

undercurrent

THE PRIVATE EXCLUSIVE GUIDE FOR SERIOUS DIVERS

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The Florida Keys: Part Two *Camping, Conching, and Carping*

If I wasn't sufficiently explicit in my first report on the Keys, I shall be so now. Who should go to the Keys to dive? Anyone who can drive there for a three day weekend. Anyone who has a camper. Anyone wanting a budget dive vacation and wants to camp out. Any diver in Miami on business. Anyone with friends with a house in the Keys. Anyone just getting started in tropical waters. Anyone who can bring his own boat along. Anyone who must take the family to Disneyworld or the Everglades. Anyone who wants to fish, boat, and fool around as much as they want to dive. Anyone who enjoys visiting an infinite array of highway tourist traps from reptile gardens to Flipper's Sea School. Anyone who cares to get in just a couple of dives while touring.

Who should go elsewhere? Anyone who can afford it. Anyone who wants peace and quiet. Anyone wanting more adventuresome diving. Anyone tired of Big Macs, surf and turf suppers, super discount drug stores and Holiday Inns. Anyone who's been there before. Anyone seeking quaint restaurants, foreign culture, and long walks on miles of beachfront. Anyone who complains of any diving less inspiring than Cayman or Bonaire. Anyone seeking swinging nightlife. Anyone wanting beach front diving. Anyone in search of the best.

Now don't all you Floridians rush to the Post Office to cancel your subscription to Undercurrent. One of the reasons the reefs are deteriorating is that too many scoundrels from Georgia and Ohio grab everything they can get their hands on to show the folks back home. You should be happy to redirect the diving tourists elsewhere to help your reefs along.

Dive shops might be concerned about such candor because after all it's their business. Yet no dive shop owner or skipper I talked with distorted the quality of reefs or the visibility and they themselves get high marks for candor. I'll even give their business a boost by noting that I saw no dive shop owners driving Rolls, unless they had other incomes. I did see several Pintos and sputtering Vans. It's no surprise that many of the shops could be improved, but none could use increased competition. To those of you braving the Northeastern winter and dreaming about opening your own shop and charter service in the Keys, forget it. It's no place to open a new shop unless you can afford an expensive hobby. Or unless you care to nurture your self destructiveness by losing your capital in a doomed venture. Conch chowder three times a day gets awfully boring.

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The busy season begins right after the first of February (that's when I was there) and runs through spring vacation when parents with kids and college students flock southward. It slows down, then summer gets busy, sometimes very busy, as does Christmas time. The hundred mile, mainly two lane, highway can be as crowded as an LA Freeway during Friday night rush hour. Every other vehicle will be a camper or car and trailer, creeping along to the next campground. Whether you intend to camp out or hole up in a motel, make reservations. I followed my travel agent's advice that no reservations are needed because "there are millions of motels," and drove over two hundred miles from the Miami airport to Marathon and back before I could find a night's lodging. It took me an hour on the phone the next morning to find a vacancy. At the same time, the dive shops were not overflowing with customers; one-third of the advertised morning or afternoon charters were not run due to lack of divers. The best diving and the most business are in the summer.

Taking a recreational vehicle or camping out in the Keys requires some planning. The highway is lined with campgrounds, but many are filled with permanent residents. As you might expect, state campgrounds are the biggest bargains. The rate is \$4/day with electricity and \$3.64 without. Rates at private campgrounds begin between \$4 and \$6, depending upon your vehicle and the number of people traveling. Your best bet, if you plan to camp is to refer to the complete run-down of campgrounds available in either of these two books;

Trailer Life's 1976 RV Campground and Services Directory. \$6.95 plus \$1 postage from Trailer Life Publishing Co., 23945 Craftsman Rd., Calabasas, Ca., 91302. All states and scores of Florida campgrounds. Canada included too.

Woodall's Florida Campground Directory. \$1.95 plus 75¢ postage from Woodall Publishing Co., 500 Hyacinth Place, Highland Park, Ill. 60035.

Either includes most Keys' campgrounds. If you don't care to order one, then you might find the following satisfactory. Listed north to south.

Bryn Mawr Camp Resorts, Rt. 1, Box 66-J, Key Largo, 33037. Toll free reservations: 800/852-3011. 240 sites. Dolphin Diving Schools (charters) is here.

