

Caribbean Sailing, Hawaiian Cruising:

And just about all the diving you want.

In our August issue we described a number of problems divers may face in traveling to tropical areas for diving. Yet, many divers never have to cope with closed shops, or play follow-the-leader with a guide, or fight sand fleas, or rent a car to get to the dive shop. These divers decide to do all their drinking, diving and dining on chartered dive boats. Riding a boat 24 hours a day, however, can have its disadvantages. One turkey can make the journey miserable, nightlife centers around a bottle of rum and diving yarns, and some people become bored silly. Yet, for those who don't mind the liabilities of life aboard a small vessel, charter boat trips may be the dive trip of a life time, or at least a good alternative to other possibilities.

A number of charter boats operate on extended trips, and Undercurrent correspondants recently, at their expense of course, journeyed with two different kinds of boats in two different parts of the world. Here are their reports:

The Misty Law, Trimarine Boat Co., Ltd., Homeport St. Thomas, USVI, 00801 (809/774-5630). \$690/person, 13 days, 12 nights, all meals, liquor and diving.

For years I've wanted to dive the British Virgins, on charters of the noted Bert and Jackie Kilbride in Virgin Gorda, or the well-regarded George Marler in Tortola. I've hesitated scheduling a trip just to dive, because the British Virgins, a gaggle of islands, is everywhere described as a "sailors dream". Combining sailing and diving seemed the perfect way to visit the Queen's Virgins. So after researching the possibilities, a 56 foot Trimaran, the Misty Law, seemed the best bet. I'm pleased to report that my wager was returned ten fold.

Upon boarding the Misty Law, I was immediately relieved that I had chartered the boat with my wife and six other friends, because the essential togetherness of eight passengers and four crew for two weeks meant compatibility would be the most important aspect of the cruise. Nearly always I find traveling divers friendly and pleasant, but the trip was made much easier by bringing my own friends whose diving skills I knew. The proximity of travelers does not extend to the bed. Two cabins amidship and one in each of the sponsons sleep two each (one has a double bed) and each has a private head and shower with hot water.

INSIDE UNDERCURRENT

- Those Concentrated Certification Courses:
For some, the best path to a C-card. . . . p. 6
- Carl Roesler's Underwater Wilderness:
A sensitive personal statement. . . . p. 8
- Do Divers Want Automatic Buoyancy Control?
Let's see if Dacor's Nautilus stays afloat. . . p. 10
- Free Flow p. 11

The Misty Law was built in 1970 to the specifications of the owners and pilots, Captain Duncan Muirhead and his wife Annie. They carry two additional crew members, Guni and Peter, both fine folk who are now probably back in school. When not under sail, the Misty Law is powered by a Mercedes Benz diesel. On the stern sit two electric compressors. I always bring my own dive gear, so I was surprised to see masks, fins, snorkels, and regulators, tanks, bcs and weights, for a full complement of eight.

When I dive at resorts or with $\frac{1}{2}$ day charters, I go where the guide takes me and there's often repetition during a week. Not on the Misty Law. Duncan knows the British Virgins well, so not only were we able to visit the popular dive sites where land-based divers travel, but also we visited spots that remain unvisited for weeks. If we saw a reef that looked promising, we could stop to check it out. Although we never found an uncharted wreck, a trunk of bullion, or even a cannonball, just the thought that we were exploring new territory made every dive an adventure.

Our dives averaged 60 feet, with 100 feet the maximum. Duncan, an acceptably conservative divemaster, demands that divers stay within the tables, so 250 foot bounce dives were out. Visibility ranged from 30 feet during a plankton bloom, through a 75 foot average, to a 150 foot high. Although night dives were available whenever we wished, we did not take a single tank into the dark. Why?

Paté de fois gras. Boiled fresh lobster. Egg salad. Asparagus, with hollandaise. Tossed salad. Coconut bread. Sour sop ice cream. Mums champagne. Pina colada's with the sunset, wine with dinner, cordials after coffee. Now that's just one night's fare, and all of it included in the price of the journey. Other nights' main courses were lobster we brought from the reefs, tuna or mackerel we caught as we trolled between moorings, or lamb, beef, or chicken with dumplings, all expertly prepared by Annie. How could I get into the water after all that, unless, as did the French kings, I induced my own regurgitation.

When I did get into the water, after a breakfast of eggs, pancakes and bangers, I lazed through coral fields as unspoiled as I've seen, fields replete with sponges, gorgonia and plenty of tropicals. We saw numerous lobster, plenty of angels, groupers, permit and jacks, and a few large jewfish. We swam with eagle rays and tweaked a nurse shark on the tail as she lay sleeping beneath a coral ledge.

At one site we entered a jungle of black coral trees at 85 feet. Although there were acres of unspoiled trees, we took only those which had been dead long enough to become encrusted with sponge. At 50 feet we saw an army of lobster marching out of their tunnel, one officer surely weighing ten pounds. The black coral forest is known to few guides; should they catch anyone taking live trees they're sure to keel-haul him, then hang him by his thumbs to dry. At Ginger Island we made a 500 yard drift dive, escorted by a school of 3-4 foot barracuda. The Misty Law's two zodiacs picked us up after the drift. At Carrot Rock, in 20-50 feet of water, we found as great a variety of reef fish as I've seen in the Caribbean; hundreds of squirrels and glass eyes hiding in small pockets in the reef, schools of angels and yellowtails, startling blue chromis, sergeant majors and puffers. We occasionally dived a site not up to par, but if disappointed we just moved on.

