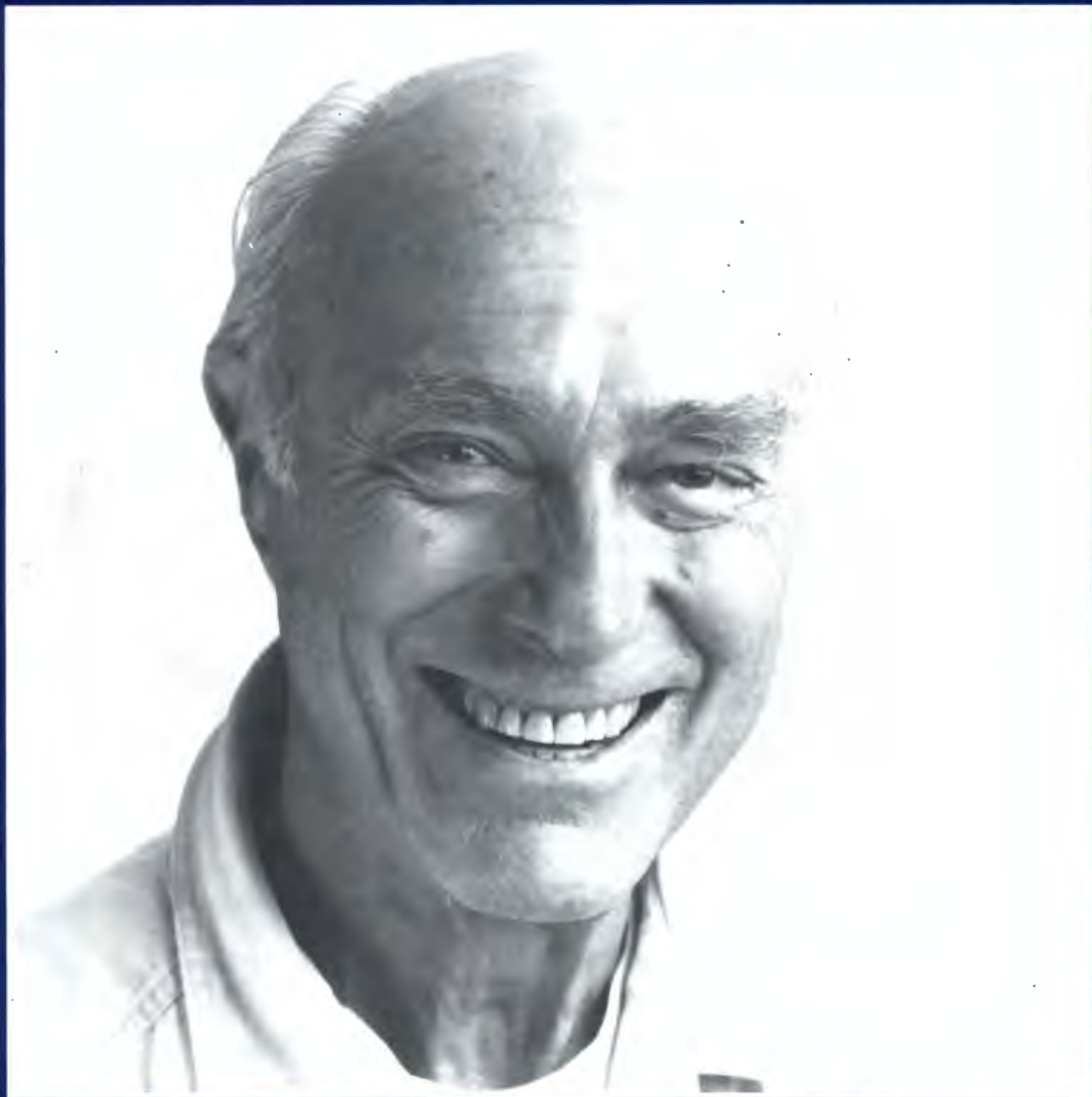


SUB AQUA

\$3.95

JAN./FEB. 1994 VOL. 4, NO. 1

JOURNAL



STAN WATERMAN
MAN WITH A CAMERA

When You Certify for SafeAir[®] /NITROX Diving Your C Card Should Look Like This:



- ✓ The Most comprehensive training program.
- ✓ The Best training materials worldwide.
- ✓ The First Instructor's Manual for Enriched Air Diving.
- ✓ The First gas blender and EAN service technician program.
- ✓ The First breathing gas purity standards other than air.
- ✓ The First International dealer network of enriched air facilities.
- ✓ Only ANDI standards are manufacturer endorsed.

Full ANDI Training Programs and ITC

Jan. 17-19, 1994 New Orleans, LA

Mar. 28-30, 1994 Freeport, NY

Apr. 11-14, 1994 Cozumel, Mexico

Remember, it may be NITROX but:

If it's not **ANDI**, it's not **SafeAir[®]**

Call for the Name and Address of a dealer near you.

American Nitrox Divers International
Freeport, NY USA (516) 546-2026

SUB AQUA

750 West Broadway Long Beach, NY 11561
Voice & Fax 516 / 889-1208
CompuServe 72650,220

Publisher / Editor
Joel D. Silverstein

Associate Publisher / Managing Editor
James F. Cleary

Associate Editor
Jeffrey J. Silverstein

Senior Editors
Tom Baker, Daniel Berg, Cathie Cush,
Capt. Hank Garvin, Kirby Kurkomelis,
Barb Lander, Dave Morton,
Capt. Eric Takakjian

Medical Editor
Stephen J. Lombardo, M.D.

Writers & Photographers
Edward Betts, Capt. Stephen Bielenda,
Dr. Jolie Bookspan, Glenn Butler,
Dr. Jennifer A. Flynn, John T. Crea,
Rod Farb, Gary Gentile, Bret Gilliam,
Les Glick, Peter E. Hess, Henry Keatts,
Jozef Koppelman, Capt. John Lachenmeyer,
John Pfisterer, Bob Raimo, Bradley Sheard,
Brian Skerry, Hillary Vidars, Ph.D.,
Kathy Weydig, Andrea Zaferes

ADVERTISING SALES
Bryan Shirley - 914 / 422-1764
Armand Zighan - 914 / 793-4469

Sub Aqua welcomes unsolicited materials, both written and photographic. Request our contributors guidelines. Submissions and queries should be accompanied by a self-addressed envelope to insure their return. All material published is subject to editing. Mail editorial correspondence and photographs to the editor.

Diving is a potentially dangerous activity. Persons engaging in this activity should be certified by a reputable training agency. Once certified you should dive within your training and experience. Information published in the Sub Aqua is not a substitute for education or training. Sub Aqua is not responsible for the contents of any information, advertisements or recommendations published herein.

Sub Aqua is published bi-monthly by SAJ Publishing Inc. Subscription rate for 1 year (6 issues) \$21.95. Subscription outside of U.S. add \$20.00 postage. Paid orders U.S. funds only. Send requests to the circulation department. Postage paid at Garden City, NY and other locations. POSTMASTER: send address changes to Sub Aqua, 750 West Broadway, Long Beach, NY 11561. All address changes are to be in writing.

Entire contents Copyright ©1993 by: SAJ Publishing Inc. All rights reserved. No portion of this publication, including advertisements created by SAJ Publishing Inc. may be reproduced without the express written permission of the publisher.

"I took one look and I was hooked."

In the past year Sub Aqua has brought you what we've been told are the finest interviews in dive journalism. One question we always ask is "Tell us about your first dive." Without exception, all the dive legends we interviewed, from André Galerne, to Evie Dudas, to Mel Fisher, to Stan Waterman, use virtually the same phrase: "I took one look and I was hooked."

And so it is with Sub Aqua readers. You are a highly visual group. You love looking at sea life, artifacts, dive hardware, historical documents, sunrises, and sunsets.

In this first issue of 1994 we celebrate a man whose name is synonymous with seeing underwater - the "cinematographer laureate" of diving, Stan Waterman. We also triangulate the continent to bring you images and stories from California, New England, Florida, and more. And, don't hold your breath, Bill Stone exhales his inspired thoughts on rebreathers.

We want to thank all our regular and new readers for helping make Sub Aqua the fastest growing and most enthusiastically read magazine on the dive scene.

When you ask divers about why they do it, they have a list of answers: "The freedom... the challenge... the camaraderie... the artifacts... the ocean." But deep inside every diver is that memory of the first glimpse through tempered glass... "I took one look, and I was hooked."

Joel D. Silverstein, Editor

FEATURES

Monterey Bay by Tom Baker	7
North Florida Keys Wrecks by Daniel Berg	10
DCI in the 90's by Stephen J. Lombardo, M.D.	12
Stan Waterman - Man with a Camera an interview by Jeffrey J. Silverstein	14
Stone On Rebreathers by Joel Silverstein	18
A Case of Mistaken Identity by Dave Morton & Eric Takakjian	20
Flash Backs by Kirby Kurkomelis	25

DEPARTMENTS

The Hang Line	4
Happenings	6
Surface Interval - Capt. Kevin Brennan by Barb Lander	9
New Products	22
Advertisers Index	25
Divers Directories	26
Faces of Adventure - Photo Gallery	27

ON THE COVER - Stan Waterman - Man with a Camera, was taken in Lawrenceville N.J. with a Hasselblad 500 C, 150 mm Sonar lens on Kodak Plus-X film at f 8.0, by Joel Silverstein.

Gilliam Joins Explorers Club

The internationally renowned Explorers Club has recently elected Captain Brett Gilliam as a member with additional honors as a Fellow National in recognition of his published works. Founded in 1906, the Explorers Club is dedicated to all the advancement of field research and scientific exploration and has sponsored expeditions in all corners of the world.

Brett now joins the ranks of such adventurers as Sir Edmund Hillary, President Teddy Roosevelt, astronauts John Glenn and Scott Carpenter and diving luminaries Robert Ballard, Eugenie Clark, and Dr. Sylvia Earle.

Gilliam began diving in 1958 and has since logged over 13,000 dives around the world. He is a twenty-three year veteran of the diving industry, and a Licensed USCG Merchant Marine Master and a recompression chamber supervisor. Author of scores of articles and seven books on diving, he is also a contributing editor and photographer to eight diving magazines, including SUB AQUA.

Through his company, Ocean Tech, Brett provides services in the design and operation of high pressure air systems, recompression facilities, diving vessels as well as training in hyperbarics and technical diving. He is Vice Chairman of the Board of Directors of NAUI and Vice President of IANTD. ■

They Call Him Flipper

Remember that wonderful faithful and mischievous dolphin Flipper? He was probably the second most famous being other than Sea Hunt's Mike Nelson that encouraged your first diving desires. Well, he's on his way back into our hearts.

SUB AQUA talked with Metro-Goldwyn Studios who confirmed that the Lassie of the sea will be returning sometime next summer in a full length feature film.

The film is currently in production and is tentatively titled "Flipper - The Adventure of a Lifetime." ■

Spielberg — Style

Darwin the Dolphin, who talks through a voice synthesizer, is one of the stars of Steven Spielberg - produced "Sea Quest DSV," on NBC Sunday night television.

Sort of a cross between "Star Trek" and "Voyage to the Bottom of the Sea," Sea Quest (DSV stands for Deep Submersible Vehicle) is finding popularity with its high tech look at next century ocean exploits.

Woods Hole research guru Bob Ballard is technical consultant on the show. So look for interesting bits of tech-lore.

Everyone's favorite shark hunting sheriff Roy Schieder, helms the squid-like sub, and



Roy Scheider © NBC

you'll want to tune in to see just when he and the beautiful doctor (Stephanie Beecham, *Dynasty*) get together. Or is that Jean-Luc Picard and Dr. Crusher?

O.K. so you think "Lois and Clark" are adorable? Get a VCR. ■

NEXT ISSUE



You asked for it — an equipment issue. During the next six weeks SUB AQUA editors will be scouring the marketplace in search of the new hot stuff.

Our first stop will be the Tek Conference where we will explore high-tech gear for specialized diving. We will find the latest in full-face masks, underwater communications gear, heads-up digital displays and rebreathers, and report on them.

After sampling New Orleans' finer restaurants we will enter the annual DEMA convention where manufacturers will be showing us their best. From the hot new masks to multi-tank computer monitors, you won't want to miss our next issue. ■

Warm Wind DRYSUIT DIVING AT ITS BEST!



Our **DRYSUIT LINER** is made of Polartec® interwoven with Lyrca®. This warm, form-fitting undergarment eliminates drysuit squeeze, "wicks" moisture, and any water which may have entered your drysuit, away from your body, traps your body's heat, and gives you freedom of movement. Since the **LINER** is neutrally buoyant, you will be able to remove weight from your belt.

By layering with our **VEST**, as shown, you will have one liner that works well in BOTH MODERATE and COLD water. Allowing you to use your drysuit year round without overheating or chilling.

THE RESULT IS THE MOST ENJOYABLE DRYSUIT DIVE YOU HAVE EVER EXPERIENCED!