John Pennecamp Coral Reef State Park, Key Largo, 33037. 305/451-1202. Small, pleasant, under-commercialized. A dive shop with daily trips located here.

Long Key State Park, Long Key, 33001. 305/664-4815. Another pleasant state park a bit south of Islamorada. 60 sites.

Fiesta Key Kamppground of America, Long Key, 33001. 305/664-4922. More a Disneyworld than a campground. 450 sites; square dancing and movies, et. al.

Holiday Inn Trav-LPark, Sunshine Key, 33043. 305/872-2217. Another mammoth with the Sunshine Key Aqua Center (charters) on the premises.

Bahia Honda State Park, Bahia Honda Key, 33043. 305/872-1353. Small.

Motels: Any other 100 mile strip with so many lodges would have to be harboring bordellos. There are four Holiday Inns, and other chains such as Howard Johnson's are as thick as the barracuda on the reefs. Use AAA's tour book or ask your travel agent. There are scores of el cheapo motels which can be located once you arrive, or you might begin with one of these in your price range:

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Key Largo: Gilbert's Motel (\$18); Unwinder (\$23-29). Islamorada: Holiday Isle (\$18-\$50); Coral Reef (\$14-25). Marathon: Rutgers (\$19-25); Sea Horse (\$10-17) Coral Lagoon (\$21). Key West: Hibiscus (\$12-18); Pier House (\$16-44). These are summer double occupancy rates. Many of the medium priced motels such as the Coral Lagoon have kitchens. Chain motels begin at \$20. Two Key's resorts advertise themselves as dive resorts: Holiday Isle and Sunshine Key (Holiday Inn Trav-L Park). In my opinion neither qualifies. They are simply resorts catering to the sporting interests of all tourists and are without diving ambience.

Self-guided tours. If you tow your own boat to Florida you can visit the reefs inexpensively. There are plenty of launching sites and well marked channels through the shallow water. If you're uncertain, simply follow a dive charter out to the reefs and dive with the other boats flying the divers' flag. You may rent a fast boat from any of several marinas, but the economics aren't in your favor unless you have at least five divers. For example, at Pennecamp an 18' outboard runs \$51/day; a 25 footer with a 10 diver capacity is \$110 for the day.

Two maps and a book are available if you're charting your own course. They may be ordered from the Holiday Isle Dive Shop (PO Box 588), Islamorada, 33306. Send the listed price, plus 50¢ postage for one or 75¢ for two or three.

Florida Keys Diving Directory, by George Wielander (\$2). Includes three navigation charts of the Keys showing channels, depths and reef locations, plus a short description of the reefs and wrecks. The most complete of the three.

Dive Florida Keys, by Tackle Publishing Company. Six 17"x22" charts of the Keys showing depths and reefs. Good size for the serious navigator.

Diving Guide to the Florida Keys, by Velde and DeLoach (\$2.95). Best where-to-dive description, but maps cannot be used for navigation. Also tourist info.

In Islamorada, 17 miles south of Key Largo, I selected two shops:

Holiday Isle Dive Shop, Box 588, Islamorada, 33036 (305/289-0123). The shop, a facility separate from the Hotel, impressed me with its courteous and knowledgeable staff. Captain Wayne Bean has a considerable reputation as a skipper and my impression was that it's well earned. Our first stop seemed enticing from the surface, however visibility below dropped to fifteen feet. Reef quality too was disappointing. Captain Wayne, himself dissatisfied, spent 20 minutes searching for the next spot, then reluctantly settled on a 10-15 minute dive he admitted he had not taken before. It was a nice dive, without the schools of grunts or the common trios of angels of Pennecamp, but with nice varieties and several lobster hiding in shallow holes. Unlike most other Keys' captains, Wayne was assisted by divemaster George who joined in and returned with a couple of lobster for his dinner table. George explained his presence was "to keep the good safety record intact." Another diver aboard brought up a magnificent trumpet and conch were scattered about. Visibility hovered at 40 feet.

The Reef Shop, PO Box 575, Islamorada, 33036 (305/664-4385). Captain Jim Williams seemed to run a decent boat, but the dives were victimized by ordinary reefs less than an hour's boat trip from Pennecamp. The retail shop is small, but the dive trip is an acceptable second choice in Islamorada.

In Marathon, fifty miles south of Key Largo, I selected these two shops.