Although Duncan regularly takes the Misty Law to the Wreck of the Rhone, we planned to dive the Rhone with George Marler once the Misty Law cruise ended. So, we selected other sites, including the Rocus, a Greek cargo vessel with a

load of cattle bones for a Vera Cruz fertilizer factory, which sank in 45 feet of water. A decent array of tropicals now make the Rocus their home, while a number of ocean swimmers--amberjack, ocean triggers and permit--speed by. A large jewfish lives in the bow. With bones scattered everywhere, its an eerie dive.

The eight of us aboard, not all divers, concluded our cruise full of good feelings for the diving, for the Misty Law, for Duncan, Annie and the crew. With stops at deserted beaches, or few-hour trips into the Virgin's small ports, and plenty of books to read, we all stayed mellow. We divers got in the two tanks everyday, and could have requested a third, but opted for the beach and ports to keep peace. Chartering the boat for eight divers I believe is the best route, but if you sign up individually and join unknowns who may be nondivers, and have written ahead and specified you're a diver Duncan says you'll get your tanks in every day. At roughly \$60/day/person, for accomodations, food, liquor and diving, I can't imagine a better value.

Comments from C.C., the Undercurrent Travel Editor: The questionnaires we receive from our readers generally support the conclusions of our reviewer. A few travelers on the Misty Law have not rated the food as "gourmet", as did our reviewer, but they do enjoy the meals. These differences in food could be seasonal, and they could be the differences between chartering and joining up with others who have arranged their trip independently. Prior to our reviewer's trip, his group communicated their culinary preferences with Annie and might have had a more exciting menu than the nonchartered runs. Another reader reported that on his August, 1976 cruise, the freezer went on the fritz, then the generator followed. Such small crafts--this applies to nearly all dive boats--are without backup equipment. When they're traveling between the remote non-U.S. ports of the Caribbean, parts for repairs may not be available for days, weeks, or months, a problem not unlike that facing remote resorts. Because the Misty Law operates in U.S. waters, she has much lower downtime in repairs than vessels operating, say, in only West Indies ports. Remember the Undercurrent Axiom: The better the diving, the more remote the location--and the more you can expect to go wrong. Regardless, our readers enjoy the Misty Law, and seem particularly pleased with the diving. Note that in the winter she's available for 7 day, 7 night charters, with rates for eight higher in winter.

* * *

Last Autumn, the Spirit of Adventure was launched from her San Pedro, California, drydock with a hoopla ordinarily reserved for a member of the Queen's Armada. Normally, we could give any fledgling operation the opportunity to get their ship together, but with the advertising preceding the Spirit, (including an advertising campaign based on finding a name to replace the temporary moniker, Superboat), a number of subscribers asked for our reviews so we decided to make a journey down the coast of Mexico with the Spirit.

Needless to say, any shakedown cruise has its problems and the Spirit had hers, but the biggest problem was that they couldn't deliver what they advertised--including a round-the-clock entertainment marathon. We were a bit tough on her--tough enough to earn a four page letter from the President of Pacific Sport Diving, Don McGrew--but the advertising changed and many of the problems we noted have been corrected.

Since January she has been operating in Hawaiian waters. We've received bursts of favorable comments about the trips, but we still get an occasional complaint letter. From what we can tell, the major criticism is related to the scheduling, and the concomitant problems, which are explained in the following review:

The Spirit of Adventure, Reservations, c/o Pacific Sport Diving, 4141 Anaheim St., Long Beach, Ca., 90804 (213/433-7485). Depending on the length of your cruise, pickup and departures are available at several Hawaiian ports.

How can you believe a dive boat which is advertised to offer "the most spectacular sport diving cruise available anywhere." I'm often repelled by "the most" and "the best" but, I'm willing to spend a weeks wages, not for "the most spectacular" diving, but for damn good diving. I was not disappointed. Undercurrent wrote last September, "there are excellent diving possibilities in Hawaii and we have no doubt the Superboat will find the reefs." She has!

Oh, there still remain a few problems with the boat, but they're more a nuisance than a problem. First, however, let me tell you what I saw.

The best diving in Hawaii is off the islands of Lanai, Molokai, Hawaii, and Kahoolawe. The sites on Hawaii, the Big Island, are accessible by boats from Kailua-Kona; the spots on Lanai are reached by boats from a small resort on Lanai or from Lahaina, Maui; and Molokai can be visited on vessels from Central Pacific Divers out of Lahaina. But to visit these sites in a week or two requires interisland airplane hopping, airport limousines or rental cars, checking in and out of hotels, and daily trips to the dive shops. Unless, of course, you ride the Spirit of Adventure.

Off Maui we dove the U.S.S. Bluehead, a submarine moored for Navy training in 135 feet of water, with the deck at 110' and the conning tower at 85'. Visibility here is the lowest in Hawaiian waters, often 30'-50', while at other sites it ranges from 70' to well past 100'.

Lanai Cathedrals are exciting, a place to cruise with the assistance of the surge, through arches and caves, always surrounded by surgeons, with bright knives on their tails, or butterflies with bright stripes on their bodies.

Molokai is a rugged island, sometimes difficult to visit, but along its stark coast reside the big fish, whose name will drive fear into your heart, but there are again that array of resplendent Hawaiian tropicals among the rocks and reefs to keep one in wonderment.

Molokini is normally gentle, but on our trip the surf was such that we couldn't reach the center of this topless volcano. A third of Molokini juts 100 feet above the surface, while the rest of the rim is awash, part only a fathom from the top. There are tropicals galore, with schools of butterflies resting away from the slopes, in the distance. Its a marvelous dive and, if fortunate, a family of whitetips, visited nearly daily by divers, will hang around for photos. The Spirit's crew says in the six months they've been in Hawaiian waters they'd only seen two sharks. Depending on your point of view, they're either going to the right places or the wrong ones.

Those of us who have dived the right spots in Hawaii know that fish life is terrific, even though the hard corals are tedious and soft corals, gorgonia and three dimensional sponges don't grow here. We also know that most spots are accessible by boats from the shops, so for the Spirit to be successful, the boat, crew and amenities must make it worthwhile.

