

Trudy's Hotel, Utila, British Honduras

A bargain of bygone days

To stay at Trudy's Hotel is to return to another era. If you're lucky enough to have a bathroom, its entrance will be covered with a plastic curtain. If you have no bathroom, you will share a shower and a commode down the hall. Some of the 10x12-foot rooms have double beds, others have twin beds. None has much else. There are no chairs or closets. Clothes are hung from lines or nails. The thin walls have no insulation; loud conversation and the sound of lovers can easily travel between rooms. There is no air conditioning. Large fans keep the air moving. Tap water, which smells like sulfur, is not potable. There is no hot water. The shower is scarcely more than a low pressure trickle. At 6 a.m. the generator stops running and the room fans stop moving the hot air. The townspeople awaken, the dogs begin barking, and the noise of the surrounding city greets the sunrise. The pump to lift water to the rooms begins to groan at 6:30. The dive shop compressor fires up shortly after that. There's no more sleeping.

At Trudy's Hotel there are no beaches; there is no snorkeling or diving from the hotel front. Sewage from the village is pumped into the nearby water. At night, there is nothing to do, save drinking beer in the Bucket-of-Blood or any one of several bars in this small town.

But beneath the surface of the sea I discovered acres upon acres of virgin hard and soft coral, black coral and white coral, gorgonia and fans on the vertical walls which drop to 200 feet. There are angel-fish, beaugregories, groupers, spotted eagle rays and nurse sharks. For hard-core divers there is hardly a better bargain. The price, which includes air fare from New Orleans, all food, four tanks/day and lodging, is a meager \$495 for the seven nights and six days.

The destination is Utila, a small island off the southwest tip of Roatan, in the British Honduras. It has not been written about. It has not been advertised. I'm not even sure how I found it. But I'm delighted I did.

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My tour of Utila began at the New Orleans airport, where my flight was met by tour leader Phil Cohagan, owner of Seven Seas Dive Shop in Baton Rouge and a partner in the Down Under Dive Tours, the trip's sponsor. Phil rounded up several other divers who had arrived for the tour, drove us to the motel for our overnight check-in, then off to the French Quarter for a Creole dinner and the opportunity to become chums with our future diving buddies. In the morning we were shuttled to SAHSA-TAN Airlines for the 3-hour Electra flight to La Cieba, Honduras, where after an efficient review by customs, we boarded a DC-3 for the 13-minute flight to Utila International Airport.



UTILA INTERNATIONAL TERMINAL

The proprietor of Trudy's Hotel, Foster Cooper, after greeting us at the airstrip, directed his crew to load our baggage onto his truck and directed us to the short walk across the landing strip to the hotel. The Trudy did not surprise me. In fact, I had expected much less. Phil, who had minced no words in describing its splendor, would have discouraged any tenderfoot from joining the tour, but he had not discouraged me. His candor is essential. With the closeness of living, eating, and diving, not unlike when being onboard a dive boat, one disappointed and therefore cranky person could spoil the trip for everyone.

Diving at the Trudy is easy enough--the boat dock begins at the back door. The well-maintained, 55-foot wooden dive boat (13-foot beam) can easily handle twenty divers, so the fourteen on this trip were quite comfortable. But the boat does pitch and roll. For the soft-stomached, Marazine may well be advised. Phil assigns specific seats to each diver and provides large plastic garbage cans to help keep gear organized. He joins the divers underwater, but each buddy team is responsible for planning its own dives and observing the tables. Decompression dives are permitted, yet the thought of a complicated evacuation to a Texas recompression chamber prevented anyone on this trip from pushing the tables. He discourages coral collecting, but does permit divers to collect a few shells with live animals inside. At dive sites he prohibits spearfishing. When food for the dinner table is sought, fish are speared in remote areas. Each day Phil offers four tanks, two after breakfast and two after lunch. Sometimes the second afternoon tank is taken at night. Between dives cold soft drinks, Vienna sausages, sardines, smoked octopus, nuts, candies, minced ham, crackers and granola bars are offered gratis.



TRUDY HOTEL & DIVE BOAT

On our first morning we left the dock at 8:45 a.m. to dive Black Coral Wall, 25 minutes from the Hotel. Beginning at 25 feet and dropping to 200 feet, the vertical wall was covered with dense growths of gorgonia, whip, white, black and pillar coral, barrel, basket, tube, and wall sponges. I was reminded of the beauty of Bonaire. Brain coral was splashed with colorful Christmas tree worms and small feather dusters. All the normal tropicals

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were here: angels, parrots, trumpetfish, rock beauties, wrasse, beaugregories, groupers, butterflies, snappers, squirrels, bigeyes, soapfish, jackknives, chubs, large green morays, and spotted eagle rays. Sponges were loaded with brittlestars and arrowcrabs. Small canyons, caves and grottoes punctuated the wall. Inside I occasionally spotted resting nurse sharks. So prolific was the life, I shot a full 36-exposure roll on each tank, something I had not done since the Red Sea. My better shots were in less than 50 feet of water.

We returned to Black Coral Wall for a night dive, anchoring the boat in 25 feet of water. The basketstars were out in force, attached to the highest coral pinnacles like TV antennae. Schools of squid darted in and out of our light beams looking like many small cars with headlights. Several large lobsters and crabs crawled along the top of the wall, which was decorated by sparkling coral polyps. Although bright deck lights shone from the boat above, when the water became choppy the light no longer penetrated the water. To give divers the ability to sight the boat at all times, a light or a couple of cyalumes hung from the boarding area on the stern of the boat would help.

We had a fine dive at every dive site that Phil had previously discovered-- the Lighthouse, the Airport, Turtle Harbor, Sand Cay, Raggedy Reef, and Carolyn's Reef--and we also searched and found new sites. We dived a shallow, sandy grassy area, which I expected to be a bore, yet here were beautiful helmet conchs, large tritons, many large starfish of various colors, eel gardens, peacock flounders, squid, the up-side-down jellyfish, and in my hundreds of Caribbean dives, something I had never seen outside the Pacific Ocean -- cardinal fish swimming undisturbed in anemones.

During my visit the prevailing eastern wind blew a steady 15 knots for four of the six days, preventing us from diving the east side of the island, an area which has seldom been dived. We often anchored in choppy seas with 2-3-foot swells, but boarding the boat was never difficult at these anchorages. A crewman is always available at the stern to take divers' tanks and cameras as they surface. In choppy conditions visibility ran about 60 feet; on good days it exceeded 125 feet.

The last day of my trip was one of those good days. There was not a ripple on the surface nor a particle in the water. We dove near the airport, where a steeply sloping wall began at 15 feet and leveled at 70. It was covered with every coral imaginable. At the bottom the white sand was alive with gardens of eels, peacock flounders, stingrays, large green morays, and lobsters and crabs nestled in whatever holes they could find. Along the wall were plenty of tropicals and very large midnight and rainbow parrots. There were enormous barrel sponges, large enough to hold divers and provide plenty of nice settings for people photography. As I cruised about I pondered the contrasts of the virgin beauty below and the 1930s unkempt town of Utila above. It was not easy to leave the water.

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Now with my description of the fine diving completed, let me soften my harsh words about the hotel itself. Sea breezes through louvered windows circulated by fans permit comfortable sleeping. (Second floor rooms are a bit more comfortable than those on the ground floor.) The beds were comfortable, the rooms clean. Linen towels are changed daily. Large plastic pitchers of potable fresh water and glasses are available for the rooms. Thanks to the sea breezes, there were no mosquitoes and only a few sand fleas during my August stay, but mosquitoes do appear in rather large numbers during March and April and in late September.

Food at the Trudy is not fancy, just nourishing and filling. Breakfast at 8 a.m. consists of eggs and/or pancakes, bacon, grits, perhaps fresh avocados, homemade bread and orange juice. Lunch, served about 12, was normally ham and cheese sandwiches. The varied dinner menu included lobster, fish, ham, and roast beef, served with vegetables, salad and homemade cornbread. No desserts were served, so for the first time after a dive trip I arrived home weighing exactly as I had before the trip.

The only diversion on the island is a walking tour, which takes a leisurely five hours. I took my hike one morning after breakfast, arriving back at the hotel in time for two afternoon tanks. I visited Bradford Duncan's uncompleted Crown Colony luxury resort, which will cater to wealthy oil company executives at \$500 per day per couple! From Duncan's, the road winds through the edge of town and past the Bucket-of-Blood bar, where I stopped for fuel for the long walk. Shortly after leaving the bar, the road becomes a trail and remains that way for the 3-4 mile walk across the island to Pumpkin Hill, the highest point on the island. The trail winds through beautiful jungle, through groves of plums, bananas, limes, papaya, guava, and coconuts. (Keep a lookout for huge banana spiders hanging in the middle of their webs across the trail.) On top of the hill heavy foliage prevents one from having a good view of the island, but that problem can be overcome by climbing part way up an old light tower. After the long walk a cool dip at the nice beach near the foot of Pumpkin Hill felt especially good. Then, after the walk back a beer stop in the Bucket-of-Blood provided my just reward.

