

undercurrent

The Private, Exclusive Guide for Serious Divers

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Gangga Resort, Manado, Indonesia

reefs, muck and luxury living

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www.undercurrent.org

Editorial Office:

Ben Davison, Publisher and
Editor
3020 Bridgeway, Suite 102
Sausalito, CA 94965
EditorBenD@undercurrent.org

Dear Fellow Diver:

When the alarm clock went off at 4:30 a.m., I thought, "The diving better be tremendous." I'd already flown 15 hours from JFK to Hong Kong, where I overnighted before a four-hour flight to Bali, then overnighted again. Now, in two hours I was to board a 6:30 a.m. flight to Makassar, Indonesia, with a five-hour layover in a stifling terminal, then fly another 90 minutes to Manado, where it would require an hour ride to the dock, where, at last we were to be greeted and taken for the last 30-minute boat ride to Gangga Island Resort. (Yes, there are a lot shorter ways to fly here, but our itinerary wasn't one of those.)

Well, my buddy and I made it to the dock, but were greeted by no one. As dusk approached, a boat finally appeared in the distance and we finished the last leg of our journey in the rain. As you might imagine, I was interested in an adult beverage and bed, but as our gear was hauled to the bungalow, we were offered sandwiches and fresh coconut water. Then, off to the dive shop where Hanne Davi, the Danish resort manager, reviewed our c-cards and log books (husband Gaspare runs the Bali opera-



Gangga Cottage



tion), collected our release forms and explained many dive details and the dive operation. Two-tank dives departed at 8:30 a.m., returning by 12:30 p.m. for lunch. All day three tank dives left at 8:00 a.m., return at 5:00 p.m. A 3:00 p.m. afternoon dive was available. She would try to accommodate requests for changes in our group, departure times or destinations. Seemed like good service to us.

Gangga Island Resort and Spa lies a few miles off North Sulawesi, smack between the muck diving of Lembah Strait and the reef diving of Bunaken National Marine Park, making it ideal for those who want to dive both areas from luxurious land-based accommodations. Fifteen two-unit bungalows with a capacity of

two adults and two children in each unit, are scattered along a winding stone path leading to the dining hall and lounge. We could enjoy the exceptional sea view from our porch lounges in privacy from residents bunked on the other side of a common wall. If I wanted to snooze beneath a palm tree on the beach, I had a personal lounge with foam pads. At the price of a 10-minute walk from the dive shop, being billeted in the next to last building meant few passersby and no kitchen noise.

Built from dark native woods, the bungalows were light and airy, with large curtained windows, high ceilings with overhead fans, and fresh flowers. Our comfortable king-sized bed had mosquito netting, which proved unnecessary as we never met a single mozzie. The A/C kept us cool in August; some guests didn't use it. The large bathroom sported a long counter area, bath products and fluffy towels. Soft drinks and beer were in the mini fridge and a five-gallon jug of filtered water was filled daily. Regardless, a few guests had minor bouts of Suharto's Revenge. The small TV offered Indonesian soap operas, HBO, and ESPN via satellite. A huge open shower was next to a large window so we could wave at folks on the beach while washing off the salt. Being European, they didn't seem to mind.

After a thorough boat briefing on our first day, which included detailed reef sketches on a white board, I donned my aluminum 80, backrolled and dropped down at Aer Benua. A swift current zipped my buddy and me along a wall dusty with sediment from recent rains. All of sudden the current stopped. Then it pushed me down a few feet to where it picked up again and we were off to the races. At 1500 psi, I ascended with my buddy and others to the coral garden at 20 feet, but now fought the current as it ran



The Dive Boat

in the opposite direction. I managed to hang on the reef long enough to peer at a wire goby, then winged back to the boat, where I handed up my fins and BCD, and climbed up the short ladder and reported my depth and time. (We were asked not to exceed 130 feet, but there was no practical reason to dive that deep; all the cool stuff was shallower.)

The rides to sites in their 45-foot partially covered boat ranged from 20 to 45 minutes. We glided on flat seas past emerald islands against a background of volcanic cones. Underwater, the guides, once satisfied with our skills, were never overbearing. They pointed out critters with stainless steel rods, without hassling the sea life. Photographers could stop and shoot without interference. Though we never had more than eight divers onboard, the Indonesian dive staff created two groups presumably separated by skill level, but it usually was one group of Italians and a second group of everybody else. The two groups frequently surfaced far apart, but the boat crews were always watchful. One day we were joined by a Mexican fellow who flailed around frantically in the current trying to deal with 20 pounds of lead, until he ran low of air and had to surface. We stayed down. On days when it was just the two of us and the Italians, we had our own private DM. My partner speaks rudimentary Italian and the surface intervals were friendly times, especially when local ladies came onboard to hawk shell jewelry and T-shirts.

Sanchiko Point in Bunaken was home to tens of thousands of red-toothed trigger fish and a large school of pyramid butterflies. A small group of batfish beckoned me deeper, where a few jacks flitted by and a Teira batfish fled to a coral head. At Fukui Point I drifted easily among thousands of damsels, and more pyramid butterflies. Lettuce and staghorn corals were dotted with anemones housing Clark's and skunk anemone fish. Hawksbill turtles settled down for photos or swam along slowly with us. Photographers were in the minority. Rinse tanks were beverage coolers that couldn't accommodate the larger rigs, and any adjustments had to be made on the benches that lined either side of the boat.

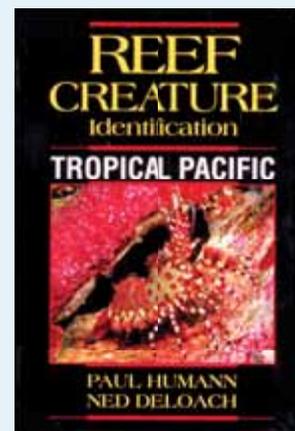
At Lekuan II, I dropped alone to 95 feet and swam along a sheer wall with

All Those Weird Critters

Paul Humann and Ned DeLoach have done it again, releasing a definitive identification guide to 1600 extraordinary reef creatures of the Tropical Pacific. There is no reason for me to gang a list of superlatives to describe the book. Anyone who has ever thumbed through one of their previous eight guides knows just how beautiful and informative they are.

With this 500+ page softbound guide, you get upwards of 2000 exceptional photos of shrimp and crabs and stars and worms and lobsters and nudibranchs and slugs and squid and bivalves . . . well, all those invertebrates that move along the reefs of this region without finning, so it seems. There are several photos of some creatures to help you identify them during different life stages, and about ten percent of the book is descriptive copy so you can tie down your identification. While anyone headed to the Tropical Pacific MUST have a copy of this book, even if you have no plans to go, just to thumb through the pages, gawk at the complexity and uniqueness of these animals, and read thumbnail sketch will give any serious diver vicarious thrills for endless hours.

Tropical Pacific Reef Creature Identification lists for \$48 and the best way to buy it is to go directly to Paul and Ned and New World Publications at www.fishid.com/nwp/index.php?main_page=product_info&products_id=47 You'll also find *Tropical Pacific Reef Fish Identification* and their other books on the website.



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Gangga Island Resort

Diving (<i>Experienced</i>)	★★★★★
Diving (<i>Beginner who can handle the current</i>)	★★★★
Snorkeling (<i>Not land based</i>)	★★★
Photography	★★★★
Accommodations	★★★★★
Service and Attitude	★★★★★
Food	★★★★
Money's Worth	★★★★★

★ = poor ★★★★★ = excellent
Worldwide scale

large stands of black and orange coral trees, reveling in 82°F water and 100-foot vis. A white-tip reef shark passed in the opposite direction and a hawksbill in a hole watched me kick by. Nirvana, indeed. Sahaung was Crinoid Central, where the feathery and colorful critters were arrayed everywhere: green with yellow, magenta and black, red with yellow, multiple shades of blue. Baby white tips clustered under a dead table coral while a bumphead parrot grazed alone.

