

Undercurrent®

The Private, Exclusive Guide for Serious Divers

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HOLIDAY ISSUE

November/December 1993

M.V. Febrina, M.V. Tiata; Papua New Guinea

—Magical Mystery Tours

Dear Reader,

If you're like most of our readers, your next dive trip will be to the Caribbean, the Bahamas, maybe Hawaii. You fantasize about seeing big fish, remarkable corals, and unusual sites. It's probably not your first trip, and last time you got in some good dives and had a great time. You wonder now whether to return to where you were comfortable or move on, in search of that perfect Caribbean dive trip.

May I respectfully suggest that you cancel that trip. I'm sure you don't have unlimited time and money to go diving. Take what you save, and put it with the money you were going to spend on the Caribbean, and give yourself the diving adventure of your lifetime. You'll find it in the South Pacific, the Indian Ocean, the Coral Sea, the South China Sea, or several other far away places. It'll cost you twice as much as staying close to home -- but you'll never forget it as long as you live.

Oh, there are plenty of critters to see in the Caribbean. But, if you love diving as I do, you must dive those far away depths at least once. You'll see more fish on a single dive than in a week at Roatan. Bigger fish on a single dive, than in a week off Cayman. And more virgin corals on a single dive, than in a week off Belize. I'm telling you, you've got to do it.

This month, I'm covering liveaboard boats in Papua New Guinea that offer the kind of diving you hoped for when you headed to the Caribbean for the first time -- but didn't find it. These are among the most beautiful and exciting reefs in the world. Whether this year, next year, or ten years from now, make the trip, at least once. You'll never be the same.

And, if you still can't make the journey, I'm recommending plenty of the better Caribbean spots in these pages, as well.

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C.C., travel editor

Papua New Guinea is a land of magic and mystery, superstition, and sorcery. One of the classic film documentaries of pre-European culture of New Guinea is 'Shark Callers of Kontum.' In the film, a man skilled in age-old magic calls sharks up from the sea with incantations and a cowrie shell rattle. The magic involves recitations of deeds of ancestors, whose spirits are believed to dwell in the sharks of the sea.

Imagine my awe while on a recent trip on the liveaboard M.V. FeBrina, watching Australian ex-pat Captain Alan Raabe in 130 feet of water bang rhythmically on his tank to bring hammerheads and grey reef sharks up to the two of us. Summoning sharks from the depths --just one of the magic moments on a 10-day trip on the FeBrina in the waters of Kimbe Bay of West New Britain.

The FeBrina is a well-equipped 72-foot dive boat with a comfortable 20-foot beam. She sleeps 12 in six passenger cabins (although fitted with bunks for 18.) Each two cabins have a full bathroom. The crew of eight worked their butts off from wake-up call till last call to provide excellent diving, gourmet food, and comfortable accommodations.

There were plenty of magical moments on this trip. One afternoon, for example, as we were steaming from one magnificent reef to another, we came across a dozen minke whales, diving and surfacing, intent on a hunt. Soon, we saw their quarry, a stunned sailfish, swim fully unfurled, frantically flailing on the surface. The minkes had succeeded; the sailfish was too tired to sound, and they left him on the surface for a snack after their hunt had yielded additional prey.

Another magical moment occurred as dark descended. Standing at the bow, I saw bright glowing points in the water that rapidly grew to 18 inches of luminescence writhing on the surface. To my astonishment, one became 10, 10 became 100, then thousands. Alan explained that tiny shrimp, no larger than a little fingernail, produced a wormlike offspring that glowed brightly for several minutes, then slowly vanished. A remarkable sight, and one that only occurs once or twice a year, and only in a few rare places in tropical waters.

The diving was magical as well. Kimbe Bay contains an incredible wealth of life. Despite my infatuation with pelagics, this was also a paradise for macro photographers. The smaller reef fish were painted in the vivid hues on Mother Nature's palate, and the pristine reefs yielded a variety of corals.

Most inshore sites are dived by people based at Walindi Plantation, where Max Benjamin runs a first class dive operation. We did most of our diving further out, mainly in the pristine 'Father's Reef' complex. Another site, 'Lots of Effen Fish', had a large school of Pacific barracuda wheeling in tight circles with a few dog-tooth tuna and a fair-sized wahoo hanging in the blue. On the reef, cleaner fish serviced hinds and groupers. In the crannies, arrow crabs and coral-banded shrimp performed cleaning duties. One night dive at 'New Reef' brought hordes of flash-light fish: using a red lens, I was able to get close enough to see more than the usual glow. Off the top of the reef, I was also able to see clouds of the usually recalcitrant squirrel and soldier fish rising in the water column.

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The Threat of Malaria: in the South Pacific

Dear Undercurrent:

Last year, I spent about five weeks in Papua New Guinea, which included diving at Walindi Plantation. I contracted malaria.

I took Larium two weeks prior to leaving in August, once a week in PNG, and two weeks upon returning home in September. I came down with malaria the end of January. I ran a fever with night sweats and chills for three weeks before a diagnosis, the final week, temperatures touching 105 and intermittent delirium.

I had malaria again, though not as severe, in June. It took three weeks from the onset of symptoms to being cured by heavy doses of malaria medication.

Even though I took my medicine as a prophylaxis, I got malaria — twice. Malaria can be dormant and just spring up any time."

Tom Franzson, Seabright, NJ

Dear Tom,

Dr. Lynn Paxton of the Centers for Disease Control in Atlanta helped clarify your problem.

"There are four species of parasite that cause malaria." Dr. Paxton told us, "vivax, ovale, malariae and falciparum. Prophylaxis is directed toward the parasite in the blood stream stage. However, two types — vivax and ovale — have a liver stage during which the parasite may incubate for several months before entering the blood stream.

"By then, any drug taken for prophylaxis is long gone and nothing is attacking the parasite. Thus, if someone is exposed to either of these two types, there is

the possibility of recurring symptoms. We recommend Primaquin for those exposed to either vivax or ovale, but that drug has too many side effects to take as a prophylaxis."

Falciparum, the most widespread, is the one form of malaria that can cause death. Dr. Paxton told us that "it can lead to liver and kidney failure and brain and lung complications. Cerebral malaria is a severe, often fatal result."

Malariae is not as widespread as the others, but causes a chronic, yet less severe, illness that can persist for decades.

Thankfully, falciparum and malariae are present in the blood stream soon after infection and, unless they happen to be resistant to the prophylactic drug taken, will be controlled by medication.

The Centers for Disease Control is finding that more and more areas have strains that are resistant to prophylactic malaria medication. Anyone traveling in known areas of malaria problems (including the Solomon Islands, Malaysia, Thailand, Indonesia and Vanuatu) should immediately seek medical assistance and mention potential malaria if any of these symptoms occur: shivering, fever, profuse sweating, nausea, headache, spleen enlargement, anemia and muscle pain.

Even if a malaria prophylaxis has been taken, you should seek a tropical disease specialist should any of the above symptoms occur, indicating where you have been and that malaria might be a cause. Australian writer/photographer Pat Manly recently lost his wife Lyn to malaria after a diving trip in New Guinea. A contributing factor was the failure of the medical staff in Australia to recognize the symptoms, and discover or treat for malaria.

Ben Davison, Undercurrent

At 'Father's Reef Number Two', a school of huge bumphead parrot fish, with their weird buck-toothed grins, paraded in 80 feet of blue water. A few grey reef sharks came up to watch us before returning to their deep domain. On top of the reef were lionfish, flame dart gobies, yellow head blue stripe gobies, anemones with their commensal clown fish and a couple of octopus. A smorgasbord of life indeed. Overwhelmed by the profusion of fish, I took my underwater notebook to 85 feet at 'Jane's Gully' and recorded: Green moray, scorpion fish, schooling jacks, two-tone dartfish, fire dartfish, club-nosed wrasse, lemon damsel, freckled hawkfish, long-nose hawkfish, regal angel fish, humphead bannerfish, bicolor angel fish, pyramid butterfly fish, long-nose butterfly fish, various goat fish, midnight snapper (adult and juvenile), dog-tooth tuna, rainbow runner, bluefin trevally, coral cod, and several species of anemone clown fish.