So, my fine friends, where in today's pricey world can we find such a bargain as Utila diving? Certainly it is no place for the nondiver. And for sure it is no place for any traveler expecting even the most limited of vacation luxuries. And surely there have been those before me who have hated this joint, the tiny hotel, the family-like food, the lack of any tropical spa glitter. But for hard-core divers, it is indeed a bargain. On each of my four tanks a day I averaged just about an hour's bottom time since there was plenty of excitement in water less than 60 feet deep. Of the 14 people on this trip, not one uttered a bad word. We were a congenial group. Phil and his wife, Nancy, were too congenial and helpful. He is a businessman who dives, not a diver running a dive shop, and he organizes his activities with special expertise. He runs 12-15 trips a year so there is plenty of time to organize with him. For information you may write: Phil Cohagan, Down Under Dive Tours, P.O. Box 80491, Baton Rouge, LA 70898.

I will conclude by noting that on one dive, just as I was getting my gear ready, the first pair entered the water and almost immediately after I heard their splash, two heads popped to the surface shouting that there was a shark under the boat. You can't imagine the rush by the rest of the divers to get into the water. Diving here is the way resort diving at Roatan used to be, before luxury dive resorts and luxury prices took over. It's a dive trip to another era.

Divers' Compass: Take whatever you need to repair your own gear since there are no spare parts on Utila. . . .For hot showers, bring along a Solar shower (See Freeflow, October 1980). . . .There is enough power to charge strobes overnight, but not enough for electric razors; power lines are being rigged to bring electrical power to the island "soon". . . .Carry a few extra bucks to buy carvings from

the local artists, and to cough up \$10 for Utila departure tax. . . The returning air flight gets to New Orleans about 1 p.m., plenty of time to get home from Utila in a single day. . . There is also decent snorkeling, but not in the polluted waters off the hotel front; a jaunt across the backyard landing strip leads to pure water, fish and coral.

From Our Readers Travel: Part I

From time to time we like to compile comments from our readers and publish them for the benefit of others. From the comments we are able to update our previous reviews, report any experiences contrary to our own, and discuss areas that we have yet to visit. We do our best to give a fair representation of an area. If we have not listed destinations or resorts, we either have insufficient information or nothing new to add to comments appearing in earlier issues. If you have traveled to a foreign resort recently and would like to share your experiences with us, please complete a travel questionnaire from a previous issue (or simply send a letter) and mail it to me, C.C., the travel editor, at POB 1658, Sausalito, California 94965.

GRAND CAYMAN: Our favorite hotel and dive spa, Spanish Bay Reef, began to slip a few months ago according to reader reports. Now we know why. Jim and Cathy Church, who ran the highly-touted underwater photography courses at SBR, have informed us that the resort is closed for an indefinite period. Apparently SBR has been up for sale and, according to Jim, "while the buyers and sellers stalled and negotiated, the bank foreclosed." While the drama of SBR continues, the Churches are shopping for a new resort to serve as home base for their instruction. Jim says to tell our readers "Jim and Cathy Church are doing just fine. Losing the winter season does hurt, but we have the capital and wherewithal to continue. We aren't investors in Spanish Bay--we've just brought groups there in the past. If the resort shapes up, we may bring groups back in the future."

Readers tell us our April '80 reviews of the Casa Bertmar and the Sunset House remain accurate. F.A. Nueberding (North Augusta, S.C.) writes: "Your report that Casa Bertmar is like summer camp is right on the nose. . . spearfishing is driving the big fish off, but the wall dives are great." Ron Mayer (Miami) says that the diving is "equal to Cozumel, but the facilities are superior." . . . Elsewhere, K.W. Cruse of Houston writes that staying at the Coral Caymanian and diving with rented tanks from Athlee Evans (formally with SBR) at Quabins gave him "23 dives, 1490 minutes of bottom time, 8 different sites, at a cost, portal-to-portal from Houston of \$714. . . Soto's Holiday Inn operation, according to several letters, still attracts the greatest percentage of inexperienced divers who show limited regard for the precious underwater environment. . . The romantically-located Tortuga Club has access to some of the best and most virgin territory on Cayman. Frank Foote (Miami) says guide Darby Bodden is excellent, though experienced divers might get a bit annoyed with his requirement to keep groups together and to stay above 100 feet along the wall (most of the time): "New divers, however, were very reassured by Darby." Lisa Schultze (Key Largo) said, "Diving with Darby was fantastic. Beach is so isolated that one can walk nude for several miles without interruption. . . Cayman Kai has excellent condominium units at moderately high but fair prices, but several of our subscribers continue to complain that diving there is too restrictive for the experienced. Jan Donovan (Madison, Wis.) says that he has been to Cayman about twenty times "and never had so little freedom as a diver."

BERMUDA: Chuck Wayne (Reading, Mass.) read us out for not mentioning his favorite operation, Shaffer's Underwater World at the Holiday Inn. Wayne has

been there three years in a row and has "never had a boring dive." Two readers have complained about the operation at Grotto Bay and no one has written well of it.

Honolulu's Hanauma Bay

The Home of Simulated Scuba Diving

I would like to report on guided tours offered by several wonderfully inventive dive shop operators in Honolulu who peddle their tours to divers who have only a day or two to spend in the Aloha State and don't have time to visit the other islands.

I call it simulated scuba diving.

I began with telephone calls to several dive shops to ask about day trips for experienced divers. They all said they had just the thing for me. No sweat, they all said, super diving awaits. Just sign up at your hotel, pay your money, and the van will come around in the morning and pick you up. Terrific, I thought.

Sure enough, the van showed up at 8:20 a.m. to pick up me and three other plain old ordinary divers for the 20-minute ride to Hanauma Bay, a protected reef in an old volcano crater east of Diamond Head. All the way our diver extolled the virtues of the dive site.

Simulated diving, I quickly learned, consists of waiting at least an hour and fifteen minutes on the beach for the leader of our "fun dive" to get his act together. We were suited up in 10 minutes and waited around with our tanks on our backs. Finally we waded in the water and snorkeled out. We had 2500 psi. It was exactly 10:05 a.m. Then we submerged. To 10 feet. There we peered into a dust storm, then paddled out over clumps of mostly dead coral heads toward the depths.

Well, in this simulated diving, I discovered, you never really get to the depths. At 20 feet, however, our guide dutifully checked his dive tables in what appeared to be a simulated display of competency.

Swimming in our dusty surge, we looked at lots of fish—all common and about the size of average aquarium stock—and eventually came to a coral ledge that dropped off to a sandy bottom at the incredible depth of 25 feet (later our guide swore it was at least 40 feet).

Down so deep the visibility improved considerably. But, apparently this was too deep for the sport of simulated diving and our guide quickly motioned us back up to the top of the reef where we stayed for the remainder of our hairy expedition.

At exactly 10:40 a.m. our intrepid guide signaled that it was time to surface. That's when I discovered another great virtue in simulated diving: it saves air. I still had 1800 pounds. On the top, in a chop, we dutifully inflated our BC's for an arduous 100-yard swim back to the beach.

On shore, I noticed that all the other dive shop vans were parked next to ours. In the water I noticed other divers who, too, were being treated to simulated dives. Obviously the sport is catching on.

Let me recap the virtues of simulated diving.

First, you get to anticipate a plain old ordinary dive and then find yourself free of the burden of having to sink any deeper than 25 feet.

You are allowed to get up nice and early in the morning and are encouraged to help your guide load and unload the gear and carry it to the beach.

You get to strap on your gear and wait around in the sun like a macho man, then you get to make a beach entry through hordes of sun worshippers and pretend they're staring at you in awe.

You get to spend half an hour at an average depth of 15 feet.

Finally, you get to surface, swim back to the beach and ride back to your hotel with a tank containing more than half the air you started with—in case of emergency, of course.

But here's the best part. You get all of the above for the unbelievably low price of \$45.00, \$22.50 for the dive, \$11.50 for the transportation, and \$11.00 for the equipment.

And there's more. Consider the convenience. By signing up, you avoid having to catch the 25¢ shuttle bus from town to Hanauma Bay, and toting your snorkeling gear on public transportation. You don't have to hold your breath to experience the tiny tropicals and sparse coral. And, you don't have to hang around the beach as long as you want. You get to go home when you're told to.

Naturally, I have only praise for the several Honolulu dive shops which have turned a decent place for snorkeling into a major site for simulated scuba diving. Their creativity, like their bank accounts I'm sure, is awesome.

CC

GALAPAGOS ISLANDS: Montague J. Lord (Washington, D.C.) writes: "The best! Everything I hoped for and more (except for the divemaster, who seemed burned out). I've really been turned on to See and Sea Travel, who arranged the trip."

SRI LANKA: According to James Gould (Evanston, Ill.) the Coral Gardens Hotel, located on a sensational coral outcrop, "is excellent and relatively inexpensive. Arthur Clarke (author of 2001, etc.) owns the dive shop at this Kikkadawa hotel, but Gould found the staff "lazy and unsafe." Nevertheless, the diving has "better coral and more exotic fish than anywhere in the Caribbean, large Indian Ocean fish and large turtles always near the shore."

VIRGIN ISLANDS: On St. John, Charlie Smithline (whom our reviewer found to be "surly") no longer leads dives from Caneel Bay. W. Carlson (Washington, D.C.) dived there several month ago with Jim Travers, whom he found "enthusiastic, anxious to please, careful with new divers, flexible with experienced divers and, all in all, the operation is much better than it was." . . .To beat the high cost of living on Tortola, Al Grotell (NYC) was able to get an air-conditioned efficiency with a kitchenette and maid service at the Treasure Island Hotel, at a fraction of the regular hotel price. He calls George Marler the most "competent, helpful, and friendly guide," he's had the pleasure of diving with; Frank Davies of Tampa would agree with Grotell's assessment of Marler, but says "the only thing to see is the wreck of the Rhone; the other dives don't compare with the average dives at the Caymans, Bonaire or Roatan."

