

NEWSLETTER OF THE NATIONAL ASSOCIATION OF UNDERWATER INSTRUCTORS

All views expressed in articles which carry a by-line are those of the author and do not necessarily reflect the policies of NAUI



READ NAUI NEWS!

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NAUI LAS VEGAS 1974

by Fred Tourtel, NAUI 1058

Las Vegas may be remembered as a glamour and gambling center for millions of tourists, but to the candidates and staff of NAUI LAS VEGAS '74, it will be remembered as a cold and windy experience. The palmed pool of the Thunderbird was as pretty as the postcard pictures, but the water temperature was 44°. Full wet suits with hoods and gloves somehow seemed out of place.

Directed by Jim Williams, NAUI No. 939, the Las Vegas course certified nine new instructors and provisionally certified five others out of the eighteen candidates who started the course. Seven other candidates failed to arrive due to the fuel shortage, an auto accident, and three days of bad weather which had

the West Coast socked in for the first two days of the course. One candidate drove all night from Texas when his flight to Las Vegas was cancelled.

Open water training at Lake Mead provided a close look at Hoover Dam from above and below the water, with 30 to 40 feet of visibility and a water temperature of 50°. Facilities were made available through the cooperation of the Bureau of Reclamation and the Nevada Fish and Game Department.



Fred Tourtel



Commander Jim Williams, Director of NAUI Las Vegas '74, watches candidates in 44° water of the THUNDERBIRD pool.

STAFF:

Jim Williams, NAUI 939, Course Director
 Fred Tourtel, NAUI 1058, Training Director
 Bob Croft, NAUI 3229, Team Leader
 Bob Johnson, NAUI 2961, Team Leader
 Bob Briggs, NAUI 3220, Team Leader
 Christie Bostock, NAUI 2898, Admin. Asst.

The course established a new record for a NAUI ICC. In attendance were TWO WORLD RECORD DIVERS. Bob Croft, world record free diver, was team leader of Team 1. In his team was his long-time friend, Bob Cave, who holds the world record for a dive to 1,010 feet in hard hat gear. Bob Croft's lectures on BREATH HOLD DIVING, HYPERVENTILATION, and films of his 240-foot record breath hold dive added a new dimension to the knowledge of staff and candidates. Bob Cave devoted his final oral presentation to his record dive off San Clemente in 1972.



Bob Croft (l) Team Leader and holder of record 240 foot breath hold dive, with Bob Cave (r), candidate and holder of record hard hat dive to 1,010 feet.

Anytime you meet a NAUI Instructor who was certified at NAUI LAS VEGAS '74, hold him in special regard. Not only did he meet the challenges you met at your ICC but, additionally, for eight days, he had to withstand the distractions of walking through the casino on the way to lectures, scantily-clad cocktail waitresses, and the temptations of the most glamorous city in the world.



Dear Staff:

THANK YOU FROM NAUI.

Dear Candidates:

WELCOME ABOARD.

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LET GEORGE DO IT

by Dick Jacoby
NAUI 2987

Often, when we open another in the continuing flow of envelopes from NAUI or NDA, we learn of another NDA event or another way to attract applicants to NDA. The list of events and NDA members is growing, and the instructors who run the events and attract the members deserve our deep appreciation.

However, how many instructors actually take on the job of running an NDA event or take the time in their class to explain NDA to their students? We believe that the number is small compared to the number of instructors who think about doing these things.



Dick Jacoby

Consider the events: many instructors say to themselves, "I'll bet I could run one of those." Yet most of us don't actually do it. We daydream about it, but we don't actually sink our teeth into it. There are at least three reasons for this:

1. *"I Wish I Had The Time."* We have too much to do already, teaching our Scuba class, going to work, going to school, carrying out the garbage. We may think we already do enough for NAUI and NDA.

Yet, we instructors are NAUI, and whatever we do for NAUI or the NAUI Diving Association is actually being done for each of us. NDA is our vehicle to increase our participation in NAUI by attracting members to classes beyond Basic Scuba. Each of us increases our leadership in scuba education by offering more to our NDA members. One important payoff from NDA comes from our increased class enrollment. Thus, attracting NDA members and running NDA events go hand in hand.

2. *"I Don't Know Where To Start."* Here is a good reason not to follow through on your idea because it probably is true. We can't know how to run a photo competition if we haven't run one before.

We know, though, that this was true in the beginning for the guy who this year will hold his

fifth photo competition. He started from the same place each of us starts. In addition, there is now a set of guidelines nearly ready to help you set up your own show — from seminar to film show to major event.

Even if we cannot take on a large responsibility right now, we can sign up new NDA members. Each instructor is in the best of all positions to do this because the natural place to attract members is in his class. This even pays him (or her) directly because he receives \$1.00 credit for each new member who enters his Instructor Number and name on the application. Besides this, there is the important advantage of giving yourself a more involved group of students for continuing underwater education.

3. *"Somebody Else Will Do It."* When all other reasons fail this is our final out. "Let George do it" can work for others so long as enough other instructors are willing to be called George.

George is a good name, so good, in fact, that we don't understand why more instructors don't use it.

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STATE OF THE ART IN DIVING SAFETY AND EDUCATION TO HIGHLIGHT FALL UNDERWATER CONFERENCE — IQ6

Abstracts of papers for presentation at the Sixth International Conference on Underwater Education (IQ6) are already coming in, according to Dr. Glen Egstrom, Program Chairman. The National Association of Underwater Instructors is holding the giant diving conference in San Diego, California October 4 through 6, 1974.

Papers selected will be presented at the main conference and at a series of seminars to allow for an exchange of information from the participants. The papers also will be compiled for future use, and the sessions themselves will be recorded and made available to the public.

Dr. Egstrom said that papers are solicited in any areas related to recent diving developments, diving safety, and education. He said he expects a large number of offerings on any subject related to these fields. The schedule planned for the Sixth International Conference includes an exciting combination of lectures, selected papers, workshop seminars, exhibits, and a film festival.

Special Problems of Diving and Instruction

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State of The Art . . . (Cont.)

will again be offered this year because of its success in past conferences. The series of workshops will permit individuals to offer brief "state of the art" investigations into problem areas. These presentations need not be prepared formally and will be scheduled at the conference.

To present a paper at IQ6 an abstract of not more than 500 words is required for submission to the Program Committee by July 1, 1974. Anyone interested in presenting a paper at the Conference should first send an abstract to Dr. Glen Egstrom, Program Chairman, 3440 Centinela Avenue, Los Angeles, CA 90066. Authors will be notified if their papers have been selected before August 1, 1974.

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SCUBA RESCUE WORKSHOP SET FOR NEW YORK IN MAY

Dave Michael and Maurice Smith will lead a scuba lifesaving workshop at Hudson Beach, New Rochelle, New York, on Saturday, May 11, 1974, for instructors from New York, New Jersey, Pennsylvania, and Connecticut.