Coral Lagoon Dive Shop, 12399 Overseas Highway, Marathon, 33050 (305/289-0123) Part of a pleasant small motel complex, this is a medium sized, suitable shop. Captain Bob, the most macho of the divemasters encountered, displayed an aggressive however enjoyable enthusiasm for his trips; through 3-4 foot rollers the boat speed knocked everyone helter skelter, but we returned in one piece. Our first dive in 60 feet of water was uninteresting and nearly everyone surfaced with unspent air.

Two divers spotted six foot mullets, but I had to be content with six inch blue-heads. On the next dive barracuda outnumbered sponges. It was adequate and uninspiring, the only unique experience happening when I rounded many coral heads and found big barracuda peering in my window. Captain Bob joined in both dives.

Key Largo: I dove several different reefs with friends, hoping to find more than I might with dive shops. The reefs were similar to Islamorada and Marathon, again corroborating the opinion that the best diving is in the Park.

Divers Compass: Cheap auto rental rates are available; Greyhound rents airconditioned Vegas for \$49/week and unlimited mileage, but you pay the gas; call toll free 800/327-2501; Atlantic charges \$59 (305/442-8237) and Payless \$69 for a Gremlin (800/648-4990). . . Although we reported in an earlier issue that there were problems at the Holiday Isle, it appears that they have gotten their act together; we looked carefully. . . although fish in the Park are indeed abundant, there's a surprising lack of shells in many parts; even so, one aspect about diving the Park is that nothing can be taken, so unless you're a photographer you might become bored not being able to collect an item or two. . . . Drinking age in Florida is 18. . . Just about everyone pumps the 10% overfill on charters. . . The Florida Diver is a new Skin Diver type publication for Floridians; it's got a ways to go but should meet many local needs; it's \$6 a year from Florida Diver, 226-C Palmer St., Tallahassee, 32301. . . There are supermarkets in each of the populated areas so if you're camping no need to bring supplies. . . many shops, the Holiday Isle among them, offer one week certification courses, which are good for nondiving spouses, siblings, and offspring. . . visibility is best in the summer and water temperature is much warmer, although there's been more than one hurricane strike the Keys late in the season. . . some people heading for extended stays ship their car by rail, then either fly or take the train themselves; local carloading companies can provide the details. . . Key West is the best of the towns in the Keys; it's touristy, yet funky, quaint and interesting; lay back in the pubs frequented by Papa Hemingway while you read his Islands in the Stream or other books about nearby areas. . . Marathon has an airport with scheduled flights. . . Winter is the best time for fishermen; I saw sailfish hanging by proud anglers and a roadside sign offering trophy stuffing and mounting for \$1.50/inch. (C.C., 2/20/76)

The Politics of Bestiality:

What Man is doing to the whale he may soon do to himself

Divers are an apolitical bunch. Although they may write a letter when their sport is threatened, our educated guess is that they rate fairly low on a political participation scale.

It's too bad, for there's a whale of a battle being waged which needs support. And it centers on one of our best underwater friends, the whale.

Ocean politics, as symbolized by whale politics, is the politics of the future. The economic issues in the exploitation of the ocean—fishing and mineral rights—are forcing serious confrontations between nations. More than one political analyst suggests that the next war may have its roots in ocean politics, and there's no better way to understand the reasons than to understand emerging whale politics.

The whale has achieved new status among the concerned, mainly because we have at last recognized the

depth of its intelligence, the complexity of its social habits and what many observers call "its love and compassion for humans." Long the object of Man's myths and dreams, the whale now faces extinction at his hands. All species have been placed on the *Endangered* list, and many species are already commercially extinct.

Whales are killed because it is profitable. Whale meat and oil are consumed by man, by his pets, and by his machines. But the romance of the whalers described by Herman Melville have today given way to the mechanics of corporate and national killing operations.

Scores of organizations have arisen to try to save the whale. Some of them fear destruction of the marine ecosystem. Others simply detest the brutal devastation of such a magnificent creature. All agree that in this modern world, whaling is unnecessary.

The battle being waged by North American groups is complex and difficult because whaling is strictly an over-

seas enterprise. American companies' whaling was prohibited in 1972 with the passage of the Marine Mammal Protection Act. Now, Japan and Russia are the chief whaling countries and most of the organizing activity in the U.S. and Canada is directed at these two nations. They argue that they must keep whaling to provide protein for their people. Yet in both countries whale meat represents a relatively small part of protein consumption. Furthermore, synthetic substitutes exist for all other whale products and byproducts.