The large soft corals of the Pacific were in full bloom. Particularly impressive were the sea fans at 'Vanessa's Reef' and soft corals filling 'The Arch.' At 'Kristie's Alley', a small forest of soft sea whips hid a school of razor fish hovering vertically to escape my scrutiny. 'Hanging Gardens' is an abstract lattice work of rope sponge with intertwined sea whips hanging off a vertical wall, best savored at night when crabs crawl through the network.

Another magical element was Aussie ex-pat Jane Heanes, with a background as varied as her culinary skills. Trained as a lifeguard, she has seen the world, and broken more than a few hearts along the way, I would surmise. Her love of diving brought her to the FeBrina. Her dinners were a veritable hodge-podge of the best foods of the United Nations: wiener schnitzel with hot potato salad; fresh-caught fish grilled and served with varied pastas; glazed baked chicken; steak and lobster grill with hollandaise; Indian curries with rice pilaf and fresh chutney; a Yankee Fourth of July roast lamb with an apple pie dessert topped with flaming sparklers; and a New Guinea feast with chicken stew (Cokaroo Kai Kai), 'weed' soup, and a medley of yams, sweet and white potatoes. Lunches were international in scope as well: gazpacho, spinach quiche, Mexican tacos (build your own from a variety of mixings), Malaysian meat satay with peanut sauce, All-American cheeseburgers with the trimmings, and sesame chicken with shrimp fried rice. Desserts included passion fruit mousse with vanilla sauce, puff pastry stuffed with chocolate and cream, cherry crumb/vanilla/chocolate sliver, and Harvey Wallbanger birthday cake.

Mid-morning snacks included two-layer vanilla sponge cake with raspberry filling, pumpkin scones with strawberry jam, double death chocolate brownies, and muffins. The afternoon snacks: tortilla chips with salsa, egg rolls, pate and French bread, Swedish meatballs with dip, and mini-pizzas. The breakfasts were ample, and usually included plenty of fresh fruit, cereals and milk, and a choice of eggs or, perhaps, pancakes with blueberries.

The salon and cabins are thoroughly cleaned daily and towels are changed. The heads are kept immaculate by Jane's two helpers, Lole and Helga. I was impressed by the liberal use of a disinfectant on the air-conditioning ducts. Many of my liveaboard trips have been marred by the spread of upper respiratory infections (usually because one diver picks up a bug on the incoming flight and spreads it throughout the boat). Colds are a common complaint. Not so on the FeBrina. The constant attention to cleanliness seems to have led to a healthier dive trip than usual. One reason for the spotless conditions is the washing machine on the dive deck. With clean sheets every three days and your personal laundry done daily at no charge, this is a real move up from the old days of reeking T-shirts.

In addition to his skills as a shark-caller, Alan Raabe makes a fine boat captain. None of the tight-ass rules that make diving some of the fleet liveaboards or Grand Cayman less-than-desirable. He provides first-class diving and is a story-teller of some renown. One favorite tale is of Peter Hansen, who, a century ago, settled in the Witu Islands in Kimbe Bay and befriended the Balangori tribe. One of their enemies, a member of the Lama tribe, was an expert spear thrower. Peter shot him, cut off his arm (for the magical properties therein), and presented the arm to the Balangori. They, in turn, presented him with a bride of some sexual versatility. This, according to Alan, was the beginning of the arms trade in New Guinea. I had some doubts about the veracity of this tale until Alan showed me the reference in an old text. Yes, Papua New Guinea is a magical country, all right.

Alan's prowess as a story-teller is matched by his attention to detail in the operation of the spacious dive deck. Two dive guides, Francis and Anton, kept the BC-mounted tanks filled to 3100 psi. The compressors are below decks in

PNG TIATA and FEBRINA

Diving for Experienced	★★★★★
Diving for Beginners	Log a Hundred First
Accommodations	★★★★★
Food	★★★★★
Ambience	★★★★★
Moneysworth	★★★★★
★ poor, ★★ fair, ★★★ average, ★★★★ good, ★★★★★ excellent	

Two Other PNG Liveboards

It would be shortsighted to write about Papua New Guinea diving, without a word about Bob and Dinah Halstead's *Telita* (see the story in this issue on Deep Diving).

Long time *Undercurrent* subscriber Harold Carson (call him Kit), who resides in Berkeley, CA, was there about a year ago, diving with photographers Carl Roessler and Mary Jane Adams. "You're told 'You are all responsible divers and are responsible for yourself.' Dived Black Jack plane at 160 ft., the *S Jacob*, a Dutch cargo and troop ship, sunk by the Japanese, with 9 bombers and 2 fighters, resting upright at 167 feet. Prettiest wreck I have seen, but I don't think it was worth the risk and 8 minutes on it — especially at age 72. The *Telita* is for experienced divers who want all the diving they can handle in gorgeous reefs, variety, abundance and unusual tropical fish. Truly a photographers paradise. Halstead lowered a baited cage to 900 feet overnight; pulled up ten Nautilus's, a 2 foot shark, a 3 foot eel and a snake. The Nautilus's were taken to 70 feet where one was given to a diver to take pictures as they slowly went down to where they came from. At Hammerhead Reef, 8 to 10 foot hammerheads made passes at bait while I was as close as 15 feet! The Halsteads, the *Telita*, the diving, and the Highlands Ambua Lodge is a wonderful adventure."

David Vickery and Suzanne Leeson (Hoboken, NJ) add, "Ship-shape and efficiently run. Food ample and tasty, the crew helpful, friendly, and competent. Dive sites magnificent, healthy, full of life both large and small. Five species of sharks, a Bryde's whale, mantas, blue spotted rays, turtles, huge tuna and crevallies, herds of bumphead parrotfish, crocodilus fish, and hordes of macro. Ghost pipe fish, frog fish, miniature scorpionfish, leaf fish. Tell Bob what you want to see and he'll take you there. Shallow or deep. Several dives to 150 feet. Bob Halstead gave excellent pre-dive briefings, with layouts of the wrecks, the marine life, and safety rules, including a mandatory ascent at half a

tank, ascent rates, and safety stops at 35 feet (five minutes), 25 feet (10 minutes), and 15 feet (15 minutes). Free to dive to limits of their ability and buddies not required."

Says Barbara Fletcher (San Diego, CA), "Bob and Dinah Halstead are the greatest. The range of places we visited was phenomenal — sheer walls with pelagics to coral gardens to pinnacles. So-called 'muck dives' among the best — who'd have thought that a bunch of experienced, well-trained divers would be excited at diving in limited visibility, hunting a range of bizarre and wonderful critters that Dinah would find for us? Truly a unique and wonderful experience!" Reservations only through Sea & Sea 800/348-9778, 415/434-3409.

There's another craft in the PNG waters — the *MV Chertan* — operating out of Milne Bay, *Telita*'s homeport. Says S. Bertavche (San Rafael, CA, 5/93), "Rob Van Der Loos has been running charter company for years and has knowledge of sites on itineraries similar to *Telita*'s. Six private double cabins made up daily. The food is fresh and well prepared. Diving spectacular—best variety of corals, sponges and fish. Five Star operation; \$2500 for 10 days. . . .Graham McMullen (Sacramento, CA) said diving on his May trip was "great; associated with locals in their outriggers. *Chertan* has every creature comfort and public space anyone could want. Capacity 15. Great wall and bommie dives: lionfish, reef sharks, sponges, sea fans, sea turtles, clownfish, gorgeous nudibranchs, barracudas, humphead wrasse, clown triggerfish, soft and hard corals. Saw mantas leap completely out of the water and land on their backs. Saw dolphins every day. One highlight was a visit to a skull cave with 10 human skulls."

