Regulator. What could be going on at U.S. Divers? We'll try to find out and report that at a later date.

On August 26, the company recalled all J.M. Cousteau Royal Aqua Lung Regulators (Model #1014) and J.M. Cousteau Royal Aqua Lung Supreme Regulators (Model #1015). The previous week two divers, one in Minnesota and one in Australia, had the air shut off while diving, U.S. Divers attorney Will Halm told *Undercurrent*. Both escaped injury. About 6,000 of the regulators have been distributed.

The problem is in the first stage. Excessive air pressure in the cavity of the low pressure side of the first stage would cause the pin pad to become dislodged from the guide hole. Should this occur, the pin could be prevented from moving the high pressure seat from its closed position. The result would be a shut down of air.

Do not dive with either regulator unless it has been repaired. Return the regulator to any U.S. Divers dealer for retrofitting. If no distributor is near you, send any recalled regulator to U.S. Divers Corporation (Attention: Royal Recall), 3233 W. Warner Avenue, Santa Ana, CA 92702). For additional information, you may write U.S. Divers or telephone collect (714/540-8010) and ask for Customer Service, Royal Recall.

places, others entirely unknown. It seldom seemed to matter. On just three occasions, Eric dove with us. Each time he asked us to leave our cameras behind. He led us to caves, tunnels and canyons that I can't imagine how he ever discovered. The excitement, the darkness, the beauty and the massive architecture were exceptional, making similar terrain I've seen in the Caribbean seem like mere mice mazes. More than once I thought we were surely lost, when suddenly we were back again, just under the boat. One swim was more than 1½ miles long, with depths ranging from 20' to 80'. Several tunnels were long and dark and narrow. At times, we couldn't see light at either end, just a very faint, dim glow from an occasional hole or crack in the tunnel roof, barely allowing us to catch a glimpse of the diver in front of us. Eric kept a steady and comfortable pace, stopping only when he found new critters for us—including poisonous sea snakes which he handled like pets!

Most nights we motored back to a protected cove on Namara Island, about central in the Astrolabe chain. One morning we dived there. I expected to find little in the sea grass, other than a few odd fish and shells, but what a surprise! I was amazed by the innumerable small coral heads, full of color and fish. Calm, still water, between 10' and 25' in a veritable submarine garden, permitted a lovely 75-minute excursion. There were royal blue starfish, as big as dinner plates; a cooperative sea snake, proud lion fish, and schools of juvenile blue-green chromis which created clouds of aquamarine color as they darted in and out of small, pearly pink and gold clumps of staghorn. In this shallow bay, I saw species I hadn't seen before. I pleaded to dive three or four tanks here...but ours was a democratically controlled craft and I was out-voted. We sailed to deeper waters.

Usually when I surfaced from a dive, the aroma of Keresi's cooking whetted my already ravenous appetite. The meals were terrific: fresh fish steamed with scallions and ginger; filet mignon, broiled and seasoned to perfection, pork chops, potatoes and onions baked in an exotic and savory sauce; a wonderful, garlicky Chinese rice, meat and vegetable dish; tender roast chicken; salads, fruits, fresh breads, cheese cake, fruit pies, meringues. (If you want beer, wine or liquor, Eric will take you shopping for your own before leaving Suva. Otherwise, sodas, juices, tea and coffee are provided on the boat.)

Fiji's weather is strange and changeable, varying remarkably over different parts of the archipelago. Over Suva, for instance, one frequently sees heavy

rain clouds...while the northern part of Viti Levu is relatively dry. The central and northern islands of Astrolabe, too, are dry, yet Kadavu, a large island just south of Astrolabe, is mountainous and rainy. Suva's overcast drifted south and plagued us for more than half of our trip. When it blew away, we enjoyed sunny skies and temperatures of 75° to 80°F.

It is on Kadavu that Eric refills the Sta Reta's 115-gallon, fresh-water tanks whenever required. We stopped only once, anchoring overnight in Kavala Bay. In the moonlight the sea was like polished ebony, with not a ripple. The next morning we rowed ashore to visit a small village, where we were greeted at the water's edge by a few villagers who have known Keresi and Eric for years. Their smiles and their "bulas" invited us to come into their village. Eric refilled the boat's water tanks with a hose from shore to the Sta Reta, while we three divers wandered through the village.

Night dives are available as often as desired. I made a couple and would have made one every night had the weather been warmer. Lion fish were out of their holes to feed, their resplendent "plumes" an easy target for my lens. I got within a couple of feet of a sleepy Unicorn Fish, swimming slowly about. I saw enormous scarlet starfish and flame red pencil urchins as big as basketballs. Parrot fish slept deeply, wrapped snugly in their protective mucous cocoons. Shrimp and lobster walked about, and one gorgeous porcelain lobster, with its black and white carapace and long salmon-pink antennae, made a grand sight.