The International Whaling Commission was established in 1946 to regulate whaling on the open seas, but it has little effect since member nations are not bound by IWC decisions. Not all whaling nations are members. The commission meets annually to establish quotas for the following season's catch, but last year the limit was nearly the same as it was the previous year. The commission does little more than legitimize the policies of the two dominant nations—Russia and Japan.

Undercurrent has surveyed dozens of groups working to save the whale. Their means vary from open confrontation on the high seas to boycotting the products of whaling nations.

One group wants to beach a whale, roll him across an enormous piece of paper laced with paint, and then take this "whale print" from town to town in order to display the size of a whale to those who remain uninformed. This group is not among the three we have selected as worthy of your support.

Project Jonah (Box 476, Bolinas, CA 94924). . . . A small volunteer organization, Project Jonah sends representatives to IWC meetings and leads the call for a ten-year moratorium on all whaling. The group argued before the IWC that time is needed to allow researchers to determine the effects of the kill rates on animal population and the ecological balance of the sea. The IWC refused to place the issue on its agenda.

Project Jonah is seeking American intervention in whaling politics under U.S. law which authorizes economic sanctions against foreign countries plundering the seas. Project Jonah people are not optimistic; they do not believe that the whale will be saved by voluntary actions of whaling industries or nations, and expect no help from the IWC.

Project Jonah has therefore turned to increasing public understanding and pressure. The group solicits stories, poems and drawings from children for presentation to the IWC and to Russian and Japanese authorities; adults are encouraged to write directly to Premier Kosygin and Emperor Hirohito. Project Jonah also publishes information about whales and whale products to dramatize the plight of the whale.

Animal Welfare Institute (PO Box 3650, Washington, DC 20007) The institute distributes various promotional materials such as buttons, bumper strips, posters and T-shirts—all echoing the plea to "Save the

Whale." Most notable, however, is the institute's leadership in establishing a consumer boycott of Japanese and Russian goods: electronics products, automobiles and Vodka.

The boycott enjoys the support of most conservation organizations. Many supporters believe that the Japanese are already feeling the sting. Japanese stubbornness at the IWC has not diminished, but some detect a softening in their tone.

The Greenpeace Foundation (2007 W Fourth Ave., Vancouver, British Columbia) Modern-day Davids, Greenpeace organizers sail into forced confrontation with giant Russian and Japanese whaling vessels on the high seas. They first used their technique successfully when they sailed into nuclear test areas in the Pacific and brought a halt to tests being conducted by France and the United States. Now they intercept whaling fleets in the North Pacific and place themselves between the whalers and the whales.

Although the actual number of whales they may save is insignificant, Greenpeace has generated much needed publicity, brought the seriousness of their efforts directly to the attention of the Russians and Japanese, and helped create a romantic and adventurous spirit among the whale savers. They're an effective group.

Larger environmental groups have also joined the efforts to preserve whales: The Sierra Club, Friends of the Earth, The National Audubon Society and Cleveland Amory's Fund for Animals. The Fund is particularly noted for its humanitarian plea—that is, its leaders attack the modern harpoon because its explosive head causes massive internal damage and long suffering before death comes to the whale. All of these groups urge their members to participate in demonstrations and letter-writing campaigns to curtail whaling, and each supports the boycott of Japanese and Russian goods.

Will the whale be saved? The odds are clearly against some species surviving. So far the conservation organizations have not developed the political clout required to achieve their goals. Whaling has been outlawed in The United States and Canada (but only after it had become a dead industry), but where whalers and nations still turn profits, the practice has been barely moved.

Still, all is not lost for the great mammals. The hearts and minds of the movement are on course. And the general public, both in North America and abroad, is becoming aware of the serious threat of extinction.

The advertisements of one organization, General Whale, darkly define whaling as the "process by which the elephant will soon become the largest creature on earth." We think divers, who better than anyone understand Man's eternal relationship with the sea, might help reverse the process. Any of the three groups mentioned will be glad to hear from you.

Diving for Dollars:

Watching your portfolio go up while you go down

Let's face it; diving can be expensive. Transportation, equipment, food and lodging, guides and good rum can, and do add up, no matter how carefully you follow the counsel of *Undercurrent* or your frugal friend, Fred. To those who love the sport it is a way of life worth every penny—but to people in the business, all those pennies and dollars add up to growing sales volume, more and more as the number of divers continues to grow.