Reservations with any dive travel agency including Poseidon Ventures 800/854-9334; 714/744-5344.

Ben Davison

the engine room, and the air hose system was simplicity itself. Gear is kept under the bench seats, and the dive deck always had a bubble watcher to assist with handed-up cameras and weight belts. Because of the way the boat is tied to moorings Alan and Max have installed, the swim to and from was easy; there's no need for 'dinghy diving' on these reefs.

The down side to diving this part of the world is the travel time and expense to get there. From the East Coast, I took three days to get to Hoskins (the nearest airport to Walindi Plantation). With the crossing of the International Date Line working with me, it only took one calendar day to fly from Hoskins to Port Moresby, Port Moresby to Cairns, Cairns to Honolulu, and Honolulu to Los Angeles. Next time I book the *FaBrina* (and I surely will), I think I'll spend a few days in Cairns on the way out and back. Maybe if the weather is right, I'll do some diving with Mike Ball on the Great Barrier Reef. Lots of visitors choose to visit the Papua New Guinea Highlands and the Sepik River region for the exposure to some truly unique cultures.

An interesting side note: Over postprandial libations late one evening, Max Benjamin told me that the owners of Ocean Realm, with the backing of the Smithsonian Institution, are planning to establish a marine life research station at Walindi. They chose Kimbe Bay because of the health and diversity of life in the sea. Certainly testimony to the high level of diving to be found off the Fabrina in Kimbe Bay.

Divers' Compass: Book through Poseidon Ventures (1-800/854-9334; California 714/644-5344) or Rainbow Sea Tours (1-800/762-6827; Hawaii 808/329-8000).

Coral Bleaching: Clearing up the Mystery?

Extensive bouts of coral bleaching — when hard corals turn white and sometimes die — in the Caribbean in 1987 and 1990 have previously been attributed to unusually warm water. Some researchers even think it's due to global warming.

But scientists have discovered that some areas that suffered bleaching, including the Bahamas, Panama and Jamaica, did not have unusually warm water.

Now, they believe that what we divers find as ideal diving conditions — long spells of calm seas and clear water — may lead to mysterious episodes in which coral turns white. The combination may allow unusually high doses of the sun's ultraviolet light to reach the coral, causing colorful algae to abandon the innermost layer of coral, exposing the white skeleton. A bleached appearance results.

Many reefs in the Caribbean during 1987, says Daniel Gleason of the University of Houston, had very calm and clear water before the bleachings. The water may have lacked natural particles like plankton and sediments that normally block ultraviolet light. Gleason reported (*Nature*, October 27) that when he and his colleagues exposed coral to doses of ultraviolet light that could be expected under calm and clear conditions, the coral bleached.

"You don't even need increased temperatures," Gleason said. "The ultraviolet light could have caused the Caribbean bleachings by itself or in combination with other stresses on the coral."

The experiment involved transplanting coral off San Salvador Island in the Bahamas from 80 feet to either half or three-quarters of that depth. The shallower depths exposed coral to ultraviolet doses that would be encountered at the original depth in unusually calm and clear water. The shallowest coral began bleaching within a week and became markedly pale by three weeks. No bleaching appeared at any depth in coral that was protected from ultraviolet light by plastic sheets.

Gleason said possible depletions of the ozone layer should not affect coral bleaching because tropical ozone is not significantly affected. The bottom line: while clear water is the diver's best friend, it's hell on coral.

Rack rate is \$280/night; Round-trip air fare from the West Coast will run approximately \$1800. There is a weekly flight via Continental through Guam. . . . January to March, the Fabrina operates off the South Coast of New Britain out of Rabaul; April to May and October to November, out of Walindi Plantation to Kimbe Bay and sometimes the Witu Islands. June to September, the Fabrina operates out of Walindi to 'Father's Reef' and the Wulai Islands. December is usually the worst weather. . . . Bring an ample supply of insect repellent. . . . Arrangements can be made for on-board E6 processing. . . . Electrical voltage is 220v; 110v converters are provided, but check — one guest cooked a AC/DC transformer because the converter was not operating properly. . . . Water temperature is always above 80 degrees F. . . . Most divers spend a day or two at Walindi Plantation; the off-gassing ambience is well worth the time.

* * * *

At a party at the home of one of our scuba club members last year, I learned that four had signed up to dive on the new boat in PNG, the Tiata. No couch potato, I quickly volunteered. My wife too. By the end of the night, eight eager divers were ready to go for a September trip, to be led by premier underwater cinematographer Stan Waterman.

To tackle jet lag, we spent two days in Rabaul, on PNG's New Britain island, before boarding the boat. We toured the lovely island, visiting an old Japanese air base (now a coconut grove laced with bomb craters, wrecked planes, and vehicles), tunnels and bunkers, and the Rabaul market. The next morning, we carried our bags across the road and taxied by water to the Tiata.

We were soon off for a checkout dive, then to a nearby WWII wreck, the Haiku Maru, the shallowest part at 120 feet. We dived from the large and comfortable inflatable NAIAD, an excellent craft for conditions where it would be difficult for the Tiata to maneuver. Rabaul's Simpson Harbor is no Truk Lagoon. Few of the wrecks are within sport diving limits (Tiata owner and captain Kevin Baldwin came to PNG in 1967 and salvaged the brass propellers from wrecks 240 to 300 feet deep), and the visibility and fish life is not the best. Wrecks outside the harbor are divable, but are covered with plenty of soft corals, sea fans, sponges, and schools of fish.

My seventh liveaboard in 13 years, the Tiata is tops. Kevin designed and constructed it, finished it in hand-crafted native woods, polished to perfection. It's well suited to diving. Simple plastic clips are mounted to the wall to hold the tank in place. Beneath are large gear bins and behind are compartments to hold your mask, fins, and snorkel. Tanks are steel 100 or 85 cu. ft. (these mini tanks were perfect for my wife) and 75 cu. ft. aluminums. With the negatively buoyant steel tanks, several people needed no weights at all. Kevin encourages safety stops on every dive regardless of depth, and the 100 cu. ft. tank (pumped to 3400 psi) gave ample bottom time and a good reserve for a stop. Dual wide-rung ladders to exit the water, located in the center of the rear platform, minimize any roll of the boat. Ela and Nikki, Kevin's very able crew, are right there to assist.

The first two days we dove the reefs and wrecks near Rabaul, waiting for Stan Waterman to arrive. Once he did, we settled into our routine. At 7:00 A.M. every morning, we had a pre-breakfast dive (cereal and juices were available), then breakfast of bacon, bangers, eggs, fresh fruits, toast, muffins, and coffee. Following breakfast: more diving, then more diving, lunch, more diving, more diving, a night dive before dinner, dinner with wine, followed by more night diving - if you were up to it. You can get seven dives per day, limited only by your computer, your experience, your physical limits, your common sense, and the need to move the Tiata to new dive sites. You can dive solo if you wish. Several times I surfaced, topped off my tank, and was back in the water in less than ten minutes with a fresh camera. Only one night were we anchored at a location where we could not make a night dive.

Kevin Baldwin loves to dive (one night I crashed at 11:15 and he was still in the water). He takes special effort to get to the best sites because he wants

Scubapro MK15 First Stage Regulator Failure

Scubapro is recalling all MK15 regulators — about 3000 — shipped from Scubapro prior to September 1, 1993. No other Scubapro regulator is affected.

According to Scubapro engineer Jim Dexter, they received four complaints that the high pressure seat had failed, but he says, no failure caused an injury or accident.

"When we investigated we found that in two instances a crack developed in the O-ring seat and in the others the high pressure seat had broken. This caused a second stage freeflow.