On the second day I switched to an aluminum 100 and 32% Nitrox. There were also 62s available, and plenty of spares stowed below the deck so you could dive a 100 on the first deep dive, and switch to an 80 for a shall-

lower second plunge. They analyzed the Nitrox, but I always checked my own fill. Midweek the Nitrox system failed and I had to go back to air. After diving, gear was rinsed and hung up to dry, packed and set up on the boat the next morning. But the staff wasn't perfect. Once I found my Scubapro Mark 25 upside down on the tank. Another time the o-ring on my tank failed and DM Donal tried to fix it while I was bobbing on the surface, but the leak only got worse. I had to get out of the water, holding up the entire group.

After three dives and a one-hour full body massage (\$35) at the Pasung Spa, I slid into a relaxed evening mood, hungry as a bear. So having to wait for the rigid meal times was torture. Other than the two weekly BBQs, and two lunch buffets, lunch and dinner were at 1 p.m. and 8 p.m. respectively, and ordered from menus. I suspect the late dinner time accommodates the mostly European clientele, many of whom appeared at dinner in collared shirts and dresses, not the typical T-shirts and shorts worn by us casual Americans in most dive resorts. There is no room service, and no snacks for sale, so PYOP (Pack Your Own Pringles). Before dinner, no chatty crowd swapped dive tales at the watering hole. Guests ordered their drinks and drifted off to flip through books from the library, watch videos, shoot pool or link to the free Wi-Fi. That left two starved Yanks at the bar munching free peanuts and fish snacks while waiting for 8 p.m. Thankfully, food was scrumptious: continental and Indonesian, with choices of meat, fish, chicken or pastas, preceded by soup, salad or hot appetizer, and followed by small portions of cake, pie or ice cream. Aussie and Kiwi wines were available, as were Heineken and local brews served in frosted mugs, and the bartender could even mix margaritas and mojitos. (Breakfast was buffet-style, with eggs, pancakes, cereals, toast and fruit.)

The dive package included a night dive off Lihaga, a small island where

Mandarin fish mate.

Descending to 35 feet at dusk, we hunkered down in rubble near a three-foot high coral ledge. As if on cue, at 6 p.m. the outrageously colored little bug-gers emerged from the coral and crept around the sea bed, some within inches of my hands, before swimming off



View from the grounds

on other business. One pair swam up belly-to-belly right in front of us and darted apart, leaving a small cloud of eggs and sperm to the mercy of the sea. The show is guaranteed; a German couple we met got skunked on their Mandarin dive, so the management offered them a second try at no cost.

Management makes a significant investment in the local villagers, providing jobs and training. Some staff has even been sent to Italy to learn Italian (most guests were Italian). It's a friendly staff, made more so if you got to know them by name and smiled. Your breakfast coffee will arrive without asking, there will be more ice in your water

glass, and the bartender may even offer you a taste of the local homemade popskull he keeps hidden away. Caution is advised. Staff assisted us with flight confirmation and emails. This attention to detail brings divers back again and again. One was on his tenth visit, and said he preferred Gangga to Wakatobi because of the easy-going divemasters.

Our last dive was at Alpha Omega, a cove in front of a classic South Seas island with thatched hut and resident dugong. Strictly a muck dive, it offered all the macro critters we hadn't seen yet: Ambon stonefish, pygmy pipe seahorse, fire dartfish, leaf razor fish, fringed dragonet, long-horned cow fish, flying gurnards, marbled snake eel, a little sea moth, and according to my partner's log, a "wrasse with a big thing on its head," which turned out to be a pavo razorfish.

Scientists have recently reported extensive coral bleaching throughout Southeast Asia, but on our dives most reefs were unaffected. Except for trips to Bunaken, we saw no sharks or rays, but even two pelagic-freaks like we had to admit the macro life was stunning. At Rainbow Reef, pygmy sea horses justified the use of our magnifying glasses. A white frog fish walked across a coral head, and we saw our first-ever blue ribbon eel.

One downer -- the ocean is littered with floating trash on top and debris at depth. The concept of using trash receptacles hasn't made it to Indonesia yet. The mola mola I thought I saw turned out to be a black garbage bag drifting by at 100 feet. The diving did prove tremendous. We loved the scenery below and above. If you are a muck-lover and don't want a live-aboard, this could be your place, even though park entry fees don't pay for trash cleanup. - T.D.

Where Travel Insurance Counts

The liveaboard *Archipelago Adventurer* ran into deep trouble in Raja Ampat, Indonesia, on October 26. "The vessel sat at anchor after a night dive, due to a combination of factors to do with weather and current; the vessel dragged the anchor and struck the reef stern first, sustaining damage to the drive shaft and propeller. The vessel was upright, but due to the propeller damage it proved impossible to dislodge her despite our efforts." The guests were taken ashore by Max Ammer's Papua Diving crew.

At first, the company found a replacement charter, hoping eventually to repair the *Adventurer*, but on December 20, the company pulled the plug on all replacement trips, leaving divers paid up for January and subsequent trips scrambling. With the owners of the Archipelago say they will refund all prepayments, divers holding air tickets to Indonesia will need to find another destination (and it's unlikely to be a Raja Ampat liveaboard since they are all booked well in advance), or delay their trip, pay the airlines rebooking fines, and figure out what to do with the vacation time they had planned. www.mytripinsurance.com is a good place to research trip insurance.



DIVER'S COMPASS: From NYC, Singapore Airlines flies to Singapore with fewer hassles than I faced. As little as \$1,523 with an 8-hour layover in Frankfurt (get a hotel room in the airport) and a 2½ hour layover in Singapore. From JFK there are flights to Singapore connecting to Manado as low as \$1,329; from LAX you can go without layovers for as little as \$1,184 . . . We booked the resort through Island Dreams. Helpful and experienced, their package rates beat those on Gangga's website. Through March, a

seven-night package with five dives is \$1,798.00; last August we paid the high season price of \$2,104 . . . www.islandream.com . . . Nitrox is \$6 a tank; trips to Bunaken or Lembeh cost an additional \$45, plus \$6 park fee . . . Rent a spotlessly maintained wetsuit, Scubapro reg and BC, SPG, fins, boots, mask and snorkel for \$30/day; add a computer for \$10 . . . www.Ganggaisland.com . . . Power is 230 volts 50 Hertz, so transformers with adapters are needed . . . Non-divers can take snorkeling or sailing trips or make land excursions to Manado and Minihasa to visit villages, climb volcanoes, look for Birds of Paradise or the world's smallest monkey, the Tarsius Spectrum, and check out WWII relics . . . there is no beach diving or snorkeling off shore.

Caribbean Explorer II: Saba/St.Kitts

and a missing jewel in the crown

Dive St. Eustatius? Well, you no longer can from the Caribbean Explorer II on its northeastern agenda! I was aboard for two days in mid November before I learned that a jewel of the trio Saba-Statia-St.Kitts had been off the itinerary a few months. More about that in the sidebar, but I should have been told in advance because I think Statia diving is much more interesting than St. Kitts -- better viz, less trash, and more fish. Perhaps CE II can find another jewel to add to the crown.