The starting time is 10:00 a.m. for discussions, explanations, demonstrations and practicing self rescue, surface rescue, and deep water mouth-to-mouth resuscitation. Dave requests that you register in advance, so that he may send each instructor the printed materials, which will be the basis of the day's activities. Send a check, *Payable to NAUI*, in the amount of \$5.00 to:

Dave Michael
NAUI LIFESAVING WORKSHOP
Department of Athletics
M.I.T. Branch P.O. Box D
Cambridge, Massachusetts 02139

You will need full ocean scuba gear, a lifevest, and surface float with diver's down flag. Bring your own lunch — Dave won't share his.



photo by Gary Kalpakoff

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A REGIONAL APPROACH TO OPEN WATER CHECKOUTS

by William L. High, NAUI 175
North Pacific Branch Manager

During a recent NAUI Branch Managers meeting, we became aware that across the continent some variations in teaching practice existed, particularly during open water checkout dives. This report is intended to acquaint instructors with instructional practices in the North Pacific.

It would be a monumental task to describe all variations of the open water checkout as conducted by various North Pacific instructors. Therefore, no such attempt will be made here. My purpose is to describe the typical method used and comment on some common variations. Because of the similar environment and close working relationship with British Columbia divers and instruction methods, our checkout procedures are similar.

Nearly all North Pacific scuba diving activities are carried out somewhere along the literally hundreds of miles of protected shoreline. Seldom do the waters develop surf or wave conditions comparable to average California conditions. Oregon has negligible protected waters with even minimal visibility levels, so, except for those classes taught on or near the coast, many Oregon instructors travel with their classes to several locations in Puget Sound. Similarly some instructors from eastern Washington (across the Cascade Mountain range) travel to the inside marine waters for a weekend of checkout dives.

Checkouts are staged from the shore at city, county, state and federal parks. The sites are uncrowded and often have parking within 100 feet of the water. Students can walk into the water from sand, gravel or rocky beaches. The sand-mud-shell bottom tends to drop away nearshore, so depth may reach 50 feet within 50 yards. Divers tend to stir up sediment when doing practice skills such as buddy breathing, mask clears, etc.

Horizontal visibility varies from about 5 feet to an occasional 40 feet or more, depending upon area, time of year and tidal phase. Visibility generally improves on incoming tides but moderate to strong currents may develop. Currents pose no unusual threat because they generally flow parallel to the beach and divers can incorporate the direction and speed into their dive plan.

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Open Water Checkouts . . . (Cont.)

Students usually receive two dives, one snorkling and the second snorkling plus one full tank of air. A few instructors who must travel considerable distance with their class complete both dives in one day. More commonly, the dives are on consecutive days. Only a few students receive 3 or more basic course dives. However, many instructors promote and encourage some form of advanced training.

Course fee in commercial classes is about \$50., which includes rental of wet suit, scuba and vest but not mask, fins, or snorkel. They are normally purchased by each student. Classes are most popular in the winter, anticipating coming warm weather. However, marine water temperatures change little from the 43° to 48° average, so instructors conduct openwater checkouts throughout the year.

Commercial courses often have 10 to 20 students while college sponsored classes are somewhat larger. Team teaching is common with most classes utilizing several experienced divers as pool assistants. Aides may receive some formal training from the course instructor or develop his skill by close supervision from certified instructors. During class pool training the senior instructor may not regularly work in the water but instead direct other instructors and students from pool edge.

The first openwater dive commences by issuing assigned rental gear at the staging area. Student buddy teams are assigned so gear checks can be made prior to inspection by the Dive Master (often the senior class instructor). Diver flags delineate the class area along the shoreline. Occasionally a powered or rowed skiff or paddleboard functions as a safety platform.

Buddy team student groups are supervised in the water by experienced divers serving as teaching assistants and from 1 to 5 certified instructors, depending on class size and their availability. Often the instructor — student ratio is maintained using competent assistants.

Generally students are unable to remain in the water more than 2 hours. Rental wet suits seldom fit equal to a custom fitted suit which is considered necessary for proper thermal protection.

Until recent years the checkout scuba dive in the Northwest area consisted of a single 15 to 20 minute one on one underwater test and familiarization period. Fortunately, now the students' time in

and under the water has increased to the point that each consumes a full tank of air. The greater time consumed places more demands upon the available instructors. Instructor to student ratios have commonly jumped to one on a buddy pair or much less frequently one on 2 buddy pair.

Most instructors in the North Pacific Branch use experienced divers as teaching assistants. We believe this practice is an asset to students when the T.A. is directly supervised by one or more NAUI instructors. During openwater dives, experienced divers, oriented to the teaching goals, can guide student teams, assess some of the students' capabilities and promote confidence. While several student-instructor groups are in the water, the Dive Master can respond quickly to any problem area and is in the best possible position to begin corrective action if a difficulty is encountered. Even after initial scuba testing is complete, students remain in the care of a certified instructor or T.A. until the class outing is complete.

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KNOW YOUR BRANCH MANAGER

William L. High
Branch Manager, NAUI North Pacific



Bill High, a Fisheries Biologist with the National Marine Fisheries Service, has a long association with the sea and diving. The son of career Coast Guardsman, he frequently spent his summer vacations at sea aboard his father's ships.

Bill, his wife Phyllis, 9 year old son Jeffrey and 4 year old daughter Jennifer, make their home just northeast of Seattle. Bill's near total involvement with the many facets of diving precludes

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Know Your Branch Manager (Cont.)

other hobbies except a little black powder shooting and fly fishing.

While working with the U.S. Bureau of Commercial Fisheries in 1955, Bill was introduced to dry suits and diving gear. His first underwater assignment was to recover fish accidentally electrocuted during research studies.

Bill graduated from the University of Washington in 1958 and joined the staff of the International Pacific Halibut Commission while continuing graduate studies. In 1963 he took his underwater research talents back to the newly organized Gear Research Unit of the Bureau of Commercial Fisheries. He is the Nations most experienced scientist working directly within the influence of active commercial and research fishing gear.

Bill High's experience includes:

1. Scientific team leader for saturation dives in the undersea laboratories Tektite II, Hydro Lab and Edalhab.
2. Scuba instructor at Shoreline Community College, 1968-present.
3. Member of a United Nations (FAO) committee on assessment of submarines and habitats for marine research.
4. Past Vice President Underwater Society of America, 1962-1970.
5. Served as National Diving Coordinator for the National Oceanic and Atmospheric Administration (NOAA) and the National Marine Fisheries Service.
6. Authored more than 50 articles primarily relating to fisheries, research, fishing methods or underwater activities.
7. Serves as an underwater consultant to universities, federal and state government agencies and industry.
8. Founded and served as Chairman for the annual North Pacific Man in the Sea symposium and International Photo Competition, 1968 to present.
9. Recipient of the International NOGI Award, 1964.
10. Served as the Senior Foreign Judge at the World Spearfishing Championship in Japan, 1969.
11. Began teaching diving in 1958, graduating over 5,000 students to date.
12. Completed numerous research sub-

mersible dives to depths over 1,300 ft.

13. Recipient of over 40 photographic and competitive diving awards.

14. Dove all waters from the Bering Sea to the Equator, Gulf of Mexico, Caribbean, east coast United States and Japan.

15. A member of the killer whale hunting team that captured over 50 live whales, many of which were used for research or display around the world.

16. Certified by NAUI in 1961, served on numerous ICC staffs, attended specialty courses such as the IOC and was named the first North Pacific Branch Manager in 1968 for NAUI.

Editor's Note: A biography of each Branch manager will be published in future issues of NAUI NEWS.