ARUBA: Not much in the way of fish or coral, especially when compared to neighboring Bonaire. As Nancy Myers (St. Louis) says, "It was nice to get wet, but not really worth schlepping the dive gear all that way. We kept complaining about the lack of fish and the dive guide kept promising 'a better spot' tomorrow. We never got there, although we dove a total of seven times over five days with Sub Sea Safaris at the Aruba Sheraton."

THAILAND: Phuket Island Resort is overpriced by Thai standards, according to Jim Gould of Evanston, Ill., but the fishlife is abundant, although some of the reefs seem to be dying. This is a "tropical hideaway, very sleepy and isolated." The dive shop on the premises arranges boats for unguided tours at remote islands.

JAMAICA: Political violence has wracked Kingston, but with the recent election of a moderate Prime Minister the climate should change. We've received no reports of tourists being seriously hassled on the Montego/Bay Negril side, but then our own reviewers have never found the diving sufficiently spectacular to recommend it to anyone unwilling to face a sometimes hostile country. On the other hand Kathy Jameson (Louisville, KY) liked the availability of the dive boat at Negril Beach Village and preferred the fewer restrictions on diving she had found at Clubs Med, and was especially pleased to report that "on the last dive we made we came within ten feet of a 15-foot hammerhead shark," indeed a rarity in these waters.

JAPAN: Last year Bill High (Seattle) dived Izu Ocean Park, where he says most divers from the greater Tokyo area go for a weekend of diving. He called it a "good experience for those who want to try a wide range of diving conditions."

FIJI: Bob Staley (Decatur, Ill.) reports that on a single dive off the lovely resort on Mana Island he saw "a large jellyfish, twenty sharks, two schools of large barracuda, and took a ride on a sea turtle." . . .Dr. Hollingsworth (LaJolla, CA) reports that although his only previous experience was in the Caymans he was delighted with "the marvelous colors in the soft corals, the beautiful and lush ten-mile island of Taveuni, and the unspoiled natives." He stayed at the Travel Lodge and dived with Ric and Do Cammick, who run Dive Taveuni. "They're fine people," the doctor writes. (More reports next month.)

The Secret of the Coral Reef Comes Indoors

The Smithsonian Institution now houses the only living indoor coral reef in the world. Three tons of coral rubble and more than 200 species of plants and animals were transported from the Caribbean to fill the 3000-gallon miniature ocean created in the Washington, D.C. Museum of Natural History. Living coral reefs have previously been impossible to establish, but a discovery by Smithsonian scientist Walter Adey has paved the way for the reef's success.

Dr. Adey discovered that a fuzzy blue-green, green, brown and red algae growing on the reef's shallow bottom, working in collusion with the waves and currents which wash over a reef, is a main contributor to a mature reef's tremendous biological productivity. This algal "lawn" captures the sun's radiant energy and nutrient waste in the water and, through photosynthesis, converts them into cell growth and oxygen. The algae provide food for many of the reef's fish and other animals and prevent them from polluting the system.

To simulate realistically the reef's environment, a number of mechanical developments were required. An automatic wave generator, consisting of two large buckets which alternately dump water into the tank, creates a current that surges down into the depths of the tank and then upward, over the reef's crest. At regular intervals, both buckets empty simultaneously, simulating the waves of a different force and frequency that roll over the natural reef. Distilled water is added automatically to the tank to control the salinity. Every five minutes brine shrimp are squirted into the tank in amounts consistent with the amount of plankton that would wash into a reef.

Adey experimented with a number of light sources to find one which would provide sufficient energy to simulate the sun in a small area, yet provide a color spectrum close enough to natural sunlight so that the algae could gather the same light they use in the wild. He finally settled on halide lamps and installed ten 400-watt and four 1000-watt lamps over the main tank, timing them to modulate their intensity through the full cycle of dawn, sunrise, high noon, sunset, dusk and darkness.

At night, of course, the daytime animals on the reef retreat into hiding places and the reef is taken over by a different set of animals. The reef has a protected "lagoon" of 500 gallons, connected to the main aquarium by pipe. Each night valves are opened, permitting fish to swim through the pipes and feed on tiny crustaceans that live in the lagoon's sea grass.

Adey went through a number of testing processes over the years to perfect the aquarium. For example, he says that "it took me time to discover that the violent wave surge was critical, because it keeps the sediments off the surfaces of the plants and animals and prevents the formation of a partially 'stagnant' water layer on the surface."

The aquarium provides a valuable setting for observing fish behavior. For example, damsels "tend" their algal gardens, while guarding their algal territory from others. They graze their territory and weed their plots. Damsels have also begun to breed in the tank, but the larval fish, once hatched, are rapidly eaten by larger animals. In the ocean these larvae migrate to the open ocean to grow, returning later when they are able to take care of themselves.

Adey's aquarium not only pleases visitors to the Museum, but it pleases scores of researchers who observe various facets of the reef for their own work. But perhaps more important, Adey believes that his algal lawn could be grown on thousands of floating platforms scattered across millions of miles of tropical ocean. The algae, once harvested, could be taken ashore to be converted into cheap alcohol or methane fuel, perhaps someday providing a major source of nonpolluting fuel for the future.

Beating the High Cost of Dive Vacations:

Twelve tips for saving money

Inflation and the upward spiraling price of petroleum seem to be pushing the cost of international dive vacations to unbelievable heights. Not only are air fares on the up escalator, but also the costs of running a dive boat, importing food to resorts, and catching the taxi from the airport to the resort are on the rise. Here are a few ideas which, if

followed prudently, can reduce the cost of your dive vacation by hundreds of dollars.

1. Plan far enough ahead so all contacts with the resort can be made by mail. Last minute details that have to be handled by telephone or cable can be expensive.
2. Pay for your flight tickets as far ahead of your

- departure as you can. Although you may have reservations the rate can continue to be raised until you actually pay for your tickets. But once you pay for your tickets, the price of your flights is fixed.
3. Although a group of fifteen divers can fly to a destination, have lodging and dive for the price of fourteen, some Central American lines may offer savings for groups of four or more. Contact airlines to determine if there are rate reductions and suggest small-group reductions to hotels and dive operators (who will find it much easier to serve a prearranged group than a pickup group with numbers varying daily).
 4. A competent travel agent can generally seek out the lowest air fares, but you might double check by calling the airline rate desk to get the final word. Simply dial the reservations number of your airline and ask for the rate desk. Those are the people with accurate information about all fares and discounts.
 5. Getting to Miami or New Orleans, typical points of departure for Caribbean travel, can be expensive. Air/Hotel packages may offer a savings. Mid-week super-saver fares can reduce costs. Night flights or the coast-to-coast red-eye specials can be helpful. Having to stay overnight in Miami or New Orleans to catch a morning flight can easily add \$50 to \$100 to the bill of two people traveling together.
 6. Where there once were two seasons for hotels, the December 15-April 15 high season and the rest of the year, many hotels now have four, five or six different rates throughout the year. A week in early January might be 20% less than a week in early February. Summer, of course, may be as much as 50% less.
 7. Before agreeing to a certain package, verify that you indeed want all the components. If you don't dive every day or don't always dive all the tanks offered in a day, get enough information about costs to ensure that you won't end up paying more than you need to. If you stay on an island where there are a number of hotels and restaurants, you may not want the American Plan or the Modified American Plan, which require you to eat your meals at the hotel. You may be able to make adjustments in the plan once you arrive. Some hotels have agreements with other hotels and restaurants to permit guests to dine out at no additional charge. Ask the desk.
 8. Consider renting a house or condo at your destination. On lodging alone you might save up to 50%; if you handle your own cooking you can save much more. Travel agents have lists of condos on many islands, but call the dive shop at your destination to get their recommendations of nearby accommodations so you don't have to rent a car.
 9. Have your predinner cocktails on the veranda of your cottage with locally purchased liquor. Don't be embarrassed since other people at the resort will be doing the same. Invite them over. Drink local rum (which in the Caribbean runs \$2-\$4/bottle) and local beer. A couple of drinks a night at the bar before dinner will add up to at least \$50/couple in one short week.
 10. Use a fold-up two-wheel luggage cart in the long-haul airports like Miami to save on tips and to save your back.
 11. Weigh your bags carefully before you travel. Several carriers in the Caribbean, for example, allow about 66 lbs./person, but charge lustily for extra weight. Small carriers which transport people to small islands can charge outrageous sums for overweight bags. Ask your travel agent for specific weight limits, then stick to them.
 12. Hotels and restaurants which don't charge in U.S. or Canadian currency try to make a few extra bucks by not paying the same exchange rates as banks. If possible, covert your money to local currency before departure or convert it in local banks. Before paying for services always ask the price in the currency in which you intend to pay so there is no confusion when it's time to pay.

#

For Dive Club Members Only:

As you know, *Undercurrent* exists financially only because of the support of its subscribers. We're able to "tell it like it is" because we have no advertisers to offend, no special interest to tout, no members of the industry to please.