My last dive at Astrolabe was one to remember. I followed Eric's long smooth kicks down through canyons and around sea mounts to a lovely archway at 75 feet. I passed through the archway to enter a small courtyard, just large enough for two divers. Our third paying customer hovered above, as did Eric, who began dangling a spear at the entrance of a small cave. Soon, a rare, brilliant, blue and gold ribbon eel emerged, a beautiful and unique creature. I finished my film on this jewel-like critter, then moseyed back to the boat stopping at 60 feet, next to a seamount, to enjoy the blue serenity. A school of small magenta fish curved gracefully around me, and then twenty feet below, a family of five hammerheads cruised slowly past. What a magnificent sight. I watched until they disappeared, then slowly rose to the boat.

Above, life returned to normal. It was just what one might expect aboard such a cozy craft. With a limited water supply, once-a-day showers could be nothing more than a quick splash to rinse away the salt. Washing regulators and cameras was taboo, but also unnecessary since salt takes at least a day to begin crystallizing. Four tourist bunks are in a single main salon. They fold away during the day. A bench in the wheelhouse becomes a bunk at night, and another bunk can be found in a cubby hole below the wheelhouse. (Keresi and Eric sleep forward in the bow cabin. With such a lack of privacy, the Sta Reta is not a retreat for passionate lovers; in fact, with no door or curtain between the wheelhouse and the shower/dressing area, privacy is virtually nonexistent... except in the head.

It was this lack of privacy--and only the lack of privacy--that made me look forward to my first night back in a hotel. Otherwise, the trip was near-perfect. The diving surpassed anything I've ever found in the Caribbean. The food was great, the people fine, the boat seaworthy. If you've got the time and the money, See and Sea's trip to Fiji is one fine adventure.

Divers Compass: When traveling this far, take a few extra days to see Fiji. See and Sea has options or any travel agent can arrange them. . . .Eric keeps two steel and three aluminum tanks on board and can add others; the Poseidon 7cfm compressor on board fills each tank in about 10 minutes. . . .Strobes and dive

lights can be recharged aboard, but no hair dryers please. . . Continental, Air New Zealand and Air Pacific all fly to Fiji from Los Angeles; rates began at \$800 round trip; check each for rates and ask about excess baggage charges. (Currently, Continental allows two bags of 70 lbs. each, but a third bag is \$64; Air Pacific allows the usual 44 lbs., and charges \$1.65 for each additional pound.)

Notice

In the August *Undercurrent*, we offered our readers a book entitled *Divers Guide to Underwater America*, along with two *Undercurrent* books, *Diving with Undercurrent* and *The Best of Undercurrent*. The juxtaposition may lead some people to believe that the *Divers Guide* is an *Undercurrent* publication. It is not. It is independent of *Undercurrent*, and has been neither reviewed nor recommended by our editors.

Ed Brown
Publisher

Smelling Up The Air In Corpus Christi

—Will The Culprit Ever Be Caught?

Claims and counterclaims of bad air have been raising a stink in Corpus Christi, Texas.

According to the *Corpus Christi Caller*, a local newspaper, "bad air, oil, and filter particles have been found in several scuba tanks inspected by a Corpus Christi diving equipment shop. . . Jim Copeland, owner of Copeland's Dive Shop, said bad air had been reported in 14 tanks. Of these, five tanks he tested contained compressor oil, charcoal and other filter material."

Denise Copeland told *Undercurrent* that she opened several tanks and "the smell of the air was so strong that you could smell it all over the shop."

That kind of air can put a diver in the deep into an eternal sleep. Corky Warren, an employee of the Padre Island Dive Shop, reported that he and friends were diving at nearby oil rigs. One of the divers, Daniel Jenkins, became sick, but "fortunately he was an experienced diver, and an instructor, and knew what to do." He immediately teamed up with his buddy and shared air.

Back at his shop, Warren checked all the tanks on the dive and found that only Jenkins had the foul air. "We called the shop where his tank had been filled to tell them they were pumping bad air, but they claimed it couldn't have come from them." Jenkins then called the local TV station to report that there was bad air going around, and the media issued cautions to divers to check their air. No air source was identified and no shop was implicated.

After a little detective work, we figured that everyone was pointing the finger at The Dive Shop, run by Harry Nolan. Nolan told us "It couldn't have been my air that was bad. I sent samples to the Texas Research Institute in Austin for testing in their National Life Support Quality Assurance Program. The air passed their tests."

At TRI, Ruby Ochoa agreed. "The Dive Shop's air

met all of the U.S. Navy standards for diving air quality," she told *Undercurrent*.