It would be a nice feeling, wouldn't it, to know that, as you go down into the tranquil beauty below, your financial reservoir is not being depleted along with the air in your tank. Nice, but without going into the equipment business or opening a dive shop, there's little prospect for you to dive cost-free. There may be a way, though, for you to recoup some of the expense—and to have a little additional fun connected with your favorite sport. How? Buy stock in a company with a significant stake in the diving business.

Here we'll attempt to suggest possible vehicles for investments in the field, confessing at the outset that, although we researched the possibilities as thoroughly as you and I might comb the bottom for a Spanish doubloon, we discovered precious few ways for the "public investor" (you and me) to invest.

Before guiding you to what we found, we offer two caveats: The information offered was obtained from established sources such as Standard and Poors, from a highly respected brokerage firm, and, in two instances, from direct contact with executives in companies discussed. We believe it to be correct, but cannot vouch for its accuracy or completeness. The other warning, less legalistic, is directed to experienced divers who may be neophyte investors. Stocks can go up, but sometimes they take deep dives.

If you're still with us, here we go. Our initial list included twenty companies which have major roles in manufacturing scuba diving gear, and our first disappointment occurred when we found that only four of these appear to have stock that is publicly traded. Sometimes determining who owns what became a voyage of discovery. For example, U.S. Divers, whose Board Chairman is Jacques-Yves Cousteau, is wholly owned by Liquid Air of North America. According to the U.S. Divers executive to whom we spoke, its sales comprise only about 11 per cent of those of the parent company—which itself is 70 per cent owned by a French company.

There are two large corporations for which diving equipment constitutes a very small part of their volume. One of these is AMF, Inc., a company with annual revenues of over \$1 billion. In diving gear the name most easily recognized is AMF Swimmaster (fins, masks, wet suits). Many of us also know the company as a leader in the bowling industry, one of the pioneers of the automatic pinsetter. Other products include a

number of Cadillacs of the leisure field: Head Skis, Harley-Davidson motorcycles, and Hatteras yachts. Worldwide sales of recreation equipment constitute the majority of this company's sales, and diving gear is a relatively small portion, but a diver/investor seeking to participate in the fortunes of a broad group of important leisure products would be unable to find another stock with a similar position. AMF's earnings are reflective of the level of consumer income and of industrial activity as well, industrial products constituting about a third of its sales. The shares are traded on the New York Stock Exchange (where else?) and on March 12 were quoted at 21. The current dividend yields over 6 per cent.

Another Big Board company with sales of a mere \$350 million is Warnaco, Inc. ("White Stag"). The company is primarily in the apparel business; however, much of it is in the sportswear field. Underwater sports products are of relatively minor significance. The company has had an irregular earnings record. Its stock traded at 10 $\frac{1}{2}$ March 9, and its current dividend yields a return of over 8 per cent.

At the far end of the scale from these large "listed" companies is one named Hill Acme (Sherwood Selpac is a subsidiary), which appears to have a very small, inactive public market for its shares. Information about it is not available from the usual sources. The company is located in Cleveland, and *Undercurrent* subscribers also living in that city may wish to inquire about it from a local broker.

The company with the most "direct play" (a stock-broker term) in the field is Great American Industries. The stock is traded on the American Stock Exchange and March 12 was 4 $\frac{3}{8}$; it does not pay a dividend. The company's sales are about \$35 million. Since sustaining a loss several years ago, it divested itself of several unprofitable operations and has since been reporting substantial earnings. In 1974 its earnings were \$1.09 per share, and, according to the Executive Vice-President to whom we spoke, earnings for 1975, not released at press time, will be "approximately equal to last year."

Great American's participation in diving is uniquely broad based through several subsidiaries, even though other activities comprise the majority of its sales. Rubatex Corporation produces neoprene for the suits made by Parkway Fabricators, another subsidiary, as well as suits made by other manufacturers. Rubatex has other industrial applications as well. Additional diving gear, including the Poseidon Regulator, is produced by Poseidon Systems, a subsidiary of Parkway Fabricators. Two other subsidiaries, New England Divers and Underwater Sports of America, both retail equipment and Underwater Sports also installs, inspects and repairs underwater structures. It appears that Great American is giving increased attention to its diving business. Re-

cently, it acquired Underwater Industries, Inc., and Undersea Centres Corp., Virgin Islands companies with aggregate sales of about \$1 million.