Hurricane Tomas left the waters churning, with eight ft. seas en route from St. Maarten to Saba in the early morning hours. JF Chabot, the substitute captain and previous operations manager for Explorer Ventures, has plied these waters for many years on both of the CE vessels and handled the craft with grace and good humor. Years ago, CE II was my first liveaboard and now, after several hundred more dives and a dozen liveaboards, I was aboard again. She was showing her age, but a valiant refurbishing with minimally invasive "face" lifts left her clean and tidy. It felt like coming home with JF onboard, but the other crew had, of course, left long ago.

For a while I thought I would be diving buddy-less, as when my buddy John got to his airport, he had no flight reservations. I had made mine at the same time with Reservation Services International, recommended by Explorer Ventures. The agent quickly rerouted him, but with the loss of a day on each side of the trip; but diving time was intact. Seems like he forgot to confirm with his credit card with the agency, a warning for all travelers. Shouldn't he have been alerted? He had booked a bunk on the boat.



As on my other CE trips, the crew of seven was gracious, friendly, and skillful. For example, we returned in the dark via dinghy from a tour of Saba: no moon, stars or flashlights to guide us past obstacles in the unlit harbor. As the waves were splashing over us, Robert, the engineer, warned the six of us not to move when we got to the vessel and wait for directions. After a

Caribbean Explorer II Saba & St. Kitts

Diving (<i>Experienced, Saba</i>)	★★★★★
Diving (<i>Beginner, Saba</i>)	★★
Diving (<i>Experienced, St. Kitts</i>)	★★★
Diving (<i>Beginner, St. Kitts</i>)	★★★★
Accommodations	★★★★
Food	★★★★
Overall value	★★★★★

★ = poor ★★★★★ = excellent

Caribbean Scale

half-dozen attempts, the crew secured the boat at the dive ladders and the two crafts surged in tandem. When Dave, alias 'Tuna', shouted my name, the safe exodus began.

Another day when surge had the exit ladders rocking wildly, Marie, a fellow passenger, was approaching the ladder, but a wave tossed her away from it. Dave immediately went after her as she was carried away in the current and the two waited until the chase boat came.

All twelve divers, ages 30-70, were experienced. One photographer had to be 'cautioned' by the crew, as he was more mindful of his focus on his subject than what his fins were kicking. Three divers were from Canada, a physicist from Switzerland, software engineer from Germany, and the rest

of us from various locations in the USA. A dive instructor from the New York City area, decided on our last day to stay aboard one more week.

Saba provides an excellent variety of diving, from coral encrusted boulders at Diamond Rock to walls, overhangs and canyons at Tent Reef. Aided by Hurricane Tomas, Saba lived up to its reputation for changeable currents, but the fish were plentiful, corals colorful, and visibility generally good, 80'-100' (Water was a consistent 83°F). Diamond Rock highlights were a half-juvenile gray angel fish fluttering its yellow and black body, and a male sailfin blenny in its full black sail glory in the rubble, where a female rested outside her hole. I am partial to lettuce leaf slugs and their ruffles, and Dave's Drop Off produced two beauties blending in with the algae, one whitish green, the other an orange yellow. At Tent Wall, six circles of Sgt. Major eggs were guarded and fanned by wary-eyed males. A large Nassau grouper accepted my presence as I slowly glided by; down in a crevice hid a large adult spotted drum. Blennies entertained and nudis flared their colors. A dive an hour later at this same calm site produced a reversing current, its speed increased and the light dimmed. My buddy and I burned a lot of calories kicking back to the vessel, surfacing 10 ft. from the ladder and in high waves, only to be waved off -- they were launching the dinghy to retrieve two divers. I drifted in the battering waves for 10 minutes, wondering why I even used my energy to get back to the vessel in the first place. I kept a respectful but safe distance from my dive buddy who was throwing up in his reg. (This caused him major problems the next dive; lesson: clean it thoroughly.) Drift diving would be excellent in Saba waters; but then they would need a second chase boat. On a 115' vessel with a max of 18 divers and 7 crew members, one eight-person rubber dinghy just isn't adequate, particularly with the currents.

All of us opted for the ease of the 6-ft. leap from the side of the vessel rather than tackle the steep stairs to the dive platform. Exiting is easy up one of the two heavy metal ladders . . . unless the surge and waves are active, as was often the case. A crew member was at the ready to assist before we took the giant stride and again at exit to grab our fins. After each dive one of the crew recorded our max depth and remaining psi. We were told to return with at least 500 psi, not a problem with the set limit of 60-70 minutes. Depths averaged around 65' in Saba (range 101'-55'), and a shallower average of 45' in St. Kitts. We were encouraged to dive with our buddies, but a very loose interpretation was tolerated. I kept the dive guide in sight because of the changeable conditions and very



low visibility, 10'- 20' at St. Kitts at several sites, and Lynn and Dave had great eyes for fish and creatures. Because of the currents, I used the granny line, and used it for safety stops on the surface to steady me while I took my fins off before approaching the bucking dive ladders.

A tarp-enclosed area on the dive deck is for charging batteries; there are a camera table, washer and dryers, and hanging space for wetsuits. We had our own space for small gear and fins. They filled the tanks in place with air or Nitrox (it varied from 26% oxygen early in the trip to 32% the last

day.) We analyzed and recorded the percentage, as well as the psi and depth limit. I had problems with leaky o-rings and a slow Alt 2 leak, which the crew immediately repaired. Dave was alert to small details with diving gear that might cause problems.

They offered five dives on four of the 6½ dive days, four on one day, and three dives on the last day. One was cancelled because of nearby lightning. Two nights we dived at St. Kitts Bedroom site to get away from the rough seas: viz was less than 20'. Paradise, River Taw and Corinthian (all in St. Kitts) had similar low visibility.

Chef Jan, an import from England, presented a variety of fresh yeast breads throughout the week to compliment her substantial buffets. Perhaps the food was not as inventive and delicious as before, but it was good and plentiful. Breakfast with eggs, French toast or pancakes, sausage or bacon, and boxed juices. Pizza, spanikopita, hot dogs, hamburgers or tacos provided filling lunches. The soups for dinner were excellent. Steaks and fresh fish brought to the boat by a local were highlights for hungry divers. The very acceptable complimentary wine with the meal meant only a few divers went diving after dinner! However, if we did go, hot towels and hot chocolate doctored with Irish Cream or rum were waiting, then popcorn. Jane baked a chocolate layer cake for a Canadian diver's birthday and the crew gathered us around for a rousing happy birthday song.

Four dives at Monkey Shoals, about halfway between St. Kitts and Nevis, saved the diving for me. This one-square-mile-atoll, about three miles offshore, is good for multiple dives and excellent visibility of 100 ft. plus. A spotted scorpionfish startled me by plopping down in my path as I was cruising at 35 ft. I spotted several others, including a reef scorpionfish inside a barrel sponge. A gold spotted snake eel entertained me on two afternoon dives, as it hunted in and out of the reef, great to see as usually they are night hunters. Lynn pointed out something moving erratically above the sandy bottom: a half-inch rough file clam jerkily moving edgewise, rapidly opening and closing its valves. I was eager to see flying gurnards, so prevalent five years ago; I saw none. Come to think of it, I had seen most of them on Statia! However, a few seahorses made up for the loss. Nurse sharks and stingrays were the only representatives of that ID group, not the plentiful reef sharks I had previously seen. A dozen large tarpon provided the big stuff viewing. I recently heard Paul Humann comment that every five or seven years the ocean reef fish seem to shift. Yep - think he's right.

The CEII is a homey craft, but their nine small but functional air-conditioned

Why No Statia?