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SINGLE HOSE REGULATORS AND COLD WATER DIVING

by D.J. Fullerton,

Defence and Civil Institute of Environmental Medicine, Canada



David Fullerton

With the increasing popularity of ice diving in recent years, special diving techniques have evolved. However, most of these have failed to cover the possibility of regulator freeze-up under the ice. This is one facet of cold water diving that every diver must be aware of and be prepared for.

During the summer of 1973 I conducted extensive evaluations for the Canadian Forces' Clearance Diving Trials & Development Unit, on the fifteen top of the line products from eleven European and North American Manufacturers. The trials included subjective evaluations, breathing resistance tests, freeze-up trials, and simulated working dives to 150 feet of sea water. The results indicated that generally single-hose regulators perform as well as or better than double hose models. Unlike two-hose regulators, single hose

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Cold Water Diving . . . (Cont.)

regulators are very susceptible to freeze-up failures in cold water operations. Although double-hose regulators have been reported to freeze on occasion due to some component failures, they do not normally freeze-up, simply because the mechanism is enclosed in a water tight compartment. Because much of the mechanism of single-hose regulators is exposed to water, the cold can readily cause a malfunction which will lead to regulator failure.

It has been determined that freeze-up of single-hose regulators may occur in one to two ways, each of which may rapidly cause regulator failure. Freeze-up is caused by the cooling effect of rapid gas expansion in both the first and second stages. Tests revealed that freeze-up occurs in the ambient pressure reference chamber of the first stage or beneath the demand lever of the second stage. In all tests, where both stages were immersed, ice formed around the hose inlets and spread over portions of the regulator as freezing progressed.

Freeze-up of the first stage stems from the adiabatic expansion of the HP gas. The resultant sub-freezing temperature causes ice to form around the first stage housing. The water surrounding the pressure reducing spring also freezes. As ice forms about the spring, jamming and additional friction of the spring occurs, resulting in an increased pressure of the gas delivered to the second stage. When this intermediate pressure increases sufficiently, the second stage valve pin lifts off its seat, and a free flow results. The free flowing gas causes further freezing of the first stage plus freezing of the demand mechanism in the second stage to a point where the only gas available for the diver to breathe is that which is free flowing past his mouth. Exhaling into this stream of gas becomes steadily more difficult (to the point of causing dizziness). To eliminate the freezing of water around the first stage spring, the ambient chamber surrounding the spring may be filled with an anti-freeze liquid which is subjected to ambient pressure, as it is only separated from the water by a flexible cap. This modification, apparently first introduced by a European manufacturer, effectively prevents freezing around the spring. Tests conducted on the other regulators, utilizing a glycol filled chamber on the first stage, verified that such a modification does inhibit failure of the first stage due to freeze-up.

Even with the above first stage modification, the second stage will freeze if purged or allowed to free flow for longer than about five seconds. In this situation, the diver's exhaled breath and free water trapped in the chamber form ice around the demand lever and spring mechanism.

The maximum temperature drop in the second stage during a full free flow was found to be 5.4°F occurring within 30 seconds. From this we can estimate that failure can occur in fresh water below 38°F or in sea water below 34½°F.

Tests conducted in a climate controlled room determined that if a regulator is cooled below 32°F prior to a dive, any moisture, including the diver's humid exhaled gas, may cause second stage failure (by breathing from the regulator before entering the water).

As a result of these cold water studies, the following operational guidelines have become apparent for cold water diving:

- a. if possible, double-hose regulators should be used,
- b. the moisture content of the supply gas must be closely monitored to ensure that it is below the dew point,
- c. all single-hose regulators should be fitted with an alcohol filled, pressure sensitive cap, encasing the ambient pressure reference chamber of the first stage,
- d. purging or free flowing of the second stage must be avoided but if required must be limited to a duration of less than five seconds, and
- e. the diver should ensure that the second stage is moisture free before entering the water, if temperatures on the dive site are less than 32°F.

The hazards of ice diving cannot be over emphasized due to the unexpected physiological and psychological responses, as well as the constant threat of equipment failure that may occur. Because of these hazards, such diving should never be attempted unless there is a specific need to do so. If diving under ice is required, only highly experienced divers familiar with ice diving techniques and equipment operation, should attempt such excursions. Remember that unnecessary risks under water can prove fatal especially when the surface is covered with a few feet of ice.

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SOON TO BE AVAILABLE . . .

"Cold Weather and Under Ice Scuba Diving"
by Lee H. Somers, Ph.D.

WATCH FOR IT SOON! . . . Another in the series
of NAUI Technical Publications.

WOMEN IN DIVING? . . .

by Bob Widmann - NAUI 2055
Mid-Pacific Branch Manager

Only complaint: felt uncomfortable once in awhile in class due to something which is rather ingrained in the diving scene - that is, sexism. Instructor a knowledgeable man, neat person, but tended to treat women as more incompetent than men in class, treat as small children rather than young adults, perpetuated this attitude in class and other males picked it up. Otherwise, an excellent teacher. Sure hope this "macho" image of diving changes, because it is a real drag to be constantly viewed in a forementioned manner. Blech.

(Statement by female Basic Scuba student found on standard NAUI Course Evaluation Form in section concerning "General Complaints or Suggestions," April 4, 1973).

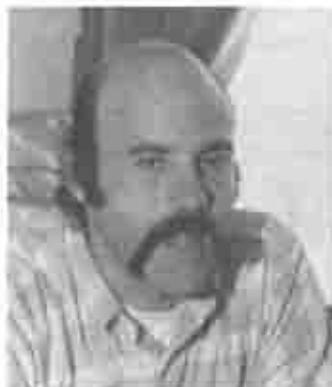
The sport of scuba diving is growing so quickly and changing with such rapidity that it sometimes makes my head spin. The old school of thought that placed the "he-man" diver at the top of the diving hero list is fast disappearing. The spear fishing hunter who left the beach littered with his/her kill is also no longer a hero of the sport. The participants are looking to a more gentle, organic type of hero. The people who observe the most interesting aquatic life, the people who capture it on film, and the people who contribute to the safety of the sport are the one's who are being looked up to. By the very nature of the "old school" women were excluded for scuba diving. Present times find the female segment of the population (that were denied recognition and even participation in the sport) now in many instances, the very one's that are the leaders. The problem is that there is a consciousness lag. Many instructors still think that if you can't swing a 30 or 40 pound tank on your back and a 20 pound weight belt around your waist and hike 3/4 of a mile to the beach you don't belong in the sport. I am afraid that there are far too many instructors that feel this way.

I also think that the manufacturers are guilty of female suppression in the sport. The equipment

is primarily designed for men. The market does not provide enough volume to justify the re-designing of equipment to accommodate women. The problem is that until the equipment is designed for them there will not be the market to absorb the cost of production. It is a vicious cycle.

Please don't get me wrong . . . I am not saying that the present attitude of instructors and the availability of equipment *excludes* women from participation in scuba. What I am saying is that it does not **ENCOURAGE** their participation. This is the problem I would like to see rectified.

At the University of California, Santa Cruz, we are attempting to rectify the problem in a small way. Each quarter the basic, as well as the ocean diving sections, are divided in half. Half of the vacant spaces are reserved for women and half of them for men (after all, 1/2 of the students are men!). This eliminates some of the pressure on women to have to compete with men for spaces. Much of our philosophy embraces cooperation rather than competition. We have ordered a supply of 50 cubic foot tanks which will be available for smaller people (both male and female) so that the sheer weight and bulk of scuba gear will be diminished and hopefully less frustrating. We encourage women to become teaching assistants (half of the T.A. spots are reserved for them).