The crew has improved immeasurably in the first year and, thankfully, there are no more efforts to hold Las Vegas floor shows in the evening. Most divers, after stuffing themselves, prefer conversation, cards and early bed, although a couple of times a week the boat is in port and some take a trip to the local saloons.

I found the cooking just as advertised, gourmet, but for my taste it was a bit too rich; Chicken Kiev, Chinese pepper steak, crepes and eggs benedict were not as appreciated by as many of the passengers as one might expect. There seemed to be more meat and potatoes divers than gourmets. Service was smooth, efficient and fast, and there was always seconds or thirds. Yet, four of the 12 meals were served as we arrived at a dive spot. As the excellent Cook, Mary Lou Bright, was putting pork chops on my plate, the divemaster announced "this is a great spot for a night dive." The crew recognized the need to coordinate dinners and diving, and by now that coordination should exist.

Occasionally the crew went out its way--but sometimes into the way of divers already on board--to pick up new passengers for, say, a 2-day weekend trip. A quick stop at port to let someone off just at the time we expected to be headed down to ten fathoms also was disappointing. There's evidence, however, that these summer difficulties will be overcome. The eight crew members were eager, friendly, informed, personable and involved. They made the trip a joy, and promise changes in the future.

Fourteen staterooms hold 39 passengers in various combinations of double and single beds, not bunks. There are four large heads, three with showers, and two top side for divers. Each diver gets a locker for his gear (it doubles as a seat) and behind, a built-in rack holds hanging wet suits. Eighty U.S. Divers aluminum tanks, 40 back packs, and weight belts are for use of the guests. Two compressors can fill 14 tanks at a time. Since repairs are readily available in Hawaiian ports, mechanical problems should have quick solution.

Rates now run from \$299 for a three day trip, to \$595 for a week and \$855 for ten days. That works out to roughly \$85/day for all but the three day trip, not a particularly steep tariff for room, board and plenty of diving. Everyone aboard seemed to agree.

During our first day's diving, fellow passengers showed extreme enthusiasm for the diving, demanding to boast of their own special sightings. After a day or two, their mood passed into awe and an intense appreciation of the startling drama of Hawaii's shoreline and water. I noted the change to the Captain, who said, "It's the same almost every trip--the diving's so great, the scenery so great. . ." His voice trailed off, his eyes sweeping in his own impression of the land and sea. Sure that reads as a corny publicity puff, but that's what he said. And that's the way it was.

* * *

So, is a cruise for you? It's probably not if you're lovers and want a lot of privacy. And it's not if you get claustrophobia, need a New York Times each day, or want to bring the kids along. And, it's not if you have to make business calls, need to get away from your spouse during the day, or like nightclubbing. But, if you want to dive, lay back, eat, drink, and sun yourself, then it might be just the ticket. If it is, consider these tips for travelers:

- because of space limitations on small boats, try to get your personal goods into one suitcase, but
- remember you must bring everything you need, because there are no super-markets at sea
- if your departure is from a remote area, don't cut air connections tight; if your air arrival is late, and at Caribbean ports the planes are always late, what will you do when the boat leaves without you?
- if you have a tendency toward sea sickness, avoid cruises altogether
- Remember, you're not a captive. If for whatever reason the cruise becomes too unpleasant, you can always get off at the next port.

Those Concentrated Certification Courses:

For some, the best path to a C-card.

Ten thousand divers subscribe to *Undercurrent*. Checking over our subscription records, we've determined that 90 per cent of the subscribers have male surnames, a male-to-female ratio which is consistent with other data on divers that we've seen.

In our travels we've met a number of men who wish their wives or girl friends would dive, but so far have not been able to coax them to spend their weekends in the cold Pacific or Atlantic or floating in a quarry just to dive once a year on vacation. Of course, we've occasionally encountered a woman with the same complaint about her lover or spouse.

Many wonder whether the one-week concentrated courses offered in vacation areas are a valid means for certification. We wondered, too. So, during the last year, colleagues took three one-week courses (with the VI Divers in St. Croix, with Virgin Island Dive Schools in St. Thomas, and with Bob Lovelette at Kaanapali Beach Hotel, Maui). In two cases we observed the class, and in each case we immediately dived with the newly certified divers to ascertain their skill. The newly certified needed many more dives to become fully competent and controlled divers who didn't kick up the bottom or burn up their air, but we believed these divers had adequate training to be crowned as beginning divers with C-cards and were easily the equal of most other newly certified divers we've seen floundering around dive boats on their first post certification dive.

Regional Certification

Can a diver certified in the warm waters of the Victoria Inn and Scuba Club in Freeport return to dive the icy waters of Victoria, British Columbia? The answer is *no!* A diver certified in warm, clear waters will have a difficult time in a full wet suit, wading through 50° breakers. That diver needs further instruction, at the minimum a careful introduction to new waters by a skilled and cautious buddy. If one expects to do a great deal of diving in home waters, getting certified at home is the best way to proceed.

On the other hand, when one anticipates diving mainly on vacations, a tropical certification is suitable, particularly when one realizes that getting certified on the mainland does not mean that one is immediately ready to tackle even the gentle waters of Grand Cayman. Consider these words of Bruce Parker, who has been diving for nearly 30 years and now runs the dive operation at Rum Point on Grand Cayman:

"I've had more potential problems from *unqualified certified* divers than I've ever had with the people I've given a short resort course to. Some of the instructors who have worked for 8-11 weeks with some of the divers who have ended up at Rum Point Club should *blush* for signing these divers' cards. A quarry check-out dive with 6" visibility leaves a lot to be desired when the new diver drops off my boat and sees the bottom 25'

down. Most go into a modified panic. Also some of the equipment purchased by the new divers is not really understood by them. We've had instances of new divers with ¼" full wet suits *rolling down* our Cayman Wall in a panic because their suit compressed and they forgot to push the button on their inflator. Other newly certified divers develop what we call sinus fears. When they see the bottom 40' down, they can't clear their ears, not because of physiological reasons, but because of mild panic." And, Charles Rolison, Vice President of Dan's Dive Shop in Honolulu, reminds us that a person used to diving in kelp "can be easily swept away by a warm tropical current and never be seen again."