CALL US AT 800 288-WARM FOR THE NAME OF DEALER NEAR YOU.
PLUS A FREE WARM WIND OUTERWEAR CATALOG

Today's The Day!

by Hank Garvin

A cold Sunday in November — we were on our way to the *Oregon* for the last time this season. The *Oregon* had been turning up all kinds of artifacts this year ever since a group of divers from Connecticut uncovered a spot this past March.

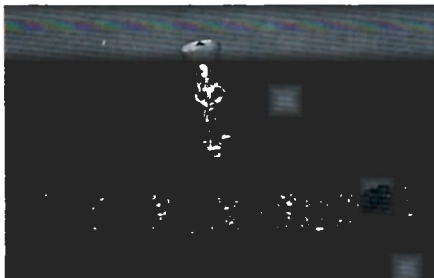
This spot became known as the Connecticut Hole. Each time we would go out this year I would find myself digging for goodies in the Connecticut Hole, so it only made sense that on this last dive we dig there.

I would be diving today with Captain Bielenda; he had not been to the famous spot yet. Captain Janet made Captain Phil's tie-in a cinch, just ten feet from the desired target. The boat was humming. Everyone wanted in fast to get their opportunity at digging. One team was even using a scooter to speed the process.

As Steve and I reached 80 fsw we just stopped and looked at the beautiful wreck. Visibility was over fifty feet — a scene not to be missed. From where we were almost the entire bow could be seen. I dropped down to the spot and started digging. Twenty five minutes later I was putting what felt to me like a little figure into my goodie bag. It turned out to be made of brass and as far as I can determine it is mounted on a piece of jade.

As I started to reach back into the hole, out of the corner of my eye I saw something sparkle. I stopped and picked it up. I knew instantly that this was a bracelet made of gold. Needless to say the water instantly felt much warmer. I completed the forty minute dive and started up. All I could think of throughout the hang was Mel Fisher's famous line... "Today's the day!"

The bracelet is being preserved now. Jewel experts have determined that the stones, each about 3/4 the size of a 25 cent piece are hand carved from jet and the ornate links are about 22 carat gold. Quite a valuable piece.



Eight divers went in first that day. Thousands over the years. I realized that it doesn't matter who gets there first. When you get lucky you get lucky — Today's the Day! ■

Up the Downline by Michael Flynn

The world of dark and wet
Arouses senses of feel and touch
I now assemble mind pictures with items I hold
Feel the shape of the round
Know the touch of the square
With open mind expansion, we caress image.

In three dimensional labyrinth
I maintain an acute awareness
of the forces upon my being
The downline guides my journey
Through an atmosphere of sweatless toil.

When the task is complete, and,
I've satisfied down time
I will etch a return
Up the downline
My roadway of rope
From whence I began.

NEW DESIGN



BLIZZARD

REGULATOR
IMPROVED COMFORT AND BREATHABILITY

- Lighter, Sleeker
- Comfort Mouthpiece
- Superior Cold Water Performance
- Exhaust Tee Direct Bubble Away From Face
- Easier to Service

**SHERWOOD
SCUBA**

Sherwood, Harsco Corp.
120 Church St.,
Lockport, NY 14094-2889

See your authorized Sherwood dealer for Details

MARCH

Boston Sea Rovers 40th Anniversary

The Boston Sea Rovers invite divers to celebrate their 40th anniversary dive show. On March 5th and 6th, divers from all over the country will converge on the Copley Plaza in Boston.

Divers can select from over 50 seminars, by such speakers as Steve Bielenda, George Buckley, Gary Carvonneau, John Chatterton, Jerry Comeau, Cathie Cush, Evelyn Dudas, Pierre Henry Fontaine, Brett Gilliam, Ed Hemsdorff, Henry Keatts, Ken Loyst, Andy Martinez, Wes Pratt, Bill Quinn, Terry Rioux, Bradley Sheard, and Brian Skerry.

60 exhibits from manufacturers, dive travel agencies, dive clubs and charter services will be in the exhibition hall throughout the weekend. For more detailed training, workshops are offered on Basic and Advanced Photo Techniques, Nikonos First Aid, DAN Oxygen Administration, IANTD Nitrox Diver, Dry Suit Repair and Maintenance, Tank Inspections, and three different workshops on Mixed Gas and High-Tech Diving.

The Saturday Evening Film Festival will be hosted by Frank Scalli, and features such notable speakers and cinematographers as Nick Calyoianis, Al Giddings, Dr. Joe MacInnis, and John McKenny.

Tickets are available by contacting The Boston Sea Rovers, c/o Bunky Hodge, 174 Beech Street, Rockland, MA 02370, or call The Boston Sea Rovers Information Line at (617) 424-9899. ■

Beneath The Sea Dive Show

Beneath The Sea's three day program with 50 speakers and 170 exhibits will present wonders from the world beneath the sea. The daytime programs and exhibits will be at the Westchester County Convention Center, White Plains, New York. The matinee and evening Film Festivals feature Steve Frink's magic produced through the eyes of Nikon's multi-media team. Al Hornsby's "Expedition to the Indian Ocean" and Stan Waterman's always-beautiful images will be presented.

Panels, video and slide shows, and seminars on Dive Computers, Women in Diving, Underwater Photography, Hyperbaric Medicine, diving in Africa, the Red Sea, the Caymans, Micronesia, New England, and Wreck Valley, are a few of the planned

adventures. And there will be 170 exhibits showing the latest equipment, and incredible new places to dive around the world. The new *Diving Discoveries Pavilion* will focus on Atlantic Diving off New Jersey, New York, Connecticut, and Rhode Island.

Fun will begin Friday night with the new *Beach Party*. Saturday's events include the *Endless Summer* fashion shows and then following the Underwater Film Festival will be the Cayman Islands' *Decompression Party*. Sunday's special added all-day program, March 27th will be for kids and their families, Beneath the Sea's national children's *Ocean Pals* program and awards. Contact: BTS 94, POB 644, Rye, NY 10580. Phone: (914) 793-4469. ■

MAY

Diving Physiology in Plain English

Dr. Jolie Bookspan, dive scientist/researcher and former physiologist with the US Navy, will offer the seminar "Diving Physiology in Plain English" on the *M/V Isla Mia* in the Bay Islands, Roatan. Experience a week of live-aboard diving and a fascinating seminar. Learn about half-times, m-values, tissues saturation and bubbles. Plus the latest methods of fitness and nutrition. Contact: Isla Mia at (800) 874-7636 ■



Demand the best in technical education

Train with Tom Mount

Benefit from 35 yrs of experience

- 11,000+ LOGGED DIVES INCLUDING:
 - 2300+ cave dives
 - 1100+ wreck dives
 - 2200+ dives deeper than 200 FSW
 - experienced saturation diver
- AUTHOR OF SEVERAL TEXTS INCLUDING:
- Safe Cave Diving,
 - Practical Diving and
 - Mixed Gas Diving

Quality Diver Education

- IANTD Certification and Instructor Training
- Nitrox/Advanced Nitrox/Technical Nitrox
- Deep Air/Advanced Deep Air
- Technical Deep Air
- Trimix
- Cave
- Wreck Penetration
- Photography
- Modeling with Patti Mount

1545 NE 104 St. Miami Shores, FL. 33138 USA

305-754-1027

Don't Get Soaked.



O.S. SYSTEMS

(503) 543-3126 • Fax (503) 543-3129

An Otter Place to Dive

The Joys of Monterey Bay

by Tom Baker

Winter: In the Northeast, the docks are quiet. Dive boats are not running; one has like the birds, fled south. Not 'til spring will we hoist our doubles and gear crates for another descent to the mysterious shipwrecks now sleeping in peace, undisturbed, dreaming of ports never reached.

For some, there will be diving in the Caribbean, Florida or other warm southern destinations. But there's an alternative in the west. One of diving's great meccas is in Monterey Bay, California, eighty miles south of San Francisco, a cold water region of spectacular kelp forests and teeming sea life. There is not only great diving, but a host of other activities that anyone who loves the sea will enjoy.

The diving occurs along the edge of the Monterey Canyon, a trench deeper and more extensive than the Grand Canyon. Many of the best dive sites are on reefs and seamounts a stone's throw from the abyss. This proximity to the deep ocean enriches the waters with nutrients, creating one of the world's healthiest and most elaborate ecosystems.

Last summer, a pod of orcas cruised the bay for a couple of days, at times only ten yards off the beaches. A week later, a grey whale surfaced just off a seaside restaurant, startling the lunch crowd. A few lucky divers saw it as it wove through the kelp.

Even without orcas and whales, no dive is dull. The thick kelp forests provide a habitat for an incredible diversity of creatures. Sea lions and harbor seals are present on almost every dive. Divers also are encountering the growing numbers of sea otters. In the kelp hide schools of fish, and just outside can be found swarms of squid, coming in during winter to mate and lay eggs. The rocky reefs hide octopus, crabs, abalone and the amazing wolf eel, ferocious looking but gentle with divers.

Swimming in the kelp is like exploring in a dim forest of redwoods. Even under the kelp canopy, the reefs glow red and pink from blankets of strawberry anemones and cup corals. Swimming in the cuts and groves of the reefs feels like flying.

In spring and summer, the plankton blooms create the rich stew that supports this life. Visibility is much like the pea soup we often encounter on the Northeast wrecks. But in fall, and especially winter, it can open up to 75 feet or more. The water is cold year-round so drysuits are best.

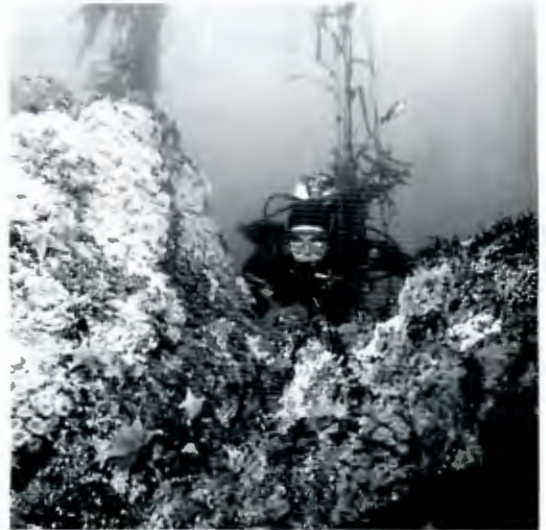
There's lots to do on the surface. Sea kayaking and biking are easily arranged, as is hiking at the Point Lobos National Park just south of Monterey. The redwoods of Big Sur are a short drive along the world's most spectacular coastline.

The Monterey Bay Aquarium brings the underwater world of Monterey to life for non-divers. It is the most interesting facility of its kind, anywhere. — A must to visit. Built in the remains of the Hovden Sardine Cannery, it is situated in the very heart of Monterey on famed Cannery Row.

A few doors down stands the old Pacific Biological Laboratory, where John Steinbeck once hung out with Ed Ricketts, the famous character "Doc" in Steinbeck's novel, *Cannery Row*. To this day, Ricketts' classic work, *Between Pacific Tides*, first published in the 'thirties, is a standard text of west coast marine biologists.

There are shipwrecks, too, but they're thousands of feet deep. So divers have to be content with the unbelievable sea life, best seen in winter.

Dive boats like the *Silver Prince* and



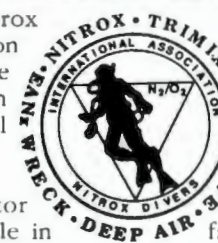
Cypress Sea operate year-round. There's a wide variety of shops, restaurants and hotels and motels for all budgets. (For wine lovers, the Napa Valley is a two-hour drive.) Monterey truly has it all: world class diving, fishing, kayaking, whale watching, the aquarium and historical landmarks like Doc Ricketts' lab and one of Steinbeck's homes.

So, if you're thinking of a winter dive trip, maybe it's time to follow Horace Greeley's advice and "Go West"! ■

Dive Safe, Dive Fun, IANTD is for Everyone!

Join the founding Nitrox and Technical organization for recreational divers—The International Association of Nitrox & Technical Divers.

Diver and instructor certifications are available in EAN Nitrox; Advanced Nitrox; Nitrox Technical; Trimix; Deep Air; Advanced Deep Air; Technical Deep Air; Gas Mixing; EAN and/or Air Overhead Environment; Cave and Wreck Penetration Diving.



Annual Membership Dues: \$40 US/\$50 International. Includes subscription to the IANTD Journal which is published quarterly.

To receive an international listing of IANTD facilities and instructors, send \$5.75 to IANTD World Headquarters, 1545 N.E. 104th Street, Miami Shores, FL 33138-2665.

Check, Money Order, VISA and MasterCard accepted.

305-751-4873 • Fax 305-751-3958

A new breed of medical specialist... only at Saint Agnes.



Oh, you noticed, they're divers. Dr. O'Neill, Nara and virtually every member of our Hyperbaric Chamber medical staff are divers.

What's a Hyperbaric Chamber?