"In every case problems occurred in pressures above 3,000 psi. The MK15 was designed to be used with pressures in the 3800 to 4000 psi range. We have now limited it to 3,000 psi.

"The Consumer Product Safety Commission told us that all we really needed was a 'Quality Alert' notice because the freeflowing begins when the tank is turned on and most divers wouldn't dive with a regulator that is freeflowing before it is in the water."

Each Scubapro dealer should have all materials needed for the retrofit. The new high pressure seat is to be used to a maximum pressure of 3,000 psi. Scubapro is developing an alternate seat and retainer that will allow use of the MK15 at higher tank pressures.

Divers should discontinue using any MK15 first and second stage regulator with serial numbers prior to 24193000. Take it to a Scubapro dealer or ship it directly to Scubapro at 3105 E. Harcourt St., Rancho Dominguez, CA 90221. The retrofit will be done at no cost.

For additional information call Scubapro at 1/800-GO-SCUBA (1/800-467-2822).

to dive them himself. The Tiata and the NAIAD (don't refer to it as a Zodiac; Kevin will tell you it's like calling a Rolls Royce a Volkswagen) are both equipped with Global Satellite Positioning (GSP), allowing Kevin to put the divers within 30 feet of any dive site he has charted. When diving from the NAIAD we were in constant communication with Tiata by radio.

A sampling of the sites: Georges Wreck is a mine sweeper that sits at 40 feet, and angles down to 180 feet. Covered with crinoids, sponges, several anemones with clownfish, and numerous fish, it is perfect for close focus wide angle shots with sun bursts on the surface. I swam easily into parts of the wreck, through silver clouds. At Cape Tavaui, a wrecked bi-plane is covered with crinoids and sponges, perfect for wide angle shots; I exited to find a friendly crinoid on my regulator hose.

In open ocean is Midway Reef, a vertical-walled pinnacle beginning at 15 feet, with vertical walls on all sides. I circled the reef on one dive, amid numerous big tuna, jacks, barracuda, an occasional turtle, large soft corals, and a sea yellow and black sea snake, sleeping at 20 feet deep.

At a site we named "Gorilla Reef", the current was 3-5 knots. Kevin attached a tag line to the anchor chain, and reviewed the dive plan: pull yourself along the line to the anchor chain and follow it to the bottom, then swim along the reef to the wall where the big stuff would be waiting. When down to 500 psi all the divers would get together and make a drifting five minute safety stop at 10 feet. It took me 17 minutes and 1600 psi of air to get along the tag line to the anchor at the bottom. While pulling myself along with one hand, I almost lost my camera several times as the anchor chain was bobbed 6-8 feet in the rough seas. At the bottom, I had to crawl hand over hand. When I finally reached the drop off, voila! Eagle rays hovering effortlessly in the current, schools of large jacks, barracuda, batfish, tuna, and numerous other large fish, including what must have been a 200 lb grouper, called a "cod" here.

After dives like this, divers need plenty of vittles and the Tiata crew, led by Kevin's wife Pilu (sitting in for the regular chef), performed admirably. Meals are served in the lounge, at tables with cushioned booths. Twice we had grilled steak and lobster (I scarfed three tails, as did others, and there was still enough for a lobster salad lunch). Pilu baked banana muffins, peanut butter muffins, and numerous desserts. We had lamb chops, chicken, two vegetables at every dinner, fresh salads with lunch and dinner. Beer, soda (honor system bar), juice, coffee, tea, or hot chocolate was available round the clock. Diving in these warm waters - always above 80 degrees - doesn't burn enough calories. I gained three pounds.

For years, the Telita crew (and now the Tiata) have been feeding 10 foot silver tip sharks at one reef, where we dropped to sit and wait. Soon the sharks began to cruise leisurely among the divers. On the second dive, after settling on the bottom, Nikki dropped a weighted line full of fish chunks. Within 30 seconds, a six and 10 foot shark began to cruise. During the first dive, their movements were smooth and controlled. This time they were quick, jerky, abrupt, and their pectorals were down. At first they missed the bait, but quickly homed in, devouring it in less than a minute. Others arrived, but too late. They cruised among the divers, running in very close before making abrupt turns to avoid contact. Several times I almost had to push them away with my camera, but they turned just in time to avoid contact.

The Tashio Mary lays on its side in a lagoon, starting at 10 feet and bottoms out at 60 feet; it's fully encrusted with soft corals, nudibranchs, sea fans, sponges, and the soft corals are easily six feet. I took two cameras with

extension tubes on my first night dive, and finished both rolls of film. We moored on this wreck for several nights, making trips to the reefs for other dives such as the Amphitheater, about 90 minutes away. When we arrived, the waves were 6-8 feet, and conditions were rough, but we pulled ourselves down the tag line, then over the lip of the reef until we got below the current. Hundreds of jacks, tuna, batfish, and large schools of fish greeted us. Gray reef sharks patrolled in the distance. Butterfly fish were abundant. Several small barracuda swam before me. More and more joined. The group continued to grow and grow until it became a huge school that blocked out the sun. There were thousands of schooling barracuda. I took a second dive here with Kevin, while the Tiata motored back to another site. The current was down, and the schools of fish were not as abundant, but there were more gray reef sharks and bigger tuna (100 lb.). Kevin's love of diving got three of us an extra dive at a great site, when he could have saved the fuel for the NAIAD and simply moved on to the next site.

One reason a guy like Stan Waterman travels on a boat like this is because it's photographer-friendly. Main deck: three tables provide plenty of room here to assemble, disassemble, and maintain your camera gear. The lounge contains a TV and a VCR; watch your underwater videos just by plugging into the TV. Twelve built-in shelves for camera gear, each with its own 120 and 220 volt outlets for charging strobes and camcorder batteries. And, two large freshwater soaking tanks for camera gear.

A real charmer, Stan entertained us with numerous stories, videos of trips to Borneo, and stories about lunches with Jackie Bisset while filming The Deep (the 15 year old flick that still remains diving's best). He gave pointers on video, suggesting lighting, filter use, when to use flat ports or dome ports, how to compose. After dives he would watch our videos and cry out "good for you" when he saw something he liked. Down to earth, unpretentious, and a constant source of great stories, Stanton Waterman is a great fellow to travel with.

When our trip concluded, Kevin went to Kavieng airport at 4:30 A.M. with our bags and checked them in. He stayed with us at the airport until our 6:00 A.M. flight boarded and waved to us as we climbed the stairs to the plane. No owner, dive master, or captain has ever done that for me in 15 years of diving.

Boat stuff: Outside are two fresh water shower heads (with hot water on long hoses. Walk into the lounge damp, but don't sit on the cushions. All decks are finished wood or carpet. Two toilets on main deck are wet areas; simply hang your dry clothes behind the shower curtain and take your shower. Toilet paper stays dry, hidden behind the door of the vanity; toilets are not marine heads, but flush toilets. Even the water used for flushing the toilet is fresh; desalinization equipment keeps a 1200 gallon fresh water tank filled. . . .Four guest cabins, thickly carpeted, each with a sink with vanity and mirror, under bed storage, a narrow closet with hangers, several drawers, towels, a reading lamp for each bunk, and adjustable air conditioning vents. Two have a double bunk on the bottom with a single bunk on top, and two have single bunks top and bottom. An additional cabin with two single bunks means the boat could accommodate twelve, but Kevin prefers six to eight. . . .Upper deck is covered and has hangers for dive skins and wet suits, chairs for relaxing, and open space for working on a tan. Beware the equatorial sun. One cloudy day after a noon dive, I stood on the upper deck talking for twenty minutes. The next day, I was bright red and tender from a sunburn.