Since we don't sell *Undercurrent* through dive shops, many divers who would leap to subscribe have not yet learned of our humble publication. Many are members of dive clubs. You can help them learn about *Undercurrent*—and help us increase our circulation—by sending us a copy of your current club roster. We'll send the members information about *Undercurrent* and add six months free to your subscription if you're the first from your club to send us your roster.

And, of course, we'll never tell your buddies where we got their names.

So, help your buddies, help *Undercurrent* and help yourself. Send a copy of your current dive club roster to: Ben Davison, *Undercurrent*, P.O. Box 1658, Sausalito, CA 94965.

A Handful of Tangs

An Undercurrent fiction feature

When he was three years old, his mother gave him a grey plastic frogman, the size of a fountain pen. She put magic pills in the back, where the tanks were, and when he put it in the bathtub it would rise and fall and bubbles would flow. It was his favorite bathtub toy so when he lost it he cried and asked for another, but his mother said they didn't make them anymore because of The War. It was 1943.

Between the second and third grades his mother told him that he must learn to swim, that she did not want him to grow up afraid of the water like she was. He did not like going to swimming lessons any more than he liked going to Sunday School. By the end of the second lesson he would hold the side of the raft and kick, but he would not put his face in the water. The instructor in blue trunks would shout his name and yell at him, so he shut his eyes, got his face wet, and cried when the water ran up his nose. By the end of the summer he could dog paddle to the senior raft. When he waved his mother waved back from the beach.

By the time he was nine he could do the Australian crawl, dive from the three-foot board without bellyflopping, and jump feet first off the ten-foot board, which he never did unless someone watched because it scared him and he did not want to face that fear without getting some credit for it. He learned to tread water after each dive, waiting to see if any girls lost their bathing suits, but he was never as lucky as his best friend Jimmy who had a diving mask and got to see the boobies of a fourteen-year-old. On family picnics he would stay in the water all day if they would let him, but his mother would always insist that he wait an hour after lunch before going back. "You've got to give you food time to digest. You'll get stomach cramps and drown," she would say, but he had never known anyone to get stomach cramps. "And don't jump into shallow water," his father would say, but he never paid much attention to that either.

For his eleventh birthday his parents presented him with a rubber facemask and a long, S-shaped, blue snorkel with a ping-pong ball in a grey rubber cage on one end and a grey rubber mouthpiece on the other. He knew that when he put his head in the water the ball would float up and plug the snorkel so that water wouldn't enter the tube, but his fifteen-year-old sister insisted on demonstrating. When she finished her lesson he put the mouthpiece in boiling water and told her never to use his snorkel again.

Next summer he spent most of his days with his pals exploring the lake bottom. He found a Spaulding golf ball which he gave to his father, a bass plug which he kept for himself, and a perfectly good ladies' bathing suit which his mother gave to Goodwill. Once in his excitement over discovering a gigantic largemouth bass,

he nearly bit off the mouthpiece on his snorkel. He inhaled water and began coughing. For a moment he thought he was drowning, but he kicked as hard as he could and made it to a spot where he could stand on his tiptoes and breathe. When he told his friend Jimmy, Jimmy would only say, "Well, I have frogfeet. I don't have to worry about that."

Frogfeet cost \$4.50. During the winter he saved 15 cents a week from his allowance, so when summer came he could buy a pair of green Voit swim fins. Jimmy told him he bought the wrong kind and laughed because his were flat and Jimmy's had ribs "like a real frog foot." But he knew better. Nearly every day he and Jimmy would walk to the lake, each carrying a shopping bag containing fins, mask and snorkel, a bathing suit wrapped in a towel, and a brown sack with peanut butter sandwiches. His mother said he was turning into a fish because his back was nearly black from the sun and his underbelly remained white.

When he was thirteen he wanted to snorkel in the Sound but his mother said it was too dangerous without adults. When Jimmy's father offered to take them she was still reluctant, but his own father said it was safer to swim in saltwater than in freshwater because he couldn't sink. They would wear clothes to protect them from the icy water. They snorkeled near some kelp and saw fish nearly as big as they were. Sometimes they would get scared when they saw things move in the kelp shadows, but they were fascinated and stayed in the water until they were so cold they couldn't stop shivering. On the beach Jimmy's father would build a driftwood fire, but it would always take an hour for teeth to stop chattering and purple goosebumps to disappear.

Next year he and Jimmy got permission to go by themselves on the bus. He wore a special sweatshirt and Levis, which grew stiff from salt. He had lashed a three-prong spear to one end of a broom handle and surgical tubing to the other. A "toad stabber" he called it. People stared at him when they saw the stabber, and on the bus ride home he would always unwrap one of the flounders or perch he had speared, as if to make sure it was still there, but really to show the passengers his underwater prowess.

When he was fifteen he saved \$39, enough to send away for a Seal Suit from the U.S. Divers catalogue. He couldn't decide between the one-piece suit, which had a big lump of rubber flesh hanging from the front where he would climb in, or the two-piece suit, which had to be connected around the waist by standing inside a rubber ring the size of a hula hoop and stretching the top and bottom over it. He decided he would look more like a frogman with the one-piece suit. He stored it in his room, dredged in talcum powder, in a brown

bag away from the sun. He could not afford the gloves which came with the suit, so he wore canvas gloves and wrapped rubber bands around the wrists of the suit to stop leaking. No matter how he tried to prevent it, water would always trickle in. His hands would grow numb in the canvas gloves, so some days he would leave the water early. Other days the long underwear and pajamas he wore underneath were so soaked with seawater leaking into the suit that he was afraid of sinking. As he got heavier he would drop rocks from the pocket of his ammo belt, which he wore around his waist for weight. He would even blow air into his suit by pulling the hood over his face, but as he would dive the extra air would blow out through the flutter valve on his hood top. His father called it a "Bronx Cheer."

When he was sixteen he would go diving at least weekly. He always had stories to tell. Once he forgot to look up on the way to the surface and popped out of the water with an enormous jellyfish on his face. He spit out his snorkel and screamed. The poison from its tentacles puffed up his head like a pumpkin. Another time when his body was stiff from the cold he lost his Brownie Hawkeye camera, which he had taken underwater in a specially made bag. Once he took a friend out for the first time, but as soon as his friend entered the water he stabbed himself in the foot, thinking in his excitement that the green flipper was a fish.

When he was seventeen something happened. He no longer wanted to take the bus across town, go spearfishing with Jimmy, or bring fish for his parents. He met a girl and all he wanted to do was make out. That fall he went to college.

* * *

In the middle of his 33rd year he was short of breath, and frightened by the occasional pain in his chest which he claimed was only tension. He ate peanut butter out of the jar for snacks and he would rather miss the bus home after work than run to catch it. When football ended he watched stock car racing, drinking Seagram's instead of coffee. His pants no longer fit around his natural waist, so he wore them lower than he had in high school, but now his belly bulged above his belt and the buttons on his shirt drew tight at the buttonholes, exposing his undershirt where there were no buttons. He did not mind being a tax accountant and he did not mind his wife; he had money in the bank and cars in the garage. And he had high blood pressure, beads of sweat on his forehead, and a sore lower back. He felt like crying about something, but he had nothing to cry about until one day his father called and told him his mother had collapsed at the supermarket. He cried on the way to the airport, drank Seagram's on the airplane, and when he got to his childhood hometown his childhood doctor had already treated his mother. "She's fine," the doctor said, "just

fine. But look at you." He bought his father a couple of drinks before they went home, then slept in his own bed that night. In the morning his father pointed at a pile of junk in the corner of the garage. "Look it over. It's going to the Salvation Army." It was his stuff. A Monopoly board, clamp-on roller skates with a key, a three-fingered first basemen's mitt, and a brown grocery sack. He removed his Seal Suit, still slick with talcum powder. He had forgotten about the tire patch glued on the puncture he had made with his cork-handled dive knife, about the unpatched hole near the knee he had circled with chalk. He had forgotten how small he had been then. "I'd like to keep this," he said.

He surprised his wife when he told her that this year they would go to Hawaii instead of Las Vegas. "Four years in a row to Las Vegas," he said. "A change is due." On their first day they sat in the shade on the beach drinking Mai Tais served by a dark-skinned beach boy wearing a lei. "This is the life," she said, and he remembered his chest pain. To keep his Bermudas dry, he waded only knee-deep in the surf, Mai Tai in hand, not going near the gentle breakers so he wouldn't have to run back when they rolled in. The next day he swam out and back. The following day he visited the beach shack. He had never seen fins so large, and they were black fins to boot, with holes in them. The masks had windows on the sides. Not a single snorkel sported a ping-pong ball. For the rest of the day his wife couldn't get him out of the water. He listened to his breathing, he floated weightlessly, he never heard a voice. "How about a drinking partner?" she yelled, but he only came out for lunch. Afterwards she told him to wait an hour before he went back in. "You'll get cramps," she shouted. He chased lemon tangs, saw a queen triggerfish, couldn't get near a unicorn fish, put his hand on an urchin, got nipped by a damselfish, found a tiger cowrie, had the bejesus scared out of him by a green-spotted eel hiding in a coral head. Later in the week his wife, lonely for company, took snorkeling lessons. He called United and changed his flight home from Friday to Sunday.