It's a state-of-the-art piece of medical equipment that allows patients who have a variety of problems to get those problems treated. For divers who accumulate dangerous quantities of nitrogen in their bloodstream, a session inside the chamber allows them to decompress and purge themselves of the harmful bubbles. The Hyperbaric Chamber also treats conditions like Carbon Monoxide Poisoning, Non-Healing Wounds, Oral Surgery, Crush Injuries and Smoke Inhalation.

The Hyperbaric Chamber at Saint Agnes.

It's a brand new unit and is the only one between New York City and Syracuse, NY—a distance of 350 miles. Virtually every member of our Hyperbaric Chamber medical staff is a diver.



For more information, call Nara Sullivan, our Hyperbaric Coordinator at 914-681-4844.



Our Divers Referral Medical Program.

If you're a diver with a medical problem, you should call 914-948-1128 any time of the day or night. You'll get a sympathetic medically trained member of our staff who will answer your questions.

University Care in a Community Setting.
Saint Agnes Hospital

Affiliate of New York Medical College
305 North Street • White Plains NY 10605 • 914-681-4500

Surface Interval with: Captain Kevin Brennan

by Barb Lander

A smoke filled room crowded with U-Boat officers; the din nearly drowns out the singer in the red silk dress. Most of the officers far gone on a drunken debauch that marks their final night before sailing. Many of their comrades who left for patrol never returned.

Das Boot was playing in Captain Kevin Brennan's mind as he knelt in the sand, staring into the knife-edged bow of a newly discovered German U-Boat.

Being involved [with the late Captain Bill Nagel] in the discovery of the *U-Who* was the culmination of Kevin's childhood dreams. But growing up in landlocked West Chester, PA, he spent more time playing in the orchard on the Bartram Farm than he did on the water. Not until 1983, when he traveled to Jamaica and learned to free-dive and spearfish did Kevin think about scuba diving.

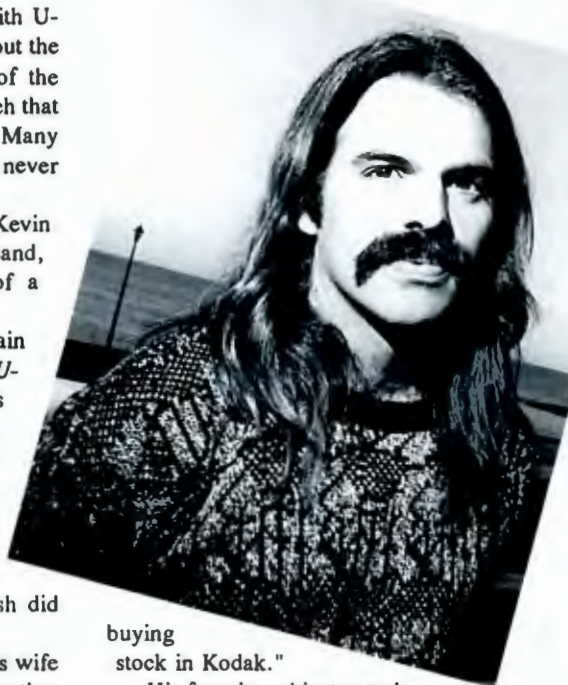
January 1984 found Kevin and his wife Barbara enrolled in a scuba class. Together they braved an icy certification at Hamburg Quarry. Every penny Kevin could lay his hands on went to buying gear for himself and Barbara.

His first few New Jersey wreck dives under his weight belt, Kevin began looking around at other divers on the boats. They were all wearing doubles. A set of bands and Barbara's tank, and Kevin was diving doubles too.

Many of his dives that first year were off the *Sea Lion*. A year later Kevin was a regular mate on the *Sea Lion* and on other boats when he could; Kevin was logging sea time at every opportunity. In June 1990, Kevin earned his Ocean Operator's license and began freelancing as an alternate Captain; a business that he readily admits has its ups and downs.

But, Captain Kevin's first love is his diving, and he knows the wrecks of New Jersey like few others. Most often, you will find him splashing over the side and reaching back for his camera. Kevin has been photo-documenting area wrecks almost as long as he's been diving. It was through the lens of his camera that the rest of the world learned about the newly discovered U-Boat.

His first camera was a used Nikonos II. Both the camera and strobe flooded the first time he took them into the water. Kevin recalls, "I learned by the trial and error method. . . I could shoot myself for not



buying stock in Kodak."

His favorite subjects are the wrecks and the marine life of New Jersey. Captain Kevin's advice to would-be underwater photographers: "Get close to your subject matter; the water here is not the clearest."

Another of Kevin's hard-earned lessons will benefit deep-diving photographers. "Mixed gas," he says. On the *Chopa* (210

fsw) and the *U-Who* (230 fsw) Kevin relates that his head is clear and he is able to concentrate on composition, bracketing and can even do the math for changing f-stops at depth. The same dive on air led to frequent photographic surprises, usually unpleasant ones. "It wasn't exactly the way I remembered it," Kevin laughs.

The example he uses was his first U-Boat dive. As he struggled in the current to return from the bow to the anchor line, his vision narrowed to a tunnel. He thought of the U-Boat sailors who never went home. It took all his physical and mental power to reach the anchor line and ascent. Kevin returned to shore and went on a diet and fitness regime and learned to dive mixed gas.

One of the industries biggest proponent of fitness in diving, Kevin says he's forty pounds lighter and is "wired for energy." His now trim figure with its long dark ponytail is a regular sight on the beaches, as he jogs five miles a day. Says the Captain, "A lot of things you ask your body to do are just mind over matter, but if you are physically out of shape, natural law will prevail.

Good advice for us who need to stay in shape for the dive season. ■

Our springs, caverns and caves in this special part of northern Florida present one of the most beautiful diving opportunities in the world. Technical training in cavern and cave diving is our speciality. . supported with a complete line of technical diving equipment. All the springs are easily accessed by decks, and there are clean bathhouses throughout our camping resort.



Ginnie Springs

R E S O R T

For more details call and we will send our packet outlining rates (individual, instructor or groups), technical training programs and the camper /diver packages.

(800)874-8571 Spring country(904)454-2202

NORTH FLORIDA KEYS WRECKS

by Daniel Berg

The Coast Guard cutters *Bibb* and the *Duane* lie on the sandy bottom beneath the crystal clear warm waters of the North Florida Keys. These two vessels did not go down in a storm or due to a collision at sea but were sunk intentionally by local dive operators to create a dive site and an artificial reef. The two wrecks once considered obsolete to the Coast Guard now continue to serve, not the government, but rather the adventures of scuba diving tourists who explore their fascinating remains.

The Coast Guard Cutter *Bibb*, was built in the Charleston Navy Yard, in, South Carolina. Her keel was laid on August 15, 1935. She was launched on January 14, 1937 and commissioned on March 10, 1937, as the *George M. Bibb*. She was 327 feet long, had a 41 foot beam and displaced 2,658 tons. The *Bibb* was powered by two Westinghouse double decker reduction geared turbines and would cruise at ten knots. Her maximum speed was 19.5 knots. Her armament consisted of one 5-inch gun, one 3-inch gun, six 40-mm and four 20-mm guns. During active duty she had a complement of ten officers, three warrant officers and 134 crew.

On one of the *Bibb's* early cruises, she patrolled the North Atlantic's first weather station. She also served as convoy patrol during World War II and was involved in the Okinawa assault. During World War II, the *Bibb* rescued over 300 survivors from six torpedoed vessels. She was also



USCGC BIBB Photo by Geo Toth, Wreck Valley Collection

deployed to Vietnam. As with most Coast Guard vessels, one of her main roles during peace time was search and rescue missions. One of her most notable missions was the rescue of almost 70 survivors during gale force winds from the airliner Bermuda Sky Queen which crashed in October, of 1948. On September 30, 1985, this fine cutter was decommissioned.

The U.S. Coast Guard Cutter *Duane*, was built at the Philadelphia Navy Yard, in Pennsylvania as the *William J. Duane*. Her

keel was laid on May 1, 1935, and she was launched a year later on June 3, 1936. The *Duane* was commissioned on August 1, 1936. A sister ship to the *Bibb*, she was also 327 feet long, had a 41 foot beam and was powered by two Westinghouse double reduction geared turbines. The *Duane's* armament consisted of three 5-inch guns, three 3-inch guns, fourteen 40-mm and eight 20-mm guns.

The *Duane* was originally stationed in California until being transferred to the East

ULTIMATE PONY BRACKET

The New, Secure, Easy Way
To Mount Your Pony Bottle.
(SEE IT AT YOUR LOCAL DIVE STORE)



The Aqua Explorer
**ULTIMATE
DIVE REEL**

- * 5 inch Spool
- * Anodized Aluminum Construction
- * All Stainless Hardware
- * Unique Lock Screw Location
- * 1/8 Diamond Braided Nylon Line
- * Solid Delrin Core

#RA5 and
NEW SMALLER #RA3 Reel



From Aqua Explorers Inc.

- ◆ NO TOOLS REQUIRED
- ◆ FAST & EASY MOUNTING
- ◆ SECURE & LOW PROFILE
- ◆ ALL HARDWARE MOUNTS TO PONY
- ◆ STAINLESS STEEL CONSTRUCTION
- ◆ FITS ALL TANKS, SINGLES & DOUBLES

Call for COLOR CATALOG
and the location of
your Nearest Dealer.



Aqua Explorers Inc.

Po Box 116, East Rockaway, N.Y. 11518

Phone/Fax (516) 868-2658



USCGC Duane

coast in 1939. During World War II, the *Duane* was credited, along with her sister cutter *Spencer*, with sinking the German submarine *U-175*. The *Duane* also served as a flagship in the 1944 allied invasion of Southern France and was sent to serve as coastal surveillance during the Vietnam war. On another occasion, the *Duane* rescued 250 survivors from the *Dorchester*. The rescue lasted for three days from February 3rd through the 6th. The *Duane* also escorted boats full of refugees during the 1980's Cuban boat lift. On August 1, 1985, the *Duane* was decommissioned.

After sitting in moth balls for a couple years both the *Bibb* and the *Duane* were purchased for \$160,000. The money was raised by the Monroe County Tourist Development Council as well as local dive shop donations. The vessels were stripped of their armament, and hatches and their main masts were removed. The ships were cleaned and sunk at an Army Corps of Engineers approved location one day apart near Molasses Reef. The *Duane* was scuttled on the evening of November 27, 1987. She now sits upright and intact with a slight starboard list in 118 feet of water. The *Duane's* crow's nest is first reached at 60 feet, while her wheel house is in 80 feet. Her main decks are at 98 feet, and her bow points southeast. With the Clear Gulf Stream washing over the site, visibility can be as good as 200 feet. Her sister ship was sunk the next day. She now sits on her starboard side with her bow facing north in 130 feet of water. Divers will reach the upper portions of the *Bibb* in only 90 feet of water. The two Coast Guard vessels now rest only 100 yards apart.

These two wrecks have become one of

the most popular dive sites in the area and are a favorite destination for underwater photographers. The site has attracted a huge assortment of marine life including schools of huge barracuda, three to five feet in length. Keep in mind that a strong current is usually present. This site is considered an advanced dive and I would highly recommend advanced training due to the depth and current before descending to either the *Bibb* or the *Duane*. ■

CAPT. MIKE'S DIVING SERVICES INC.

**WRECK DIVING on
Long Island Sound**
aboard The *DEFIANCE*

**ICE DIVING in
Lake George**
Jan 22 & 23 & March 5 & 6

DRY SUIT TRAINING
DUI, VIKING, POSEIDON &
PARKWAY

EQUIPMENT SPECIALIST
Training & Certification

Full Service Repair Facility
• Viking • Poseidon • AGA

718 885-1588

CITY ISLAND, New York
Minutes from New Jersey & NYC!

TYPHOON

Drysuits Since 1947

Ballistic Grade Nylon

Superior Abrasion & Tear Resistant

Lightweight

Comfort and Manuverability

Thermal Boots

Neoprene Lined for Warmth

Front Entry

Easy On / Easy Off

Typhoon Water Wares

**For the dealer nearest
or further info contact:**

1106 Market St.
Pocomoke City, Md. 21851
P 410-957-4414 F 410-957-4415

DECOMPRESSION ILLNESS IN THE 90's

by Stephen J. Lombardo, M.D.

With recent developments concerning decompression illness it is important to become familiar with the new terminology. Due to the similarity in initial symptoms of arterial gas embolism (AGE) and classic bends (DCS) as well as the need for prompt first aid rather than lengthy diagnostic debates which may begin at the dive site and continue in the Emergency Room, both AGE and DCS have been grouped together as DCI.

Decompression illness is classified by organ system involvement. Most commonly we see a diver experience pain in an arm or leg, usually described as an ache in a joint.

LIMB PAIN DCI - Recreational divers are usually affected in the upper extremity, and most commonly the shoulder. LIMB PAIN DCI, decompression illness, can be differentiated from musculoskeletal injury because the limb pain of decompression illness is generally not worsened by movement of the affected joint. Indeed, in the early stages the victim may get some relief by moving the limb or by application of local pressure (eg: inflated pressure cuff).