Does One Learn Less in Concentrated Courses?

National training agencies require that students spend a certain number of hours in training, so whether one learns in one week or eight weeks, the number of hours of instruction will be similar. Some people learn best in concentrated courses, while others learn better if the course is spread out. Since the time between lessons in concentrated courses is reduced, less repetition is required. Good training, however, has less to do with the number of hours of instruction than it has to do with having divers develop and demonstrate certain skills in the water. Protracted mainland courses have no monopoly on skill training. Glen Gallere of Grand Cayman's Flag Royal Palms says: "One could get the impression that most instructors in the states were totally incompetent if you assume that scuba certification, including open water ratings, are indications of achieved competency in the water. Without a doubt, 40 per cent or more of the newly certified diving tourists are real turkeys."

The most effective means for developing diving

Without a doubt, 40 per cent or more of the newly certified diving tourists are real turkeys.

skills and building confidence is through open water dives. One-week resort courses tend to have a great advantage over most mainland sessions because all the learning takes place in the ocean. At St. Croix, training included six beach dives, the majority of which required a 200-yard swim to the reef. In Hawaii, Central Pacific Divers advertises seven beach dives and three boat dives in their five-day, 35-hour course. Richard Ollis, instructor at the Coral Reef Center in Guam, says that learning in the ocean gives the student "a

safe and immediate introduction to the ocean; the student does not have to undergo the sometimes disorienting transition from the fresh water pool to the sea."

When the water is warm and handy, there's much less emphasis on the textbook. No one brings a blackboard to the beach. Some shops (like the Virgin Islands Dive School) do use canned instruction such as the Scubapro system, but there's still plenty of time in open water.

On the Mainland there's a fair share of excessive chalk talks. Those instructors are not keeping pace with changes in the industry. Dennis Graver, PADI National Training Director, argues in the latest issue of *Undersea Journal* that students don't need to know how to figure pressure increase per foot, or how to compute partial pressure. Remembering the names of gas laws and understanding the computation is not necessary. He doesn't believe that students *need* to know how a regulator works, only how to use it. Divers don't need to know the medical names for different embolisms; they need only to recognize the symptoms of lung expansion injuries and how to treat them. Graver's points are generally heeded more closely in concentrated courses emphasizing open water training than in courses relying on pool practice.

On the other hand, instructors of concentrated courses in resort areas can be a little less than rigorous if they develop the laid-back attitudes rampant in the tropics. There seems to be a tendency to call off dives if the weather is bad; a passing tropical rainstorm can become an excuse to cancel the day's dive. And many divers have departures scheduled immediately after the course's expected conclusion, so there's no opportunity to make up missed days. Furthermore, open water training may present too many diversions. While permitting students to enjoy their training dives to develop confidence, instructors may pay insufficient attention to the training itself. In pool training, there's nothing else to do but work on the basics, so by the time the diver hits the open water, he should at least have learned the fundamentals.

For example, consider the experience of one of our female associates during training in the Caribbean.

Our travel editor reports that his traveling companion, upon completion of her concentrated course, proved to be a very calm and confident diver, having made six ocean dives in the course. However, during the training, her instructor had not shut off her air underwater, so she had never had the experience of pulling on a regulator emitting less and less air. Second, although she had been instructed to monitor her submersible gauge, she became moderately dependent on her instructor's careful checking. Third, she'd been instructed that j-valves are dangerous to depend upon, so during the training the reserve valve was down; with no reserve, she learned to rely exclusively on the gauge.

After that, she traveled to another island and on her first dive, became enthralled with the virgin reef. She had last checked her gauge at 600 lbs. What seemed

like only a minute later, she noticed that it was getting more difficult to drag on the regulator, but she did not make the connection between a diminished air supply and increased difficulty in pulling in air since she had not experienced the phenomenon in training.

Finally, when breathing became impossible, she checked her gauge. It registered zero. She calmly swam 10 feet to the guide, tapped him on the shoulder, and signalled she was out of air. The guide simultaneously handed her his regulator and reached for her j-valve, which had not been turned on, and she was back in business with 300 lbs. of air. She had not pulled the j-valve because she had been instructed to dive with it off, and she did not recall that the guide had pushed up the rod to give her a reserve.

Perhaps the ultimate test of the quality of training is whether a newly certified diver can take care of herself in adverse situations without panic. In this instance the calm reaction was a clear indication of the self-confidence our associate developed from the gentle instruction and several ocean dives. She knew she could take care of herself if she ran out of air in 50 feet of water and she did just that. Certainly she should have carefully monitored her own gauge, she should have been experienced in the mechanics of being out of air and should have been experienced with the j-valve, even though there are valid reasons not to dive with one. The great advantage of certification on the beach can be lost without full attention to the basics.

Finally, if one intends to learn diving in a concentrated vacation course, several days should be planned for additional diving after the course has been completed. Returning home immediately after certification and not diving again for another year will send the newly certified diver right back to square one. Had our lady diver experienced the same problem on her first dive many months after certification, it's doubtful that she would have reacted so calmly.

Cost

Concentrated certification courses at resorts range from \$125 to \$250, all equipment included, while mainland courses run from \$50 to \$100, usually with equipment rental additional. Vacation courses tend to have fewer students. The maximum we've seen is six; three to four is normal, and occasionally the lessons are individual and private.