Meanwhile, Warren told us, someone filed a complaint against the Padre Island Dive Shop for bad air. "It couldn't have come from here," Warren said, "because our compressor was down at the time. We were getting air from Copeland's."

Denise Copeland said every tank that she opened with bad air "had the same tape around the valve, so we know where the air came from." And you can be sure that she doesn't mean her shop. She also said they removed the valve from one tank and found grease inside. They checked others and found grease and what she claims was "activated alumina." Alumina are found in the filter material.

So, we ask, is it the pumped air that's bad? Or could there be another cause? It seems impossible for grease in any visibly identifiable form to survive a journey into a tank from a compressor. First it would be filtered. Second, the high pressure and generated heat should vaporize any grease.

It might contaminate air, but it would not be visible. The accused, Harry Nolan at the Dive Shop, says "I have a 5-micron filter as a final filter, and the stuff they say they found wouldn't go through that size filter." The TRI report seems to bear that out—assuming the filter was not replaced prior to TRI testing.

Could it be that the grease and other particles were in the tank prior to the fills? Or that the grease and particles entered the tanks during the inspection? Both are possibilities. Grease could be carried into a tank by the inspection light or by the towel used to wipe the interior. Aluminum tanks—apparently all tanks in question were aluminum—have grease on their necks, which is standard procedure to prevent galling of dissimilar metals. Furthermore, aluminum

(Continued on page 9)

Undercurrent Travel Questionnaire

Response Requested

Mail to: *Undercurrent*, PO Box 1658, Sausalito, CA 94965

Location being evaluated _____ Would you return? _____

Date of your trip _____ Hotel _____ Dive shop _____

What other resorts have you dived? _____

fish size tropical fish kinds of tropicals hard coral soft coral sponges, gorgonia... caves, ledges... wrecks sharks shelling snorkeling from boats water temperature visibility	<input type="checkbox"/> large ones plentiful <input type="checkbox"/> abundant <input type="checkbox"/> impressive variety <input type="checkbox"/> plenty and colorful <input type="checkbox"/> plenty and colorful <input type="checkbox"/> very nice <input type="checkbox"/> good variety <input type="checkbox"/> exciting <input type="checkbox"/> a couple for fun <input type="checkbox"/> excellent <input type="checkbox"/> some of the best <input type="checkbox"/> 80° + <input type="checkbox"/> 90 ft. or more	<input type="checkbox"/> a few big ones <input type="checkbox"/> not bad <input type="checkbox"/> fairly interesting <input type="checkbox"/> o.k. <input type="checkbox"/> o.k. <input type="checkbox"/> pretty average <input type="checkbox"/> some of interest <input type="checkbox"/> worth a tank or two <input type="checkbox"/> none <input type="checkbox"/> o.k. <input type="checkbox"/> not bad <input type="checkbox"/> 74°-79° <input type="checkbox"/> 50-90 ft.	<input type="checkbox"/> too small to eat <input type="checkbox"/> sparse <input type="checkbox"/> common ones only <input type="checkbox"/> kind of a bore <input type="checkbox"/> kind of a bore <input type="checkbox"/> not much <input type="checkbox"/> none worth diving <input type="checkbox"/> none <input type="checkbox"/> too many <input type="checkbox"/> none or prohibited <input type="checkbox"/> nothing to see <input type="checkbox"/> less than 74° <input type="checkbox"/> less than 50 ft.
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rules for experienced divers guides for new divers diving frequency night diving boat diving beach diving dive shop manager air quality air fills rental gear repair capability	<input type="checkbox"/> no restrictions <input type="checkbox"/> top-rated <input type="checkbox"/> 3 or more tanks/day <input type="checkbox"/> frequent <input type="checkbox"/> two tanks under \$25 <input type="checkbox"/> as good as the boats <input type="checkbox"/> a great person <input type="checkbox"/> no problems <input type="checkbox"/> 3000 psi + <input type="checkbox"/> everything you need <input type="checkbox"/> can handle anything	<input type="checkbox"/> a little tight <input type="checkbox"/> acceptable <input type="checkbox"/> 2 tanks per day <input type="checkbox"/> 1-2 times/week <input type="checkbox"/> \$25-\$35 for two <input type="checkbox"/> fair possibilities <input type="checkbox"/> just does the job <input type="checkbox"/> I wondered <input type="checkbox"/> 2250 psi + <input type="checkbox"/> tanks, wt. belts... <input type="checkbox"/> some repair capacity	<input type="checkbox"/> treated as a novice <input type="checkbox"/> lousy <input type="checkbox"/> one per day <input type="checkbox"/> none <input type="checkbox"/> over \$35 for two <input type="checkbox"/> no way <input type="checkbox"/> a real bastard <input type="checkbox"/> I worried <input type="checkbox"/> short-changed often <input type="checkbox"/> bring everything <input type="checkbox"/> pray nothing breaks
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hotel food nearby restaurants accommodations car needed nightlife locals weather insects	<input type="checkbox"/> gourmet <input type="checkbox"/> must try <input type="checkbox"/> luxury <input type="checkbox"/> of no use <input type="checkbox"/> swinging <input type="checkbox"/> helpful, friendly <input type="checkbox"/> great every day <input type="checkbox"/> none	<input type="checkbox"/> not bad <input type="checkbox"/> adequate <input type="checkbox"/> o.k., decent <input type="checkbox"/> only for touring <input type="checkbox"/> enough <input type="checkbox"/> no complaints <input type="checkbox"/> o.k. <input type="checkbox"/> now and then	<input type="checkbox"/> ough! <input type="checkbox"/> better off fasting <input type="checkbox"/> far below par <input type="checkbox"/> a daily must <input type="checkbox"/> dead <input type="checkbox"/> hostile <input type="checkbox"/> many bad days <input type="checkbox"/> too many bites
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Comments and comparison to other places visited: _____