GIRDLE PAIN DCI - Closely akin to limb pain DCI, but more ominous, is GIRDLE PAIN DCI, characterized by an aching or constricting sensation in the abdomen, pelvis or chest. Girdle pain DCI frequently evolves to neurological deterioration. Both of these types of DCI will require recompression treatment.

CUTANEOUS DCI - Another extremely common type of decompression illness, CUTANEOUS DCI [skin bends], involves a reddish rash, often preceded by severe itching around the shoulders or over the trunk, which may progress to mottling or marbling of the skin. Heat may also be a presenting symptom, although this is less frequent. Cutaneous DCI usually disappears within an hour, but may sometimes last for a day or more. It is not generally followed by more serious symptoms and by itself does not warrant recompression.

NEUROLOGICAL DCI - The next most common form of decompression illness is, NEUROLOGICAL DCI where symptoms are usually referable to the spinal cord rather than the brain. Previously known as DCS type II, neurological DCI is more often associated with short, deep dives than with long shallow exposures. It has been estimated that up to 80% of DCI among sport divers is neurological. Retrospective studies have indicated a greater incidence of Patent Foramen Ovale, (a communication between the atria of the heart which is found in up to 30% of the population) in divers with serious decompression illness. It is postulated that micro bubbles may bypass

the lungs, which act as an excellent filter, and proceed from the right side of the heart to the left and out into the systemic circulation, causing sudden neurological DCI. Other factors allowing bubbles to bypass the lungs include pulmonary hypertension, cold water immersion, oxygen toxicity, the use of bronchodilator and by bubble compressions during the recompression

"It must be borne in mind that the promptness with which pressure is applied has a most definite bearing on the effect of treatment.

This is a fundamental rule..."

Underwater Salvage
Operations - 1944

of divers. This is thought to explain the latent period between the appearance of bubbles in the tissues and the development and subsequent progression of symptoms. An important subset of neurological decompression illness is AUDIOVESTIBULAR DCI, characterized by vertigo, ringing in the ears (tinnitus), jerking movements of the eyes (nystagmus) and loss of hearing after a dive. These symptoms may be accompanied by nausea and vomiting.

PULMONARY DCI - also known as DCS III by prior nomenclature, may have two distinct presentations, which may be difficult to distinguish initially despite completely different mechanisms.

The first involves lung rupture due to barotrauma, and may occur in any dive regardless of depth or duration. This will release undissolved gas into local tissues and blood, and can result in arterial gas embolism and possible neurological DCI. Symptoms usually develop within five minutes of surfacing and may begin as subtly as a cry, gasp or a grunt, or as dramatically as convulsions, paralysis or other stroke-like symptoms. Resolution of symptoms is in direct proportion to speed of initiation of recompression therapy.

The second presentation of pulmonary DCI used to be known as "chokes," and can present as sore throat and cough on deep inspiration in its early, milder form.

BENEATH THE SEA
18th Annual Exposition
March 25-26-27 1994
White Plains, New York

Great Seminars
Slide Shows
Workshops
Film Festivals
Photo Contest
Parties
Kid's Ocean Pals

150 Exhibits
Latest Equipment
Best Dive Shops
Top Dive Clubs
Hot Travel Resorts
Shipwreck Artifacts

INFO
BTS
POB 644
Rye, NY 10580
914-793-4469

Unfortunately, untreated it can progress to severe chest pain, shortness of breath and unconsciousness. This form of pulmonary DCI is thought to be caused by massive venous gas embolism and treatment is accomplished by prompt recompression. Pulmonary DCI is seen less commonly recently, except in cases of rapid uncontrolled ascent. Perhaps this is due to the emphasis on slower ascent rates.

LYMPHATIC DCI - describes the swelling of one or more lymph nodes, or the unusual phenomenon of extensive swelling of one or more limbs. This is thought to be due to the obstruction of lymphatic vessels by bubbles. The breast, abdomen or face can also become involved, and pain is often a symptom. Although recompression treatment may relieve the pain rather rapidly, it usually takes several days for the swelling to subside.

Although the aforementioned manifestations of decompression illness are most important to delineate, it is also significant to comment on the evolution (eg: progressive, static, spontaneously improving or relapsing), time of onset, gas burden and presence or absence of barotrauma. Thus a description of a victim of DCI might be "Acute progressive limb pain and neurological decompression illness presenting at the 30 ft stop with a minimal gas burden and no evidence of barotrauma."

Of symptoms in 1249 cases of DCI in Recreational Divers reported to the Divers Alert Network, over 50% of symptoms develop within the first hour and 90% within 6 hours of the dive.

It is essential for us to be familiar with the symptoms of DCI in order to maintain a high level of awareness, and it is only through this form of informed vigilance that the seductive and deadly syndrome of DIVER DENIAL may be eliminated.

Noted diving physiologist and decompression expert Dr. R.W. Hamilton states; "Decompression Sickness is not an accident; a certain incidence of it is expected from practical diving." It is with this basic understanding that there should be sufficient cause for us to redouble our efforts to safely and intelligently prevent DCI from coming our way. ■

Dr. Stephen J. Lombardo is in private practice with a specialty in internal medicine. He serves on the board of directors for the Beneath the Sea - Hyperbaric Chamber at St. Agnes Hospital.

LEARN TO BREATHE

NITROX

- **NITROX, Tri-Mix, Argon, Oxygen**
- **O² Cleaning of Regulators & Tanks**
- **NITROX Diver & Instructor Training**
- **Specialized Rental Equipment**
- **Repair Center for ALL equipment**
- **Advanced Wreck Training**
- **Call for Northeast Wreck Dives**

SEA DWELLERS OF NJ

SCUBA Diving Outfitters • Instruction • Dive Tours

132A Broadway, Hillside, New Jersey 07642

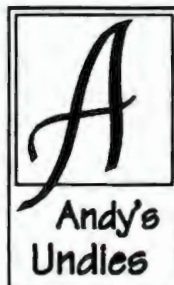
201-358-0009; FAX: 358-1519

©1993 SAJ

The UNDERSUITS FOR DRYSUIT DIVING

- ◆ **6 Styles for all Drysuits & Conditions**
- ◆ **Thinsulate Insulation for Cold Waters**
- ◆ **Pile Suits for Warmer Waters**
- ◆ **Custom Sizing**

We Never Leave You Cold!



Contact your local dealer or:

Andy's Undies

1106 Market St.

Pocomoke City, Md. 21851

P 410-957-4414 F 410-957-4415

STAN WATERMAN

Man With A Camera

an exclusive interview by: Jeffrey J. Silverstein

*I shall be telling this
with a sigh ages and
ages hence, two roads
diverged in the yellow
woods and I took the
one less traveled by
and that made all
the difference.*

— Robert Frost

How did you start diving? “Hanging on my office wall just over there, that mask was given to me in 1936 and is a Japanese ama diver mask... I put it on, went off the beach, off of Palm Beach, opened my eyes and was hooked. Of course, that ability to see well under water is perhaps the greatest challenge of all. . .

After the War, when I was a blueberry farmer in Maine and living on the ocean, I read about this man, Cousteau, first tidings of a self-contained breathing unit and was so excited I could hardly stand it. . . I must have had the first aqua lung in the State of Maine, ordered from U.S. Diver’s.”

At this time, was diving recreational or business? “It was recreational. . . just to get under water and see, even in Maine, which does not have a terribly active eco system, but I was so enthusiastic about the aqua lung that I tried it out ... and I started interesting other people in my area in scuba diving and began selling equipment. I found that I could earn some money too, \$25.00 a shot by diving up lost moorings and repairing some fishing weirs and recovering drags, so I earned some part of my keep using the tank — a complete novelty in that area.”

Had you at that time been interested in photography and film making? “(This was) really before my interest in photography, but I had a 16 mm home movie camera. I had done some still photography, but never considered using a camera for earning my bread.”

Are you a diver who photographs or a photographer who dives? “When I first



started, I was certainly a diver who photographs, but I would like to think that over the years I have gained some proficiency with the camera and I hold both parts equal now, because a person who does not dive easily and is not at home with his equipment, is able to act spontaneously to problems, crises and so on, cannot be easy with a camera, so they really go together.”

Tell us about your decision to make diving your life’s career. “It happened on one of those long winter evenings in Maine in 1953. . . I opened up the new National Geographic and there was Cousteau’s article

on the Red Sea and I ate it up. I thought: “Who is this man who has carved out this life of adventure and goes into the sea, and earns a living doing it?” I thought “Perhaps it means stepping out and taking a chance and doing something about it.” I conceived of building a boat up on the Maine coast in a little lobster boat yard, designing it for what I knew I would need for diving, and starting to teach diving. A company that I had been getting my tanks from, the Fin John Company, had the earliest 16mm underwater movie system for sale off the shelf. They loaned me one of their cameras, hoping some of my customers might want to

buy one and I started shooting. It was a surplus Bell and Howell gun camera with a 50 foot magazine."

That was the first time that you ever took a camera under water? "That's right. When I got the film back I observed a great deal, I did not learn it as fast as I would have with video, but by the time I finished three years of shooting in the Bahamas, I developed my housings and got other cameras and lenses... I knew what I was doing and I started lecturing with my films in the off season and making the filmmaker's pay. I lectured all over the country, Kiwanis Spring Tours, Canada, Hawaiian Islands, through the Mid-West, the Bible Belt, seven shows a week, every evening from one little town to the next. . . living out of the trunk of the car. But it was the only game in town before television developed a capacity for underwater films."

In those days, were you also editing and doing all the post-production? "The whole thing. I made my own A & B rolls for my dissolves, did everything in a little editing room at home in Princeton, but I had to deliver my voice live. Film lectures meant standing up and talking for 90 minutes against the background of the film and rendering the music on the tape recorder and synchronizing it with the film. "

Had you taken any kind of class or training for film making? "I was self-taught and I had help from a dear old friend, Herman Kitchen, who was the head of editing for CBS News. Herman taught me how to edit."

How did you make the transition to television? "The first television purchase was made by Jack Douglas, for one of the very early documentary series called "Bold Journey" . . . a lot of us who were film lecturers found a market there and for beans, and by beans I mean, for \$800, we would sell the television rights to our entire film to Jack Douglas and Bold Journey. But we were on television!"

Is there a difference between documentary nature shooting and feature film work? "What you are referring to is the difference between *docudrama* in which you are doing documentaries, but you have human beings involved... and the story, or *scripted* films. I have done a number of scripted television films, but the only theatrical release film that I shot was *The Deep* and that, of course, required stage sets, scripting, direction and heavy lighting."

"I was a second unit Director of Photography, Al Giddings and I were credited with directing the second unit from *The Deep* and also the underwater cinema



Jaqueline Bisset on location for *The Deep*.

Columbia Pictures

ography. We shot in 35mm. . . and spent over three months just doing the underwater work for *The Deep*, a whole month and a half on the wreck of the *Rhone*, which was a very difficult shoot because some of it was as much as 80 feet deep, as many as six dives a day, . . . extended decompression, as many as 22 people involved in the underwater team with mike holders, grips, safety men, three camera men, script girl, that was a big, big deal. Al Giddings had a great deal to do with the direction of that work."

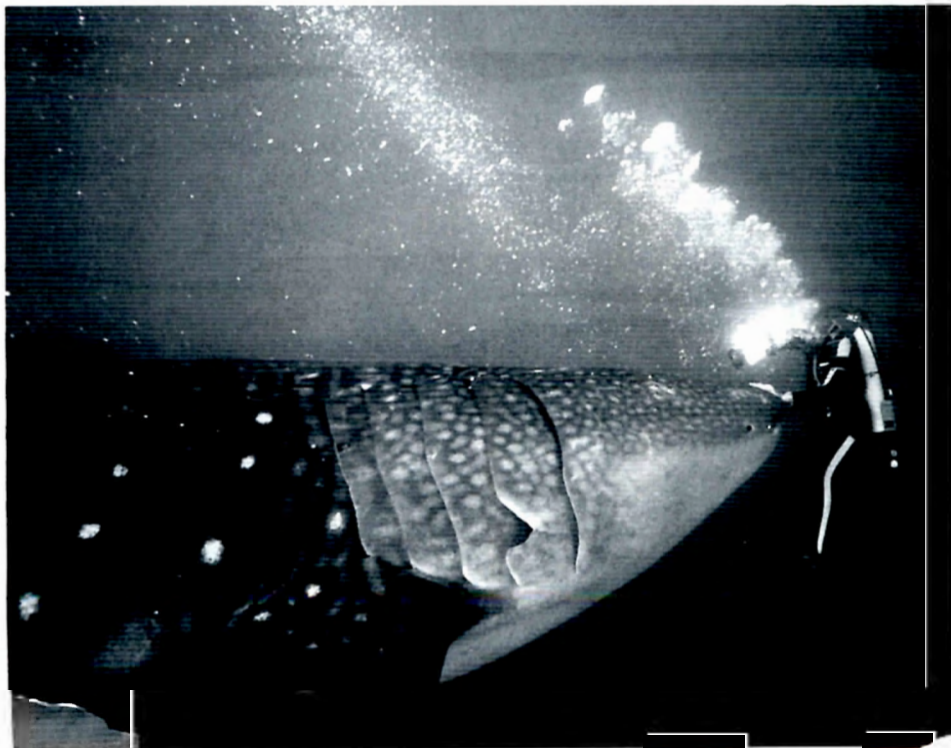
Did you work with Giddings and (director) Yates to decide upon a look, an emotional feel and style of underwater shooting? "Very much, and before each take Al and I would set the lights for the set

and then take Peter Yates down. . . He was on location underwater for every shot and ultimately, used a DESCO face mask so he could actually communicate through the surface and bounce back through a hubbell speaker and give the directions or call for a second take."