Divers' Compass: It's a pricey \$2970 for eleven nights; add another \$1800 for airfare; See & Sea: 800/348-9778; in CA 415/434-3400; FAX: 415/434-3409. . . .It's unsafe to wander around any towns alone. . . .Towels for use after diving are always available at the back platform area. . . .The Tiata picks up one group

in Rabual, then completes that charter in Kavieng; picks up the next group in Kavieng, and completes that charter in Rabual, making a continuous circle between the two towns. . . . the Travelodge is top-of-the line in Rabual at \$125/night, worth half that in the U.S.

Diver's Speak Out

—good prices close at home

While some of us are willing to peel off a wad of greenbacks for trips to distant seas, most of us pick shorter sojourns that are easier on the wallet. After all, to a hardcore diver, simply getting wet and gassing up is half the fun.

Walker's Cay, Bahamas

After reviewing reports from you, our readers, during the past year, one Bahamas destination I would visit to replicate the shark action found in the Pacific is a short plane hop from Fort Lauderdale: *Walker's Cay*. While I've dived many Bahamas Islands, I've not set foot on this one.

Sea Below motored Ronald L. Bailey (Roanoke, VA) to the reefs in July and Bailey says: "Five shark dives; 30-60 sharks each dive. Saw eagle rays, groupers, and barracuda. Wonderful caverns, some filled with silversides. Most diving under 50 feet, plenty of bottom time. Boat roomy with a good dive ladder. Seas were flat. Lack of schools of typical reef fish and a lack of macro critters. Food good at the hotel. Room was OK, but needed to be vacuumed more often. Plenty of hot water. Our room had a slight musty smell. TV in room with some satellite channels. Pool was nice; hot tub. Grounds were kept clean. All in all, a nice trip."

Tim Britton (Kinston, NC), there in September writes: "Accommodations outstanding. Food varied and tasty. The black-tie wait staff helped provide an ambience of casual elegance. Gary Adkison runs a smooth operation; two tank morning dives, one tank afternoon dive, allows computer folks to dive their own profiles and offers to guide others. Knowledgeable. Dove in the

midst of 60-100 blacktip reef sharks, nurse sharks and 10-12 foot bull sharks. Unbelievable experience, made even more exciting by Gary hauling a frozen fish 'bait ball' to a central area to help us get better photos. All the while sharks were ripping through the fish. Coral caverns/grottos, some gorgeous leopard rays, lots of hugh grouper, clean, healthy reefs and some of the best diving that I've experienced north of Bonaire. Uncrowded, food outstanding, cost moderate." (800/327-3714; 800/432-2092; 305/522-1469.)

Cayman Brac

For calmer but more consistent diving, in a dedicated diver's hotel with a few amenities, a fine beach, and plenty of diving, it's pretty hard to beat the *Tiara Beach Hotel* on Cayman Brac — and those day trips to the astonishing, nearby Little Cayman. When I inspected Tiara Beach in 1989, it had fallen from earlier heights due to the specter of bankruptcy. That slide continued until two years ago, but Divi secured new financing (at the expense of old investors), and readers report that it's once again back among the premier resort destinations in the Caribbean. Look at this string of compliments:

Dan and Carolyn Lynn (Fairfax Station, VA, 11/93) say, "Dive sites in better condition than Grand Cayman. Time-share condos large and comfortable." . . . Pete and Phyllis Ewert (Mt. Prospect, IL, 12/92) note, "Good time — good food. Lots of fun with the bartenders. Water rough. Went to Little Cayman — beautiful diving, but trip rough and some people got sick. Camera shop helpful. Had a nice video made

of the family underwater. Two sons, 17 and 21 had a good time with locals." . . . Mike and Kathy Cardwell (Victorville, CA, 5/93) say, "Wall is close enough that most sites can be reached from shore with moderate surface swims. Long-term protection results large groupers, parrot fish. Divi Tiara, under new management of Chuck Podrasky, is best. Friendly, courteous and helpful towards experienced divers who don't want to pay for boat rides to sites that can be shore dived". . . Fred Cook (Seaford, DE, 6/93) says, "100-foot limit not restrictive to me. Nearly daily trips to Little Cayman is worth extra money. Local people friendly, criminal activity absent." . . . Ann L. Tolstoy, Alta Loma, CA, 6/93) writes, "Marvelous place and great diving, especially Little Cayman. Entire staff pleasant, helpful, accommodating. Safety primary: on a stormy day we had to abandon ship and swim to shore. Len, the divemaster, and Lenny, the bartender, deserve special kudos." . . . Sally Webb (Brighton, CO, 6/93) writes, "Paradise. I've been five times. Spoiled by divemaster doing everything. Resort in better condition than ever. No currents and no crowds." . . . Jim Fiumara, (Glendale, AZ, 8/93) said, "Visibility 60—70 feet, but corals, sponges, marine life, and fantastic walls made up for it. Boat staff made diving easy. Same-day E6 processing. Food plentiful, but merely adequate. Hotel nice. Boats overcrowded, but not unbearable. Lot of freedom for experienced divers." . . . But, it's not perfect. Writes Gerald Deral (Sacramento, CA, 8/93), "Three boats broke down on one day. Some problems with rental gear-faulty depth gauge, leaking hose. Overall,

a great place to dive and Cayman Brac and easily accessible Little Cayman are top sites, especially walls. Love that 150 foot visibility!" Reservations: 809/948-7313; 800/367-3484; 607/277-3484.

Honduras

While I have mixed feelings about Honduran diving because of the paucity of anything other than pansized fish, I can't quarrel about the beauty of most reefs. I've seen most of the places there, but one I've not visited gets the best review on Roatan: the *Reef House Resort*. What fellow subscribers say:

"Dove in the midst of 60-100 blacktip reef sharks, nurse sharks and 10-12 foot bull sharks."

Warren Elledhe (Lufkin, TX, 3/93) writes, "Quaint and rustic, professionally managed, excellent atmosphere, food, and service. Rental gear and fleet topnotch. Wayne, the manager, dive shop operator, and general person in charge, can fix anything! Best beach dive I have seen anywhere in the Caribbean. Reefs are great, with many walls and soft corals and sponges." . . . Michael Grossfeld (Woodbury, NY, 5/93) says, "Diving as good as Bonaire five years ago. Difficult to get to, 45-minute bus ride from airport to dock, then five-minute water taxi to hotel. Rustic accommodations, but aim to please. Two one-tank boat dives daily, but will drop you on way back for additional dive to shore at hotel. Night dive no problem, additional shore dives if you want. Food good — steak, lobster, etc. Family-style meals. Diving very good — 100-foot visibility, many corals and fish, octopus, crab, lobsters on night dive, minimal restrictions. Hotel has 13 rooms and two dive boats. During my visit, only five guests, so personalized service." . . . Deb Colavita (Gillett, PA, 7/93) notes,

"Staff exceptional, from the night guard, to maids, to kitchen staff, to divemasters, to owners. Meals well-prepared, dietary needs well-handled. Rooms clean, laundry service available. No requests refused. Pandy excellent captain. Hank and Trish excellent divemasters. Beryl handles the bar quite well, and is a good interpreter. Stephanie knows where the local doctor can be found (I became very ill and almost died). Wayne (the manager) is quick to identify medical conditions that require immediate attention. Best diving ever, much better than Bonaire. Swam with a pod of wild dolphins. Quiet, relaxed atmosphere. The place becomes a family." . . . Reservations: 504/476-2949; 800/328-8897; 512/681-2888.

Grand Turk

It's hard to find "the old Caribbean" anymore, but if there is such a place, Grand Turk island is it. I first visited it a decade ago and about all that's happened has been a couple more small hotels, though the number of hotel rooms on the island still falls short of 100.

What I found was surprisingly good diving mainly because fewer divers come here in a year than visit Grand Cayman in two weeks. The lack of development has kept the reefs free of the effects of pollution. But, if you take the short hop (all in all, a couple of hours from Miami, 550 miles away, after a stop at Providenciales you'll be rewarded with superb Caribbean diving.