Becoming a certified diver was no cakewalk. So the students would become accustomed to the cold Pacific the dive shop owner kept his pool unheated. When his toe touched the water he recalled as a kid how much his jaw would hurt after he shivered for an hour. For sure he would kill himself, his wife had said, but someday he felt like he was dying anyway. His instructor seemed half his age, was blond, and had the body of an Olympic swimmer. He saw the cute brunette sidle up to the instructor, so he told stories of what it was like to spearfish in the old days, of schools so thick with rubber-lipped perch that he could impale two with a single shot. The instructor didn't pay much attention. When the instructor demonstrated the scuba gear, he feared its complexity so he acted as if he knew all about it. A woman in the class moved through the water like a seal. How he envied her. He tired so easily in the water. Only the

instructor's shouts kept him from quitting. On the last weekend they went to the ocean. On the surface in the waves he became sick and vomited. His heart palpitated. He nearly passed out. The seal-of-a-woman pulled him ashore and a doctor in the class told him his body could never take it. "Lose weight," he said, "Cut down on the booze," which was still on his breath from the night before. The seal smiled at him and he became a believer.

When he was 36 his wife told him that he looked 22 again, but she said it was no excuse for hanging around the dive shop like it was the corner bar. He dived nearly every weekend. Instead of watching Archie Bunker he went to the gym. The next year, at 37, he became the president of his dive club, the oldest president ever, they joked, but when he led the river run they shut up. "Stay home more," his wife-pleaded. "Come with me," he would reply. On their trip to Cayman three of the nondiving wives took certification courses. After she passed, he dove with her, only her. He had never felt so young. In the grey light of dusk he felt a new palpitation as she revealed the white of her breasts contrasted sharply against skin tanned by the Cayman sun, skin-toned by the Cayman waters. She had never felt so young, he thought, as he touched her softly and brought her close. When they finally left for dinner he could not remember the last time he had gotten out of bed after making love.

Once home he announced he wanted to become an instructor. "Only if you take me back to Cayman," she said and he promised her in a flash. Now that his pants fit around his waist again and the pains were gone, instructor training was less straining than his certification three years before. By the time he was 39 he was taking twenty-year-old kids to Salt Bay for instruction, leading three tours a year to Cayman and Bonaire, and writing an article for *Skin Diver* to be illustrated with his own photographs. His boss claimed he had forgotten how to add and ought to resign the accounting profession, so he sent him a photograph of a tube worm for Christmas.

At 40 he had his first heart attack. There were pains he had never before felt. As they intensified he called his wife from the kitchen. "This might be it," he said. She drove to the hospital. "Seven years ago," his doctor told him, "this would have killed you. You're lucky. But slow down." Later he liked to tell his friends, "the sea saved my life. It was a flock of reticulated butterflies or maybe a handful of lemon tangs, but once I saw them I knew I had to be with them. They saved me." It could have been the seal too, he thought, but no one would know what he meant.

To open his own business at the age of 42, his youthful banker told him, was indeed ill-advised, so he found an older banker. His doctor told him that slowing down did not mean starting a business. "Sure diving is relaxing, but a dive business?" He

would spend his weekends diving, he told the doctor, like he did now, but he would no longer have to worry about someone else's taxes. Instead, he learned quickly, he would spend his weekends worrying about how to pay his own taxes, while explaining the virtues of back flotation to a horsecollar BC, the reasons to buy nylon two-side rather than nylon one-side, or why it doesn't make much difference to a dive shop whether a diver shows a PADI or a NAUI card when he gets his tank filled. But he had no time to dive, not even a single day. Six months later the first fleeting pain in his chest scared him witless. For the next two hours he floated in the shop pool, staring at the cement bottom, listening to his breath through a snorkel, meditating, he supposed, though he didn't call it that. Within a month he found a new business partner. A week later he left for Cayman, his wife at his side.

"The sea saves my life," he said as they sat shoulder-to-shoulder, the seagrape leaves rustling in the late afternoon breeze. Holding hands they snorkeled to the reef, where a queen angel swam with them, a school of sergeant majors poked at their pockets and looked in their masks, and a swarm of silvery minnows, ten-thousand strong, perhaps ten-million strong, slithered and darted and danced to the reef music. Afterwards they huddled in their towels on the beach and drank hot tea in the bar. "I think we're home," he told her.

In the middle of lunch on his 44th birthday, before he had even finished his bowl of bean soup, Junior Ebanks, who had been his boatman since he had owned the resort, a full year now, burst into the dining room with news of dozens of enormous turtles swarming on the surface in Spotts Bay. It was a rough boat ride at such speed, but he was able to get a roll of Ektachrome into his Nikon without getting it wet. After an hour's search above and below the surface they returned, at a slower pace. "It's too dom bod, mon," Junior said. "Dem turtles don' come roun' much anymore. I tot we'd git 'em." In the dining room an enormous buffet replaced the bean soup, his partner had flown in from the states, the Banker from Barclay's was dressed with a tie, his kitchen staff wore paper birthday hats, the Bodden family stood ready with their guitars, flutes and drums, and when everyone yelled "surprise" and shouted "happy birthday" joy pumped tears from his eyes and everyone cheered and clapped. He hugged his wife for the longest time. His body felt strong, his heart young. "Junior, you damn old fish baiter, there never were any turtles," but Junior just shrugged his shoulders and hugged him, too.

After he opened his gifts it was time for a dive, "a very special dive for my friends," he said, "to a reef where only my wife and I have been." He called it "Genesis Reef." Four giant turtles rested in a crevice, between giant balls of brain coral. Two batfish lay side-by-side, covering each other with their

pectorals, as if they were lovers. A dozen of the most delicate banded coral shrimp scampered about an anemone, and he smiled when he heard the "ooh's" of his friends echo through their regulators when he pointed to four seahorses hovering within a foot of an orange and brown frogfish. From beneath a big coral head he coaxed an enormous moray by dangling a slipper lobster, but when "Waldo Too," as he called the moray, snapped he withdrew the prize and returned the lobster to a safe haven. For a finale, he approached a cleaner wrasse and, to the delight of his guests, the wrasse entered his mouth and went right to work. His wife nearly drowned from laughter. In the evening the beams of moonlight sent sparkles from the gentle ripples of the sea. He sat by himself for the longest time, watching the snouts and dorsal fins of the tarpon breaking the surface, bathing himself in the evening breeze, listening to the time pass, as it had there forever. He took a brisk run down the beach, drawing the salty air deep into his soul, then walked back slowly, with nothing at all on his mind, cognizant only of the warm and gentle waves stroking each foot as he stepped in the forgiving sand.

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When he becomes 49, his hair will be thinning, his wife fattening. The leathery skin on his chest will have wrinkles, his hands liver spots. When he looks in a mirror he will not be heartened by his aging beach boy appearance. He will wonder whether to relinquish the gold ring dangling from his left ear lobe, whether to switch from bikini to boxer trunks. He will try to avoid his crisis by seducing a 34-year-old instructor who will be leading a dive tour from Minneapolis to his resort for a week, but his depression afterwards will give clue enough to his wife who will hold her own liaison with an underwater photographer on contract with *National Geographic*. It will prove exciting for the moment only. He will accept his liver spots and become his wife's husband again. They will have no more flings. As the years pass he will grow deeply concerned about the disappearance of life on the reefs and develop the single purpose of conserving that life. He will turn his business over to his wife to devote his energy to conserving the mangrove swamps which serve as refuge for the fry of the reef, but which condominium developers want for their bulldozers. When he realizes no divers

have seen turtles for several months, the pain in his chest will return once again, but he will ignore it, only to work harder, at first with the Cayman government, then with the governments of Mexico and Belize, pleading his case to whatever tribunal will listen. At 55 he will be honored by the Cayman Chamber of Commerce in a banquet at the Galleon Hotel. "For Your Foresight, Passion, and Concern" the plaque will read. When he reaches 58 *TIME* magazine will drop his name in a feature story under "Environment." When he is 59 he will photograph several giant turtles off Seven Mile Beach. When he returns the following day they will still be there. At 62 Junior Ebanks will interrupt him at lunch during a bowl of bean soup and tell him of a patch of turtles at Genesis Reef, a patch so thick "you can walk 'cross their backs." He will laugh, but he will join Junior to speed to the reef. When they arrive pirate fisherman will fire shots into the air. Below, a French angel, a Nassau grouper, three horse eye jacks, and a rainbow array of reef fish will be struggling to free themselves from a gill net. Nearby, triggers and snappers and parrots will be floating skyward, their bodies paralyzed from chemicals, their gills frozen stiff. Junior will radio the police while he works to free the fish. The pirates, in their rush to abandon their catch, will throw three hawksbill turtles overboard, their limbs strapped to their bodies with hemp. They will sink rapidly, shells down, proud heads up, their eyes filled with fright. He will rush to their aid, saving two by cutting their bindings, but will be unable to save the third as it drops below to 200 feet. His chest will agonize him as he watches it sink, but the pain will ease as the two he frees streak to the wall for shelter. When he climbs aboard his boat he will watch the pirates throw an enormous green moray into an open hatch, a spear through its throat.

That night he will die in his sleep.

At week's end he will be cremated and his wife will spread his ashes on Genesis Reef. "He has gone home," she will tell the mourners. The next year she will join him. He will be waiting.

Sometime after that, the fish will return to Genesis Reef.