The St. Eustatius marine park ranks high on the list of good Caribbean diving. So why would the *Caribbean Explorer* drop it from its itinerary and add more time at mediocre St. Kitts?

The Statia marine park welcomes liveaboards as long as they pay the park and immigration fees. However, Kate Walker, the manager of St. Eustatius National Parks (STENAPA), says that “It is a requirement for all divers to dive within the park under the supervision of island operators. In the past this was done by one of the dive centers for the CEX, however this arrangement stopped working, so the marine park offered the supervision services of the park staff for free. When I took over as manager of the parks I found that we could not realistically continue. We are underfunded, understaffed and cannot feasibly afford the staff time away from the park work to continue this for CEX.”

According to Walker, local STENAPA suggested this past July that CEX use dive operators again. However, Clay McCardell owner of Caribbean Explorer vessels, doesn't want to hire local guides. He wants to “send our instructors (who have many years of diving supervision experience) to be certified as guides there, but we have been turned down.”

While potential passengers of the CEX might not be pleased, Walthers says: “we are not unhappy with this . . . it is not a loss for the island. The guests on board don't (or almost don't) go on shore. They take advantage of the marine park and that's it. They don't bring anything to the local economy (restaurants, gift

shops, etc.). Besides that, the CEX is also an unfair competitor for the local dive shops. The CEX does not have to pay taxes, work and resident permits for the employers, mandatory insurances, etc.”

McCardell says that “the discontinuation of our Statia visits was largely a result of popular demand, but also a result of the local politics – the local dive shops just don't want us there, because they feel we're taking their business . . . we weren't welcome to dive the best sites and certain local shops would complain about our operation even to our clients who stopped in their stores during their tour of the island...”

Somehow, I don't think that is going to happen. Too bad. Statia diving is a crown jewel missing from its itinerary

This is an issue that can exist between all liveaboards and local communities: the interloper vs. the locals. When amount of exchange is enough? Off a liveaboard in Fiji, we divers visited the chief, shared a little dancing, then contributed \$25 each to the village larder. Everyone felt like they were getting their money's worth. I can imagine the resentment on Statia when a dozen faceless divers who have sprung for a couple grand show up and dive the local waters without leaving much green behind How much should they spend to be welcome? Would a much more substantial cash contribution to the underfunded park be enough, or are the dive operations powerful enough to demand business as part of the deal? Are the dive shops being short sighted? After all, I know of several divers who were so impressed with Statia, they returned for a land-based dive trip and to volunteer for cleanup with the Park. That's some payback.

cabins were an uncomfortably frigid 62°F. When seas are rough, one can sit on the edge of the queen bed and touch the sink or the knob for the bathroom door, minimizing the drunken-walk. Bunks are also available. Crew changed towels once, made beds daily, and dropped a chocolate on my pillow with the nightly turn-down service. Dining, dive briefings and video-watching are done in the semi-enclosed all purpose room (zip-down plastic for wet days, otherwise sides are open to the breezes) Connecting is an open-air lounging area for sunbathers, star gazers, or cocktail sippers. When you take your first drink, you've had your last dive.

I arrived on St. Maarten the day before sailing to make sure my gear arrived. I stayed at the old Princess Port de Plaisance. Paint is peeling and decorative signs askew or missing. The phone, ice maker and half the lights in my room were not working and the toilet seat and paper roll holder had fallen off. The covering on the two lounge chairs on my patio overlooking a small harbor was dirty and torn. At least the room had been well cleaned. But they had a new and glitzy casino. The trip ended at St. Kitts: CEII needed us off by 9 a.m. to get ready for the next group. As my flight would not leave until late afternoon, I took a day room at the Bird Rock Beach Hotel -- much better choice than wandering around the somewhat

grubby town in the heat. It was above the beach with a great view, nice pool, and so-so café.

For Caribbean diving, it is hard to beat Saba and the Caribbean Explorer II: diving is varied, the crew topnotch, and the price is reasonable. Dive five trips and get one free is a good offer, and they often have specials; for example, 25% off for return visitors. The dive sites are visited by land-based operations, but I prefer the convenience of multiple consecutive diving. At both islands a tour was available instead of one dive in the afternoons. A real plus is getting to dive off three different islands - oops, only two now. St. Kitts is good for new divers, but does not compare well with the other top Caribbean diving of Saba, St. Vincent and Bonaire. And, by not having St. Eustatius on the tour, it does pale compared to my last journey. Oh well. - D.C.



Divers Compass: CEII liveaboard, seven nights: \$1895; port & marine Fees: \$115; fuel surcharge: \$95; Nitrox \$150 for the week; Saba and St. Kitts island tours: \$20 each. . . .Getting to St. Maarten: several major US airlines fly direct, with AA leading the pack. . . .Reservations for a shuttle to St. Kitts can be made online for \$12. . . .St. Kitts has fewer direct flights. . . . Princess Port de Plaisance hotel overnight: \$95. St. Kitts day room at Bird Rock: \$50 (\$60 until the cab driver most frequently used by CEX II intervened). . . . I make my reservations for the CEX vessels

directly, rather than going through another agent. Lynn and Mary are available on live-chat and are superb at handling questions and arranging details of the trip.

www.explorerverventures.com

At Last, Justice in Belize

shoddy operation and its owner fined for diver's death

In April 2005, we gave a big Thumbs Down to Vance Cabral's Advanced Diving in Placencia, Belize, after an *Undercurrent* subscriber and nine others went on a dangerous journey with them. The boat departed at 9:30 a.m. and struck a reef, but captain Vance didn't slow down, which is probably just as well as there was no spare prop on board. And no working radio, no oxygen, no first aid kit, no flares nor running lights.

After the first dive, the group went to Glover's Reef and waited three hours for their tanks to be refilled, departing at 3:30 p.m. After the second dive, they left for home at 5:20 p.m., with the sun sinking over the horizon. There was no GPS, the compass was not illuminated, and there was no flashlight on the boat. Luckily, a diver had two flashlights, and shined one on the compass, but Vance's navigation skills fell short. An hour later, there were still no signs of lights from land. Vance said that he was about out of gas except for a 5-gallon reserve can. The boat apparently had been under-fueled. There were only two lifejackets, so folks started filling BCDs. They pressed Vance to call to alert someone to their situation, but he got no response - this was no surprise, since earlier in the day a diver had received a shock from the antenna when he brushed up against it, a sign of malfunction. About 7:30 p.m., a breaking wave smacked the 30-foot boat. The next one rolled it over. Some divers found themselves between the reef and the capsized boat (with its motor still running full tilt), while others were washed onto the reef. Still others were momentarily trapped under the overturned craft. Folks crawled onto the overturned boat to wait it out. The two small flashlights were the group's only means of signaling. Fortunately, friends on shore began to worry about the group's absence, and they contacted Turtle Inn.

About 10 p.m., the Turtle Inn dive boat set out and thanks to the divers' flashlights, found them at 3:00 a.m. They were ten miles offshore and fourteen miles south of their intended route.

So, *Undercurrent* warned divers to stay away, but our reach only goes so far and six months later Cabral, in a similar incident, lost a diver. On October 10, 2010, Belize Justice Oswald Legall awarded the deceased parents US\$35,016, after finding that defendants Vance Cabral, owner of Advanced Diving, and divemaster Mark Tucker were negligent in their handling of divers during an October 2005 trip to Silk Caye, 22 miles east of Placencia. Cabral and Tucker had been charged criminally with negligent endangerment to life in 2006, but the charges were filed too late to be considered by the court.