Most mainland courses are loss leaders. That is, shops make no money from them, hoping to make their money by selling equipment later on. Since few resorts peddle equipment, they have to make a profit from their classes. Yet in some respects, the more expensive tropical course might ultimately cost less, since the newly certified diver won't be persuaded to buy \$1000 worth of gear he may never use again. However, our two friends certified by the competent Virgin Islands Diving Schools did succumb to their enthusiastic sales pressure and walked out with \$1500 worth of gear between them—gear which has gotten wet a couple of times in 15 months. In addition, the two bought back flotation devices, which they were

trained in, but back flotation devices are not necessarily the right BC's for people intending only to dive on tropical vacations.

We conclude, then, that one-week certification courses at resorts are indeed a valid means for learning diving, particularly for people who expect to do most of their diving in similar waters. We've provided a list of shops we know who run these courses. Before you select one, write ahead with alternative dates you request for certification. Don't show up without making prior arrangements. Some shops run courses for one person; others have fixed schedules for group lessons. Get the current price and verify the fact that you'll be getting a recognized certification: NAUI, PADI, NASDS, SSI, YMCA, NAUTIC or BSAC (British Sub Aqua Club). Bring fins, mask and snorkel, and a sweatshirt and pants for minimal protection from the coral. It would also pay to study a decent dive manual ahead of time, because the written exams can be difficult and spending off hours in the tropics reading dive books is indeed a bummer. Plan to stick around for a couple of days after the course is over or head elsewhere for a little post-certification diving. That's important to build confidence in a new diver, and that's what safe diving is all about.

We wrote to 60 shops in vacation areas asking if they ran concentrated certification courses. Those listed below responded. The quality of a course depends largely upon the quality of the instructor. The outfits on this list are reputable, but we cannot evaluate

the instructors used in the course, in most cases. An asterisk marks the courses we visited and do recommend, although the instructor we had at Virgin Islands Diving Schools has since departed.

Bob Lovellette, Kaanapali Beach Hotel, Lahaina, Maui 96761; 808/661-0011, ext. 14 (\$150, NAUI, PADI)*

Central Pacific Divers, 780 Front St., Lahaina, Maui 96761; 808/661-4661 (\$142.50, all instructors graduates of Ed Brawley's Professional Diving Instructors College)

Coral Reef Marine Center, P.O. Box 2792, Agana, Guam (\$150, private, NAUI)

Dan's Dive Shop, 1382 Makaloa St., Honolulu, Hawaii 96814; 808/946-7333 (\$250, certification listed as "international")

Divin' Hawaii, 5085 Likini St., Honolulu, Hawaii 96818; 808/833-2298 (\$150, NAUI, PADI)

Pressure Ltd., Box 3612, Christiansted, St. Croix, USVI; 809/772-2678 (NASDS)

Sea Sage, Ltd., 4544 Kukui St., Kapaa, Kauai, Hawaii 96746; 808/742-1262 (\$200-\$250, NAUI)

Victoria Inn and Scuba Club, P.O. Box F-1261, Freeport, Grand Bahama Island, Bahamas; 809/373-3040 (\$149, NAUI, PADI, YMCA)

VI Divers Ltd., Pan Am Pavilion, Christiansted, St. Croix, USVI 00820; 809/773-6045 (\$225, NAUI, PADI)*

Virgin Islands Diving Schools, Box 1704, St. Thomas USVI 00818; 809/774-8687

Carl Roessler's Underwater Wilderness:

A sensitive personal statement.

"When scuba-diving began in earnest in the Caribbean during the early 1960s, there was one 'ultimate reef,' the legendary Palancar Reef off the southwest coast of Cozumel Island. . . . Along the edge of this drop off is an epic bastion of coral, some five kilometers long, punctuated by huge canyons, overhangs and [other sea forms]. . . .

"The first time I swam out over this abyss in 1967, it was as breathtaking as flying out over the Grand Canyon. . . . Since that day, thousands of divers have experienced the thrill of this famous reef. In a very real sense, Palancar Reef today is a vast sepulcher, because, during the 1960s, ardent and unthinking spearfishermen slaughtered the larger reef fish for sport. They were followed by a wave of collectors who tore out many thousands of black coral 'trees,' used to make coral jewelry. Today, a diver must descend more than 70 meters to find even a small colony of this precious coral. . . .

"Although very little of each tree is suitable for jewelry, collectors destroyed entire colonies to get a few select branches. Later collectors ripped out the trees just to prove they were deep divers, so that many colonies perished for nothing. . . .

"There has been another, later wave of carnage, one

that is inflicted unintentionally by thousands of innocent divers, including many conservationists. Inexperienced divers inadvertently maul the coral with their hands, elbows or knees; others kick sand (which cannot be safely ingested by the coral) over it with their swimfins; still others rip off 'just a little piece' to adorn the coffee table back home. Thus, a reef that becomes popular will inevitably suffer damage even at the hands of its admirers.

"Palancar Reef is still awesome, still heroic. There is still hardly a thrill in the underwater world to compare with moving from cavern to cavern in the darkness, realizing that you are moving entirely within the great reef's structure. . . . While Palancar has retained its structural magnificence, its grandeur today is like that of the Parthenon, a great ruined temple, a reminder of splendors forever lost. . . . For the diver who experienced this reef a mere decade ago, Palancar is a warning. If this could happen to Palancar, it could happen on any island, in any sea. Palancar is part of the underwater wilderness which was not isolated enough, whose peril was not perceived soon enough, whose nation did not early enough see fit to protect it."