We'd guess that half the male readers of Sub Aqua got into scuba diving hoping to find Jacqueline Bisset. . . "She was a lovely, a lovely lady. She was afraid of the water, she was not easy in the water and she took instructions in scuba, a crash course before we started. She was very apprehensive on her first few dives which started in the Virgin Islands, and when she discovered that nothing was going to happen to her and that it was beautiful under water, that it was not so awful, she began to get into it and she came on like a tiger. She enjoyed it, she insisted on doing her own shots in everything that we would allow her to do and was a real trouper and also a real lady; a very lovely person, we liked Jacqueline very, very much."

The title of your Discovery Channel documentary is "The Man Who Loves Sharks." Do you? "I once told somebody that I owed much to sharks because they put my children through college. If you earn your bread by making films in the sea, sharks are box office, they are show biz. I like working with sharks."

The Discovery Channel, is covering the under water world — "A whole shark week, every year. Discovery is a prime market for the kind of thing we do. Also, look at the broad interest in the Titanic, the newest



IMAX feature. Howard Hall is shooting an IMAX right now down in the Caicos Island."

Is deep diving of interest to you? "I am not particularly attracted to deep diving, maybe one reason because I am 70 years old and a little long of tooth for some of that kind of exercise. But the depth to which I go is really almost entirely dictated by what is there to film and if there is an objective and I have a chance at it. I would be very glad to try mixed gases and learn how to work with them and go deep to shoot something. . . . I often do a bounce dive off the walls in the Bahamas or in the Caribbean down to 150 or 170 feet to see what is there and, in fact, there is very little there and I look around, find nothing that I even want to aim the camera at and come up into the sun lit area where you begin to find life proliferating."



Filming Seals in the Pacific.

As you "rewind through" a lifetime of footage in your head, what are the highlights? "When we were shooting *Blue Water White Death*, Peter Gimble got out of his cage on his own recognizance; we had not planned it at all. This is 100 miles off of Durban in the open water with a big gang of oceanic white tip sharks around us. Nobody

had done this before. I got out to support Peter, it was unthinkable that he should be out alone and both of us were scared to death. There were so many sharks that these animals were bumping us from behind, we were taking pictures of each other as sharks were coming up behind. I had more adrena-

line than I could ever remember, but that was the breakthrough, that was the benchmark experience that Ron Taylor and I have used years after that to work with sharks."

"It made us realize for the first time that it is very likely that the sharks see you as an unusual animal, nothing that they relate to their usual feeding process. So they may circle around, watch, they may even brush against you... to check you out, but if you repel them and don't evince fear, they are apt to leave you alone, especially if they have something else to eat."

Other high points? "Since that time, really high points of my shooting have been associated with animal behavior. When we were shooting for ABC with Peter Benchley and Ted Willison, and Howard Hall and I were shooting together, we rode on the big mantas for the first time."

We've heard you had a rare encounter with a famous lobster lothario. . . "One time in the northern part of the Bahamas up off of Cat Island, I went out by myself... and I had seen a couple of lobsters out in the open just before we quit shooting in the morning. I felt "This is strange that these lobsters are out in the sand. I wonder if this is the mating time." I went back and dropped down on a small wreck in shallow water and there was a big lobster in the open on the sand. . . .

I was set up at the right time, in the right place with the magazine loaded, the sun coming down on the arena, a 57 to 95 zoom. The big boy brought out a female and proceeded to "do her" and it was the first time that intercourse - copulation between

Personal Submersible

Now your Sony TR-200 video camera can go where you go...and stay dry.

SPORTS CAPSULE



- Lightweight polymer housing
- Depth rated to 300 feet
- Push button controls
- Shock absorbing interior cradle
- External microphone

AMPHIBICO INC. 9563 Côte de Liesse, Dorval, Quebec, Canada H9P 1A3
Tel:(514) 636-9910 / Fax (514)636-8704

lobsters had ever been filmed. Shall I tell you how it is done?"

Oh please. Don't stop! "The male lobster, after he has drawn the female out from cover. . ."

He takes her out to dinner first? "That's right, a few furs and jewels. They are sort of locked, antenna locked, and he is backing up and drawing her out into the open. Then big, maybe five pound lobster, rose up on his legs and started to curl his tail under him and in one deft move, he flipped over on his back and pulled the female over on top of him. Then there was much lashing around of tails, giggling, shrieking, steam coming out of his ears. Then they broke away and without exaggerating, I could see the female sort of shake herself and then turn around and come back. I filmed the whole thing about four times. . ."

With the same pair? "Yes — and at the end, the female was *stalking* the male."

She was saying, "Sidney, go get some oysters." "I was completely transfixed, I was in 20 feet of water, it was in other words a perfect set up. I think that was one of the best things that has ever happened in animal behavior."

You teach underwater cinematography at Maine Photographic Workshop. . . tell us about it. "We picked Tortola in the British Virgin Islands because of the good conditions and places to stay. We have a maximum of 15 students, all equipped with at least video 8 cameras. They are learning the moves, and how to work with a camera... and I bring down lights. Armando Jennings, another professional cameraman, who lives in Tortola, works with us daily and we have class room for an hour in the morning, go out on location during the day, then an end of the day critique and sometimes another seminar in the evening and give them some diving and some fun in between. We work on the *Rhone* every day. . . a marvelous location."

Do you shoot film during the workshop? "I would expect somebody just starting today to start with video, ...film is almost unused now. 16 mm is too expensive for an amateur and all the right moves, all of the sense of what *not* to do with panning too much, focus, and so on, can be learned with video."

How would you suggest someone start with underwater image making? "I would



Climbing into the shark cage.

start by joining a club. . . providing an opportunity to go out diving regularly and start practicing, start shooting. It's a self-instructing process, up to a point where you might work with a professional in a workshop or a seminar."

"But there is nothing like just shooting, looking at what you have taken and in video, you can see it immediately when you come up and correct your own moves.... Jim Church's book on underwater video from A - Z has it all, it is excellent. . ."

You also do dive tours where you work with video. "I do many tours actually each year and I don't have formal seminars on my tours, but anyone who is interested in video can work with me and I, in fact, instruct them and work with them, watch over their shoulder and, so the tours, depending on the amount of interest by the people there, are also instructional courses, but not as structured as the workshop is."

What do you think the future holds? "I think the future of diving continues to be bright. Responsible certifying, of course, was a big breakthrough from the very hazardous ways back in the old days. I, of course, am no longer a spring chicken, I'm not going to be on the cutting edge of where diving is going on a more technical basis. I think we are coming into mixed gas rebreathers. At least, at this point, mixed gas closed circuit units require considerable training and a great deal of care by the people who are using them. I would like to keep diving long enough to be able to use a closed circuit unit. Anyone who works with animal behavior under water is in a state of despair with every exhalation of bubbles

they make. . ."

"I look forward, therefore, to technologies and continuing development. Just since I had my first high 8 video unit, the focal system, the electronics have taken a quantum step, I can do things today with the Sony units I am using that I could not have dreamed were possible, like focusing from wide angle with an auto focus all the way down to macro. . . which gives you tremendous versatility. People say, when are you going to retire but I tell them I will retire when I feel like it, because I still love diving and I look forward to shooting animal behavior. . . the whole new world."

You studied poetry with Robert Frost. Did you find anything in poetry that applies to what you do? "One little group of lines from Robert Frost that touched me was:

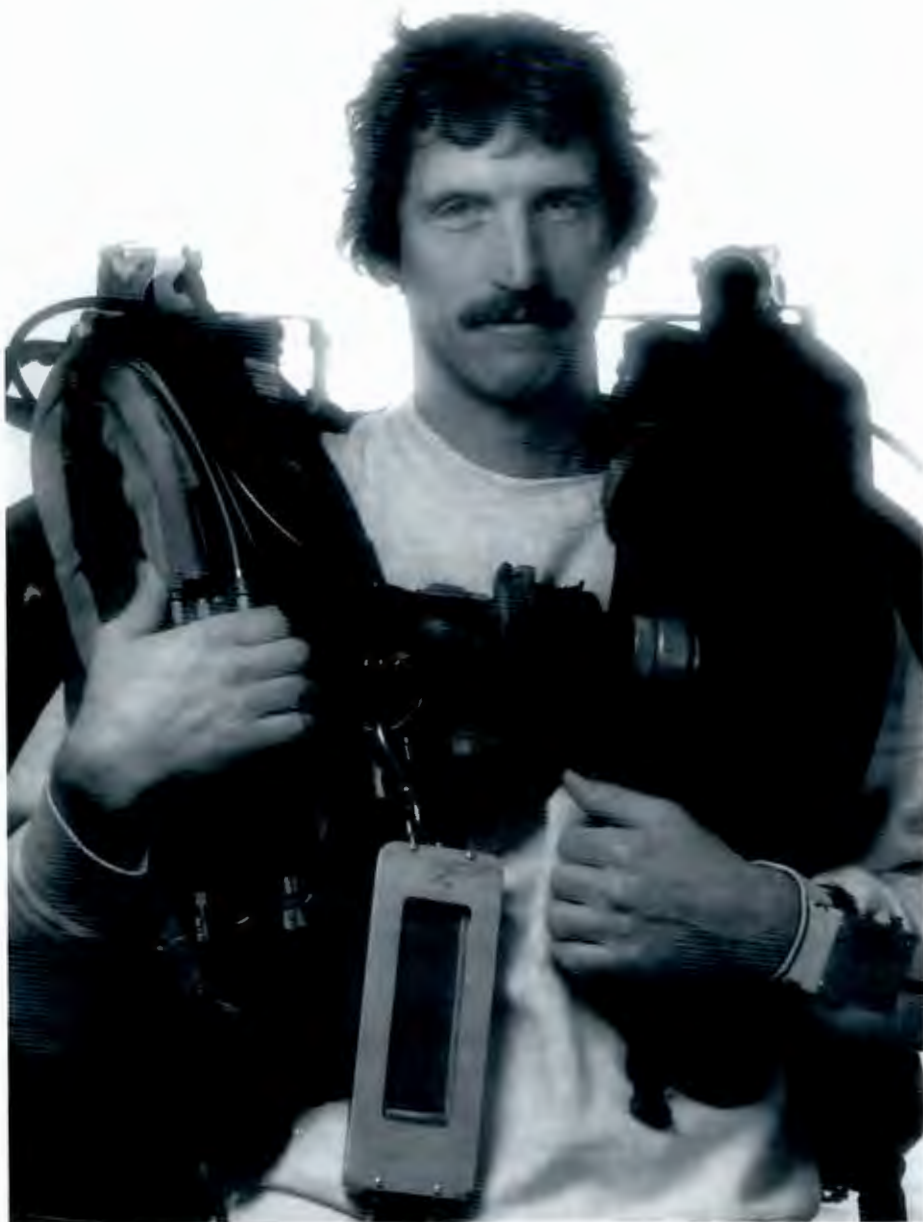
*. . . to their separation by
object and living is to make
my vocation my avocation
as my two eyes make one
sight. Only where love and
need are one and the work is
play for mortals' stakes is
the deed ever really done for
heaven and future's sake.*

What he meant by that, is that you'd better love what you are doing, and I really do. ■

Photographs courtesy Stanton A. Waterman collection.

Stone on Rebreathers

an interview by Joel Silverstein



What was the driving force behind developing the Cis-Lunar Rebreather? In the cave exploration community the name of the game there is to discover the world's deepest cave. . . Solving the logistical difficulties.

What kinds of difficulties? Transporting heavy equipment great distances and then being able to repair and recharge [batteries and tanks] them.

How did you overcome these problems? We started looking for longer range, lighter weight diving equipment in the late 1970's. We couldn't find what we needed so we set out and built the first composite diving system.

How did you get started? We first talked to people at NASA, and then a couple of other places and eventually, ended up building this S-class fully composite fiberglass system. [lightweight high-pressure fiberglass scuba tanks] But we ran it to its limits; we pushed it to 6250 PSI operating pressures. . . they weighed about a third of what a standard 105 cubic foot steel tank would weigh.

What was the technology turning point? We concluded that the only option was going to be closed circuit. A *mission specific design* to give us, first, greater range that would be independent of depth and perhaps even more importantly to break the tie to the refilling compressor.