Guanahani Hotel and Off the Wall Divers get a lot of the action. There in March, R. Clifford (Springfield, VA) said, "Nice people — clean hotel — air-conditioning, cable, great lobster dinner. 5-7 minutes to dive sites, 7,000-foot wall, great locals." . . . Chris and David Sunday (Coming, NY, 4/94) said, "No commercialism like Provo, well worth the extra \$100 air round-trip from Provo. The Guanahani is laid-back, with 16 average rooms next to the beach. Its restaurant was good, with the best lobster. The Regal Beagle has good meals, about a five-

minute walk. Maria and Terry are accommodating and safe, without being overbearing. Free to use your computer within its limits. Diving is usually a two-tank dive, a wall dive followed by a reef dive after a one-hour break at the hotel." . . . Gary Holliday (Austin, TX, 5/93) wrote, "Pontoon dive boat is perfect. Wall is dramatic and full of critters, corals, and sponges. Eagle ray, morays, peacock flounder, barracuda, and angel fish. Water clarity is excellent. Hotel comfortable; can sit on beach all day and see few people." . . . Janis Moran (Munster, IN, 6/93) wrote, "Crew allows you to dive your computer and your style, while keeping a watchful eye. Crew, haul, set up, and rinse your gear. Willing to take only one diver. One night saw many crabs with bodies the size of dinner plates; lobsters, eels, octopus. Day diving, lots of fish: large, friendly groupers, a few sting rays and several barracuda. Hotel Spartan but clean — air-conditioning, a bed and a shower, not much else. Food excellent and well prepared, if somewhat limited. Town, safe and within walking distance of the hotel, is small and only has a few good pubs and restaurants." Jean A. Larner (8/93 Easton, MD) noted, "My room was on second floor with a view of the ocean. The hotel has a lot of potential and it's for sale. No big pelagics. Dive sites are five minutes away. One day we traveled we pulled the boat up on the beach for lunch at The Water's Edge restaurant. One night Terry lent us his van and six of us went to the Salt Raker for dinner, a barbecue buffet."

Reservations: Guanahani Hotel 809/946-2135, Off the Wall Divers 809/946-2517, Salt Raker Inn and Blue Water Divers is a combination others select. Robert Sentner (NYC, 2/93) wrote, "Great wall diving. Winds limited visibility to 50 to 75 feet and caused a cancellation. Dive boat basic, but did the job. Two to eight divers; given an appreciable freedom to plan dive depth, pace and bottom time. Hotel accommodations were rustic and somewhat run-down, but hotel manager (Jerry) and crew

were warm and likeable. Hotel arranged babysitting services for our 10-month-old daughter while we dove every day." . . . Vicky and Elliott Thomas (Yarmouth, ME, 4/93) stated, "One of the friendliest places I have been. Turtles most every dive. The Salt Raker is a great place — good accommodations, great food, great people. Going to Grand Turk is like setting your watch back 20 years. Moorings have been installed at the most popular dive sites." . . . Alex Bowers (Savannah, GA, 5/93) exclaimed, "Grand Turk is awesome. Plain, simple rooms with air-conditioning and fresh linens daily. The quiet is shattered by a braying donkey or crowing rooster. Pace and quality of locals often requires you to estimate the cost of your meal and leave a note with your money as to where you can be found if you shortchanged them. 78-degree water with no current or surge and

100-foot visibility unless there's a lot of plankton, which mantas come to feed on. Blue Water Divers owner comes to your hotel to check your C-card the day before diving. February is the middle of humpback migration season." . . . Mick and Toni Tingle (6/93 Dagsboro, DE) write, "Mitch and Dave accommodating to divers. Tank air fills above 3000 psi. The dive boat picked us up on the beach in front of the hotel. The Salt Raker Inn is charming and laid-back. Room was nice-sized, with a small refrigerator to bottled drinking water, paddle fan, air-conditioner and king-sized bed. Two people; room, six days, two one-tank dives per day, meal plan for five days, taxes and gratuities, airport transfers and welcome cocktail. \$1,758." . . . Blair and Mary Nicodemus (North Wales PA, 6/93) write, "Snorkeling off beach was great. Spent an hour every afternoon in the shallows, a

massive nursery for tropicals. Saw spotted drums, eels, and tons of baby fish. Left our gear on boat all week. Mitch and Dave knew the sites well, helped with all gear, and treated us as grown-ups. . . . Richard Connel (London, England, 9/93) says, "It's diving with friends at a sleepy old British Caribbean low key colonial town. The divemasters at Blue Water double as 'Mitch and Dave' — a near enough local Simon and Garfunkle—twice a week at Salt Raker... Good choice even for jaded veteran divers who want a quiet unstressed week or two in the old Caribbean."

Reservations: Salt Raker Inn, 809/946-2260; 305/667-0966 Blue Water Divers, 809/946-2432 (phone & Fax); 800/328-2288.

PS: Your travel agent can make reservations for you with any of the above hotels.

Ben Davison

Why Divers Bend

—*permanent injury often the result*

This is the last in a series analyzing the Diver's Alert Network's (DAN) 1991 accident and death report. We offer it in the hope that it will help you — and I — dive more safely.

Characteristics of Dives that Resulted in DCS or AGE

Arterial gas embolism (AGE) can occur in any diver who ascends too rapidly from any depth. The typical AGE incident occurs within dive table limits and/or during the first dive of the first day.

"Nearly 19 percent of those injured continued diving after the first symptoms of decompression illness."

There has been a resurgence of inexperienced divers suffering from AGE — 52 percent in 1991 compared to 34 percent in 1990. Only 60 percent claim to have made a rapid ascent, the predominate cause of AGE. Time and depth exposures are not major contributing factors: only 46 percent of divers went deeper than 80 feet, and 60 percent were within the no decompression limit tables. Decompression sickness (DCS) results from the duration

of exposure at a depth of 30 feet or greater. It was associated with dives 80 feet or greater, repetitive diving within the tables and with multi-level profiles. A rapid ascent occurred in 59 percent of AGE cases but only 22 percent of DCS cases.

DCS I includes all cases of pain-only bends occurring in the extremities and also includes skin bends. DCS II is more serious, and includes all cases with neurological or cardiopulmonary symptoms except those diagnosed as air embolism. The percentage of DCS II appears to be rising annually.

The most common initial DCS symptom was pain, but up to six symptoms were reported by individuals. Numbness and pain appeared in more than 50 percent, corroborating the neurological nature of most decompression illness. Two symptoms reflect the serious nature of progressive neurological DCS: 13.5 percent had difficulty walking at some time after their dive, and six percent suffered paralysis.

Nearly 19 percent of those injured continued diving after the first symptoms of decompression illness. This is presumably due either to a lack of knowledge or an unwillingness to admit to the first symptoms of decompression illness. About 2.5 percent had suffered a previous episode of decompression illness. The second bends hit tends to be more severe than the first.

More About Cozumel's Hidden Downwelling

Dear Ben:

I read the letter in the last issue from Eric Glanz regarding an "unusual experience" in April on Santa Rosa Wall in Cozumel. He described a waterflow inversion which forced his diving party downward due to strong current. This phenomenon may not be so unusual.

On January 4, while diving Cozumel's Chankanaab Reef, our group experienced a strong downward current that reversed the ascent with normal kicking. There were six divers and one divemaster, Jose "Portfiro" Barrera; the dive operation was Blue Bubble.

Our dive was our second after a 40-minute surface interval. The first dive was a 30-minute, maximum depth, 70-foot drift dive on Punta Tunich. The normal current was in evidence, it was overcast with rain, there was some chop at the surface, and the water temperature was 80-81 degrees F. In other words, a normal Cozumel dive.