On October 22, 2005, at 8:30 a.m., four divers and eight snorkelers left the Placencia dock with Cabral and Tucker in the smaller *Advance II*, planning to drop the snorkelers at Silk Caye and head to White Hole, 1½ miles away, with the divers. But Cabral turned back for a bigger boat and halfway into the second journey, water got into the Yamaha engine filter and cut off power, causing the boat to drift for three miles before Cabral got it re-started. At Silk Caye the snorkelers and Cabral got off and the divers and Tucker traveled to White Hole. But halfway there, water again got into the engine and shut it down for good. Attempts by tourist John Bain, an attorney, and Tucker to re-start the engine failed, and calls for help on the VHF radio were futile, as the radio did not work. Further, when Tucker dropped the boat's anchor into the water at Bain's suggestion, the rusty chain attached to it broke and the boat continued to drift.

Dr. Abigail Brinkman, 28, in Belize for research at a medical clinic, and three other divers decided to swim toward an island that appeared to be not far away. Tucker helped them into their gear and watched them jump over. Unable to re-start the engine or communicate on the radio, Tucker too decided to swim toward Glovers Reef, and made it two hours later. Three divers were rescued at sea, but Brinkman drowned.

Justice Legall found Cabral and Tucker guilty of negligence and neglect, writing that the defendants should have returned to dock to check the engine after it shut down the first time, despite their suggestion that this was a frequent occurrence with "bad gas" from Mexico. It was clear that the engine, anchor and VHF radio aboard were not maintained in proper working condition, and had they been, the tragedy could have been avoided. The boat should not have been out at all that day, because a small craft warning had been issued for the coast, though Cabral said he had not listened to the weather report. It was probable that the engine had other problems that ought to have been detected by the defendants before going out. The defendants tried to dodge responsibility by citing the waiver Brinkman had signed, but the judge ruled it was sufficiently ambiguous so as to make it difficult to exclude the defendants from responsibility.

Furthermore, the defendants argued that Brinkman was responsible for her own death because she chose to swim, but the judge stuck by his ruling for the family.

Deciding to abandon a boat and swim for it is a risky decision and in this case the swimmers, who were clearly inexperienced regarding Belize's waters, misjudged currents and distances. One can survive for endless days drifting in a boat at sea, so deciding to swim for it instead cuts survival time – and the likelihood of being seen and rescued.

The San Francisco Ocean Film Festival Wants Your Video

This is a great chance to have your short underwater films have a shot at the big time. This annual festival previews a number of exciting and unusual films of varied lengths. The deadline is soon – January 7 – but you can find entry forms and all you need to know at www.oceanfilmfest.org

From Undercurrent's archives and reports in Amandala

Divemasters in American Waters

do they fall under Coast Guard regulations?

In mid December, I received a very flattering letter from subscriber Stefan Fuegi of Gila, NM, who wrote

“Mr. Davison, let me say thank you very much for helping me and my family to dive more and to dive better, finding better ops to dive with. We got to dive more this year than we ever have, and nearly all our dives were made with ops we found on the advice of the Chapbook. Just this morning we flew back from GCM where we had the good fortune to get our 10 year old son certified with Divetech and for all of us to dive together with Divetech and Indigo, both outfits we found through *Undercurrent*. . . UC is my favorite publication of any kind and means a great deal to me. Your advice is core to every great vacation we have taken the last few years. And I am probably one of the thousands of people you have never heard from but whose lives have been deeply enriched by your various activities. I absolutely admire what you do and the way you do it, and I try to show my appreciation by always linking through UC when I shop Amazon and by trying to get family and friends to do that also so you get the commission.”

How nice to hear from an ardent reader, but more important he raised a significant question about the qualification of American divemasters, which occurred to him after he read my article regarding the Carlock jury award in our November issue.

“I just read the article on the “Open Water” case in California and one of the questions that it raised is the comment that divemasters were listed as passengers as they were not qualified by the Coast Guard as crew. That seems like a very important point and I wonder if you could follow up by informing readers like me as to what are the CG requirements that DMs need to possess to be qualified as crew and which we as divers should look for in those we go diving with?”

There’s no better person to turn to for an answer than Bret Gilliam, who has an unmatched bio in the diving industry and was, himself, involved in the early stages of the trial as a witness for the defense. Here is his response.

* * * * *

Few divers are familiar with the governing rules for U.S. flagged passenger vessels. These are found both in the Code of Federal Regulations and within the U. S. Coast Guard’s own regulatory protocols as the agency with direct oversight for licensing, enforcement, and inspection of vessels and crew. While the rules are very simple, very few divemasters are employed under Coast Guard standards.

The two divemasters who were employed by Ocean Adventures could not be qualified as crew members aboard a U.S. flagged inspected passenger vessel unless they met the following prerequisites *prior* to hiring:

They had to pass a scientifically recognized chemical/drug test for evidence of “dangerous drug or alcohol abuse.”

They had to successfully complete specific safety training as defined under the Standards of Training, Certification, and Watchkeeping (SCTW) for Seafarers as dictated by the International Maritime Organization (IMO).

If they had successfully completed these two prerequisites (and they did not), then they would also have to be formally employed and paid by the vessel in a designated crew position. This did not happen either. In fact, they worked for the dive store arranging the trip and were listed on the vessel's manifest as "passengers" and, as such, the Master (captain) cannot delegate crew responsibility to passengers.

Further, the Master has an absolute duty to maintain a manifest of passengers and crew including any departure from the vessel, whether for a guided shore tour, beach picnic, or diving activity. He can delegate this accounting to a qualified crew member, but he maintains the ultimate responsibility for its accuracy and for seeing that they are safely back aboard before getting underway.

In this case, Daniel Carlock disembarked from the vessel to dive, and should have been logged out when he stepped off and subsequently missed when the log showed that he did not re-board after the first dive. Incredibly, however, he was not only logged back aboard while he was drifting in the ocean, but he was also logged as being aboard and disembarking for the second dive at a completely different site miles away. Only when he failed to reboard from the second dive was he noted as missing.

In the interest of full disclosure, I was hired on this case originally as a maritime defense expert and fully explained all this to the defense attorneys that contracted for my professional expertise and counsel.

I pointed out that the captain of the vessel *did* delegate the logging of divers on and off the boat to the divemasters and that they failed to keep an accurate record. Their breach of responsibility caused Carlock to be left behind. But ... they could not be technically or legally held responsible since they did not meet the requirements of being crew members and, therefore, could not be delegated such a crucial task. Under the governing rules and statutes, only the master and crew could perform such responsibility. And further, they were clearly listed on the manifest as "passengers," thus eliminating any argument that they could be crew or serve any crew function. So the defense for the divemasters had to be based, not on some concept of diving protocol, but on USCG, IMO regulations and maritime law.

For reasons that I cannot go into based on confidentiality, my professional advice was not heeded... even after I gave a formal expert witness deposition on these regulatory issues in January 2010. And I was not called to testify at trial so the jury never heard an expert's explanation of the rules that governed all the various defendants' responsibilities or lack thereof.

I will note, however, that the USCG was sufficiently shocked by the events that they sanctioned the master, suspended his license, and mandated a special series of remedial sessions on how diving vessels should conduct themselves. Hopefully, this will help prevent a similar abandonment of a diver in the future.

The pattern of leaving divers behind by careless logging is a phenomenon that began to occur in the last 15 years or so, and I regard it as a serious sign of the deterioration of both diving vessel operation and the training and conduct of divemasters and instructors. How difficult is it to count the number of divers you start with and that you have back on board before getting underway? Some shocking incidents have occurred, and I think the Carlock case verdict was a "wake up call" long overdue.