Circle the number of stars applicable to your experience, from 0 to five (for the tops)

Diving for beginners	★ ★ ★ ★ ★
Diving for old pros	★ ★ ★ ★ ★
Beach snorkeling	★ ★ ★ ★ ★
Hotel meals	★ ★ ★ ★ ★
Hotel otherwise	★ ★ ★ ★ ★
Moneysworth	★ ★ ★ ★ ★

Location being evaluated _____

Date of your trip _____ Hotel _____ Dive shop _____

What other resorts have you dived? _____

fish size	<input type="checkbox"/> large ones plentiful	<input type="checkbox"/> a few big ones	<input type="checkbox"/> too small to eat
tropical fish	<input type="checkbox"/> abundant	<input type="checkbox"/> not bad	<input type="checkbox"/> sparse
kinds of tropicals	<input type="checkbox"/> impressive variety	<input type="checkbox"/> fairly interesting	<input type="checkbox"/> common ones only
hard coral	<input type="checkbox"/> plenty and colorful	<input type="checkbox"/> o.k.	<input type="checkbox"/> kind of a bore
soft coral	<input type="checkbox"/> plenty and colorful	<input type="checkbox"/> o.k.	<input type="checkbox"/> kind of a bore
sponges, gorgonia...	<input type="checkbox"/> very nice	<input type="checkbox"/> pretty average	<input type="checkbox"/> not much
caves, ledges...	<input type="checkbox"/> good variety	<input type="checkbox"/> some of interest	<input type="checkbox"/> none worth diving
wrecks	<input type="checkbox"/> exciting	<input type="checkbox"/> worth a tank or two	<input type="checkbox"/> none
sharks	<input type="checkbox"/> a couple for fun	<input type="checkbox"/> none	<input type="checkbox"/> too many
shelling	<input type="checkbox"/> excellent	<input type="checkbox"/> o.k.	<input type="checkbox"/> none or prohibited
snorkeling from beach	<input type="checkbox"/> some of the best	<input type="checkbox"/> not bad	<input type="checkbox"/> nothing to see
water temperature	<input type="checkbox"/> 80° +	<input type="checkbox"/> 74°-79°	<input type="checkbox"/> less than 74°
visibility	<input type="checkbox"/> 90 ft. or more	<input type="checkbox"/> 50-90 ft.	<input type="checkbox"/> less than 50 ft.

rules for experienced divers	<input type="checkbox"/> no restrictions	<input type="checkbox"/> a little tight	<input type="checkbox"/> treated as a novice
guides for new divers	<input type="checkbox"/> top-rated	<input type="checkbox"/> acceptable	<input type="checkbox"/> lousy
diving frequency	<input type="checkbox"/> 3 or more tanks/day	<input type="checkbox"/> 2 tanks per day	<input type="checkbox"/> one per day
night diving	<input type="checkbox"/> frequent	<input type="checkbox"/> 1-2 times/week	<input type="checkbox"/> none
boat diving	<input type="checkbox"/> two tanks under \$25	<input type="checkbox"/> \$25-\$35 for two	<input type="checkbox"/> over \$35 for two
beach diving	<input type="checkbox"/> as good as the boats	<input type="checkbox"/> fair possibilities	<input type="checkbox"/> no way
dive shop manager	<input type="checkbox"/> a great person	<input type="checkbox"/> just does the job	<input type="checkbox"/> a real bastard
air quality	<input type="checkbox"/> no problems	<input type="checkbox"/> I wondered	<input type="checkbox"/> I worried
air fills	<input type="checkbox"/> 3000 psi +	<input type="checkbox"/> 2250 psi +	<input type="checkbox"/> short-changed often
rental gear	<input type="checkbox"/> everything you need	<input type="checkbox"/> tanks, wt. belts...	<input type="checkbox"/> bring everything
repair capability	<input type="checkbox"/> can handle anything	<input type="checkbox"/> some repair capacity	<input type="checkbox"/> pray nothing breaks