We have built in a lot of safety factors, not just in the idea of using higher ability equipment, but actually building in the architecture, ways by which if something goes wrong, the user could reroute [the gear configuration] on the fly. This is totally alien to any of the design philosophies that have been used for the military equipment.

Tell us a little about the development of the Cis-Lunar MK5. As we developed our unit we constantly changed it. Our groups, who were operating at the extreme limits of technical diving, would come back with each unit after ten weeks of training simulation with a ten page list of fix-its. We had a shoe-string budget,

Remember "Journey to the Center of the Earth?" As we sat with Bill Stone in his laboratory, we felt the vibrations of an explorer determined to go there. Where technology stops him, he engineers his way around. Bill's thoughts and design concepts for rebreathers will surely influence diving for many years to come.

and dedicated people who were willing to work long hours and push for it. The changes came about extremely rapidly. This rig is not a conversion of anything, it is built from scratch and it has been tailored to solve problems that are at the cutting edge of diving.

What makes this rebreather so special? It's a 35 pound unit that will give a four to six hour range at any depth and be totally silent.

There are four main things that make these rebreathers fully spectacular: one is outrageous range. It will operate independent of depth, unlike normal scuba. The second key point is optimized decompression. Third is gas efficiency, and lastly, stealth.

We can convert this rig into anything: heliox, nitrox and pure oxygen. We can do all three on the fly. It can even handle neon. All of it is there so that if you want to do a dive to 100 feet on this rig, versus an open circuit system, we can spend two to two and a half times at that depth without having to do any decompression. Since we can control the oxygen content in here and we can actually look at the results on the fly, adjust what we need and conduct the dive and its return. Of course, all the basic built-in safety limits and stuff are also there.

The third advantage of the rebreather is its cost effectiveness of gas. For about 50 cents we can charge it with helium, do a 500 foot dive and come back up and do optimized pure oxygen decompression from 20 feet on up, cut my time and have spent, perhaps, a dollar overall in gases.

The fourth and final advantage is stealth. You watch people swim into a gallery of fish, for example, on the open circuit and it is just like the parting of the seas. All the fish scatter. Follow behind him in the MK5 and the marine life will come right up to your mask. I mean, they will come right up and kiss your face plate.

Is breathing different than on scuba? One of the things that we came back from Wacola Springs with was this mind-numbing concern over the rate at which the gas gauge was going down, you can see the pressure gauge visually moving at every breath.

It's like watching a timer count down. That's right, but let me give you the counterpoint to that. Last spring, we had

3 to 4 people on closed circuit at 240 feet. . . and the phenomenal thing that was going on was nothing would be happening with the helium gauge, absolutely nothing, and the oxygen would be ticking down about a PSI maybe every couple of minutes. . . At worst we would consume two cubic foot per hour.

That's incredible. That's a typical metabolic rate for someone who's anxious at depth, they are excited doing what they are doing, or something like that, they may be swimming at a moderate pace, but two cubic foot per hour, so you are sitting there with this eight hour range and nothing is happening.

It helps you stay cool. There was a tragic case a couple of years ago when one of the best cave divers in the country died because the open circuit scuba did not last long enough. Had they panicked, they would have been dead an hour earlier, but they kept their cool. By the time they found the route out they ran out of gas.

The guys were level headed right down to the end. Had they had a closed circuit unit, they would have had six, seven hours left to figure it out and they would still be alive.

Being cool in a situation is one thing but what about the panicky feeling when someone is lost? Well, you can get panicked all you want on a closed circuit rig, it just keeps on going around the loop and it doesn't matter, because you are not metabolizing any more oxygen. . . all it does is just increase your respiratory rate. It does not increase your CO2 uptake rate, so you can just sit there for another eight hours while you get back to normal.

It gives you that life window. It removes time stress which has been the critical task, in probably 75 to 80 percent of the cases, the other ones are probably more like medical or physiological, but in the end the clock is ticking and the more excited you are, the faster the clock ticks. Take away the clock, everybody could figure out their problems.

This buys you that time. That is the key, that's the key. There is a lot of other things involved here, we spent ten years working on all the little aspects and classical ones that will cause problems with a normal type rebreather, but when all is said and done. The MK5 buys time to explore and time to return. ■



Even More in '94

Boston Sea Rovers

40th Annual Underwater Clinic

March 5th - 6th 1994

Copley Plaza Hotel, Boston, Massachusetts

Two full days of Seminars, Workshops and Exhibits running simultaneously throughout the weekend, with topics such as:

Wreck Diving	Marine Life Photography	Nikonos First Aid
PADI Update	Diving Physiology and Medicine	Latest Dive Gear
Dive Travel	Field Neurological Exams	Technical Diving
Dive Clubs	Tropical & Exotic Diving	New England Diving
Dry Suit Repair	Underwater Photo Techniques	O ₂ Administration
	Introduction to Nitrox	

Saturday's evening program will feature award winning film maker Nick Caloyianis, legendary underwater cinematographer Al Giddings, famed scientist Dr. Joe McGinnis, a world premier film from Stan Waterman, and much, much more!

For Ticket Information contact:

Bunky Hodge, 174 Beach Street, Rockland, MA 02370, or call the Boston Sea Rovers Information Line at (617) 424-9899.

Professional Scuba Association Inc.

Extended Range Diving Program

Including: Deep Diving to 300'

P.S.A. Deep Air Diving Levels

Level I - 100' Level II - 130' Level III - 150'
 Level IV - 180' Level V - 200' Level VI - 240'
 Level VII - 300'

Other Technical Courses Include:

- Nitrox • Technical Nitrox • Trimix • Cave • Cavern • Oxygen First Aid Instructor Training Programs

Hal Watts, a world record Deep Diver has trained 4 other Record Divers!
Come Dive the depths at Hal Watts' Forty Fathom Grotto,
 The Professional Scuba Association Inc.
 9487 N.W. 115th Ave. • Ocala, FL 32675
 Phone: (904) 368-7974 Fax: (407) 896-4542

SATISFACTION GUARANTEED!



Your satisfaction is guaranteed when you learn from a PDIC instructor.

These instructors take great pride in helping *you* become confident and enthusiastic divers.

Paul Korbin (203) 284-1880
 Wallingford, Connecticut
 Marc A. Braun (603) 448-1222
 Lebanon, New Hampshire



The Professional Diving Instructors Corporation
 P.O. Box 3633 Scranton PA 18505

CALL TODAY! (717) 342-9434 or FAX (717) 342-1276

Get Mixed at Blue Abyss



Nitrox & Custom Blends Always Available
 O₂ Cleaning 5000PSI Fills Chilled Fills
 Beuchat - Dacor - Dive Rite - Poseidon
 All levels of Technical Instruction Available
 Nitrox - Deep Air - Wreck - Mixed Gas

Blue Abyss Dive Center

Florham Park, NJ (201) 966-1312

A Case of Mistaken Identity

By Dave Morton
 and Eric Takakjian

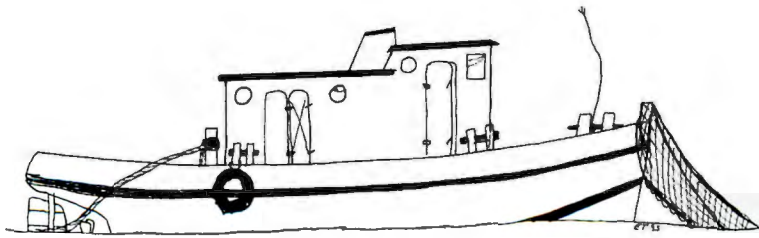
The 43 year old tugboat *June K* sank at the dock in Plymouth, Mass. in September of '58. Almost a year later the *June K* was raised and towed out to deep water in Cape Cod Bay and scuttled. Nothing more was heard of the *June K* for several decades.

In the late 1980's the loran numbers for a wreck believed to be the *June K* were obtained from a local commercial fisherman, and a new deep dive site was found. During the first exploratory dives, the steel hulled wreck was found to be in great shape, sitting upright and seemingly seaworthy in over 150 feet of water. Not only was the vessel fully intact, but many items usually taken from a scuttled vessel were still present, including the 6' brass propeller.

Many artifacts, including portholes, cage lamps, and searchlights were recovered. If a boat was purposely scuttled as was the *June K*, it was thought that many more of the re-usable equipment and fittings would have been removed prior to the sinking. The divers wondered why anyone would scuttle such a nice vessel, raising the first of a series of questions concerning the true identity of the wreck.

This tug was a well kept secret for several years, but all that changed when accurate loran numbers were published in "*Fishable Wrecks and Rockpiles*" (Coleman and Soares) in 1989. This book describes the *June K* as a prolific fishing spot, and ever since, the wreck site has seen much more activity, both on the surface, and below. But even though this book also referred to the wreck as the *June K*, other information began to filter in which further clouded its' true identity.

Through diligent research, the certificates of enrollment were obtained for the *June K*, which identified her as a 68' long wooden vessel with a 21' beam and a single mast built in Greenport, NY in 1915. Upon closer study, the all steel wreck that was being dove was found to be about 50' long (20' shorter than the *June K*), with a deckhouse design that appeared to be much more modern than a vessel built in 1915. Furthermore, there was no evidence of there ever being a mast and derrick on this vessel. More and more evidence stacked up against



this wreck actually being the *June K*, but if not, then what was this wreck?

A short distance from this tug was the wreck of a badly broken up wooden vessel that only rose about 3 feet off of the bottom, believed to be the tugboat *Colebrook*. Research had learned that the *Colebrook* was under the command of a Captain Cecil Smith when it sank in 1972. Wishing to learn the true identity and history of this tug, a friend Cecil Smith Jr. was asked if he knew about a tug named the *Colebrook*. Cecil Jr., referred to by his friends as Brother, certainly did know of the boat, because his father had built the tug in Dartmouth in the late 1960's. Brother started talking of a 45' long steel tug that exactly described the tug that was being called the *June K*. He further went on to reveal the details of the sinking. The *Colebrook* was enroute from Boston to New Bedford, towing a barge loaded with pilings. When departing Boston Harbor, the *Colebrook* had bounced off the side of the barge, causing a crack in the hull. During the night the boat became sluggish. The mate on watch went aft to the engine room to check on things, and found that it was half-filled with water. He and the captain brought the tug alongside the barge to get an extra pump to try and save the boat. Their efforts were unsuccessful and the *Colebrook* sank stern first while both men watched, unharmed, from the barge.

Brother continued to recount how his father had considered salvaging the tug right after it sank, and had even sent a diver down to determine if this was feasible. In the end, it was decided that it would be cost prohibitive and she was left on the bottom. It appears that the commercial divers went back to their virgin wreck and re-appropriated the helm and compass. All known photographs of the *Colebrook* were lost when the Smith's house was destroyed by fire some years ago.

For many years, the *Colebrook* was forgotten and assumed to be a flattened rubble heap on the bottom, but all that is changed as divers are now enjoying her underwater beauty. A dragger net hangs over the port bow rail, ghost fishing in the sand, and the bumper tires still guard the

be able to tour an entire wreck on a single dive. The tug sits at 156', with the roof of the deckhouse reached at 138'.

The distance offshore can combine with the silt and mud bottom to create unpredictable conditions over the *Colebrook*. Surface

sides against impending collisions that will never again occur.

The tug is a perfect size wreck for the depth. With the limited bottom time available, it's nice to

conditions can change suddenly, bringing currents which can vary from nothing to a couple of knots, requiring a hand over hand descent, and an extremely cautious ascent. The visibility on the wreck is directly related to the surface conditions, and has been as good as 50', and as poor as 2'. The water temperature at that depth offshore in Cape Cod Bay is cold in the summer (42° - 46°) and even colder in the spring and fall (35° - 40°). Due to the depth and water temperature, bottom times are typically governed by the total in-water time that a dry suit diver can handle.

Although deep cold, and a long ride offshore, The *Colebrook*'s worth the effort. It's upright position makes it picturesque, with an almost Hollywood appeal, combining to make the *Colebrook* a great New England deep dive. ■

THE ENCHANTED DIVER INC.

The largest International Association of Nitrox and Technical Divers facility in the northeast.

100 fsw

- We train all levels of divers including instructors.
- We fill nitrox, oxygen, tri-mix, heliox and argon.
- Training for Andrea Doria & other deep wrecks.

150 fsw

The most complete High-Tech Facility serving the entire northeast.

200 fsw

Training Programs

Nitrox Diver Course

250 fsw

Nitrox Instructor Course

??? fsw

Tri-Mix Diver Course



How deep is your choice. Getting there and back starts with *attitude*. Ours is simple. Solo. Whether at 100' or 250', you can only depend on yourself. We get you there and back, solo. Training earned, not bought. How deep is your choice. **And so is who trains you.**

Contact Bob Raimo for more information.