We asked the company about pending lawsuits of which we had learned, and were informed that "none is diving-related" and that in the company's opinion none of these long-standing actions is likely to have serious consequences.

Great American Industries must be termed a speculative investment, but, according to our brokerage source: "This is the kind of situation which could get a fair play if the market remains on its present course,

in the direction of tertiary and more speculative stocks." That statement was made about a week before the Dow Jones broke through the 1000 barrier.

Should you buy one of these stocks? Perhaps. If you do you can go diving at one of the many spots with a casino nearby. While others are playing craps, you can sip cognac and occasionally find the opportunity to remark: "I do my gambling in the Market. Right now I'm into diving stocks."

(The writer, a vacation-snorkler, is a former Senior Vice-President of Sutro and Co., Inc., members of the New York Stock Exchange, the firm which furnished a substantial part of this article.)

Vivatar? Honeywell? Subsea? Oceanic?

Where to start with your first strobe

A beginning underwater photographer can make nice snapshots by housing his inexpensive viewfinder camera in an Ikelite housing. It's usually not long, however, before enough money is scraped up to purchase the Nikonos, a terrific camera which produces photos technically suitable for the best publications. Only the real pros take the next step to house their Nikons and Hassleblads. For the other 99 per cent, the Nikonos does just fine.

But we quickly tire of the blue pall shrouding our yellow tangs and orange garibaldi and fool with filters and film to bring back the colors. The only answer is light, artificial light, without which the blues will plague you to the grave. Flashbulbs are out. Electronic flash, simply called a strobe, is in.

Not only will a strobe let you find out where the yellow went, but it permits you to use low-speed films (25 or 64 ASA) which are essential to maintain clear lines without grain in enlargements. And, you have a greater depth of field available.

Obviously all strobes are not the same and which one you select will depend upon your projected needs. Your purchase doesn't end there; you'll have to decide on a housing (unless you buy an expensive underwater strobe), a strobe arm and a tray.

In buying a strobe, your basic considerations are: How much do I really want to spend on an underwater lighting system? At what distance and what subjects do I want to shoot? What's the best strobe to meet these needs?

As your technical skills and composition increase with experience, you'll need the right lighting for your photography goals. This guide should help you select the right strobe within your financial limitations.

The Fixed Costs: A Tray and an Arm:

Presuming you're using the Nikonos, your first need is a tray with a handle and a thumb shutter release. Different brands are available, but now that Ikelite has redesigned its handle the Ikelite system is as good as any at \$24.95, and about the least expensive.

Ikelite sells an arm (a short tray) for an additional

\$4.95, but the value is limited. It permits only limited horizontal movement and the strobe must be removed for shots closer than 30 inches. But unless your pockets are well lined, you might very well accept those inconveniences rather than step up to a true professional arm.

A complex strobe arm allows you to change the angle of the light in relation to the subject. With strobe positioning you control the shadows, subsequently controlling photo depth and mood. That kind of control separates the professionals from amateurs. Of course it can be done by holding the strobe by hand, but since we only have two, we prefer using the Oceanic Products Ball Joint Arm. It comes in three different lengths and can be interchanged with long and short halves. At \$79.50 for the 28" arm, you must take your photography seriously to indulge.

Housings and Connectors

For strobes built for land photography, a sturdy housing is required. Ikelite is the major producer, making housings for nearly all strobes at \$60 (prices were to increase moderately this month). The housing for the Honeywell 700 series retails for \$75. Our experience, plus conversation with a number of underwater photographers, indicates Ikelite products are quite reliable. Oceanic Products makes a housing for the Honeywell 700 series which retails at \$137.50. It's superior to the Ikelite housing because it has an optically corrected front port and full cast aluminum housing. For all but the most demanding photographer, however, the Ikelite should do just fine at its lower price.

There are a variety of connecting cords on the market, but an adequate cord comes with the Ikelite housing and it fits into your Nikonos with the addition of a \$20 adapter. The coiled Ikelite cord cannot be disconnected underwater and hidden corrosion is more likely, corrosion which won't be noticed until your flash fails. Yet, at \$15, it's not prohibitive to pack an extra cord with you. For the beginner, stepping up to the more expensive EO connector is probably not

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worth the cost.