hotel food	<input type="checkbox"/> gourmet	<input type="checkbox"/> not bad	<input type="checkbox"/> ough!
nearby restaurants	<input type="checkbox"/> must try	<input type="checkbox"/> adequate	<input type="checkbox"/> better off fasting
accommodations	<input type="checkbox"/> luxury	<input type="checkbox"/> o.k., decent	<input type="checkbox"/> far below par
car needed	<input type="checkbox"/> of no use	<input type="checkbox"/> only for touring	<input type="checkbox"/> a daily must
nightlife	<input type="checkbox"/> swinging	<input type="checkbox"/> enough	<input type="checkbox"/> dead
locals	<input type="checkbox"/> helpful, friendly	<input type="checkbox"/> no complaints	<input type="checkbox"/> hostile
weather	<input type="checkbox"/> great every day	<input type="checkbox"/> o.k.	<input type="checkbox"/> many bad days
insects	<input type="checkbox"/> none	<input type="checkbox"/> now and then	<input type="checkbox"/> too many bites

Comments and comparison to other places: _____

Circle the number of stars applicable to your experience, from 0 to five (for the tops)

Diving for beginners	★	★	★	★	★
Diving for old pros	★	★	★	★	★
Beach snorkeling	★	★	★	★	★
Hotel meals	★	★	★	★	★
Hotel otherwise	★	★	★	★	★
Moneysworth	★	★	★	★	★

PLEASE RETURN THIS TO:
UNDERCURRENT, P.O. BOX 1658,
SAUSALITO, CA 94965

Name _____

Address _____

City _____ State _____

Zip _____ Tel. _____

oxidizes to a white powder—that oxidation might be mistaken for alumina or even claimed to be alumina.

Denise Copeland doesn't think so. "I don't think what they found was from the neck or from oxidation. One tank was only 30 days old, and could not have developed that much oxidation in that time."

The mystery remains. Corpus Christi shops continue their thinly veiled accusations.

As it turns out, the truth may never be known. Copeland's seems to be the only shop to have made a visual inspection of the tanks. That could suggest some conflict of interest. And no one seems to be able to determine if the tanks with foul air were purchased or serviced by the same shop prior to filling.

The Consumer Product Safety Commission has been called in, but it will be a while—if ever—before the results are made public. Zannie Weaver of the Dallas Regional Office told *Undercurrent*: "We did not take air samples, but we did investigate the shops because of the complaints." Weaver would not disclose the findings and informed *Undercurrent* that

to get the results, we must file a request in Washington in compliance with the guidelines of the Freedom of Information Act. That we'll do. But getting the results will take time.

Meantime, Harry Nolan isn't at all happy with what he sees as unfounded accusations. "Look," he said, "I use this air, my daughter and son-in-law and their two children use this air. I wouldn't pump it for them if it were bad."

He wonders about Dan Jenkins' role—Jenkins first brought the charges to the attention of the media. "A few months ago he wanted me to hire him as an instructor. He's SSI and we certify PADI. We suggested that he pay the \$100 fee and take the test to cross-over to PADI, but he didn't want to do that."

"For years," Nolan said, "there has been only two dive shops here, and then I opened mine. I've been trying to build my business, and have been offering some good deals on equipment. The other shops may have lost some business. But there is enough business here for all of us."

Meanwhile, the stink remains.

The Regulator As An Inwater Resuscitator

—A New Technique For Rescue Breathing

To prepare divers to manage the rare but dramatic accidents in scuba diving (arterial gas embolism, decompression sickness, and drowning), scuba certifying agencies include instruction in rescue techniques as part of the basic course. Instruction in the theory and practice of resuscitation at the water's surface involves bringing the victim to the surface, establishing flotation for both the victim and rescuer, initiating ventilation by using the mouth-to-mouth or mouth-to-snorkel method, and continuing rescue breathing while towing the victim to safety.

Students should be exposed to as many rescue methods as possible; a technique that is effective in one situation may be unsuitable in another. For example, many people could not perform successful mouth-to-mouth ventilation in a choppy ocean, but they could effectively ventilate with the snorkel technique. Recent testing with selected scuba regulators has shown that these devices also may be used for in-water rescue breathing.