Upon arrival at the "jump-off" point at Chankanaab, no unusual surface conditions could be seen to predict events that would occur at the end of this shallow drift dive. At the conclusion of our dive, three of the six divers made an uneventful ascent to the surface to be picked up by the boat. However, the divemaster, one experienced diver (over 100 dives), and two newly certified divers (less than 10 dives) drifted into a down current that, while they kept kicking normally pushed them from 50 feet to 70 feet.

The divers did not immediately realize they were "sinking" as their more buoyant bubbles were sinking at a slower rate than they were. This phenomenon was so subtle that the experienced diver thought his depth gauge was broken as it registered that he was going deeper, not ascending, and yet, all the external input said he should be ascending.

The divemaster picked up the situation quickly and signaled to the experienced diver, then held the BCs of both new divers, and the group proceeded to kick strenuously to the surface. As slow ascent was being achieved, no air was put in the BCs and no weight belts were dropped. At about 10 to 15 feet, the down thrust

was not strong but the divers were now moving in a clockwise circular motion. This circular motion was very evident to those on the pickup boat. Also, in an otherwise choppy sea, a glass-flat, circular area about 70 feet across with what appeared to be a vortex (the exact description Eric Glanz reported) was observed.

The divemaster was very professional and calming. Though the three divers sucked a lot of air (none came back with over 500 psi and each started their ascent with over 1000 psi), nobody panicked through a vigorous but controlled ascent. Everyone was convinced that a possible tragedy was averted because of the capability of our divemaster in this completely unexpected phenomenon. Luck played a part because the group had "extra" air (second, shallow drift dive that was not taxing), but a competent divemaster made the difference.

The description of the down flow in April seems to describe a stronger current with a nearby up flow. Both events occurred in the grouping of dive locations south of St. Miguel (Chankanaab on the north to Santa Rosa on the south, Tormentos, Yocab, and Punta Tunich in the middle), but three months apart.

There is no doubt that this natural phenomenon is extremely dangerous — it's totally unexpected, breaks apart a diving group, separates buddies, can be powerful enough to force divers to nonrecreational depths, and induces panic even in very experienced divers. The prevailing wisdom is that it is associated with the changes in tide and mixture of warm and cool water. If that's so, this is an event that can unexpectedly occur any time of the year.

Mark A. Anderson
Severna Park, MD

Note to our readers: Should you get caught in a downwelling or upwelling, stay calm, don't panic. Don't swim directly against it, since you probably won't win. Swim out of it at an angle so you don't fight it full force.

Ben Davison

Decompression Illness in Computer and Table Divers

Compared to table users, computer users can stay down longer, and make earlier repetitive and deeper dives. When making multi-level dives, computer users can go deeper during their repetitive dives.

The use of computers supposedly enables divers to make repetitive dives more safely. However, while using computers, more than 80 percent of the divers suffering decompression illness in 1991 made multi-level, repetitive dives deeper than 80 feet. Other factors such as multi-day diving and fatigue appear less important. The number of divers who suffered pain-only bends (DCS

I) was approximately equal in both computer and table users as was neurological or more serious bends (DCS II). DCS II was much more common than DCS I in both computer and table divers. Slightly less than half the divers with decompression illness used computers in 1991.

Approximately 25 percent of computer divers thought that they were within the tables. However, only 15 percent reckoned they were diving outside the standard decompression table limits. Staged decompression has decreased in computer users, presumably as the computer indicates there is no need for decompression at the end of the dive schedule.

Arterial gas embolism was two to three times greater

in frequency in table users than computer users. It may be that computer users are more experienced divers, who have been diving both more often and longer than table users. This may indicate that table users were more likely to miscalculate time and run out of air.

Equipment Problems

Fifteen percent of the 1991 cases involved equipment problems, which not only includes failure or malfunction, but also includes unfamiliarity with the equipment. Problems mainly occurred with the regulator, dive computer or buoyancy control. Other problems included gauge or timer problems, an improper wet suit fit, a mask leak, a tank not turned on, and three cases where someone else's actions or equipment reportedly led to an injury.

First Contact for Assistance

Approximately half the injured divers called for assistance within 12 hours of the onset of their first symptom. Some divers delay seeking medical evaluation

because they may not feel their symptoms are serious enough. Others may not recognize their symptoms as being related to decompression illness. Pain can easily be mistaken for the aches and pains associated with exertion. A remote dive site may limit access to medical evaluation. Delays in treatment may decrease the possibility of immediate and complete resolution of symptoms. Thirty six percent of all injured divers received no first aid.

Post Hyperbaric Treatment Residuals

After completion of hyperbaric therapy, 48 percent of the treated divers still had residual symptoms. Twenty-four percent had a neurological residual and 24 percent had residual pain. At the three month follow up, 17 percent of injured divers still had some symptom of injury.

Decompression illness often leads to permanent injury. Hyperbaric therapy provided complete resolution of symptoms in a little over half of all cases. This percentage might be improved if more divers sought earlier treatment.

Deep Diving and the Meaning of Life

—When 200 feet is a risk, but not dangerous

The *Telita* departed Garove Island at 1900 hours, bound for Ravieng. Our guests and crew turned in and I found myself alone on watch. The moon rose and I moved to the bow to savor the glorious New Guinea night. Undisturbed by even a sigh of wind, the seas were flat and glowing with a pearly light, and the surface parted, sparkling with luminescence and crying a submissive hiss.

Over the past three weeks, I had, together with my wife Dinah and a few competent and adventurous divers, made some of the most incredible dives in all our experience. We had collectively made 143 dives ranging between 155 and 225 feet, along with many others to modest depths. Had we not made the deep dives, we would have missed sights and encounters that have enriched our lives.

I sat alone on the bow of *Telita* thinking of the good humor, intelligence, skills and discipline that the divers demonstrated in flawlessly performing difficult and high risk dives without incident. Were these dives dangerous? Two were. And I'll tell you about them later.

But first, let me be rational. This will upset some people. Obedience or fantasy seems to be more popular these days, but when things get too irrational I feel insecure and go all wobbly. Which is of course why I am forever making comments about irrational behavior such as taking giant stride entries from the side of the boat, jumping into the water with air in the BC, wearing a snorkel when scuba diving, diving with a buddy, and acting as if the Queensland, Australia government diving regulations have anything to do with making life healthier

and safer. Of course, my rationality is also the reason we never start a cruise on a Friday.

Risk is Not Danger

The words "Risk" and "Danger" are often deliberately misused. This is a bureaucratic technique to make the simple seem confusing, thus to justify taking control. "Risk" is something inherent in a dive and it is the same for all divers.

"Danger" depends on how well the person making the dive copes with the risk. A dive to 25 feet in clear, calm water is low risk, but it would be dangerous if the person attempting it did not understand the consequences of breath holding on ascent.

Understanding the real risks is the most important factor in safe diving. A safe diver knows when not to dive — the diver assesses the risks and decides that he or she does not have the education or experience to overcome them. If the diver is unable to do this, then the dive is dangerous and injury is likely.

A safe dive is one where it is unlikely (but not impossible) that injury will occur. If a "safe" dive turns out to be dangerous, one must ask if the problem could have been foreseen — should it have been assessed as a possible risk — or was it so totally outrageous that anyone considering it would have been thought paranoid. Safety is never absolute. Stuff happens. Recently some unfortunate people were sitting, they thought safely, in their living rooms when an aircraft landed on their heads.

The Right Stuff for Diving Deep

Some people have the right stuff for diving and some do not. Some people will never be safe divers, while others will be able to make high risk dives and never run into trouble. Safety rules rarely work. Rules are for the guidance of the wise — and the observance of fools.

The deep diving rule implies that it is the risk assumed that needs limiting ... “no deeper than 130 feet.” What should be limited is the danger. And that depends on the individual diver.