Caveat emptor!

Bret Gilliam is a 40-year veteran of the professional diving industry, and has been licensed as a USCG Merchant Marine Officer as Master for 38 years and remains current. He has commanded passenger and diving vessels up to 550-ft. including the world's largest sport diving operation aboard Ocean Quest International from 1987-1990. He is frequently hired as both a diving and maritime expert witness and litigation consultant.

Barracuda Attacks

why divers can't take them for granted

Barracuda attacks on humans, including completely unprovoked ones, are more common than recognized. I learned that after an unprovoked barracuda attack amputated my left little finger and the side of my hand in Cozumel in 2004.

I was on a dive boat with my 13-year-old daughter, Marina, and we jumped into the water to snorkel and see the reef. We soon saw a large barracuda, 5-6 feet long, lying on the bottom. We stayed above it for 10 minutes, watching it. It never moved, but was certainly aware of us. After a while we headed on to see more of the reef.

My daughter had drifted about five feet away, and I started to swim toward her. At that point there was a stunning blow to my hand, but I never saw what hit me. I lifted my hand from the water and blood was pouring from it. My daughter said the barracuda had attacked. We began yelling, but the boat was a quarter of a mile away. Everybody was having lunch, and it took a long time before they noticed. I never saw my finger again, and imagine the barracuda ate it or spat it out when it turned out not to be fishy enough.

Marina said that the barracuda charged me with its mouth open and that we both disappeared in a cloud of bubbles. She saw the barracuda charge me two more times in rapid succession, but I am certain that it only bit me once. Barracudas often have a stereotypical triple strike behavior. People seeing barracudas attack fish often see the barracuda first bite right through the middle of large fish, then lunge twice more to gobble down the head and tail. So perhaps the three strikes Marina saw were pure instinct.

The Aftermath

It was only when I was on the boat that I realized that my little finger and the side of my hand were completely gone, and the bone stuck out of raw flesh. It barely hurt, perhaps because barracuda teeth are so sharp that they deliver clean cuts. The crew bandaged my hand. The dive boat, having a full load of paying customers for the next dive, arranged for me to be taken to shore by a small boat, then my daughter and I had to hitchhike to town. The dive shop gave me the directions to the DAN Center in Cozumel. In the emergency room they injected me with a local anesthetic, pulled off the bandage, cleaned the wound and sterilized it with hydrogen peroxide. I spent that night in the hospital on intravenous antibiotics, and by dawn the next morning DAN had sent a special plane with trained staff to evacuate me (and my daughter) to Miami for surgery. My little finger was gone and I had come within about a millimeter of losing the next finger as well, but the bite had just missed the tendon so I was able to move all remaining fingers as normally as possible. Cuts from the outer teeth (barracudas have a couple rows of teeth) ran the length of that finger; had it gotten me an inch or so further over I would have lost all my fingers. The nerve to that finger had been severed, so I had lost all feeling in that finger, but it gradually recovered as the nerves regrew. I now I have a patch of brown skin with hair on my palm, and my thigh skin is on my forearm, so I'm built upside down! But I have full use of the hand, and most people don't even notice that I'm digitally impaired.

The barracuda that attacked me was well known to local divers, as it had frequented the same reefs for years menacing divers. One friend, a Cozumel dive operator, told me that he was diving with a customer and the same barracuda twice swam at her (she was lying still on the bottom composing macro shots) and butted her full force with his head, but luckily with his mouth closed, so he caused a bruise, not a cut.

A Cause of Pollution

About a year before my barracuda attack, local divers were complaining that some reefs were being smothered with algae. I was quickly able to find the source of the nutrients – a captive dolphin pen inside the Cozumel marine park. Masses of algae typical of sewage outfalls covered the down current side of the enclosure, and were killing coral reefs up to a kilometer down current, but were completely absent from areas up-current. I made a documentary film showing the impact there, at another dolphinarium in Isla Mujeres, Mexico, and at the Turtle Farm in Grand Cayman, to point out that if such small and local sources could produce such impacts, that of human sewage was vastly worse. You can see the film at: www.youtube.com/watch?v=xDT_q1LwGmA

The response of the Marine Park was to “shoot the messenger” and protect the coral killers rather than protect corals. They denied there was any problem,

told the press that I knew nothing about corals or algae or water quality (all issues on which I have many scientific publications) and that I was a trouble maker trying to destroy their tourist industry. The head of the Cancun Isla Mujeres National Marine Park told me that I was not allowed to discuss my observations as this was “a political matter, not a scientific one.” When I insisted that there was a real problem that needed to be addressed, they cancelled all my projects restoring coral reefs in the marine parks that had run for around seven years.

Many or most of the dolphins had been imported from the Solomon Islands, in clear violation of another Mexican Federal law banning the introduction of any exotic species into National Marine Parks. But these laws were ignored because of the large revenues the marine parks get from licensing their waters to captive dolphin operators.

– *Thomas Goreau*

I later learned that the local divers actually blamed Marine Park officials for my attack. It is against Mexican law to feed any animals in the marine parks. However, dive operators told me Marine Park management would take important visitors out in boats and throw meat to the same barracuda that attacked me, in order to impress their guests. This barracuda had been habituated to food handouts from the very people supposed to prevent that from happening. But the operators all said that if they were asked they would be forced to lie, because if they told the truth they would lose their licenses to operate.

Discussion

Every shark attack makes headline news around the world, but no barracuda attack ever does, largely because they are widely claimed never to happen. Mine did not even make the local newspapers in Cozumel.

I have swum with barracudas all my life (I’ve dived with tanks for 54 years). I have never been afraid of them, and until my own attack I had adamantly maintained that there were no known unprovoked barracuda attacks. I’ve also known that there could be no protection against them if they chose to attack you. When they go after a fish there are just a flash and a whirring noise because they move so fast you can’t actually see the attack, just the remnants of the fish head and tail floating afterwards and a barracuda gulping the center part down. What I always found amazing is that one could be swimming along on one side of me, then there would be a sudden flash, the barracuda would instantly vanish, and suddenly it was swimming on my other side. I respected them and never tried to menace or provoke them.

After my attack I received close to a hundred personal descriptions of unprovoked attacks and near attacks by barracudas. These do not include attacks on spearfishermen, who are hundreds of times more likely to be attacked by barracudas (or sharks) going after their catch . . . or people who spear barracudas and miss them or make a glancing blow, and it turns on them. One spearfisherman I know in Port Antonio, Jamaica, was bitten three times by barracudas in separate incidents, but he was holding a dying fish every time.

I have had many descriptions sent to me of people who were bitten around glittery necklaces, bracelets, finger rings, and mask reflections, or of barracudas that charged these objects and suddenly

stopped just short of biting, sometimes only an inch away. However, I wore no jewelry except my watch, which was entirely black, with the scratched glass face pointing upward. I know two people, one a hotel employee in the Maldives, and the other a submarine engineer at the Woods Hole Oceanographic Institution, who jumped in the water and were immediately bitten by barracudas. Perhaps it was the splash and light reflecting off the bubbles. The engineer jumped straight back into the boat with a tiny foot long barracuda hanging from his butt, and still has the hole to prove it, but is reluctant to show it! Clearly, attacks are far more frequent than realized. See our presentation at the 2005 Association of Marine Laboratories of the Caribbean Conference in Curacao: http://globalcoral.org/BARRACUDA_ATTACK.pdf

There is no doubt that diver's behavior can provoke attacks. An old friend from Jamaica, Phillip Motta, was once wiggling his fingers with his palm facing forward, and a barracuda got very excited and prepared to charge him until he realized it and stopped. Paul Herring was night diving in the Bay Islands of Honduras when a large barracuda seemed fascinated by the divemaster's light shining on it, and started getting agitated, so the dive master switched it off. Immediately the barracuda attacked Paul's mask face. It was unable to bite through the glass of the mask, but it knocked him unconscious and severed arteries in his nose and forehead. Though saved by his buddies, his face was pushed in by the impact and he needed many operations to recover.