259-19 HILLSIDE AVE. FLORAL PARK, N.Y. 11004

TEL (718)470-6858 FAX (516)378-4233



**SUBSALVE PROFESSIONAL LIFTBAGS
ENGINEERED FROM THE BOTTOM UP.**

**The world's best underwater lift bags,
available in lift capacities from 50 lbs.
to 50,000 lbs.**

call or write: SUBSALVE USA, P.O. Box 9307
Providence, RI 02940 Telephone (800) 468-6962
Fax (401) 521-6962



HATTERAS DIVING Rapture Of The Deep

Roomy 42' 6-pac Designed for Safety & Comfort
NOW BOOKING FOR MAY - SEPT '94
Captain Roger Huffman
call: 919 441-2393

Advanced Diver TRAINING



- **Deep Diving**
(Progressive Levels to 220 fsw)
- **Decompression
Chambers**
- **Dive Accident
Management**
- **Mixed Gas & Nitrox**
- **Instructor Training**

**A proven commitment to safety, planning,
operations and educational excellence.**

Professional training and systems with experienced staff • Fully insured • Our Florida facility offers diverse site conditions on excellent deep wrecks with consistent visibility and warm water • Air conditioned classrooms • State of the art equipment • Chamber dives standard for pre-dive evaluation

Course Director: **Bret Gilliam** • 22 years experience with military/commercial/scientific/technical diving training • World depth record holder (452 fsw) • Author (*Deep Diving, Mixed Gas Diving*) • Member Board of Directors for NAUI and IANTD • Over 12,000 dives logged career.



OCEAN TECH

HC 33, #7 Stonetree Rd.
Arrowsic Island
Bath, ME 04530

207-442-0998
fax 442-9042

New Dive Computer

The Nemesis

Cochran Consulting Inc. has brought some of its space training technology to the scuba diver — The Nemesis a multi-level full function air integrated dive computer. The coolest part of this new product is it does not use a high pressure hose.

The unit was originally designed for NASA's astronaut training program. The trainees are fitted with full space suits and submerged in a diving tank where they practice mechanical tasks. The "hoseless" computer allowed both the trainee and his commander to monitor air supply, decompression obligations and depth changes simultaneously. This was accomplished via a transmitter attached to the breathing regulator and a wrist mounted information center.

The Nemesis designed for recreational divers, comes complete with the wrist module, transmitter, high pressure port adapter, replacement O-rings, lubricant, a battery replacement tool (U.S. 25 cent piece), a full comprehensive ring-binder instruction manual and a limited two-year warranty.

The Nemesis tank unit (TU) is made of high-impact, crushed fiberglass filled ABS resin (it's tough to break it), and is only 4.5 inches long and is powered by 4 user-replaceable AA batteries. The TU contains the central processing unit and transmitter which reads tank information via a stainless steel transducer which attaches to the regulator's high pressure port. Its important to note that no high-pressure air is present outside of the first stage. The short black cable that connects the transducer to the TU only contains wires. There is no possibility of a high pressure hose failure, a comforting thought while wreck diving.

The TU monitors tank pressures from 0 through 4,095 p.s.i. in increments of 1 p.s.i. and calculates remaining no-decompression time, emergency decompression obligations, air integration

and log book storage functions.

The wrist unit (WU), displays four modes — Surface, Subsurface, Emergency Decompression, and Logbook. The screen measures 3.25 X 2.75", displaying large easy-to-read information and is powered by a user-replaceable battery. A large button on the side turns the unit on and off and toggles the screen to an alternate display of additional information in each mode.



When the unit is in surface mode it will scroll maximum no-decompression dive times in ten foot depth increments from 30 feet to 160 feet. The no-deco and deco calculations are based on a modified Haldanean 12 compartment half-time model. This limit shall be the lesser of either Remaining Airtime or No-Decompression time .

Although most divers will use the unit for multi-level no-decompression diving, the Nemesis will also handle emergency decompression diving requiring up to 4 stop levels with up to 35 minutes of decompression.

The Nemesis hosts a dive log database which will store up to 350 dives which are downloadable to your PC using the optional DCI-I Personal Computer Interface. It stores and reports and information which will help you not only keep track of time and depth but your actual profile in graphic form. On your PC monitor you will be able to see your depth changes on a moment by moment basis. Plus you will have decompression, depth, time, and air supply information which will be helpful for future dives.

Using the Nemesis couldn't be simpler, attach the Tank Unit to the high pressure port of the regulator, turn on the valve, press the large button on the wrist unit and then tap the pressure plate on the TU. An audible chirp will sound indicating the unit's start up mode.

On your dive you can effortlessly, look at your wrist as you do with your watch to get all of the information you need without the possible entanglement of hoses.

For a free descriptive brochure contact:
Cochran Consulting Inc. 1758 Firman Drive,
Richardson, Texas 75081 (214) 644-6284 ■

NEW PRODUCTS

DUI SF3 & SF2 Divewear



If you're in the market for a new type of dry suit underwear, consider DUI's new SF3 Divewear. A combination of fleece, Thinsulate®, and nylon shell, this new Divewear is one of six different models offered by Diving Unlimited International.

The unique combination of fleece and Thinsulate® provides outstanding warmth and comfort. This underwear is rated for water temperatures from 35-55 degrees, depending upon body size and type, and activity level. The nylon shell on the outside acts as a windproof barrier that also resists water. The SF3 is outstanding for those situations where the topside environment is more demanding than the water.

For less demanding conditions there is the new SF2 Shelled Pile Divewear. SF2 is an excellent combination of soft, warm pile and wind resistant nylon. This is a basic, economical divewear that provides high performance.

The advantages of SF2 Shelled Pile Divewear are its wind and water resistance, its fast drying ability, and its easy care characteristics. SF2 can be machine washed and dried.

Contact your DUI dealer. DUI is located at 1148 Delevan Drive, San Diego, CA 92102. Telephone (800) 325-8439 ■

Heavy Duty Dive Reel



Aqua Explorers, Inc. announces the release of their new improved Wreck & Cave Reel #RA5. The #RA5 has been specifically designed to withstand the rigors of salt water wreck diving.

The #RA5 DIVE REEL is uniquely constructed from anodized aluminum and all stainless steel hardware. The spool glides on a solid delrin core that spans the entire width of the spool. Other benefits include a larger 5 inch diameter spool with approximately 300 feet of a heavy 1/8 inch diameter diamond braided nylon line. This heavier line is perfect for wreck diving because of its abrasion resistance.

Divers should also note the unique location of the locking screw. It's located on the outside diameter of the spool so rather than pushing against the spool's side wall which causes cocking and bushing wear, the pressure is only applied downward therefore eliminating unnecessary core wear. On special orders the reel can be restrung the reel with a thinner #36 diamond braided nylon line so cave divers can have all of the heavy duty construction benefits with

upwards of 550 feet of line.

The New #RA5 has a slightly lower handle which allows individuals with smaller and un-gloved hands to easily rest their fingers and apply tension on the spools side.

For additional information or a Free Color Catalog contact: Aqua Explorers Inc. PO Box 116, East Rockaway, NY 11518 or call Phone/Fax (516) 868-2658, Toll Free (800) 695-7585.

Breathe Dry with DACOR



DACOR introduces its most advanced snorkel ever. A true "dry" snorkel the Integra utilizes a top vent so innovative that a patent is pending. On the surface, this unique vent prevents water from splashing into the top of the tube while allowing air to enter freely from below. No water gets in while swimming on the surface and water that enters while underwater drains out of the bottom vent so clearing is always easy.

The swiveling mask attachment and rigid lock system allows the snorkel to be positioned for optimum comfort.

Available with a flex or contoured mouthpiece, and in eight hot colors.

Contact your local dealer or Dacor Corporation at 161 Northfield Rd. Northfield, IL 60093 (708) 446-9555. ■

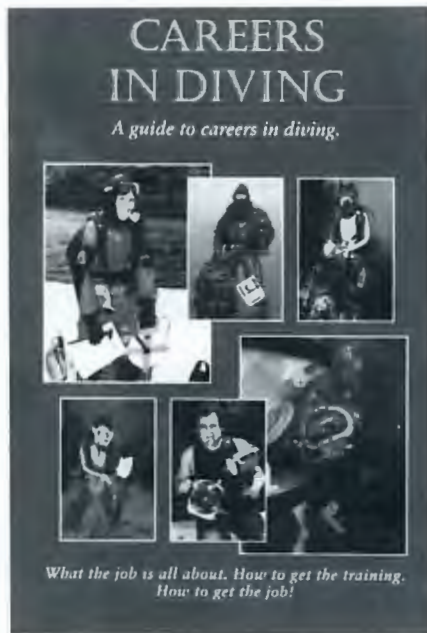


Don't get lost at sea; be found with Dive-Alert, the surface signaling device that emits a loud blast heard up to a mile away. Quick disconnect fittings allow easy integration with most power inflators and low pressure hoses. Models now available for SeaQuest® AirSource and Scubapro® A.I.R. 2.

Ideations • 800 275 4332
206 281 0067 • FAX 206 285 6897
U.S. Patent No. 4950107
and foreign patents

NEW PRODUCTS

Careers In Diving



For the diver who is considering a professional career in diving, this new book by Steve and Kristine Barsky and Ronnie Damico, three long time divers, provides detailed information on how to become employed in the diving field. The careers examined in *Careers in Diving* include marine biology, underwater photography, equipment manufacturing, search and rescue diving, scuba instruction, seafood diving, commercial diving, resort dive guide,

military diving and more.

Careers in Diving describes what each job is like, what specialized training is needed to get the job, and the type of work you can expect to do on the job. The book includes both the negative and positive aspects of each job and the dangers inherent in each type of diving. It also includes in-depth interviews with more than 50 professional divers who actually work in these careers.

Key elements that prevail in helping divers find full time employment in diving include leadership skills, perseverance and developing a relationship with a mentor. Support skills such as photography, writing, and small boat handling contribute to a successful search for diving employment.

Best Publishing Co., (800) 468-1055. ■

Diving Above Sea Level

Diving Above Sea Level is a scientifically documented book to assist those who dive above sea level to do so safely and with a maximum of enjoyment. Written by the Director of Computational Testbed for Industry in the Advanced Computing Laboratory of the Los Alamos National Laboratory, Bruce Wienke, the book incorporates the recent thinking in



bubble theory, altitude decompression, and dive tables interpolation.

The book presents guidelines and formulas to use for operational procedures and modifications at elevation, including decompression, tables, meters, buoyancy, gauges, air consumption, physiology, and pressure mechanics. A separate Appendix outlines the mathematical details which prove each of Wienke's recommendations for change in the higher altitudes.

The compact book contains a list of tables and figures to further explain the theories presented and discusses how standard units may be modified to be used in altitude diving. Because operational diving often requires many dives to various depths over periods of hours, and often days, it is critical to construct a set of decompression tables that altitude divers may safely employ. The book details how to develop such tables as well as an altitude delay chart that meets the 24-hour rule.

Best Publishing Company, (800) 468-1055. ■

SOUTHERN CROSS

DIVE LONG ISLAND'S WRECK VALLEY



Join us as we dive Long Island's premiere wreck sites aboard Capt. Phil Galletta's SOUTHERN CROSS. Charters available to wrecks in 30 to 150 feet of water. **Call: 516-587-3625 for a free brochure**

It Doesn't Make Any
Difference
Which Tables
You Don't
Use.....



FLASH BACKS by Kirby Kurkomelis

ADVERTISERS INDEX

It was the night before Christmas — not a creature was stirring, not even a diver on this cold winter night. Sitting back in my favorite chair, sipping a warm glass of brandy. In the fire place a log burned. I was skimming through my photo album. With each page, a fond memory raced through my mind. Looking back, I didn't take enough pictures, but the images held fast in my mind. I started to recall some of my best moments. Frame by frame. Some snapshots were hazy, others like a loin-fish — razor sharp spines burned like the sting of a jellyfish.

Any wreck diver knows that it is very difficult to search and recover objects while taking pictures at the same time.

I recall diving back in the 60's on Beach 8th street in Far Rockaway, NY. On the first jetty, south of the parking lot, where the bulk head has been replaced. At the end of the rocks. A few feet from the surface on low tide, a small piece of white coral started to grow and flourish in these cold northern waters. The size of the brain coral was about six inches across surrounded by orange sponge. Always a nearby butterflyfish feeding on this new addition to a living reef. Some divers had taken pictures, I didn't. Today the coral has grown to a size of six feet across.

One of my first wreck dives was the *Iberia*, an old tramp steamer that sunk in 1888 in 55 fsw. I remember lobsters at every turn, blackfish 10 pounds or better swimming out and around her hull plates. A porthole waits for some lucky diver to recover it. Her boilers stand tall in the sand to mark the diver location and way back to the line. Today the bulkheads have broken down, cargo crates fill with sand. Wreckage scattered and twisted. The lobster hunter, has to work for his dinner. Now I have to throw back my short lobsters.