The author, Ken Smith, is a freelance writer living in Mill Valley, California. His work has appeared in *Outside*, *Adventure Travel* and *Skin Diver*. When he was three years old his mother gave him a plastic frogman, but he is not married, does not drink Seagrams, and his pants still fit around his natural waist. He can't decide whether to move to Cayman.

Two Underwater Movie Cameras

—*the Eumig takes the blues out of shallow shots*

Nearly all sport divers interested in underwater motion picture photography use 8mm cameras. There are a number of reasons for their choice, but

perhaps the main reason is that 8mm cameras are substantially cheaper than 16mm or 35mm. The more costly 16mm cameras are designed for the small

market of "advanced" amateurs and professional cinematographers, while the 35mm format is used where money is no object: for TV commercials or feature length movies such as "The Deep" and "Jaws."

Scores of different models of 8mm movie cameras meet the needs of the average person interested in capturing family events and holiday festivities. But in the growing underwater photography market, only two cameras directly meet the needs of the amateur marine life cinematographer: the Fujica Marine 8 AX100 and the Eumig Nautica. We asked professional underwater photographer Flip Schulke to compare the two cameras and report the results for the readers of *Undercurrent*. Schulke has been the recipient of more than twenty major photographic awards, including *Underwater Photographer* of the year and the *CINE Golden Eagle Award*. Here are his observations.

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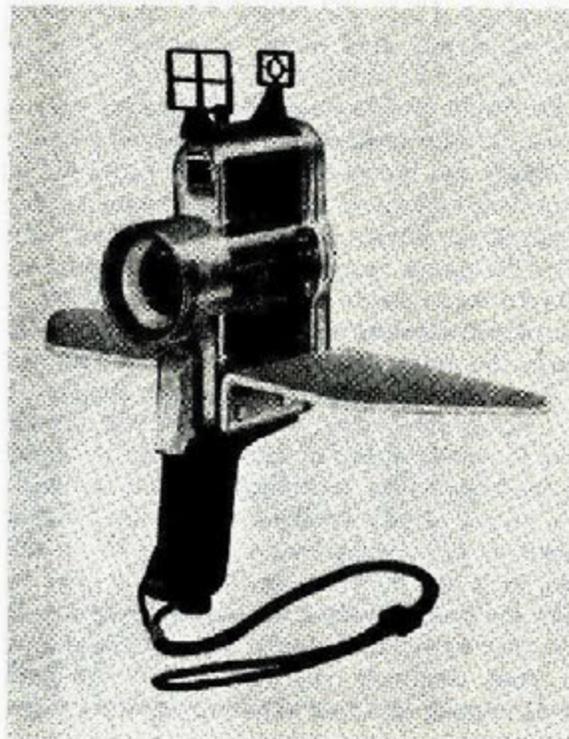
The introduction of the Fujica Marine and the Eumig Nautica now put underwater cinematography within financial reach of sport divers. There is nothing quite so nice as being able to invite friends over for home movies and, rather than bore them with pictures of the kids growing up, show them a minor underwater production of swimming eagle rays, battling damselfish, or swaying soft coral.

Both of these cameras make natural light photography a snap underwater (or on the surface, for that matter). All one needs to do is pop in a roll of film and shoot. Both cameras are fixed focus, both have automatic exposure meters and photoelectric cells which adjust the camera for proper exposure (which works well if one does not move too rapidly from a white sand bottom to darker backgrounds—the cells need time to adjust, just like eyes need time to adjust in moving from a light to a dark room). Each camera is relatively easy to use underwater so anyone with no land filming experience should be able to teach himself the mechanics of either camera without private tutoring.

Perhaps the most notable difference between the two is that the Fujica was developed as a land camera, but is now marketed as an underwater camera in a case designed especially for it. The Eumig, like the Nikonos, was designed for underwater photography and is taken below without an external housing. The Fujica and case retails currently for \$254, the Eumig for \$499.50.

The Film:

Two types of film are available for 8mm cameras. Super 8 is manufactured by Kodak (and other companies) and is readily available in drug stores and supermarkets. The Eumig uses Super 8. The other film, Single 8, is sold only by Fuji, and usually can only be purchased in photographic supply stores. The



FUJICA MARINE 8 AX100

Fujica Marine uses Single 8 film. Although most projectors can handle either film with a simple flip of a switch, the film cannot be interchanged between cameras. Owners of the Fujica must always take care to carry enough film when traveling.

Because the film cannot be interchanged between two cameras, it was impossible to make a precise comparison of the color and sharpness of the images from each camera. So, my judgments would have to be approximate. For the test, I used Kodak's Super 8mm KMA Kodachrome Tungstun type, both 40 and 160 ASA. For the Fujica Marine, I used Fujichrome R 25 (25 ASA Daylight film) and Fujichrome RT 200 (200 ASA Tungstun film).

Film which is color balanced for use with tungstun light (artificial light) is commonly used for daylight photography. However, when used with natural light, a filter must be added to correct for the color differences caused by the two different light sources. The Fujica Marine comes with a CC30R filter which can be placed on the lens. The Eumig has an internal filter which can be brought into place simply by flipping an external switch on the camera. No filter is necessary with so-called "day light" film. Once the film cassette has been loaded into either of the cameras, the speed and photo cells are activated automatically to match up with the film used.

The Test

I filmed in 12-20 feet of clear, 40-60-foot visibility water, in Pennecamp Underwater Coral Reef Park, Key Largo, FL. The day was bright and sunny, with

few clouds. The seas were flat, the water still, and the reef was covered with coral and fish.

I shot the selected film in each camera, one immediately after the other, duplicating as closely as possible the subject matter, color, action and distance-from-subject. My model was wearing a bright red diving suit to give me an idea of how well the red end of the spectrum was being captured. No artificial light was used.

Fujica Marine—Single 8 mm, Model AX100

The camera, placed in its own Fuji-designed plastic housing, is compact and well-designed. Since the housing is modeled to a fine tolerance, there should be no water leakage if common maintenance procedures are employed by the owner. The housing opens easily with the twist of a large opening lever and the camera easily slips in or out of the housing.

"Because of the lenses, the camera is not really suitable for filming people underwater."

There is only one control on the housing, the shutter release lever, located on the handle. The handle is attached by a thumbscrew to the base of the housing.

Two stabilizing wings are provided, one for each side. Wings are popular in Italy, but don't have widespread acceptance in other parts of the world. They do not make my filming smoother, and I find them clumsy when climbing in and out of a boat in rough seas.

The 13mm f1.1 lens, telescopic underwater, is prefocused so no adjustments may be made.

A plastic sport-type open viewfinder comes with the camera.

Using the Fujica

The plastic sport-type viewfinder did not provide good framing. Its mounting, high above the lens, creates excessive parallax, rendering it almost useless for shots in the 1-3-foot range. The device may have better value at greater distances, but I was certain I had perfectly framed a beautiful angelfish, but when I viewed the films later I had only filmed half a fish. No doubt practice is required.

I could frame better with the built-in optical finder, although the image is very small, which makes it difficult to determine exactly what the subject is doing. The solution to successful framing, of course, would be to purchase one of the optical viewfinders on the market. The Ikelite would do just fine. It would make sense to learn to use the built-in optical finder, because the light indicator is located within. If one is filming with insufficient light a red light appears, so when filming in dark areas keeping an eye to the optical finder is important.

Because the Fujica is in a housing, the film footage counter is difficult to read. Even with a magnifier in my mask, I could not read the small numbers. I

would be a bit annoyed if I inadvertently ran out of film just before the shot of a lifetime appeared.

Film results

The semitelephoto lens proved to be fine for shots in the 1-3-foot range, where subjects must be small. The images were clear and the color generally true. However, with the 200 ASA film my shots at distances greater than three feet took on a blue overcast. Even the red diving suit at depths of 12-20 feet lost its red color. The slower ASA 25 film gave much better color balance, but much depth of field is lost. Since the lens is fixed-focus, I found that with the slow film I could not capture objects in the close, 1-3-foot range.

Because of the lens, the camera is not really suitable for filming people underwater, but with the addition of lights I have no doubt that the color saturation would be substantially improved and the blue overcast eliminated. With light it would work well for filming undersea life.

Eumig Nautica, amphibious super 8mm camera

Eumig has taken a page from the Calypso/Nikonos notebook and designed an underwater camera from the ground up. The Nautica, at least at first glance, looks just like a super 8mm surface camera. Film pops into the camera just as simply as it pops into its nonaquatic cousins. The difference is that an O-ring seals the compartment door and the Nautica can be taken down to 130 feet.

The Nautica comes with a wide-angle lens attachment for underwater use. It screws easily into the threads on the front of the lens. When removed the camera can be used in closeups and the lens can be stored in the handle of the camera.

Using the Eumig:

Because the Eumig is itself amphibious and no case is required, using it is quite simple. For example, loading film is easier, since the camera does not have to be taken in and out of the housing, and the film footage counter, uncovered by a housing, is simple to read.

The wide-angle coverage is a good feature, enabling me to shoot more varied subjects and scenes than was possible with the Fujica—especially scenes with people.