The most horrifying barracuda attack story I've heard was told to me by a divemaster at the College of the Virgin Islands Marine Laboratory. During a DAN course on decompression chambers, the lecturers said there was not a single known case of an unprovoked barracuda attack, but a physician taking the course disagreed. He described an incident in which two divers who dived at the same location every week, would feed a large friendly barracuda that frequented the site. One day the barracuda was waiting for his handout, but they had brought no food. The first diver held his empty palms in front of him to indicate, "sorry big boy, no food for you today." The barracuda bit both off both his hands. The second diver hugged his hands under his armpits to protect himself, and the barracuda bit and savaged both of his forearms so that they "looked like meat that had been through a grinder." The doctor who told this story to the class ended by saying that "I was the physician who had treated them both."

Conclusions

What is the lesson from all of this? Don de Sylva's advice 40 years ago, not to swim in murky water under poor light conditions and not to splash around while wearing flashy jewelry, seems the best we can do. A diver should not automatically assume that barracudas never attack without provocation, and treat them with respect. What makes an attack so unpredictable is the randomness of these incidents. People swim with barracudas all the time and are not attacked. I am the only person known to have been attacked in Cozumel, even though the waters are full of people splashing away at all hours, with shiny jewelry on their fingers, necks, wrists, toes, ankles, navels, and other body parts, and have never been attacked, while I, with none of those attractions, was.....

So, it's anyone's guess. Stay aware.

The author, Thomas J. Goreau, Ph.D., is the president of the Global Coral Reef Alliance. This is a condensed version of a comprehensive piece which you can find on our website at www.undercurrent.org

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Letters to the Editor/Submissions
EditorBenD@undercurrent.org

Editorial Staff

Ben Davison, Publisher and Editor
Larry Clinton, Senior Editor
Vanessa Richardson, Senior Editor
Dave Eagleray, Webmaster

Contact Us Call: 415-289-0501
E-mail: pete@undercurrent.org

Undercurrent
3020 Bridgeway Sausalito, CA 94965

www.undercurrent.org

undercurrent

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The 2010 Dive Equipment Show

something for (almost) every diver

The Diving Equipment & Marketing Association's November trade show was the usual mixed bag with products ranging from the sublime to the ridiculous. Registrants totaled 9700 – an 8% increase over last year. But the number of booths (1,178) and non-exhibitor attendees (3,925) were both down from 2009. So it seems the exhibitors sent more folks, while dive shops may have been a little less enthusiastic. Wandering the aisles in the Las Vegas Convention Center, I was struck by some new product trends, and a few oddball items that made me ask, "What were they thinking?"

Catch Your Breath

Freediving booths and products popped up everywhere, perhaps in hopes of opening new markets for traditional dive shops. Since the freediving field is dominated by how-deep-can-I-go competitors or spearfishermen, this category has limited appeal to everyday scuba divers. Nevertheless, training schools such as Freediving Instructors International (www.freedivinginstructors.com) and Performance Freediving (www.performancefreediving.com) were prominent, as were specialty wetsuits from Australia's Sharkskin Suits (www.sharkskin.com.au) and lots of other models in those oh-so distinctive camouflage-style designs, as if divers are deer hunters. Even SeacSub's Shout full foot-long bladed fins come camo-colored (see www.seacsub.com/product.php?ID=857).

Why it's taken so long to realize there's big money in assuring divers can find their way home surprises me.

For those who think that depth matters, the Xen freediving computer/bottom timer was unveiled by Liquivision (http://liquivision.com/xen_freedive.php).

Safety First

At last, more than lip service is being paid to diver safety, with 45 booths offering safety and rescue products or services, including a couple of snazzy GPS gizmos. SHB Instruments introduced the Navimate™ wrist-mounted GPS with an MSRP of \$700. (www.shbinstruments.com/Navimate/info.html). Nautilus Lifeline (www.nautiluslifeline.com) booked more than 3,000 orders for its compact depth rated GPS, combined with a marine VHF radio (\$299 retail). Why it's taken so long to realize there's big money in assuring divers can find their way home surprises me, but then add another \$300 to what is already about the most expensive individual sport around, and we have part of the answer. The other part, of course, is that the technology is a 21st century thing.

Even low-tech safety gear is getting spruced up. The Halon Corsair combines up to four primary and backup LED dive lights and choice of dive knife into one compact tool, complete with sheaf and retractable lanyard (\$189.99 at <http://divehalon.com/Products.html>). How or why you could use four lights is up to your fertile imagination. The Innerspace dive watch (www.momentumwatch.com/pages/products/list-of-products/innerspace.php) manages to be low tech and high end at the same time. With a 300m/990ft depth rating, the watch features a bi-directional rotating bezel with orange numbers. The indexes and hands glow in the dark. Priced from around \$795, it clearly qualifies as diver bling, just the kind of thing to outfit your personal posse.

Three new computers sported jazzy full color interfaces. The Mares Icon HD (www.mares.com/product_detail.php?id=496®ion=deu) features a high definition LCD color display similar to those on cell phones. Plug it in and recharge wherever you are, unless you're on a hang line . . . An air integration upgrade will be available next spring.

The Atomic Cobalt Air/Nitrox Integrated computer (www.atomicaquatics.com/computer.html) boasts an OLED (Organic Light Emitting Diode) color display and a 3D digital track back compass. It also includes a rechargeable lithium ion battery. For tech divers, Liquivision's XEO Trimix Computer also sports a full-color OLED display, tap-interface, user-replaceable battery, strap or bungee mounting options and the Buhlmann-GF (ZHL16C) algorithm.

If the new fins are any indicator, it looks like my old split fins are going the way of white bucks and saddle shoes

Oceanic displayed prototypes of two highly anticipated product upgrades: the Atom 3.0 wrist computer and VT 4.0 puck-style model. They're so new, as I wrote this they still weren't on the Oceanic website: www.oceanicworldwide.com.

Conversely, 26 booths touted rebreathers and related products or services (instruments, instruction, etc.). An impressive showing, despite an inbox full of recent bad publicity, and even calls for rebreathers to be banned (see *Undercurrent*, November 2010).

Watch Your Hands, Buddy

Scuba divers were offered a number of hands-free devices, including Light & Motion's Sola Dive lights with neoprene padded wrist mounts and adjustable straps. A "D" ring on the light offers alternative BCD or wrist clip options. Three models are listed at www.uwimaging.com/sola1200d.html from \$379-\$679, depending on light power.

Liquid Image (www.liquidimageco.com) released the latest in scuba camera masks. The *Scuba Series HD Wide Angle* model shoots HD video and five megapixel stills. The new lens offers a 136-degree viewing angle, more than double the field of view of prior masks. The mask uses four AA batteries and expands with up to a 32GB SD memory card.



Video shooting mask

Of course, these innovations raise the question of why divers need to weigh down their heads and keep their hands free in the first place. . . to grab coral? Pet fish?