(From Underwater Wilderness)

Carl Roessler has written a personal and sensitive account of the *Underwater Wilderness: Life Around the Great Reefs*, his new book from Chanticleer Press. On first inspection, the reader will dwell on the stunning array of Roessler's photographs. But, this is not just a picture book. Nor is it a volume fabricated out of warmed-over adjectives from tired writers, nor a book devoted to glorifying the terrifying creatures which haunt the deep. It's an incredible story of one man's visit to the reefs of the world, a man whose psychic connection with the ocean and its critters is relayed in a framework of science, but written with poignancy, humor, sadness, precision and clear observation. It's a love story, plain and simple, dedicated to the subtle balance among all the animals of the reef, their lives and deaths—the reef any diver armed with a camera and not a spear understands.

Yet for all the style of the text, to most perusers *Underwater Wilderness* will remain a picture book, stuffed with 306 of Roessler's full-color photographs in stunning clarity and color. Had I been editor, I might have replaced a dozen or so shots with others on the same subject (Roessler has taken some 100,000 shots beneath the seas), but no other single volume of photos has been published that can match or even stand alongside Roessler's book.

We photographers can learn a lesson from his editing. No more than a handful of shots employ divers in silhouette or divers ogling at fish, or predators in fearless poses. He needs no gimmicks to overcome artistic flaws. Instead, he relies on perfect lighting, fine printing and reproduction, and careful cropping, allowing the subject, in its own complexity and splendor, to tantalize the reader.

The photos are nicely coupled to the text. In the early pages, Roessler describes the formation of coral reefs and the forces that shape the underwater wilderness. We learn why certain species have never spread beyond a few reefs. The reasons are complex, but consider the case of the butterflyfish: "Their lavishly hued, disc shaped bodies ablaze with colors and stripes, they are usually the first fish we perceive in any coral waterscape. As one moves from one major reef area of the world to another, one finds old friends and local strangers among these butterflyfishes. The old friends are the species whose free floating larval stage is able to survive longer journeys to new homes. The local strangers, or endemic species, have evolved in isolation without continual restocking from the parent species."

Following are two splendid pages of butterfly photos, and with each, as with every photo in the book, is listed the location of the shot. Many are from the Netherlands Antilles, mainly Bonaire, where Roessler lived for three years. There he dived nearly every day with scientists, studying the prolific marine life. He traded them his pictures for knowledge, and through his book he shares both with us.

Half the book is a systematic tour of the world's reefs, laced with Roessler's own diving experiences. He provides an excellent analysis of the variations of each.



Author/Photographer Carl Roessler

A careful reading will serve the traveling diver well. He tells us that St. Maarten, Saba and St. Eustasius "are affected by the cold waters of the nearby Atlantic and have a correspondingly diminished fauna. Coral growth here is less exuberant than in the more western areas, and the water is less clear." His adventures in Australia read like a novel. When he describes the Galapagos Islands and the extraordinary range of life unafraid of human presence, he generates kilowatts of facts and experiences certain to overload our circuits. When he warns us, after years of his personal observations, that the reefs in the Red Sea, particularly around Eilat, are being destroyed by chemical pollution, we know we must soon take our dream trip if we're to see the splendor before mankind destroys it.

For all his expertise, Roessler permits us to grow close to him when he admits that he once tried for a week to film a frogfish, but that on every dive his plastic camera housing leaked. Once, in the Galapagos, he set down his camera only to find a curious sea lion trying to carry it off in his mouth.

On Bonaire, a yellow and white goat fish turned a deep red trying to attract a cleaner fish. Eight times Roessler tried to photograph it and eight times his jerky movement or his explosive exhalation after waiting breathlessly for the shot chased the fish from his lens.

I might feel somewhat embarrassed about my elation over Roessler's book if it were not that *Underwater Wilderness* is indeed a literary event for the diving world. There are plenty of picture books around, but none compiled as carefully as this. In a telephone interview, Roessler explained that he had worked two to three hours a day for a full year. He was responsible to five editors, none of them divers, but all of whom were well qualified to edit his effort. He would be asked to expand, asked to clarify, asked to eliminate. At first, his ego was bruised, but as the process developed, so did his respect for the editors' advice. Now, he's delighted with the final product. He was surprised, however, that some of his favorite photos did not make the book (my God, what could they be?), and says he surely has enough for another volume.

If the book has any liabilities, it is its neglect of the underwater wilderness beneath the colder seas. Roess-

Send me *Underwater Wilderness*, regularly \$35, but because I am enclosing \$15 for renewal gift, the price to me is \$31.25.

Name _____

Address _____

City _____ State _____ Zip code _____

If gift, the card should read from named above.

Undercurrent, Box 1658, Sausalito, CA 94965

ler's See and Sea Travel business takes him to tropical areas and the buying public certainly prefers lion fish to ling cod, coral to kelp. There remains, however, an uncharted wilderness in waters too cold and prohibitive for most of us, a wilderness waiting to be captured by an eye as sensitive as Carl Roessler's. (C.C.)

NOTE: The *Underwater Wilderness*, a coffee table volume, sells for \$35. Since it may be difficult to find the book in a store near you, you may order it directly from *Undercurrent*, postpaid, for \$35 (\$37.10 to Californians residents). However, if you include a \$15 check for renewal or for a gift, we'll send you the book for \$31.50 (\$33.39 for California residents).

Do Divers Want Automatic Buoyancy Control?

Let's see if Dacor's Nautilus stays afloat.

When you come right down to it, there's not a hell of a lot of difference between the BC's or back flotation devices on the market. The subtle differences are often more in display than in design. The quality of workmanship can differ, so some last longer than others, but the durability of a product has little effect on its initial sales.

So, if a company intends to enter the BC or backpack market, its product must either be substantially different in design (the At-pac, the Scubapro, Stabilizing Jacket), or the product must take a ride on the company's well known name and its retailers' ability to sell it.