If stray lights enter the Eumig optical viewfinder when filming, it is possible to fog the film. On the surface that's no problem because the eyepiece can be pressed against the eye to prevent light from leaking in. Underwater, however, a tight seal is impossible because one must press the eyepiece against the faceplate, which can permit some stray light to enter. The instructions state that a plug which accompanies the camera must be placed in the eyepiece when using the camera underwater. That creates a dilemma however, because the automatic light meter reading is

taken through the viewfinder, so until one learns the film's sensitivities and the camera's capabilities, one must look through the eyepiece to determine if there is sufficient light. (Although I was unable to determine if the film would fog if I used the eyepiece underwater, the problem might be relatively rare.) With my Pinocchio-type facemask (or with any large full-volume mask) I was unable to read the metering, but with experience I'm sure I'd have no difficulty determining when I had sufficient available light. I used the sport viewfinder for framing but, similar to Fujica, I had limited success because practice would be required to learn to get an exact bead on my subject.

Results:

Comparing the results of the film footage I shot with both cameras clearly establishes the superiority of the Eumig. Although the natural light color rendition was not perfect, the scenes were much less blue than similar scenes shot with the Fujica. This may be due, at least in part, to the wider-angle lens, which permits the photographer to get closer to his subject. The red diving suit showed up quite red in head and shoulder shots and still looked slightly red when I backed off to get full figure shots. The slow film gave the best color rendition, but even the fast film (ASA 160) was acceptable and it certainly provided more depth of field to work with.

Conclusion:

The primary criterion for buying one camera or the other ought to be quality of the developed film and on that score the Eumig clearly outperformed the Fu-

jica in accuracy of color rendition. The results would be adequate for most amateur photographers, but the addition of underwater tungsten lights would render the images on a screen much closer to the images seen underwater. Without lights, neither camera will provide much color on a cloudy day. Passing clouds will knock out the red so the results will only look like a black and white film with a blue tinge. Neither camera will perform adequately in murky water. The Eumig's wide-angle lens just isn't wide enough to get close enough to a subject under adverse conditions to make any difference.

Any other differences in the cameras—the handling underwater, the automatic eye, the ability to target on a subject—wouldn't add up to many differences in the cameras, but might slightly increase Eumig's edge over the Fujica.

So then it all comes down to price. The Fujica and housing retails for \$254 and can be found discounted to about \$185. The Eumig retails at \$499.50, and is discounted to as low as \$375. The question, then, is whether the \$200 difference is worth the difference in the quality of the projected film. Only you can decide. If you're serious about photography and wish to have more in your film library than "snapshot"-like quality, they you'll probably prefer the Eumig. If you would just like to capture a few scenes for the kids and the folks back home and don't expect to use the camera much, then the Fujica will be satisfactory. Some camera stores in big cities and some dive shops rent one or the other for weekends. If you're still uncertain, that may be the best way to determine your preference.

Equipment Recalls

The System Needs Improvement

Last year, AMF Voit discovered its carbine spear gun, marketed between 1967 and 1979, was faulty. A defective trigger could result in inadvertent firing, even though the safety catch is engaged. During the 12-year period, 97,300 guns had been sold. Thirteen consumer complaints about the malfunction had been received.

Working in conjunction with the Consumer Products Safety Commission (CPSC), the U.S. agency responsible for the product safety and faulty-product recall, AMF Voit issued a formal recall of the gun, employing the many steps required by federal regulations.

Based on any standard of consumer safety, the recall was a failure. Only 1009 guns were returned, barely one percent of the total manufactured. In the 12 years this product has been on the market, surely thousands have worn out, been lost in the surf, discarded, or stashed away in the attic and forgotten. Nevertheless, a one

percent response is symptomatic of larger problems running throughout the recall system in the dive industry—problems of grave concern to the sport diver.

The first recall in the dive industry was issued in the fall of 1974, when Watergill Industries contacted the CPSC to inform them about serious defects in the ATPAC, the first back-mounted buoyancy control system introduced for divers. Though this was the industry's first recall, it was not because earlier products had been perfect. Rather, the CPSC was a relatively young agency and it had yet to gain compliance from small industries like the diving industry.

The ATPAC recall was caused by an especially dangerous problem. A plastic airway in the automatic inflating system could deteriorate with use, causing the bag to fill unexpectedly. Watergill had used brass to manufacture the airway, but when brass prices increas-

ed, they switched to plastic. As soon as they discovered the disintegration, they sought a different material for the airway but it was not until a Watgill executive used a Dow Corning silicone spray on the airway and noticed immediate deterioration did Watgill become alarmed about the problem.

The problem was indeed serious. *Undercurrent* received reports as late as 1978 from divers who had never heard of the recall whose ATPAC's had inadvertently inflated and sent them unexpectedly to the surface. Although the ATPAC problem had apparently been corrected on new models in early 1975, divers with older models were still getting in trouble nearly five years later.

The reason for the continued problem is simply the recall system. At the time the ATPAC was first sold no warranty or registration cards were issued with the product, although addresses on warranty cards are the only means by which owners can be located and informed of faulty products. Although Watgill had published notification of the ATPAC recall in *Skin Diver*, sent notices to graduates of recent NASDS courses, and had done an honest job in spreading the word, the problem continued for several years. No doubt even today there are ATPAC's on the market which never had the initial problem corrected and may eventually cause some diver a serious problem.

"Although the ATPAC problem had apparently been corrected on new models in early 1975, divers with older models were still getting in trouble nearly five years later."

In our first issue of *Undercurrent* in August 1975, we indicated the recall system needed improvement. It's time to take another look at that system and see how far it's come and what needs to be done to insure future sport diver safety.

Present Procedures

Although anyone may inform the CPSC of a product problem, when a manufacturer becomes aware of a significant problem, federal law requires him to telephone the Consumer Product Safety Commission within 24 hours. He is to state the problem and suggest steps for testing the product. After notification, the law requires a followup letter be sent within 48 hours of the telephone call, restating the problem, how they plan to test the product, and the model numbers and total units suspected of being involved.

The engineering staff of CPSC obtains one or more of the suspected units and begins independent testing. Once they determine a hazard exists, the manufacturer must determine the steps required to recall the product. The CPSC provides information about what others have done and will assist in developing the recall program, but the burden is clearly on the manufacturer. There is some variation in the program, which may

consist of:

- Written notices to owners, as indicated by warranty cards on file.
- Written notices to dealers handling the line.
- Notices to trade organizations.
- News releases to selected publications.
- Advertising copy to selected publications.

Once the recall program has been established by the manufacturer it is submitted to the CPSC for suggestions and approval. It is then implemented.

On paper, it would seem the process is suitable. But the AMF recall demonstrates its inadequacies. After that recall, the CPSC asked that it be reinstated a second time. Moreover, a recent recall of the Dacor Pacer, which involved letters to warranty card holders, advertisements in major magazines, and full notices to dealers, induced after two notices only 40% of the Pacer owners to return their regulators for repair. Although the Pacer had only been marketed for 12 months prior to recall, the Pacer was recalled because a depressed purge button could stick, emptying a full tank in less than six minutes. The CPSC is still hoping to increase the 40% figure acceptable; 60% of the regulators sold in the first year of production are still uncorrected.

Problems with the Process

Today dive industry manufacturers initiate recalls when required, but in earlier years there was much grousing from company officials about "infringement on their prerogatives as businessmen," and the potential "damage" a recall could bring upon a fledgling company. Today a maturing industry feels much less threatened and the stability of a business is not considered to be under attack when a recall is ordered. In fact, John Cronin, president of U.S. Divers, believes his company profited by a recent recall of its Calypso regulator. He told *Undercurrent*: "We really didn't want to issue a recall. No one likes to admit there is a potential defect in his product and we felt that our competitors would use the recall against us. But it was a problem we could not ignore so we put everything we had into the recall and now we are glad we did it. It was the best thing we could have done. And, it gave us a better image in the industry."

But, even with the manufacturers cooperating with the recall process, the results are still unimpressive. The system has flaws, indeed.

Only distributors have to be informed: The CPSC requires that distributors of a product must be informed, but the information web does not have to spread further. Therefore, a company like U.S. Divers, which sells its products through thousands of outlets, has a much greater chance for successful recall than smaller companies. One reason, of

course, is that a diver buys a product at one store (or through mail order) but his loyalty may switch to another store for air and dive travel. He may never hear about a recall if the new store doesn't stock his product.

Diving Dropouts: Although as many as 200,000 people are certified annually, by the end of the first full year of diving only 50,000 remain active. Those 150,000 dropouts who stash their equipment away may pay no attention to a recall. Later, if they get rid of their faulty equipment through a flea market or pass it on to a neighbor, there is little likelihood that the flaw will have been repaired.

The Warranty Card: Addresses on warranty cards are the primary means a manufacturer has to locate an equipment purchaser to inform him of a recall. The burden rests on the consumer for completing the card, but not many do. Vern Peterson reported that only 30% of the Dacor Pacer purchasers returned their cards, so 70% of the owners could not be informed directly of the regulator problem and the official recall.

Magazine Announcements: Magazines are not required to carry advertisements without being paid for the space but in the dive industry most recall notices are run as a public service. The problem is, however, that they seldom get the priority placement or the graphics necessary to catch the eye of the reader. *Undercurrent*, which always gives priority attention to recalls, has not once received a notice from the manufacturer about a recall at the same time the manufacturer is telling others. We have always received our information after the fact.