The Regulator As A Positive-Pressure Device

When the purge valve of the scuba regulator is depressed, air flows from the mouthpiece and the exhaust valve. When the resistance to air flow at the mouthpiece exceeds the pressure generated, all additional air will be vented through the exhaust valve.

This allows the scuba regulator to function as a pressure-limited, manually triggered resuscitation device if the pressure generated at the mouthpiece is effective and safe. The pressure is influenced by the exhaust valve (design, position, size, and material used) as well as its overall condition (age, maintenance, etc).

Regulator Resuscitation Instruction

The following points should be stressed for employing scuba regulator resuscitation:

1. Regulator resuscitation is only one option. Therefore, all rescue breathing techniques must be practiced.

2. All regulators cannot be used for resuscitation. Only those that have been tested and found to have an acceptable air pressure (15 to 35 cm H₂O) should be used.

3. If through an established buddy system the rescuer knows that the victim's regulator has been tested and found acceptable for rescue breathing, the victim's regulator can be used if there is air available. If the rescuer does not know, he must use his primary or accessory regulator.

4. The scuba regulator has the advantage of delivering a higher oxygen concentration (20%) than mouth-to-mouth ventilation (16% at best).

5. Positive-pressure ventilation must be initiated

only at the surface. The hazards of breathing compressed air during ascent without an open airway are well known, so that procedure should not be attempted on an unconscious victim whose airway may be compromised.

6. Before initiating resuscitation, purge the regulator and be certain that air can easily vent through the exhaust port.

7. Use a chin pull or chin lift for tilting the head. As in all resuscitation efforts, the neck must be extended to facilitate opening the airway, or ventilation will not be effective.

8. Place the regulator mouthpiece in the mouth and create a seal by pushing up on the chin with the heel of the hand. Leave the victim's mask on for a nose seal. The hand position may vary. Some rescuers prefer the two-hand chin pull.

9. Depress the purge button gradually for two seconds; release for three seconds.

10. Periodically monitor the tank air supply. In the event of tank depletion, mouth-to-mouth or mouth-to-snorkel methods must be used.

11. As with any method of pulmonary resuscitation, observe chest excursions to determine the effectiveness of the technique.

12. Under certain conditions (prohibitive water conditions, obstructed airway, fatigue, etc.), in-water resuscitation may not be feasible. In such instances, the victim should be removed from the water as quickly as possible.

Resuscitation Standards And Research

The current standards and guidelines for cardiopulmonary resuscitation and emergency cardiac care allow manually triggered positive-pressure devices to have a pressure limit 50 cm H₂O and require instantaneous flow rates of 100 liters/min or more. However, we suggest a lower pressure limit for in-water rescue breathing. Scuba diving accidents may cause barotrauma (arterial gas embolism and pneumothorax), so high inflation pressures may be hazardous due to the possibility of forcing more air into the circulation or pleural space. Also, high inflation pressures induce gastric distension and increase the risk of vomiting and aspiration. For these reasons, we suggest a peak inspiratory pressure of 15 to 35 cm H₂O (10 to 27 mm Hg) for in-water positive-pressure breathing.

"This wide variation among conventional scuba regulators prevents the use of all regulators as positive-pressure resuscitation devices."

Recently, researchers N.F. March and R.F. Matthews found that some regulators generated excessive

pressure and others generated insufficient pressure. We have confirmed this. We have found that in 43 randomly selected sport diving regulators, representing ten different models, the maximum inspiratory pressure ranged from 7 to 130 cm H₂O. This wide variation among conventional scuba regulators prevents the use of all regulators as positive-pressure resuscitation devices. However, if a particular regulator is tested and has a peak inspiratory pressure of 15 to 35 cm H₂O, it can be used as a positive-pressure device for rescue breathing.

Testing Procedures

The peak inspiratory pressure of the scuba regulator can be easily tested by first removing the rubber mouthpiece from the metal inspiratory port, attaching a pressure gauge to the port with a connecting tube, and noting the pressure generated while the purge button is maximally depressed. The pressure gauge must be sensitive enough to measure pressure of 0 to 40 cm H₂O.

Since it is usually recommended that the scuba regulator be serviced at least once a year, the peak inspiratory pressure should be tested at that time. However, since scuba divers are encouraged to stay in practice, we believe that the regulator should be tested also and all rescue techniques reviewed and practiced at least every three to six months.

Discussion

Although 100% oxygen is preferable for resuscitation, air is the gas of choice for nearly all diving to about 150 feet of sea water. Due to the possibility of central nervous system toxicity (convulsions), pure oxygen is not used for sport diving. Since the sport diver is equipped with a regulator and a tank of compressed air, only 20% oxygen is readily available for rescue breathing in the water. However, once the victim is on the boat or shore, 100% oxygen should be used for the resuscitation if it is available.