The year was 1970, our destination U-853 off Block Island with a group of veteran wreck divers on the old *Helen II* out of Montauk, New York. It was my first U-boat, I was so excited, I didn't know if I was coming or going. That day I dove with a diver named Jeep, ok its seemed funnier than a name like Kirby. Once down the line we crawled inch by inch kick by kick along the bow. We encounter a school of pollack, 30 pound class or better swimming around the conning tower. The wood planking gone, the ribs not exposed yet. Great for pictures. The U-boat was alive with marine life. My



J. Silverstein

dive partner had succumbed to nitrogen narcosis. He had his legs wrapped around the deck gun, swinging upside down back and forth. What a picture that would have made. When we surfaced I promised not to tell. I have not told that story in 22 years. Now the deck gun is sitting in someone's back yard rusting. No shells for me.

"Each picture is worth a thousand words" Flash backs. ■

ANDI	IFC
Warm Wind	4
Sherwood	5
Tom Mount	6
OS Systems	6
IANTD	7
St. Agnes Hyperbarics . . .	8
Ginnie Springs Resort . . .	9
Aqua Explorers	10
Typhoon DrySuits	11
Beneath the Sea	12
Andy's Undies	13
Sea Dwellers of NJ	13
Amphibico	16
Boston Sea Rovers	19
Prof. Scuba Assoc.	20
PDIC	20
Blue Abyss Dive Ctr	20
Enchanted Diver	21
Sub Salve	22
Rapture of the Deep	22
Ocean Tech	22
Dive Alert	23
Southern Cross	24
Wahoo	25
Diving Unlimited Intl. . . .	BC

R/V WAHOO



Full Support for Challenging Dives to:
Andrea Doria " SS Republic " U-Who
U-853 " USS San Diego " Oregon
For complete information, brochures
and trip dates call 516-928-3849

DIVER'S DIRECTORY

DIVE BOATS

DIVE STORES

Connecticut

Orbit Diver II

Capt. Noel Voroba
(203) 333-DIVE
Capt. Cove Marina
Bridgeport, Ct.

Florida

Key West Diver

Capt. Bill Deans
"High Tech" Dive Center
(800) 873-4837
Key West, FL.

Little Fantasy

Capt. Bob Sheridan
High Tech Diving & Training
(305) 763-DIVE
Fort Lauderdale, FL.

Massachusetts

Grey Eagle

Capt.s Eric & Lori Takajian
(508) 362-6501
Vieras Marina
Buzzards Bay

Maryland

Scubapro

Capt. Ted Green
(800) 637-2102
Tidewater Aquatics
Ocean City, MD

New Jersey

Blue Fathoms

Capt. Tony Donetz
(908) 369-2260
Daily, Weekends & Night Dives
Manasquan Inlet

Deep Adventures

Capt. John Larsen
(908) 270-8888
Weekend & Night Dives
Point Pleasant

Notorious

Capt. Tony Chenko
(908) 458-3472
33' Custom 6 Pac
Wehrlen Marina - Brick NJ

Sea Lion

Capt. George Hoffman
Wreck Diving Guide
Daily & Weekends, Year Round
(908) 528-6298
Brielle, NJ

Venture III

Capt. Paul Hepler
(908) 928-4517
Belmar, NJ

New York

Defiance

Capt. Mike Carew
(718) 885-1588
Dive Long Island Sound
City Island, NY

Jeanne II

Capt. Bill Reddan
(718) 332-9574
Afternoon & Night Dives
Sheepshead Bay, Brooklyn

April 2 Algal & Pinta
9 RC Mohawk/Ambrose
16 Bald Eagle
30 Cindy
May 7 Pinta/Masadonia
14 Stolt/Algal
28 RC Mohawk/Mystery
30 Immaculata/BaldEgle
June 4 Gypsy/Asfalto
11 Pinta/Bald Eagle
20 Immaculata/Mystery
25 Arundo/Pinta
July 3 Algal/Pilot Ship
4 Harbor Festival
Fireworks Cruise

John Jack

Capt. Zero
(718) 788-2803
Fast, Deep /Technical
Overnights w/ Compressor
Nicholas Marina, Staten Island

Sea Hawk

Capt. Frank Persico
(718) 278-1345
Capt. John Lachenmeyer
(516) 499-9107
Vidas Marina, Freeport, NY

Southern Cross

Capt. Phil Galletta
(516) 587-3625
Weekday & Weekends
Babylon Village Dock, LI

Wahoo

Capt. Steve Bielendo
Capt. Janet Bieser
(516) 928-3849
Captree Boat Basin, LI

April 3 USS San Diego
10 USS San Diego
17 USS San Diego
May 1 USS San Diego
7 USS San Diego
15 Oregon
30 U-Who
June 3 Stolt Dagali

6 Secret Deep Dive
10 Coimbra 180'
17 Virginia 170'
19 Linda 140'
23-26 Andrea Doria 220'
July 1-4 SS Republic 240'
8 Lillian 160'
14-17 Andrea Doria 220'
22 Arundo 130'
29 Texas Tower 180'
Aug 3 Dudas' Oregon
5 Coimbra 180'
7 Oregon
8-12 Andrea Doria/Moyer
18 Oregon
28 Oregon
Sept 1 Block Island
3-5 Block Island
10 Oregon

North Carolina

Margie II

Capt. Art Kirchner
(201) 361-3018
Accommodations / Deep Wrecks
Cape Hatteras, NC

Rapture of the Deep

Capt. Roger Huffman
(919) 441-2393
Hatteras, NC

Sea Wife IV

Capt. Buck Wilde
(919) 726-5670
Advanced & Deep Dives
Atlantic Beach/Morehead City

Rhode Island

Thunderfish

Capt. Bill Palmer
(203) 269-0619
U-853 - USS Bass
Rhode Island & Conn.

Virginia

Sundowner

Capt. Nike Seamans
Capt. Trueman Seamans
(804) 481-7136
Chesapeake Bay Diving
Virginia Beach

Cayman Island

Fisheye

Capt. Ed Uditis
Capt. Martin Sutton
(809) 947-4209
Resort Accommodations
Photo & Video Specialists
Grand Cayman

Florida

Lost Reef Adventures

261 Margaret Street
Lands End Marina
Key West FL 33040
(800) 633-6833
PADI - SHERWOOD

Ocean Divers

750 East Sample Road
Pompano, FL 33064
(800) 874-6888
PADI - IANTD

New Jersey

Blue Abyss Dive Ctr.

184 Columbia Turnpike
Florham Park NJ 07932
(201) 966-1312
Beuchat - Dacor - IANTD

Blue Water Divers

806 Route 17 North
Ramsey, NJ 07446
(201) 32-SCUBA
Sherwood

Sea Dwellers of NJ

132 A Broadway
Hillsdale, NJ 07642
(201) 358-0009
US Divers - Sherwood - Zeagle
NAUI - IANTD

New York

Harvey's Diving Ctr.

3179 Emmons Avenue
Sheepshead Bay
Brooklyn, NY 11235
(718) 743-0054
All major brands since 1958

East Coast Diving

1500 Hylan Blvd.
Staten Island, NY 10305
(718) 979-6056

The Enchanted Diver

259-19 Hillside Avenue
Floral Park NY 11001
(718) 470-6858
Beuchat - Oceanic - DUI
PADI - IANTD

Island Scuba Centers

74 Woodcleft Avenue
Freeport NY 11520
(516) 546-2030
Oceanic - Sherwood - Z-90
ANDI - NASDS

Middletown Scuba

17 Dolson Rt. 17
Middletown, NY 10940
(914) 343-2858

Ocean Rock

3800 Veterans Highway
Bohemia, NY 11716
(516) 471-9500
Ocean Edge - O'Neil - O.S.

The Scuba Shoppe

Route 112
Medford NY 11763
(201) 32-SCUBA
Sherwood - Apollo - Dive Rite
PADI - IANTD

Scuba Training & Equipment Ctr

12 Bobby Lane
West Nyack NY 10994
(914) 358-6250

Stingray Divers

762 Grand Street
Brooklyn, NY 11211
(718) 384-1280
Harvey's - Sea Pro - PADI

Pennsylvania

Dudas Diving Duds

101 Bartram Lane
Westchester, PA 19382
(215) 436-0176
ScubaPro - Sherwood - Apollo
NAUI - IANTD - ANDI

ADVERTISE IN SUB AQUA

SUB AQUA is read by divers in 42 states and 14 countries. List your boat or store with us. You will get results.

To request a Media kit call 516 889-1208 or stop by and see us at DEMA.

Faces of Adventure



1



2



3



4



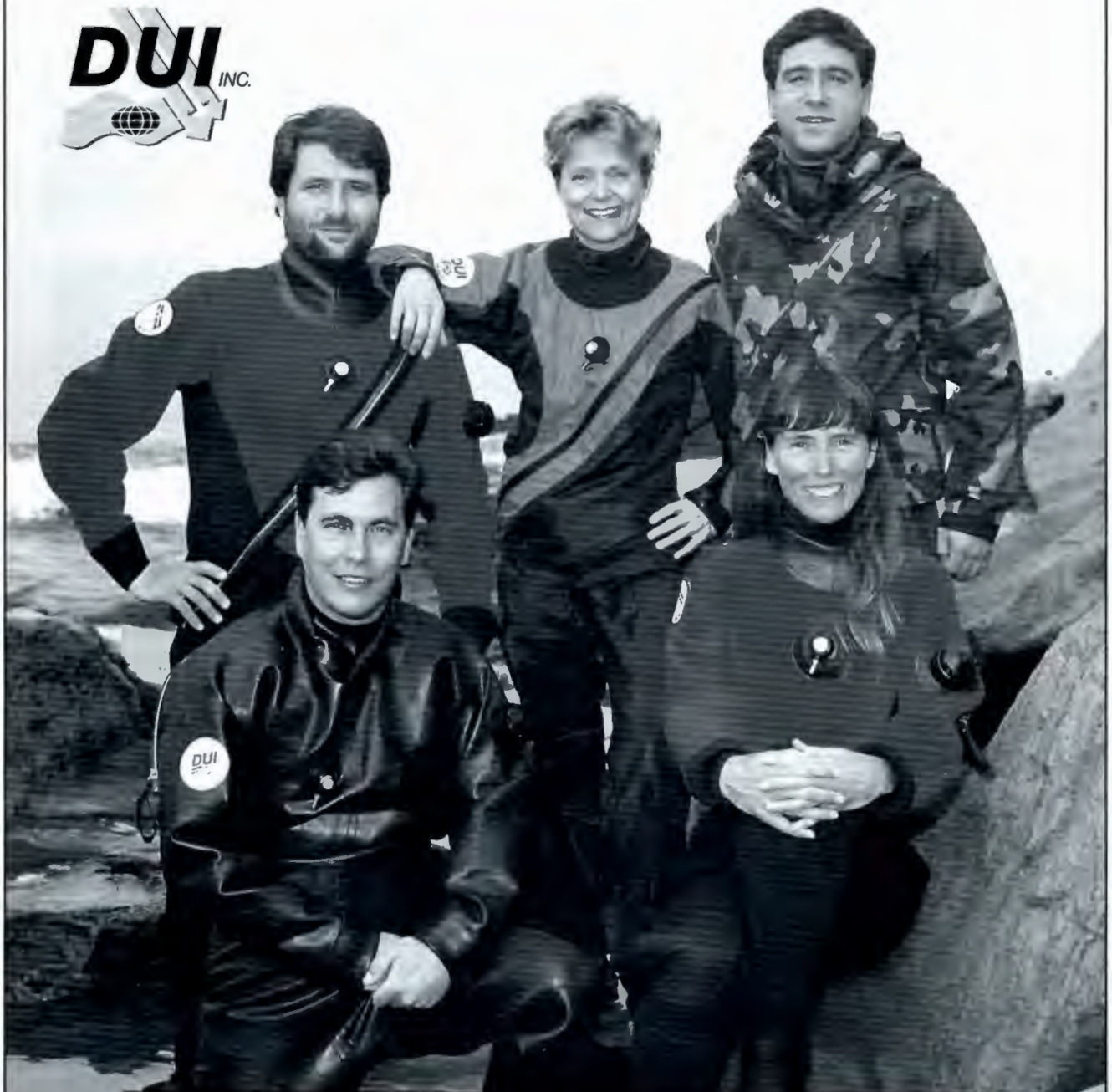
5



6

Nighttime happenings at the LIDA Film Festival and the Eastern Dive Boat Association Annual Dinner Cruise. 1. LIDA Grand Prize Cayman Islands winner Susan Lankford-Jones (center) with (l-r) Clare More, Stephen Martino, Mike Brygider, Christine Schnell and George Lent. 2. Captains Bill Reddan and Dan Berg 3. Captains Lori & Eric Takajian 4. Jim Cacace, Capt. Phil & Barbara Galletta and crew members Russel and Greg. 5. Hannah and Mike McMeekin with Jim Cleary 6. Eastern Dive Boat Association Captains aboard the Royal Princess yacht.

**No Matter What Type Of Dry Suit
You Want, DUI Has The Material, The Style,
And The *Colors* You Desire**



DIVING UNLIMITED INTERNATIONAL, INC.

***For more information on our complete line of dry suits see your
local dealer, or call DUI direct at 1-800-325-8439.***