Bob Widmann



Responsibility is vested in women in the program and well received. We recognize that there is some validity to the argument that such measures are a form of reverse sexism. For those qualified, the admittance to the courses and to teaching positions should be based entirely on a first-come first-serve system. However, it is our feeling that it is more

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Women In Diving? ... (Cont.)

important now to insure a balance of the sexes with the hope that in the future such measures will not be necessary. A basic thought in the program is that when non-diving women see other women in positions of authority in what was traditionally a man's sport then they will be indirectly encouraged to participate.

We have also been working with our local wet suit manufacturers (O'Neill's). Women in the program have volunteered to assist in designing new patterns for wet suits. They have gone in on their own accord and have been received with enthusiasm. Manufacturers need help, not from men who think they know female proportions, but from the women themselves.

Along with the above mentioned ideas we also give a big push to get "SCUBA GROOPIES" (regardless of their sex) to become participants. We encourage the presence of friends and relatives at all scuba outings and after we have caught their attention we begin our "well why aren't you out there doing it" pitch ... and it works. The word has spread ... that women are welcome ... not just tolerated but sincerely welcome. One third of our certified divers are women ... that isn't good enough ... we are shooting for equal representation ... why don't you?

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PLENTY OF ACTION OFFERED IN NAUI INDUSTRIAL ORIENTATION COURSES

Swimmable diving helmets. Fingers and pinger receivers. Deep diving closed circuit scuba. Underwater television.

These are only a few of the many kinds of futuristic diving equipment that students of NAUI's Industrial Orientation Course (IOC) will experience during their week long training. First of the courses to be offered this year will be in the Seattle, Washington area June 7 through June 16, 1974.

According to Course Director Leonard Greenstone, the IOC offers an excellent chance for interested and qualified divers to learn whether they want to make their living beneath the sea. Greenstone has been active in Industrial Orientation Courses since 1969 when the first course began in San Diego. Over the years the course has

attracted other underwater experts such as Navy Commanders Tommy Thompson, Don Ferrin and Jim Williams. Other leaders in past courses include Dr. Glen Egstrom of UCLA and Jim Stewart, Diving Officer for Scripps Institution of Oceanography.

The name of the game at an IOC is "do it yourself". In past courses student divers practiced underwater repairs with experts from the U.S. Navy. They learned knot tying, line splicing and the construction and use of underwater blanks and patches. There have been chamber runs to test for nitrogen narcosis and oxygen tolerance. The students even experienced a helium bounce dive.

With the use of well over \$100,000 worth of advanced diving gear, each student has been stimulated to use his course experience in his vocation or avocation. Use of underwater devices such as pneumatic and hydraulic tools and salvage equipment prepared the students for an actual salvage operation carried out towards the end of the course. A long list of equipment manufacturers also supplied their latest developments for the students to try.

The Seattle area course is projected as the first of several IOC's to travel across the country during 1974. Courses are tentatively planned for Florida and Chicago during the summer, and the Southern California area will host an Industrial Orientation Course during four week ends beginning October 19 and 20.

Highline Community College, Redondo, Washington will be the site of the first course beginning June 7 and running through June 16. No more than 30 persons can be registered to make effective use of equipment and teaching staff. Any certified diver may apply. For more information, contact NAUI Headquarters, 22809 Barton Road, Grand Terrace (Colton), CA 92324.



Industrial Orientation Course Director Leonard Greenstone, NAUI 2336, with some of his specialized equipment and training aids.

PUNCH CHECK TESTING METHOD

by Marcel Lachenmann, NAUI 2024

One of the most tedious parts of teaching scuba diving is the correcting of written tests.

The most common form of test question is the short fill-in answer. This style of question necessitates that a knowledgeable person will correct the test because often a judgement must be made regarding the correctness of the answer. This means that you, the instructor, must sit down and do clerical duty.

The solution to this problem is often the giving of true-false, multiple-choice, and/or matching questions. This eliminates the necessity of the instructor correcting the test. However, it is still time consuming.

For that reason, I would like to make you aware of a testing form that I introduced in the Milwaukee Public Schools approximately 10 years ago. This system has rapidly gained in acceptance due to its low cost and extreme adaptability. I have also been using the system for my scuba exams for more than 10 years. It has proven itself a true timesaving device.

The method is called the "Punch-Chek" grading system. It consists of a small plastic tray with indentations, a punch like an awl, and special easy-to-tear test sheets. The instructor has three test forms to choose from and they are colored and numbered differently so that he can easily give the right form for his test. One of the forms is designed mainly for matching, one is a multiple choice test, and one combines true-false, matching, and multiple choice. The sheets can accommodate up to

108 questions. After the students mark their answers on the sheets, the sheets are placed in the plastic tray, a master answer sheet is placed on the top, and the punch is pushed through the correct spaces. I have pushed a punch through over 50 answer sheets at one time. After pushing holes in the paper in the correct spaces, you then look at the sheets. Anywhere, a hole appears without an X on it, the answer is wrong. This eliminates the time usually wasted by consulting an answer sheet and then the student's sheet. Using this method, I can correct 30 test papers with 108 questions in less than 20 minutes. The method is hard to beat for time.

The cost is reasonable also. The tray & punch lists for 8.95 and the test sheets cost approximately 9.00 per thousand. Needless to say, the tray could be shared as could the test sheets since the average instructor normally does not test thousands of students in a year. The material is manufactured by the Schlieff and Company, 500 N. Robert S., St. Paul, Minn. 55101.



The tests being corrected by my son Marcel III

I might also add that this method could easily be adapted to tests at ICC's and the candidates could literally receive almost instant feed-back on answers. It is also impossible to change the answer to the correct one after the hole has been punched; thus, you would not have to worry about changed answers. It would be possible to correct 50 candidate tests of 50 questions each by punching them in less than 3 minutes. To circle the wrong answers would probably take no more than 8-10 minutes. Thus, in less than 15 minutes the candidates could see their corrected tests.

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PUNCH-CHEK

Name _____ Possible score _____
 Subject _____ Number wrong _____
 Date _____ Number right _____
 Time _____ Final score _____

True-False-Multiple Choice

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

PUNCH-CHEK

Name _____ Possible score _____
 Subject _____ Number wrong _____
 Date _____ Number right _____
 Time _____ Final score _____

Multiple Choice

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| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
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True-False

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| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Punch Chek Answer Sheets