The Strobe:

There are three essential price levels for strobe/housing combinations: \$80, \$150 and \$200.

The best among the inexpensive strobes is the Vivatar 102, which can be purchased through a discount photography house (See December *Undercurrent*) for \$13 or so (plus the \$60 housing). The manufacturer claims four alkaline batteries provide 400 flashes. Flash power is judged by guide number, which for this model on land is 30 with ASA 25 film. That means that at three feet 80 per cent of your slide will be covered with appropriate light, with some darker areas at the edges (water reduces the light power by roughly 3.5 times). At five feet, there will be a small amount of fill light which will do little to enhance the quality of black wet suits.

On the other hand, it is an adequate strobe for use with extension tubes or macro lenses. If close-ups are your only interest, this will serve just fine.

Next is the top-of-the-line Vivatar, the 292. There are models in-between, but if you want more than just close-ups, you may not be satisfied. The 292 can be found discounted for \$85 (plus \$60 for the housing). ASA 64 guide number is 103 and there's plenty of light for five-foot shots, but you'll still experience the fades at six or seven feet.

In addition to manual control, this model has an automatic sensor which turns the flash off when the subject receives the correct amount of light for proper exposure. That's a boon for land photography, but underwater light bouncing off particles in the water will fool the eye and turn off the strobe prematurely, underexposing your shots. To solve the problem and use the automatic eye underwater, one must add a remote sensor and housing (about \$60) and mount it on the tray away from the strobe. With the change in angle, light particles do not fool the second eye.

This model also has rechargeable batteries, which give 70 flashes with an hour's charge. If one wishes to forego the automatic feature, the Vivatar 192, identical in every other respect but lacking the automatic eye, can be found for less than \$70.

A top Honeywell strobe, the 780, can be purchased for \$115 (plus \$75 for the housing). Its ASA 64 guide number of 144 gives it enough power for nearly all underwater shots and its design makes it easy to hold. It's rechargeable and recycles in seven seconds. The 710, without the automatic feature but otherwise identical to the 780, can be found for \$85.

Underwater Strobes: Only if you're a pro.

Buying the big underwater units is only for professionals or those who have no other way to spend

their money. Otherwise, as a beginner you should stick with one of the above. Should you end up not doing much shooting underwater, you will not have made an excessive investment and you still have compact equipment for land use. If you do take a lot of photographs and begin to develop professionally, your first strobe can be used as a slave with the strobes we'll next discuss. A slave is a second light source. By adding a photoelectric eye to your system, your slave strobe will fire as soon as it picks up light from another primary source. It's a common system used by professionals, many of whom just convert their first strobe into the slave as they graduate to professional equipment.

Now, if money is no barrier to satisfying your whimsical ways, then strobes made specifically for underwater use may be of interest. The two manufacturers are Subsea and Oceanic Products, and strobes of both manufacturers meet the demands of professional photographers.

Underwater strobes provide an angle of coverage much greater than land strobes, coverage adequate for 24 or 28mm lenses. Their recycling times are rapid, usually 2-6 seconds. The large ones have variable power outputs which permit the photographer to adjust light output to match the conditions in which he is photographing. Depending upon the film, 100 watts/second may be too much light for a given distance, while perfect for other shots; with a variable output strobe, the light can be reduced to 50 watts, permitting the proper exposure.

The small Subsea strobes, the 25 and 50, don't produce any more light than Vivatar or Honeywell (the 25 much less), but are considerably more expensive. Unless you intend to use wide angle lenses, we see no advantage. Roughly comparable strobes are the Oceanic 2003 and the Subsea 150. We prefer Oceanic to Subsea. It's far less cumbersome. It's rechargeable. And, the Subsea runs the risk of flooding which the Oceanic does not. The Oceanic is rechargeable, so the guts (made by Honeywell) are never taken out of their sealed container. The Subsea uses batteries and to replace them one must open the unit. Any problem with the o-ring seal and to the factory it must go to repair the water damage. Present list price for the Oceanic 2003 is \$495; the 2001, a bit less potent and without variable power, is \$398.

We suspect that half the divers buying their first strobe make one of two errors. They buy a strobe too small and are immediately displeased with the results. Or, they buy one too big and leave it in the closet 51 weeks a year. Neither should happen to you, but to those who have already made the wrong choice, we send our consolation and the message that you're certainly not alone.

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