To enter the back flotation market, Dacor decided to be different, daringly different, in design and function. Enter the Nautilus.

At first glance, the Nautilus may appear to be a hard shell tote bag, similar to that produced by Scubapro, but instead it's a hard shell buoyancy compensator, the first *automatic* compensator on the market. Instead of an inflatable fabric or polyurethane bag, the Nautilus employs an attractive air tight molded case which the diver wears on his back. When the diver wishes to descend, he pushes down a lever at the bottom of the unit, then either pushes up on the push rod or pushes down on the oral inflator mouthpiece. As the unit then fills with water, air is expelled, and the diver descends. The water does not add to the diver's weight; it only expels air and reduces buoyancy.

Now comes the Nautilus cause célèbre, the automatic regulation of buoyancy. According to the instructions, the diver, once on the bottom, activates the regulator at the end of his oral inflation hose, popping short blasts of air from his tank into the hard shell, expelling water with the pressure. When enough air is added the diver becomes neutrally buoyant. He rises when he inhales and descends when he exhales. When balanced, he closes off the water inlet lever and from then on, maintaining neutral buoyancy is up to the Nautilus. For every additional foot the diver descends, the increased pressure operates the regulator, which adds only enough air to the Nautilus to keep the diver

neutral.

The Nautilus has been advertised since late 1975, but it was not generally available until this year. We've been anxious to test the product, but hesitated until we were certain it would reach the marketplace. Once certain, we turned the open water testing over to an Undercurrent Associate whom we'll call Captain Nemo, since he also handles a few resort reviews and we must preserve his anonymity. Nemo, who ought to be able to master the Nautilus, filed this report:

Captain Nemo's Report

I am indeed excited by the Dacor/Nautilus concept of automatic buoyancy control. After taking the nine-hour lecture and pool lesson Dacor insists upon and making several ocean dives with the device, I am still tantalized by the concept. But I learned that I don't need the Nautilus and I won't buy the Nautilus, although some divers will surely find it to be worth every nickel they spend.

The Nautilus is a complex device which deserves technical explanation, but not in these pages. I refer you to Jim Hall's fine article in the June, 1977, issue of *Skin Diver*, if you need details. It's a complex device in that it has far more moving parts and paraphernalia than any other backpack (but it does much more) and even after my pool training, I needed several ocean dives to work out the bugs.

Harry Caldwell, who sells them in his dive shop in Metairie, Louisiana, says he can teach just about anyone how to use the Nautilus in half an hour, but for me, the process was longer and a couple of minor repairs and adjustments were required.

I found that the automatic buoyancy compensator worked well, surprisingly well, but not in shallower depths. In fact, most users seem to find that because of wet suit compression, the automatic functions do not work well until a diver hits 50 to 60 feet. If he is in water shallower than that, manual adjustments are continually required, as with any BC.

I had to make what I considered excessive adjustments to maintain negative buoyancy. I later learned

in a telephone conversation with the proprietor of the Lake Orion Divers Den in Michigan that the problem could be a function of my own regulator. He said that the Nautilus comes from the factory tuned to the Dacor 400 regulator. If one is using another regulator, the flow must be adjusted in accordance with the different specifications.

With the device working properly, I enjoyed my automatic neutrality, but I wondered if all this was necessary. I've never had much difficulty in manually maintaining my neutrality at those depths. And, when I turned upside down to peer under a ledge, the buoyancy regulator dropped lower than my butt and activated, causing me to rise. I had to turn upright and vent off.

The Nautilus weighs 12 pounds and holds 16 lbs. of weight, an amount I found sufficient when taking my pool lessons in a wet suit top. But, to compensate for the fine beer I drink, I normally require 28 lbs. for a full quarter-inch, high-waist wet suit. So, I needed an additional 12-lb. weight belt to dive with the Nautilus. Furthermore, since it doesn't fit into a dive bag, it's one more 28-lb. piece of luggage to tote to foreign resorts.

But I wouldn't tote it along for chartered boat dives, because not only is it cumbersome, but also it has no quick release handle for the tank. To replace an empty tank with a full tank, you unscrew the four-screw band, certainly an annoyance. Moreover, to fill your tank in shops, you probably have to remove it from the Nautilus since the water-filled tanks at the compressors are usually too small to hold both the scuba tank and the Nautilus.

One must have a great desire for automatic neutral buoyancy to live with the extraneous features of the Nautilus. For my diving, which I prefer to keep simple, the Nautilus is too mechanical. I was constantly kept aware of the new technology throughout the dive. As I rose and fell, the Nautilus talked to me, wheezed and whistled, as the air and water gurgled in and out to keep me neutral. Now, had I been able to talk back, saying "up," "down," "forward," or "backward," Dacor would have made that sale. For the present,

however, I'll stay with my BC, knowing that if I owned a Nautilus, I'd probably still be using my BC better than half the time. —CN

Undercurrent Comments:

The Nautilus has been touted by many as the vanguard of a new wave, a look into diving systems of the future. Were it so, we would expect other companies to be rushing to the marketplace with such gear, but we could find no other company with a similar device on the drawing board. Surely companies keep secrets, but in the diving industry, secrets often become public knowledge after a good dive and a couple of beers between friends. In fact, some industry people in conversations with *Undercurrent* speculated that Dacor may be stuck with a very expensive product with such low sales that the company will be lucky to recoup its development costs. However, Dacor Sales Manager Jim Foley told *Undercurrent* that the company is very pleased with the Nautilus and that it is selling well.

Although we talked with many shop owners who claim they don't want to handle the Nautilus (many don't want to put the time into training those who buy it and that training is a necessary and required part of the sale), Dacor gave us the names of four shops selling the Nautilus. These distributors seemed very high on the product, but did acknowledge it's a slow mover.