Clinical Trials

Aside from practicing the regulator breathing technique with each other and with family members, our clinical trials have been limited to conscious scuba instructors during rescue exercises in a pool. The results have been satisfying, but have been based purely on subjective responses.

Basically, instructors who were "rescuers" felt that the technique was easy to administer and provided for efficient towing of the victim. The instructors who were "victims" felt that the ventilation provided by the regulator breathing technique was superior to the in-water mouth-to-mouth method and was comparable to the mouth-to-snorkel technique.

The ideal clinical study for testing the scuba

regulator as a resuscitator should measure minute volumes and arterial blood gases in water on unconscious humans after submersion. Since this is neither ethical nor practical, clinical trials are admittedly limited. However, we feel that we have enough information to suggest that if one is confronted with an unconscious apneic victim of a scuba diving accident, the use of a properly selected scuba regulator is a viable option for performing in-water positive-pressure rescue breathing.

The authors of this article are: Norris W. Eastman, Ph.D., an exercise physiologist and NAUI instructor at the University of Richmond; James L. Ghaphery, M.D., an anesthesiologist and sport scuba diver; and Gerald Landrum, an assistant scuba instructor and dive equipment technician in Richmond, Virginia.

The article first appeared in *The Physician and Sportsmedicine* and is reprinted in *Undercurrent* with permission. We have edited the article so as to fit in our limited format and take full responsibility for any changes. Anyone wishing a full copy of the article with greater detail of the testing procedures may send a self-addressed stamped envelope to Jane Porter, *Undercurrent*, Post Office Box 1658, Sausalito, CA 94965.

Dear Undercurrent

—Readers Give Us The Business, Part II

Dear Sir:

As an *Undercurrent* subscriber for the past six years, I felt I needed to write to you concerning a rather unpleasant experience on a recent diving trip to Roatan, with a young woman who claimed to be a writer for *Undercurrent* (strange, since your reporters have always been anonymous). I was travelling with a group of physicians for whom a continuing medical education course in diving medicine, combined with a diving vacation at Anthony's Key Resort, had been organized by Bruce and Anita Bassett of Human Underwater Biology, Inc.

The *Undercurrent* writer in question, a Ms. Edith Terry (if that was her real name), was apparently extremely put out and felt insulted by having to travel and stay at the same resort as our group due to imagined favoritism of one kind or another. Although a charter flight had been pre-arranged with Sahsa Airlines, Ms. Terry refused to accept this from either the Bassetts or the airline personnel and following a display of crude language and other unpleasanties, she had to be forcibly restrained from pushing her way through security and onto the chartered flight by Sahsa personnel. Once at the resort, she apparently told several members of our group that she would "get" Human Underwater Biology, Inc. via a report that would be published in *Undercurrent*.

If indeed this "lady" is one of your writers, I wish to cancel my subscription to *Undercurrent*. If she is not, please ignore this, but be aware someone is abusing your good name. Again, if she is in your employ, I can only say it would be hard to imagine a less professional journalist. She was publicly inebriated to a rather severe degree on at least one occasion, and throughout the week she was extremely rude.

I sincerely hope Ms. Terry is not really a writer for *Undercurrent*.

Robert F. Goad, M.D.
Durham, N.C.

Let me assure you that Ms. Terry, or whatever her name is, has absolutely no connection with *Undercurrent*. From time to time we receive letters from people who have come across impostors who claim to write for *Undercurrent* and then seek some sort of financial break or special treatment. To a man -- or to a woman -- they are phonies. I and three other journalists write 95% of our stories. It's our familial pledge to go to great extremes to protect our anonymity, for anonymity is our *raison d'etre*. We use a variety of travel agents. If we wish to cover a resort but suspect there is a reason we might be discovered, (e.g., when the owner of a resort I visited five years ago turns up owning another), we switch writers. If we think our presence becomes known while at the resort, we don't print the story. So, should you run across an impostor at a resort, pick up the phone, call us collect, and tell us there's a phony running amuck. We'll put the dive operator's mind at ease with an on-the-spot disclaimer and give our permission for stringing the culprit from the nearest yard arm.

Ed.

Dear Undercurrent:

"... Our attorneys have reviewed the remarks (in your February, 1983, issue) and consider them not only incorrect, but also slanderous and damaging. We would expect an immediate correction.

"Your statement 'Even PADI -- which prides itself on being independent from dive shops' -- is grossly inaccurate... Not only is PADI not independent of dive stores, but we view them as a focal point of the dive industry. Indeed, the bulk of PADI's resources, employees, and activities are utilized on their behalf.