Which is the most dangerous situation? A qualified advanced diver, with 9 dives, at 100 feet? Or me, with 6,000, at 150 feet? Or Bret Gilliam, with more than 12,000 dives and the world record to 452 feet, at 200 feet? Yes, limits do exist. But they are personal. Not absolute.

What I find deep

Some people dive deep just to see if they can do it, but every deep dive we made was to see something that could not be seen in shallow water. I and my companions assumed the higher risk for a secondary purpose, not because of the risk itself. And, it was worth the extra care needed to perform the dives.

The highlights were a series of dives on the wreck of the *S' Jacob*, a WWII armed cargo carrier found a couple of years ago. The wreck is upright, 325 feet long, totally intact (unlike the *Yongala*, the *S' Jacob* still has its propeller) and has never been fished, let alone dived. It's an oasis of life in the middle of a plain 182 feet to the bottom and miles from anywhere.

“Too many people diving do not have the right stuff. They are giving the rest of us a bad name, excuses for imbecilic regulations restricting what we can do, and messing up the dive sites.”

Dives on this wreck are fantastic. In the best conditions with clear water and a slight current to bring the fish and soft corals to life, the experience is mindblowing. The last time I dived it, I was alone at 160 feet preparing to unshackle our mooring line when a pair of manta rays came and danced around me, skimming the bridge and soaring around the funnel, scattering clouds of baitfish that were then set upon by a school of jacks. Did I have complete control? Of my air, depth, time, location, schedule, camera ... yes. Of my emotions ... no!

You know what I am talking about. The joy brought tears to my eyes. Moments like these make life worthwhile. Well I went back, and so did Dinah and my friends, and we all came back safely, and did it again and again.

We hear about the glories of nature, and most people experience them via the television screen. But that is not how I want to live my life. I want to be there, and I have

and I will. I also like to provide the opportunity for others to share these experiences with me.

“My life would be a sad one without nature, even if she stings sometimes, and no other endeavour brings me closer to nature than diving does.”

Certain exquisite fish cannot be found in shallow water. So I have been taking my camera to 200 feet, usually by myself, to photograph sand tile fish, anthias and dart fish that only a handful of people have ever seen in their natural habitat. They are beautiful animals and I am fascinated by their hidden lives. Taking photographs at these depths is difficult. It is dark and the fish are often spooked by the necessary light that I use to be able to focus. Technically it is my greatest challenge, but my skills are improving and the satisfaction I get when I see the rare successful result is enormous.

I would like to go even deeper but I have reached my personal limit. If I do not feel right on the way down, I will stop, check myself out and if necessary stay in shallow water. I am not happy unless my head is totally clear, my breathing and buoyancy in perfect control, and I feel good about the dive.

A Bad Example?

Soon, someone will criticize me for “encouraging deep diving” or “setting a bad example”. But, that's nonsense. I do not go around saying that diving is fun and all the family can join in. As soon as someone mentions that they are afraid of the water or sharks or being alone, or that they have ear problems, or that they are not really interested but their spouse wants them to learn, or that they are a weak swimmer, or that they are nervous or worry about currents or whatever, I tell them straight away — take up golf.

Too many people diving do not have the right stuff. They are giving the rest of us a bad name, excuses for imbecilic regulations restricting what we can do, and messing up the dive sites.

The only people I encourage to dive are those who tell me that they have an unsatisfied inexorable desire to experience the underwater world. All the top divers I know are the same — you could not keep us out of the water if you tried. So it is with deep diving.

Divers should stick to what they are happy doing. But if you have that undeniable urge to see what lurks in deeper depths, and you are willing to study and practice to overcome the higher risks involved, then you are going to do it anyway, and it is better if you take advantage of the knowledge and experience of those who have done it successfully, instead of playing Russian roulette, learning by trial and error.

I am not going to encourage you, but I will certainly tell you what I have learned about diving safely (and you won't find any of that stuff in the standard diving text books).

As for "setting a bad example" this is one of the nuttiest arguments ever — yet we hear it all the time. It assumes that others have no minds of their own, which is possibly a valid assumption, but the speakers should realize that they have to be included in the "others". Why should people with merit and ability be prevented from doing anything that those with less drive and talent are incapable of doing? For sure, it is the cry of the life haters — the jealous and the mediocre.

I rejoice in seeing skilled or clever people do things that I will never be able to do. I do not get bitter and twisted about it. I do not have the skill to walk to the North Pole, but I am thrilled that someone has done it. I am also glad that someone has climbed Mt. Everest, and flown to the moon, and, for that matter, designed the Gardner diesel and written a Ninth Symphony even if it is not me. After all, the first persons to successfully climb Mt. Everest or sail single-handedly round the world did not get accused of setting a bad example (even though many have perished trying to emulate them since). No, they got knighted!

Some of the criticism that divers have to put up with comes from people concerned with the cost to the public of the rescue and treatment of distressed divers. Since recompression facilities are expensive, this almost sounds reasonable. But the figures for an Australian chamber shows that the great majority of the case load is not bent divers — but attempted suicides with carbon monoxide poisoning. (For 1990, 54 percent carbon monoxide poisoning, 29 percent other illnesses, and 17 percent diving problems.)

Now, during the dives I made, I admit to making dangerous dives — two shallow dives to the top of a sea mount in 40 feet of clear, calm water. The mount was carpeted with olive brown anemone-like critters, about 4

inches across. I was wearing a dive skin and did not think I could damage the anemones if I touched them, so I made myself comfortable to take some fish photos. I noticed with surprise that I was getting stung through the dive skin — but the stings were not painful and I have good tolerance to marine stings, so I ignored it.

I was to subsequently suffer a month of unrelenting pain, neuritis and muscular atrophy, and ended up with a weak left arm that will take a year to get back to normal. The critters were *Corallimorpharians*. They capture small creatures by enclosing them inside their bodies by forming a sphere with a small opening on top. If a fish swims inside, the sphere closes and the fish is doomed. When disturbed they are able to produce fine white filaments that are loaded with giant nematocysts. They are what got me. The effect is rather like big sand fly bites — except more serious symptoms can occur. The dive was dangerous because I did not understand the risks of that particular dive site. Now I know — and so do you — do not touch corallimorpharians.

The Joy of It All

My life would be a sad one without nature, even if she stings sometimes, and no other endeavour brings me closer to nature than diving does. I also have the feeling that if I do not see these deep fish in this life, I am not going to get another chance. I say "Life, be in it!" and to the fullness of your ability, not to some arbitrary limit.

So I am not going to tell you to dive to 200 feet or even 50 feet. But, how about studying and testing yourself to discover who you are and what you want to do and what you can do? Perhaps that is the meaning of life.

Bob Halstead is the owner/captain of the highly regarded Papua New Guinea dive boat, the *Telita*, and an Aussie diving instructor well known for sound opinions that counter those of the diving establishment.

Only A Few Spots Left

A few cancellations have opened up four spots on our "subscribers only" dive trips aboard Peter Hughes' *Wave Dancer* off Belize. The first trip is from January 8-15 (1 Master Stateroom is available; cost \$1,595/person). The second trip is from July 2nd - 9th (1 Twin Stateroom is available; cost \$1,495/person). Also, there are five spots left on our "subscribers only" dive trip abroad the *Okeanos Aggressor* to Cocos Island. The 10-day trip is from March 24th - April 3rd. All spots are \$2,495. Please act quickly. All spots are first come, first served. To make reservations call: 516-466-7816.

Please! Not Another Fruit Cake!

It's that time of the year again. What to get your diving friends and relatives for the holidays? If my Aunt Selma is listening, please, no more fruit cakes! If you want to make a really big splash (no pun intended), take a few minutes to look at the enclosed holiday gift offerings. You'll find some great new books and videos (mixed in with the all-time classics), along with some unique jewelry items that you can't buy in stores.

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