Indeed, the Nautilus is a specialized device, but for what specialties we are unsure. Most divers we've talked with who own the Nautilus are generally pleased once they get the hang of it, but they admit that there are plenty of occasions when they prefer a plain old BC or back flotation device.

So, if you have the wherewithal to afford two flotation devices and wish to experiment with the forerunner of a whole new generation of automatic buoyancy compensators, then the Nautilus may well be worth its \$199 price tag. But recognize that conventional usage of the term "generation" spans a lot of years. It may be your unborn sons and daughters who get the next shot at automatic buoyancy compensators.



How about diving out of Miami, San Juan, St. Croix, St. Maarten, Antigua and Tobago, and then taking a side jaunt to Mexico City—all for a flat \$322.92. That's the deal Eastern Airlines now offers if you make your

reservations 14 days ahead of time, travel with two or more people, and take from seven to 21 days for the entire trip. You've got to fly Eastern all the way (you can make side trips as long as you pick up Eastern where you left off), must make at least two stops other than your destination, and can only stop once in each city unless you're just changing planes. Because of heavy holiday travel, Eastern limits departure dates, but you can stop *anywhere* except Montreal and Ottawa along Eastern's busy route. Go to it.

We anticipated reviewing one of Teach/Tour's well advertised resorts along the Eastern itinerary, but when we called their Nazareth, Pennsylvania, number, the automatic operator answered "disconnected." After

several phone calls we found a few folks waiting for months-old commission checks to arrive. So, subscribers, steer clear of the submerged Teach/Tour until they surface and we get a line on 'em.

Will dry suits replace wet suits? Not with the present manufacturing technology, says the president of one of the top three producers of wet and dry suits. In fact, he says that divers are disappointed with the maintenance and repair required to keep the water out, and he wouldn't be a bit surprised to see dry suits fade from the market—including his.

Skin Diver has announced it will no longer accept advertising for the mail order purchase of underwater life support systems which can prove potentially dangerous to nontrained users—regulators, buoyancy compensators, tanks, wet and dry suits, etc. From the standpoint of noncertified diver safety that makes great sense . . . but economics are also at stake. Many of the thousand or so dive shops in the U.S. have continually carped about the mail order equipment business, claiming that a full service dive shop has an obligation to offer certain services to divers and therefore can't meet the price competition of mail order people who ship equipment without having to pump air, provide training, or draw maps for diving tourists. Since the new *Skin Diver* policy even prohibits the advertisement of catalogues from which the diver can purchase life support systems, it will be curious to see how Central Skindiver's Honest Archie, Berry Distributing, New England Divers and other large mail order operations cope with the loss of their major advertising source.

While he was a graduate student at Scripps, Steve Seuss developed a chemically filled device to fit on the hose between the first and second stages of a regulator. As air passes into the second stage it is warmed from the lower temperature of the surrounding water to approximately 120°. Sound like just another gimmick? Well, don't be so hasty. The diver's body requires a great deal of energy to raise the cold air temperature to body temperature. *The San Diego Union* reports that divers using the device claim to be more comfortable when diving, perform better, and don't shiver themselves silly after a cold water dive. Inventor Seuss says not only have patents been issued, but also the Coast Guard is interested.

Now that modern science strives to warm our air to prevent the slightest of chills, consider reminiscences from members of the *San Diego Bottom Scratchers*, a club which has admitted only 19 members in 44 years. Sixty-three-year-old Jack Prodano-vich told the *Valley News and Green Sheet* that in the good old days of diving, club members made goggles from the lenses of ladies' compact mirrors. They removed the silver from the back, fitted the clear glass into slices of radiator hose, and strapped them on their heads with strips cut from innertubes. To get

into the club, recruits had to bring up three abalones in one 30-foot dive and capture and beach a horn shark, bare-handed. And bare footed . . . So, today, as you slip into your Bubble suit, strap on your Nautilus, and step into your Farafins, let us remind you to check your powerhead before you go after the flounders on the other side of the seawall. Diving is indeed a macho sport.

But not too macho. PADI is running a Women in Diving seminar. Hillary Hauser, Nancy Ackerman and Zale Perry will be covering such topics as "Diving and the Pill," "Changing the 'Macho' Image," "Teaching Women to Dive," and "Professional Challenges for Women." For information write PADI, 2064 N. Bush St., Santa Ana, CA 92706. More than one prominent woman diver employed in the industry has indicated a doubt about the conference, saying that there are no female issues in diving, that in this sport women stand flipper to flipper with men. That's good to hear, but we are aware of a few biological differences which suggest at least different medical problems.

Researchers from the Max Planck Institute in West Germany reported in their study of anemone fish that when the dominant female was removed from an aquarium group of five fish, the largest male changed his sex to female in 63 days. In another experiment the female was removed from each of 24 pairs of anemone fish and 18 of the males turned into females. The researchers conclude that the females control procreation; they restrict the size of the breeding population and actively suppress males which are likely candidates for future females . . . Anita Bryant might consider taking her crusade to the reefs. It would make as much sense.

Two South Carolina divers drowned recently in a Florida fresh water cave. On the 27-year-old lead diver's slate was written: "Don't worry, I know the way out." The other diver was found wedged up in the rocks, with a rescuer quoted as saying: "My guess is that they went too far back into the cave, ran out of air, panicked and tried to get back out. The younger boy was probably swimming like crazy when he ran out of air and the light tied to his wrist got hung up on the rocks. It probably yanked him back and his face mask came off . . . I believe he would have made it if the light had not been tied to his body. All I had to do was reach up there and twist his arm, and he came free." His reserve had not been touched and he probably had about 10 minutes of air left. The "younger boy" was 13 years old.

Correspondents 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*.