To Layer or Not to Layer

Dry suit models abounded, with radically different approaches to insulation, supported by plenty of claims from the manufacturers. White's Fusion Bullet and Ladies Fusion Tech suits have a Drycore loose fit shell incorporating latex seals, dry zipper, air intake and exhaust valves to create the waterproof barrier. An "over suit" made of durable stretch fabric is attached to the Drycore at the wrists, ankles and dry zipper to form a streamline fit. It's available in three color combinations. MSRP is \$2098 at <http://whitesdiving.com/sport-diving/fusion-bullet-drysuit>.

BARE's new SB System Trilam dry suit (www.baresports.com/en-US/Dive/Products/Drysuits/SB-system-drysuit) combines three lightweight layers that provide stretch for freedom of movement, and breathability to move moisture away from the skin and to exhaust trapped humidity, so they say. BARE guarantees seams and workmanship for the life of the suit. Even if you're not the original owner, you're covered.

At the opposite end of the spectrum, go to www.waterproof-usa.com to check out the D1 Hybrid with a patented 3-D mesh inner lining designed to keep insulating air between the diver and the water. Waterproof claims that constant insulation at all depths evenly distributes water pressure and makes buoyancy control easier. The lining stays dry, and supposedly eliminates the need for heavy underwear. We shall see.

The biggest gripes about dry suits – leaky and flimsy seals, which seem to require attention on virtually every surface interval – were addressed by two manufacturers. Waterproof’s new Silicone Seal (www.waterproof.eu/index2.html) is said to have 40% better stretch than latex, to facilitate donning the suit and sealing with your skin. SI Tech’s Quick Cuff System (www.sitech.se/pages/default_uk.asp?SectionID=3569&ArticleID=7945) enables a quick exchange of seals, in case one gets ripped or the diver needs different size seals.

Waterproof also introduced a line of wet suits. (Doesn’t the name “Waterproof” contradict the concept of a wet suit?) OK, so they are not waterproof, but with a choice of color accents, they’re *très chic*.

Also on the fashion-forward front, Exceed Wetsuits (www.exceedwetsuits.com/index.php) introduced Electro Men’s 3/2mm full suits of E-stretch neoprene in black with orange insets. There’s even a contoured crotch for freedom of movement and comfort, thank you very much. The Eclectic women’s model in shocking pink is also contour cut . . . presumably for different contours, but in our travels we’ve seen more contours than the Alps, so if everyone gets a good fit, it’s magic.

Get Your Kicks

If the new fins are any indicator, it looks like my old split fins are going the way of white bucks and saddle shoes. Take the APS Mantaray (www.apsmantaray.com) with a patented dual water channeling system claimed to add blade surface on the down stroke and reduce resistance on the up stroke, while improving blade stabilization. A scoop expands and contracts during kick cycles to create a pump action and channels focus the thrust off the blade tip at the same time. Mantaray claims the shorter blade design is reef-friendly and travels easily.



Fish tail in a fin

My nomination for “Weirdest Fin Design since Force Fins” goes to Predator Power Fins (www.predatorpowerfins.com). With the tag line “Do you want to swim like a predator or like their prey?,” these babies feature aquatic wing shapes that supposedly mimic ocean-going predators’ tail fins. The current model, Power Elfins, retails for about \$160.

Make it Snappy

Expensive, cutting-edge camera gear bristled from 48 different booths, but as a casual shooter I was struck by the Seashell “Universal” digital camera case. Two models fit more than 800 digital cameras. The stylish clear plastic cases come trimmed in a choice of colors, they’re waterproof to 40m/130 feet, and they retail for less than \$218. They looked cool until I read the fine print on the website: <http://seashell.hk>. Turns out there’s no zoom lens control, and the camera flash causes internal reflections within the hard plastic body. Instead, manufacturer Zear Corp. of Hong Kong suggests using high shutter speeds (ISO800 or above) and external lighting.



Getting Around

Into the world of self-propelled underwater vehicles and submersibles, enter one of the show’s goofiest product launches: Aqua Star’s sea scooters, which are ridden like underwater bicycles. Two Models (the AS1 one-seater and AS2 two-seater) were created to provide the underwater experience to virtually anyone – no certification, no attached gear, and no experience required. The user’s head goes into a precarious-looking open-bottom helmet that’s integrated into

The Devil is Not in the Details

Several weeks before the DEMA Convention, I noted the “first annual” DEMA prayer breakfast was to be held, sponsored by a long time dive industry professional, Tec Clark, who has reinvented himself as the founder of Reef Ministries, after “being transformed into a true believer in the Spring of 2007,” he says on his website (www.reefministries.com).

I emailed Tec to get a rundown of his beliefs and learned that he is a creationist and believes the universe was created 8,000 to 12,000 years ago, or thereabouts. He has found a unique niche in the evangelical world, praising God’s creation of the underwater world and leading dive trips for people who were to have a first hand look.

He has posted ten articles on his website, all of which I read, but one entitled *Cleaner Fish and Shrimp, An Evolutionary Stumbling Block* struck me as worth passing on. Essentially, he says that:

“One of the greatest phenomena witnessed in God’s underwater world is that of ‘cleaning stations’. These are where predatory fish such as groupers and moray eels go to have their mouths and even gills cleaned by small wrasses, gobies and/or shrimp. This is a type of symbiotic relationship called mutualism where both parties benefit; the cleaner derives nutrition and the cleaned has food debris and parasites removed.

“The big question is how did this relationship originate? Evolutionists subscribing to Darwinian ‘survival of the fittest’ maintain this relationship evolved from time, struggle and chance. Dr. Gary Parker, a former evolutionary professor turned creation scientist, claims that this cleaning symbiosis is from plan, purpose, and special acts of *creation*. Dr. Parker writes in his book, *Creation Facts of Life*:

“The major problem is using Darwinian fitness to explain traits with many interdependent parts when none of the separate parts has any survival value. There’s certainly no survival value in a small fish swimming into a large fish’s mouth on the hope that the big fish has somehow evolved the desire to let it back out!”

“. . . . God’s creation. . . is purposeful and by design. . . . To subscribe to the belief that struggle and chance mixed together with some magic potion called time will ultimately lead to this symbiotic relationship, denies the infallibility, brilliance and sanctity of the Word of God.”

Tec invited me to his breakfast and I might have done so had I attended the convention, though I might have been the only Darwinist in room. I have no quarrel with a prayer breakfast, nor prayer rugs, for that matter. However, I’m one of those guys who believes in the separation of church and scuba. State, too.

– Ben Davison

the scooter body with the breathing apparatus mounted onboard the bike. Traveling at speeds of up to 4 mph, with a basic operating depth down to 40 feet, riders have access to shallow reefs without requiring a weight belt or back strapped tank. Sounds like a cruise ship or family resort novelty. Check it out at www.aquastarscooters.com and on YouTube.

For surface support, Conquest Dive Kayak offered a line of inflatable kayaks with 40-gauge PVC viewing panels that allow paddlers to spy on underwater features and sea life. The hulls are constructed with four air bladders made from 20-gauge PVC, covered by a 1,200-denier marine polyester shell that resists punctures and tears. Nevertheless, a repair kit is included, so I wonder how well they would hold up as dive kayaks. Solo and tandem models can be seen at www.conquestkayaks.com.

Oh, My Aching Dogs

The last surprise at DEMA was the proliferation of foot and joint care products. Wheelchairs and scooters – the terrestrial kind – were available to help attendees negotiate the cavernous Convention Center, and a number of booths offered pain relief products. A Neox Invasion Therapy Massage chair gave me a deep tissue rub while humming like the scary sound effects in “Jaws.” To make it through my second day on the floor, I picked up a pair of Happy Feet massaging insoles, to boot. They helped, but I still found myself dreaming about weightlessness.

– Larry Clinton