"... If your statement that 'many industry people criticized NASDS' about the use of auxiliary regulators was meant to imply that PADI has ever offered such criticism, perhaps you are confusing

PADI with someone else...PADI has never published any material nor taken any position disagreeing with the use of auxiliary regulators...."

*Al Hornsby, Vice President
Professional Association of
Diving Instructors*

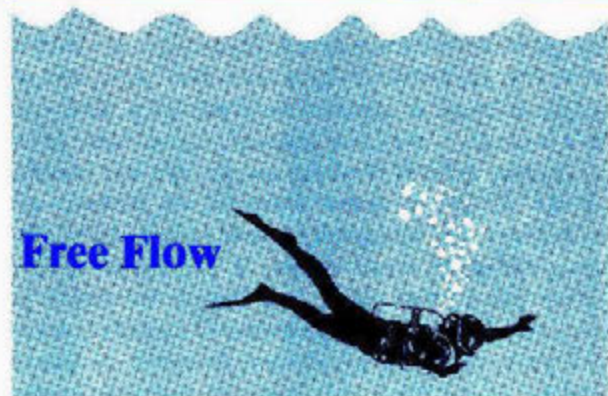
Well, when I wrote that I had intended a somewhat different meaning. So, you're right Al, and I'm wrong. But let's take a look at the phrasing. Since PADI is a training agency, I find it quite interesting that you "utilize" the bulk of your resources, employees and activities on the "behalf" of dive shops. That's the problem we face in every form of education these days, and that's the problem that guys like Bill Honig (who is the new California Superintendent of Schools) and other progressive educators around the country are trying to tackle. How about directing the bulk of resources toward the students? Just that slight alteration in a perspective

about how and why money is spent -- to serve the student and not the delivering institution -- is revolutionary in itself.

I don't have any evidence which suggests that PADI ever took an official (my word) stand against the NASDS safe second. Since individuals have the right of free speech, sometimes words they utter in the dark of the night get confused with official organization policy. Of course, that's not to say that we ever heard anything about the matter from any PADI person, but only to state that had we heard something, we might have had difficulty knowing whether the person was speaking for himself or his organization.

By the way, we're quite complimented that PADI attorneys got into this. Made us feel real important. Until our attorney suggested a 37-page response. We pay him by the hour. PADI must pay theirs by the hour, too.

Ben Davison



If you have been waiting breathlessly for your personal chance to see and photograph the Great White Shark up close, now is the time. For a mere \$7000 you can join noted marine biologist Eugenie Clark and famed underwater photographer David Doubilet on a tour sponsored by La Mer Diving Seafari. During the trip to Southern Australia in 1984, divers in tethered cages can expect to see from 10-17 foot Great Whites feeding at the bait provided by the crew. Only five tourists can accompany the tour. For information contact Amos Nachoum, La Mer Diving Seafari, 823 United Nations Plaza, Suite 810, New York, NY 10017, (212/599-0886). Air fare is additional.

Skinny dipplin' scuba? Last year we reported on an organized group who was losing their leader, and now we're pleased to report that they have regrouped. **Charlie Kerr** from Sacramento is now in charge, and he promises six newsletters a year to give you the skinny about skinny dipping. In his first let-

ter he tells about a tour group for those who want to let it all hang out, and describes a tour to Tahiti where, unfortunately, he reports that "bathing suits are required in the restaurant." If you can handle such restrictions and are interested in bare-butting it across a reef where the sergeant majors will no doubt harass the privates, then you can put your name and address on a plain ordinary postcard and send it to **Charlie E. Kerr, PO Box 26234, Sacramento, CA 95826.** He'll respond in a plain brown wrapper.

Is a snorkel on a boat dive just an extra piece of unnecessary gear? Well, if the bureaucratic old British are questioning it, then will the Americans be far behind? John Twilley, editor of *Subaqua Scene*, the house organ for the British Subaqua Club, writes: "So far as I know, the club rules will say that every diver should carry a snorkel for use after surfacing. I reckon that this is a hangover from a long while ago, before we all had buoyancy compensators and when most diving was done from the beach. Properly inflated, a decent BC holds you sufficiently high in the water for you not to need a snorkel, and the only time that I've ever had to make a long swim in, I did most of it on my back. Is it really worth carrying a snorkel on a boat dive?"

The folks at the Undersea Medical Society discovered a 1905 *Manual for Divers* prepared at the Naval Torpedo Station and printed by the U.S. Government Printing Office. Among other treatments to save the diver if his air supply is cut off: "If a doctor or apothecary is present, let him bleed the patient."

Undercurrent correspondents are located strategically in the major diving areas of the world as well as on all coasts and major inland waters of the continental United States.

*The editors welcome comments, suggestions and manuscripts from the readers of Undercurrent.
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