NDA NEWS

NAUI DIVING ASSOCIATION PUBLICATION

VOL. 1
NO. 2



DIVING AROUND THE WORLD

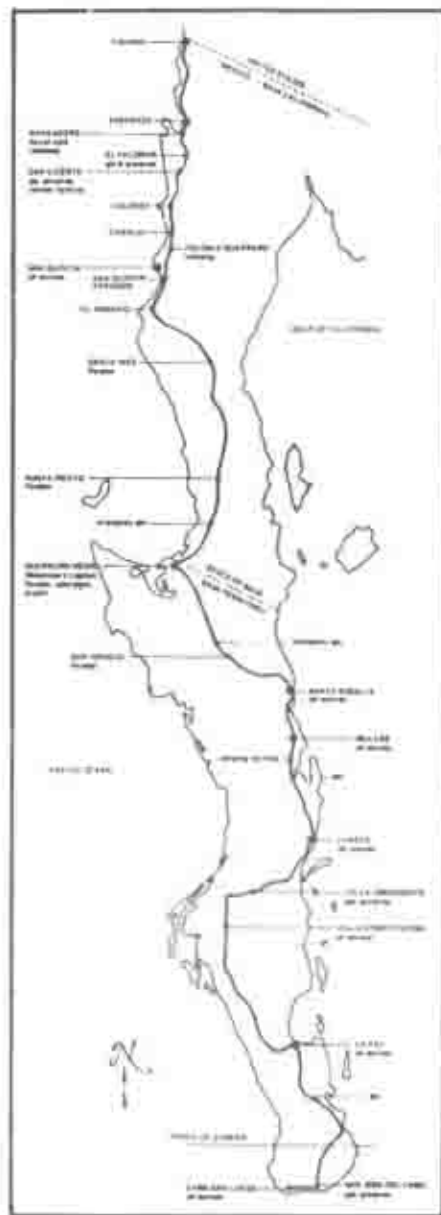
WARNING ABOUT BAJA CALIFORNIA TRIPS

The new 1,100-mile highway from the United States border to Cabo San Lucas at the tip of Baja California has recently been completed. This opens many new areas of diving exploration. However, the necessary support facilities are not yet available. Gas stations, restaurants, overnight accommodations and other facilities are not plentiful.

Divers heading down this long highway are advised to first talk with seasoned travelers of Baja. Check with your local auto club for advice. There are regulations you should become familiar with, which are available from the Mexican Consulate. The worldwide petroleum shortage may make gas even harder to find than normal, and much more expensive. You should plan to be self-sufficient by carrying all necessary gas and supplies. Divers should also accept the responsibility to not damage the land and underwater environment of the new unexplored areas. We have an opportunity to disprove the foreign impression sometimes present — "The Ugly American."

SEA THERMAL POWER PLANT

A feasibility study has been awarded to study the practicality of a sea thermal power plant which is based on temperature difference in the ocean. The temperature difference can be up to 40 degrees F. The research was conducted by Sea Solar Power, Inc. of York, PA, who have contracted with United Engineers and Constructors, Inc. to perform the engineering feasibility study.



BAJA's new 1,100 mile road



TRANSPARENT-NOSED SUBMARINE TO TRACK OIL SEEPAGE

The PC-14, a small two-man submersible, has been purchased from the builder (Perry Oceanographics, Inc., of Riviera Beach, FL) by the Texas A&M University. Funds for the submersible came from a consortium of petroleum and gas companies.

Dr. Richard A. Geyer, Texas A&M Oceanography Department head, says the sub "will be used initially to make possible more efficient investigations of natural oil seeps on the continental shelf and slope of the Gulf of Mexico. Additionally, the sub will be used to gather direct data for environmental impact studies and to study the ecology of coral reefs such as the Flower Gardens and Stetson Banks."

The PC-14 has a 42-inch transparent acrylic nose for maximum underwater observations. It has seven other view ports. The submersible operates to depths of 1,200 feet with a maximum speed of about two knots.

*Contributions
to the
Ron Church Memorial Exhibition
should be made payable to
Regents, University of California
and mailed to
Aquarium-Museum
Scripps Institution of Oceanography
8602 La Jolla Shores Dr.
La Jolla, Ca. 92037.*



DIVING AROUND THE WORLD

DIVERS TO 1,000 FEET IN 33 MINUTES

Present U.S. Navy deep diving techniques require 25 hours to pressurize divers to 1,000 feet for diver lockout from diving chambers. Oceaneering International in Houston has developed a more advanced technique which is being tested in Project Quick Dive 1000. The experiments are being conducted at Duke University. The Harbor Branch Foundation is also participating in the experiments.

The second phase of Project Quick Dive 1000 has been successfully completed, with four divers rapidly compressed from surface pressure to a simulated depth of 1,000 feet in 33 minutes at the Duke University Hyperbaric Chamber. This method of reaching great depths rapidly is to eliminate the high pressure nervous syndrome which is sometimes present at the slower rate of compression.

The high pressure nervous syndrome occurs when breathing helium and oxygen gas mixtures, which can cause severe nervous tremor, dizziness and nausea when the gas pressure is increased slowly.

RUSSIAN POLLUTION — ONE RESULT

The Caspian Sea in Russia may soon become another Lake Erie. Power stations and chemical factories along the lower Volga River add increasing effluents to the Caspian's diminishing waters. The oil rigs of Baku contribute generous emissions of dark sludge. Astrakhan, the caviar center, pours in some 30 million gallons of sewage each day. In addition to all these pollutants, the level of the Caspian Sea is becoming lower each year, dropping six feet in just the last ten years.

Just one of the many problems created by these conditions is the limited Soviet caviar available in the shops. Most

of the caviar is being reserved for sale in the special emporiums for foreigners. The caviar comes from the sturgeon, which is disappearing very fast. Russian scientists are taking steps to preserve the sturgeon. Antipollution plants have been installed along the industrial Volga River, sturgeon breeding farms have been set up inland, and fish ladders have been built around power plant dams to help the adult sturgeons up to their spawning grounds (like our salmon).

NEON AS BREATHING GAS

Five dives were made to 520 feet by divers from Ocean Systems, Inc. in the North Sea. These open sea dives were unusual because the divers were breathing a mixture containing a high percentage of neon.

Ocean Systems, Inc. has been developing advanced methods to offer less expensive methods of deep diving than the present saturation diving techniques. Their research program of laboratory and now open dives has produced a technique which allows working bottom times of 20 to 60 minutes, with decompression time only hours instead of the normal days of saturation diving. The proprietary mixture of breathing gas offers several advantages by using neon in place of helium:

1. less voice distortion
2. lower heat loss through the lungs and
3. less decompression time



UNDERWATER WINDMILLS

Three ocean scientists are proposing that marine engineers, power engineers and related fields get together to develop methods of harnessing the Gulf Stream, which moves along the Atlantic coast from Florida north past Nova Scotia. The scientists are Dr. Harris B. Stewart Jr. (director of the NOAA Atlantic Oceanographic and Meteorological Laboratories in Miami), Dr. John R. Apel (physicist at the Miami NOAA Laboratories) and Dr. William S. von Arx (Woods Hole Oceanographic Institution).

The basic proposal is to develop large slow turbines which resemble windmills. These underwater windmills would be enclosed in housings, one end open toward the current. Attached to each windmill or turbine would be its own electrical generator and cables anchoring the turbine-generators to the ocean floor, which would also carry the generated power to a master cable on the ocean floor. Dr. Apel calculated the upper layers of the Florida Current within the Gulf Stream could produce about 0.8 kilowatt of power per square meter of cross section of the stream. This is over ten times the average energy per square meter of solar cells available from sunlight in south Florida.

The underwater windmills would be in a line about 12 miles long and perpendicular to the current, at a depth of about 400 feet. This is where the maximum velocity of the Gulf Stream occurs.

NDA OFFERS INFORMATION ON THE UNDERWATER WORLD —

What To Do
What To See
What To Read
Where To Go

See pages 5 to 10 to learn more.