Journals published by training agencies don't give priority attention either, and because their readers are instructors a big opportunity for spreading the word is missed. NASDS makes a credible effort, but NAUI is the worst offender. Its recall notices often appear in a section similar to a want ad column where instructors advertise for jobs.

Dive Shops: As the primary congregating spot for divers, full participation in a recall program by dive shops is critical to success. Yet their participation is at best uneven. Some post notices and aggressively contact divers, but others tuck away their notices and give little publicity to a product recall. If a dive shop is not a distributor, it receives no notice of a recall; charter boat operators, dive resorts, and instructors receive no special notice.

We called six dive shops and asked their managers about the recall process, then inquired if they would be willing to display a poster indicating a recall of a product they *did not* sell. Each indicated that they would indeed, and one manager said he would be especially delighted since it wasn't a product he stocked. However, Doug Heston of AMF Voit told *Undercurrent* that he'd checked with several shops he knew had received posters on the Voit spear gun recall, but he "couldn't find very many hung up on

the wall." The truth is, the record of dive shop support of a recall is spotty. One reason, a manager suggested, is that notices of faulty equipment can put a shadow over the sport, putting unnecessary fear into the minds of prospective customers.

Dive shops are also required to repair products at no cost to the consumer (the manufacturer is to reimburse the shop), but we have received reports of dive shops occasionally charging illegally for repairs. They should also respond in a timely fashion to repair needs, but Dacor's Peterson recently told *Undercurrent* of a shop which sent Dacor 22 of the recalled parts in a single bunch, some they had collected from customers as long as a year ago. Without regular return of faulty parts—as the law requires—a company has no way to judge the success of its efforts.

"... only 30% of the Dacor Pacer purchasers returned their cards, so 70% of the owners could not be informed directly of the regulator problem and the official recall."

So, even though the manufacturers work diligently and responsibly to conduct a recall, the dive shop link in the process is not always well-forged.

Changing the Process:

The recall process today is neither aggressively nor creatively managed. Aside from the manufacturer, who has the CPSC looking over its shoulder, other participants in the process are able to act out their role without critics watching. In too many cases, the passivity of that role contributes little to informing divers about dangerous problems with their product.

The CPSC, whose staff is not well-informed about the dive industry (and they can't be expected to be well-informed about every industry) of course puts the burden for developing product recall on the manufacturer who experiences a problem. Dacor's Peterson said, "Our recall of the Pacer was our first experience with any recall. We asked everyone who had recalled a product in the industry what they had done and then tried our best to do what we could do." But, the manufacturers have little control over other participants in the system. Only cooperation and a sincere interest in safety by other participants can shore up the weak system.

These are our suggestions:

Manufacturers: Recall information should be sent to the complete diving network, not just distributors. All dive shops, charter boat operations and dive resorts throughout the Caribbean should be informed. Lists are available from a number of sources.

The warranty card accompanying a product should be postage paid. Direct-mail experts increase their response by 25-50% with prepaid business reply

envelopes. The warranty card should state, in bold-faced type, that should the manufacturer ever find it necessary to communicate to the consumer about problems with that product, the address on the card will be the only way to locate that purchaser.

Dive Shops: Dive shops should fill out (and then mail) the warranty card for the purchaser *at the time* of purchase. This simple step should have a significant impact on the ability of manufacturers to get in touch with their customers.

All poster and recall information should be posted in a highly visible place and remain posted for several months.

All instructors teaching in dive shops should be informed of the recall immediately upon the shop's receipt of the notice.

Dive shops should expedite repair of equipment and be careful not to charge for recall-related repairs.

Periodicals: Recall statements should be published in more than one issue, and should be awarded headlines and placement suitable to catch the attention of a maximum number of readers.

Training Agencies: Notices of recall should be placed in any mailings to instructors. Coverage in magazines sent to instructors should be well-placed

and sufficiently highlighted so that instructors don't overlook the problem. Instructors should be told to discuss the recall system in classes and inform students of the need to fill out warranty cards and keep in touch with developments in the industry through contact with dive shops and by reading periodicals.

Conclusion:

The life of a diver and his companions can hinge on a faulty regulator, yet the system designed to pull those regulators into repair shops is just not working. None of the people in the process do much more than go through the steps required. Magazines give scant attention to recalls, resorts and charters which handle thousands of divers are never informed, the warranty card process is not emphasized enough to get diver attention, and shops don't always inform all their customers of product problems.

A number of steps can be taken to increase the response, but success requires every link in the chain to be strengthened. There is no way a 100% return can be attained, but it can certainly be better than Voit's one percent and Dacor's 40 percent if everyone accepts the seriousness of the problem and pitches in.

Maintaining Your Gear

It seems a bit odd that a complete book about the care and maintenance of scuba equipment has not been brought to the national market before, but now there is such a book and it's a dandy. Michael Farley and Charles Royer, veteran divers who have had a variety of occupations within the diving industry, have written and published *Scuba Equipment: Care and Maintenance*, a 176-page volume chock full of information about storing equipment, preparing it for diving, field repairing, packing it for traveling, and so on. Here is a handful of items we've lifted from throughout the book to provide the reader a sense of the wealth of important information provided.

- To prevent fin or mask straps from slipping out of adjustment, as they may do over a period of time with prolonged use, secure the straps into their adjusted position with duct tape or electricians' tape.
- If the lens in your mask becomes cracked or shattered, you usually won't have to throw away the entire mask. Replacement lenses can be purchased or ordered through a dive shop.
- To clean corrosion from metal zippers on wet

Tips from a fine new book

suits, use a small aluminum wire brush or an ordinary toothbrush. Dip it into a small amount of vinegar, scrub until the corrosion is removed, and follow with a freshwater rinse.

- When turning in your regulator to be serviced, inquire as to whether there is some new equipment or replacement part on the market that might improve your regulator performance. Regulator designs are constantly changing and



improving, and many improvements can be incorporated in older models. Let your repairman know that you wish to *update* your regulator.

- If the sintered filter on the first stage reveals reddish-brown specks on its surface, the most probable cause is rust from the scuba tank. If the filter takes on a turquoise, greenish or chalky-white coating, it is a good indication that saltwater has entered the inlet of the first stage.
- To drain water from your BC, orally inflate the vest, then turn it upside down so that the drain hose is at the lowest point. Depress the inflator button and squeeze the vest. The sudden rush of air should force the remaining water to exit from the interior of the vest through the inflator hose.
- When you cut the excess from a new weight belt, cut a rounded edge since that is easier to thread than a square edge. Use a hot soldering iron or a match to melt the end of the nylon webbing, thus fusing the nylon fiber together to prevent fraying and unraveling.
- The rubber hoses on a regulator may be coated with silicone spray, but never spray the entire regulator. Do not allow silicone to enter the second stage, as this can cause the exhaust valve to malfunction and may cause contamination to collect within the second stage.
- When storing, rubber surfaced wet suits should be coated with a light layer of talcum powder inside and out to prevent the surfaces from sticking together, causing the rubber to rot. Use plain, not perfumed talc, as the perfume base in some powders can damage the rubber.
- When storing masks and fins, remove straps from all buckles. Tension retained in the rubber could cause cracking, particularly if the rubber has received frequent use.
- To tighten a tank band which may have become stretched, you can simply install a new neoprene band liner inside the tank band, to make the tank secure again.

These are just a few of the scores of practical points for keeping your dive gear in tiptop shape. In addition to expected chapters on regulators, buoyancy compensators, and the like, the authors cover spear guns, diving knives and lights, photographic equipment, and travel. The final chapter even discusses theft prevention.

By following the tips of Royer and Farley, a diver is bound to save many times the cover price. If your favorite shop isn't stocking the book, send \$8.95 (California divers add 54 cents for the Governor) to Michael Farley, Marcor Publishing, POB 1071, Port Hueneme, CA 93041. He'll pay the postage.



Australian scientists have come up with a "teabag" containing a mixture of granulated magnesium and iron particles which, when put in contact with salt water, heats up like "a multitude of short-circuited batteries," reports the British Sub-aqua Club. The reaction begins about 20 minutes after submersion and peaks in 40 minutes. Two pads in each glove keep a diver's hands comfortable for up to two hours. Apparently research continues to develop pads for other parts of the body, but there is no word as to whether anyone has begun marketing the product.

A new product surely destined for immediate obscurity is the "Skinny Dipper," an egg-shaped foam float with a small hook suspended from it. It's carried by the closet skinny dipper into deep water, where he drops his trunks and hangs them from the hook while he frolics about. The little float is supposed to keep the trunks nearby so when it's time to go ashore he can easily find his cover and dress up. At \$5.95, in finer stores.

Members of the International Oceanographic Foundation, an organization we have previously touted, receive several unusual benefits with their membership, but one special feature is IOF's fish identification service. How many times have you seen some unusual creature underwater, photographed it, and then found it impossible to identify from sources to which you have access? IOF members send their photos to Faith Schaefer, Sea Secrets Editor (a small publication sent to IOF members), who, so far as we know, has yet to be stumped. Once the identification is made, which may take several weeks, the member is informed of the creature's name and perhaps an unusual habit or two. The IOF runs tours for members and publishes an excellent bimonthly journal emphasizing colorful studies of sea critters, marine ecology and conservation. To join send \$15 (\$17 for non-U.S. residents) to IOF, 3979 Rickenbacker Causeway, Virginia Key, Miami, Florida, 33149.