— NIDA NEWS —

Editor/Publisher
Associate Editor

Edward C. Cargile
Richard K. Jacoby

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DIVING HINTS

SHARE YOUR DIVING HINTS

Each issue of NDA News will carry helpful diving hints to make your diving easier, more enjoyable and safer. If you have a diving hint you would like to share with other NDA Members, send it to us. We will give credit for each diving hint submitted, including your name at the end of every diving hint we use.

Describe your diving hint in as few words as possible, but including all the important information. Make each hint two or three paragraphs long. If your idea requires more description, maybe it would make a good short article. Please type if possible. We can learn from each other, so send as many hints as your diving experience can generate. The hints without name credit are contributed by Art Ullrich, Dennis Graver, Dick Jacoby and Ed Cargile of NDA Headquarters. Send your diving hints to:

Edward C. Cargile
Editor/Publisher
NDA News
22809 Barton Road
Colton, CA 92324

TANK SLIPPAGE

If your tank falls out of your back pack, even after you've tightened up the band, insert a strip or two of wet suit neoprene between the band and the tank. That will hold it.

DIVER KNIVES

A good location for your diver knife is on the inside of the leg, below the knee. There is less chance of anything hanging up on it, such as buoy lines, kelp, seaweed, etc.

Some manufacturers turn out pretty good knives, but the sheathe and plastic straps on some are not as great. Watch for signs of cracking on the straps and sheath. Replace plastic straps with rubber or woven cloth straps, available at dive stores and surplus stores.

Place a strap over the knife hilt with a brass ring, leaving a few inches for the glove man to get a grip. Sometimes you cannot be sure the rubber ring over the knife hilt will hold the knife in place.

To prevent the knife from slipping around the leg, glue a piece of wet suit material on the inside of the knife sheath, with the nylon lined side toward your wet suit. The lined side on the knife sheath will not be as slippery if the outer surface of your wet suit is smooth and unlined, and even less slippery if the outer surface of your wet suit is nylon lined.

Bob Wear, NAUI Instructor 1926

VINEGAR ON YOUR DIVING GEAR

To clean and brighten the stainless steel on your mask strap holders, use a cloth dampened with vinegar and rub hard.

Do your pots and pans sometimes smell fishy after cooking your diving gear? Keep your pans odorless by pouring in a cup of vinegar and let it simmer for a few minutes, then wash in the usual way.

A few drops of white vinegar will clean the glass of your diving mask. It removes water grime and buildup dirt.

Rust stains on your diving gear? Washable items will respond to vinegar and salt. Before washing, apply a heavy solution to the rust spot, place in the sun until dry, then rinse.

If your wet suit smells get a clean 20 gallon or larger trash can and pour a cup of vinegar into the can full of warm water. Rinse your wet suit and boots until the smell is gone.

*Richard Spencer, NAUI
Instructor 1025*

WHISTLE ZIPPER

Attaching a good plastic whistle with a short nylon cord to the zipper of your wet suit offers several advantages. It makes it easier to grab your zipper. It also is invaluable if for any reason you need to call for help.

*Paul Rudolf, NDA Member
Rahemba, NY*

HOSE HOLDER

A piece of Velcro on the upper right hand side of your vest about shoulder high can hold your regulator hose. It will keep a single hose regulator from falling behind you. Although a neck strap will do the same thing, this way there is no problem in sharing your regulator with a buddy should it become necessary.

VEST WAIST STRAP

Inflatable vests with a waist strap that has a snap on one end for quick suiting up and removal, can be dangerous. With the open side of the snap (the place the "D" ring slips into) facing away from the body, tank straps, weight belts, buddy lines, etc., can slip into the hole opening the "D" ring goes into. If that happens, it's almost impossible to free the straps in an emergency or even ditch the vest along with everything else, if necessary.

A simple solution is to face the open part of the snap facing into the body instead of away from it.

*Kenneth Yeakins, NAUI Instructor 2102
Flower Garden Ocean Research Center
Galveston, Texas*

DROWSY DIVERS

Motion sickness pills, sea sick pills, or whatever you want to call them, are primarily a form of tranquilizer. Too many before a dive can hit you like downers. Try to control motion sickness in other ways than by using pills.

DELICIOUS WARMER-UPPER

Fry scrambled eggs and freeze them. On your next dive, cut up the frozen eggs with a clean diver's knife and drop them into hot steaming chicken soup. It's a great way to warm up after a dive.

*Richard Spencer, NAUI
Instructor 1025*

DIVING HINTS

BACK PACK WING NUTS

Sometimes the wing nuts on the inside of adjustable back packs, between the pack and diver's back, tend to tear holes in wet suits. This can be solved by covering the wing nuts and protruding bolts with a couple pieces of tape.

Duane A. Nitzel, Kennewick, WA.

WET SUIT TEARS

If you tear your wet suit and it is made of the kind of neoprene that does not have nylon on it, it is easy to reinforce the repair by using a piece of nylon stocking. Just glue the tear back and let dry, then paint an area around the tear completely with neoprene cement. Place a single layer of nylon from the stocking over the entire area. Knead it in until the nylon is mashed down into the glue. Let dry and then cover with a coat of neoprene cement. Cut the excess away and glue down the edges and it won't tear in that spot again.

WATCH PROTECTION

Cut a 2-inch wide piece of wet suit material long enough to wrap around your diving watch on the outside of your wet suit. Use wet suit glue to cement the ends of the material together. Cut a hole the size of the watch face. The watch protective band can be worn over the watch to reduce damage. It will also keep the watch on your wrist if the regular strap or band breaks.

*Ed Cargile, NDA
Program Manager*

WHERE THE YELLOW WENT

If your nylon goodie bag is turning yellow, soak it in Boraxo overnight and then wash it.

*Richard Spencer, NAUI
Instructor 1025*

GAUGE LOCATION

Ever had trouble getting into tight spots with your hands with a depth gauge on your wrist, or find your depth gauge slip around your arm when you reach depth and your wet suit compresses, or getting your gauge caught on something? Try putting your depth gauge on your submersible tank pressure gauge hose by wrapping the depth gauge strap around the hose several times near the gauge end of the hose, then buckle it. It gets the bulky gauge off your arm, but provides easy access and will also have a tendency to keep you checking your depth as often as you check your tank pressure because both gauges are together.

*Kenneth Yoakum, NAUI Instructor 2102
Flower Garden Ocean Research Center
Galveston, Texas*

EQUIPMENT COMPRESSION PROBLEMS

by Dennis Graves

Are you a diver who at depth encounters some of the following problems: Compass and depth gauge spin around your arm or fall down around your wrist? The knife sheath on your leg revolves or becomes loose? Your weight belt turns on your waist making you swim top-sided (this is also dangerous because it moves the position of the quick-release buckle)? You become too heavy and bounce along the bottom — also cold? Did it seem like you had to blow all the air available into your mask on the descent to avoid a mask squeeze? All of these problems are equipment problems related to compression. Let's talk about solving them.

Your wetsuit, of unicellular construction (individual, closed bubbles), gets compressed and thinner as pressure (depth) increases. If you look at the wrist of a 1/4-inch suit at 100 feet, it looks

about as thick as a piece of cardboard. With this compression you lose three things: insulation thickness — making you cold; displacement of water — making you heavy; circumference — making strapped-on gear spin around your body. Now, what can you do about it?

Getting cold: Avoid diving deep, wear a 1/8-inch vest under your suit jacket, have your next suit made "Farmer Johns." **Losing buoyancy:** Weight yourself for the depth you'll be diving, then stick to that depth; blow some air into your inflatable vest orally to offset the negative buoyancy. Remember to allow expanding air to escape from the vest during ascent by bleeding it off through the oral inflator. **Rotating gear:** Use compensating straps — Scubapro has stretchy rubber straps that will shrink as the suit compresses, remaining in place. There are also available several compensating weight belts. Your knife can also be placed in a pouch of suit material glued to the thigh of your wetsuit — eliminating straps.

There are a couple of advantages of suit compression: If you wear mittens or gloves made of wetsuit material, the compression makes them fit nicely on your hands and improves dexterity; if you're breath-holding diving and weighted neutrally on the surface, you'll find that you'll become negatively buoyant at about 15-20 feet. With a good surface dive and a couple of kicks, you can let this take over and drift the rest of the way down.

Your mask equalization problems, more apparent in breath-holding diving, are directly related to volume — the larger the mask, the more air must be added to it during the descent. Low volume masks alleviate this problem and also increase your field of vision by getting the faceplate closer to your eyes. Try one of these masks and you'll be amazed.

By taking the time to understand your equipment problems, and rectifying them, you can spend all your diving time enjoying the beautiful ocean, not fiddling with your gear.

NDA

WHAT TO DO IN DIVING

UP DATE

IQ₆ - A SPRINGBOARD TO THE DIVING VACATION OF YOUR LIFE

Cabo San Lucas - Kona Coast - Montego Bay - TAHITI! These are just a few of the fantastic diving vacations in the planning stage to follow the Sixth International Conference on Underwater Education (IQ₆). The Conference will be held in San Diego, California October 4th through the 6th.

The diving trips range in length from three to seven days and in estimated price from \$300.00 to \$663.00 - including round trip air fare from Los Angeles. Besides those already mentioned, trips are tentatively planned for two Bahama diving resorts, and Puerto Vallarta and Cozumel, Mexico.

The Tahiti trip alone promises an exotic diving vacation of seven nights in deluxe bungalows on the island of Moorea.

Many people are predicting that IQ₆ will be the greatest diving convention ever held for instructors and all divers. Besides the diving vacations, there will be three days of fantastic and exciting underwater films, diving seminars and workshops, and the chance to meet the leading celebrities of diving.

For more information on the Conference and Diving Vacations, write now to NDA Headquarters, San Diego. Can be just the beginning of the vacation you will always remember.

✓ IQ₆ CHECKLIST NO. 1

PLAN NOW FOR YOUR OCTOBER VACATION

If you are thinking about attending IQ₆ (and maybe a diving trip afterwards), now is the time to begin your planning. Discuss the trip with your family. Perhaps some of your friends would want to come. Then let your boss know that you plan your vacation for the beginning of October.

NDA NEWS

TOBERMORY, ONTARIO, CANADA

CANADA TO OFFER GREAT DIVING WHILE TEACHING DIVING LEADERSHIP

If you haven't done the Big Time and you haven't attended a NAUI/NDA Divermaster Seminar, you will have a chance to participate in one of the most exciting weekends you will ever have this summer. NAUI/Canada will hold a Divermaster Seminar at Tobermory, Ontario, Canada June 21 to 23, open to all divers qualified by a recognized training program.



Diving the wreck "Newage" at Tobermory

The Seminar will cover diving techniques to handle group diving for maximum safety and fun. Subjects covered will include Underwater Communication and Equipment, Boat Diving, Diving Law, Emergencies, and Group Planning.

Participants will dive areas around Tobermory such as Big and Little Tub Harbors, as well as choose from literally dozens of wrecks in remarkably clear water.

Tobermory is a village at the tip of the Bruce Peninsula which separates Lake Huron from Georgian Bay. For more than a century violent storms wrecked the ships sailing through the channel between the lakes and the bay. The area is so rich with goodies that the Province of Ontario has turned the area into an Underwater Park.

Tobermory is not far from air ports at Owen Sound, and is just a few hours driving time from Toronto. For more information, contact Ten-Ten-Ten, 52 Bromley Crescent, Bramalea, Ontario. Ask him about the old Davy Hotel, now called the Georgian, where you will stay.

BEVERLY, MASS. - LATEST IN DIVING EQUIPMENT TO BE DISPLAYED IN APRIL

The general public will join NDA and NAUI members on April 7 at a diving equipment exhibit by the leading scuba manufacturers. The exhibit is one part of the annual Diving Equipment Seminar and Exposition at New England Divers Showroom, Foster Road, Beverly, Massachusetts.

New equipment seminars will show how to use the latest items of underwater apparatus and will be aimed mainly at scuba instructors. There will be a tour of a hydrotest facility, and the pool will be available for test dives.

The Seminar and Exposition runs from 9:00 a.m. to 6:00 p.m. on Sunday, April 7. For more information, call (617) 922-6951, or write NAUI/NDA, P.O. Box 291, Back Bay Annex, Boston, MA 02117.

SPECIALTY COURSES AVAILABLE

You may not have heard, but NAUI is offering something new for NDA members and the diving public. Ten courses are now available in advanced diving specialties from specially trained NAUI instructors.

The courses cover Cave Diving, Deep Diving, Diving Leadership, Ice Diving, Professional Diving, Search and Recovery Diving, Underwater Environment, Underwater Hunting and Collecting, Underwater Photography, and Wreck Diving. (See page 10 for six Underwater Photography Courses being offered this summer.)

Student Certification requirements for the courses range from Skin Diving to Sport Scuba Diving. Ask your NAUI Instructor for details or write NAUI Headquarters.

1. North Pacific Branch



William High
6531 N.E. 198th St.
Seattle, WA 98155
206/486-2252

Special Events

June 7-16 Industrial Orientation Course Seattle, WA

Instructor Courses

May 4-5 Qualification Course Portland, OR

2. Mid Pacific Branch



Bob Widmann
816 Columbia St.
Santa Cruz, CA 95060
408/429-2951 — 427-1664

Special Events

Aug. 24-25 High Altitude/Fresh Water Workshop Lake Tahoe, NV

Instructor Courses

June 15-16 Qualification Course Eureka, CA
Sept. 5-14 Qualification & Training Course Monterey, CA

3. Pacific Branch



John O. Gimbel
142 Paseo De La Concha
Redondo Beach, CA 90277
213/378-0955

Instructor Courses

April 7-13 Certification Course Santa Barbara, CA
May 11-12 Qualification Course Santa Ana, CA

4. South Pacific Branch



Mark Flahan
1867 Reed Street
San Diego, CA 92109
714/278-6210 286-6525

Instructor Courses

June 22-29 Qualification & Training Course San Diego, CA

5. Mid America Branch



Merritt Bartlett
Box 14156
University Station
Minneapolis, MN 55414
612/331-3423

Instructor Courses

| | | |
|------------|-----------------------------------|---------------|
| May 25-26 | Qualification Course | Chicago, IL |
| June 15-16 | Qualification Course | Chicago, IL |
| June 22-23 | Qualification Course | St. Cloud, MN |
| July 19-21 | NAUI/YMCA Crossover Certification | Chicago, IL |
| Aug. 17-24 | Qualification & Training Course | Chicago, IL |

6. Southwest Branch



Leon Mahry
2120 Peckham Street
Houston, TX 77019
713/526-8957

Instructor Courses

| | | |
|-----------------|---------------------------------|-----------------|
| April 13-14 | Qualification Course | Austin, TX |
| May 4-5 | Qualification Course | Houston, TX |
| May 18-19 | Qualification Course | Baton Rouge, LA |
| July 13-14 | Qualification Course | Houston, TX |
| Aug. 3-10 | Qualification & Training Course | Houston, TX |
| Aug. 31—Sept. 8 | Qualification & Training Course | Veracruz, Mex. |

7. South Atlantic Branch



John Larsen
P.O. Box 10356
Riviera Beach, FL 33404
305/844-5291

Instructor Courses

| | | |
|------------|-----------------|-----------------------|
| Sept. 7-14 | Training Course | Palm Beach Shores, FL |
|------------|-----------------|-----------------------|



1974

IQ₆

SIXTH INTERNATIONAL CONFERENCE ON UNDERWATER EDUCATION
OCTOBER 3 to 6, 1974
THE TOWN AND COUNTRY HOTEL
San Diego, California

Mailing Address:
NAUI Headquarters 22809 Barton Road
Colton, California, U.S.A. 92324
Telephone: (714) 783-1862

CALL FOR CONTRIBUTIONS TO IQ6

This is a request for contributors who wish to make presentations at the Conference. Presentations may be in the form of:

- * Lecture presentations
- * Lecture supported by films or other forms of graphics
- * Workshops designed to teach a specialized subject
Workshops may be in classroom, pool, or both.
- * Specialized visual presentations

Subjects may cover, but are not limited to:

* Recreational Diving

Equipment, its use, care, maintenance, quality, advantages and disadvantages.

Safety, new techniques, methods, signals, special applications to improve or encourage safety.

Teaching, methods, skills, subjects, new approaches, techniques---variations, innovative materials, training aids and devices.

Environment, animal or plant biology, conservation, pollution.

Accidents, prevention, recognition, investigation, reporting, statistics.

Communication, hand signals, voice equipment, utilization, emergency.

Hunting & Collecting, game taking and preparation, collections - bottles, shells, artifacts, treasure preservation, protection.

Diving Travel, new unique or exciting diving areas, resorts, special trips, guided tours, methods.

Underwater Photography, equipment, techniques, special applications, presentations, teaching methods.

* Industrial or Military Applications of Diving

Deep saturation systems, vehicles, use of marine mammals, equipment, application to sport diving.

* Human Performance

In cold, in equipment, in dark, psychological and physiological studies.

* Medical Aspects

Cause, effect, new developments, prevention, specialized treatment, management and identification of various diving injuries and illnesses.

* Special Applications

Cave Diving, Ice Diving, Deep and Saturation Diving, Wreck Diving.

* Workshops

Open water teaching methods and techniques.

Underwater Photography.

Teaching methods and visual aids.

Emergency Ascent.

Lifesaving and rescue.

PROGRAMMED AREAS - A tentative program for IQ6 has been developed which features a fine combination of invited lecturers, selected papers, selected workshops, educational exhibits and a film festival. The general concept of the Conference is centered around diving safety and education and an identification of the most recent developments in diving.

Divers, instructors, researchers, scientists, students, engineers, designers and others are encouraged to bring forth their ideas and work in the field in hopes that exposure will motivate new ideas and work to advance diving in each and every area.

Participants who wish to make presentations are encouraged to complete the attached form and submit it to the Program Chairman.

IQ6 PRESENTATION QUESTIONNAIRE

Presentation subject _____

Title _____

Contributor's name _____

Address _____

Phone (Res.) () (Bus.) ()

Abstract: Please state in less than 500 words, (a) What the author has done or states. (b) How it was done, if important. (c) Principal conclusions or results. (d) Significance of conclusions or results. The abstract must be something more than a listing of the topics covered in the presentation.

Please supply the following information with your abstract: Education, background, occupation, position, diving experience, degrees, certifications, etc.

I hereby grant permission to publish my abstract and grant all rights to its publication to NAUI, _____

Signed

Date

What audio visual aids will you require? Please check:

- | | |
|---|---|
| <input type="checkbox"/> 35MM transparency projector | <input type="checkbox"/> 16MM movie projector |
| <input type="checkbox"/> 2½ x 2½ transparency projector | <input type="checkbox"/> 8MM movie projector |
| <input type="checkbox"/> Super 8MM movie projector | <input type="checkbox"/> Overhead projector |
| <input type="checkbox"/> Other _____ | |

Note: Projected aids are required for audiences of 50 or more. Charts, blackboards, etc. will not be adequate for Conference presentations.

Contributors making presentations and remaining for the Conference will be required to register for the Conference.

Send your application to: Glen H. Egstrom, Ph.D., Program Chairman
3440 Centinela Avenue
Los Angeles, California 90066 - U.S.A.

Deadline for submissions is July 1, 1974. Contributors will be notified of acceptance by August 1, 1974.

Abstract and background information may be put on reverse side or attached separately.

DO IT.....WRITE NOW.

NAUI MANAGEMENT

NAUI employees include the full-time staff at NAUI International Headquarters, plus Branch Offices below. These Branch Offices serve the members in their geographic locale and act as local contacts for the diving public. The Branch Manager organizes local activities within the Branch and focuses his efforts on the problems which are geographic in nature.

NAUI is governed by a seven (7) member Board of Directors, which is elected by the membership. Balloting is carried out by mail to annually fill expiring four (4) year terms. The Board of Directors elects the President, Vice-President, and Secretary-Treasurer. The Board is the principle policy making body within the organization. All programs, services and standards must be approved by the Board of Directors.

This information about NAUI is only a brief description of its size, scope and services. It would be impossible to describe the thousands of members and their individual efforts to insure and maintain the safety of the diving public over these many years. NAUI, through its members, ultimately has but one vital interest — the education and training of the general public in the principles and techniques of safely participating in underwater activity.

BRANCHES

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8. Mid Atlantic Branch



D. Lee Kvalnes
P.O. Drawer C
Deepwater, N.J. 08023
609/678-3442

Special Events

| | | |
|------------|------------------------------------|------------------|
| April 27 | Underwater Symposium & Film Review | Philadelphia, PA |
| April 28 | Underwater Photo Seminar | Philadelphia, PA |
| November 9 | Underwater Symposium & Film Review | Philadelphia, PA |

Instructor Courses

| | | |
|------------|-----------------------------------|--|
| April 6-7 | NAUI/YMCA Crossover Certification | Philadelphia, PA |
| May 18-19 | NAUI/YMCA Crossover Certification | Philadelphia, PA |
| June 1-2 | Qualification Courses | Charlotte, NC— Philadelphia, PA |
| June 8-9 | Qualification Courses | Norfolk, VA— Bernardsville, NJ— Pittsburgh, PA |
| June 22-23 | Qualification Courses | Columbus, OH— Rockville, MD |
| Aug. 10-18 | Qualification & Training Course | College Park, MD |

9. North Atlantic Branch



Fred Calhoun
Box 291
Back Bay Annex
Boston, MA 02117
617/283-4933

Special Events

| | | |
|----------|---------------------------------------|------------------|
| April 5 | Underwater Symposium | Cambridge, MA |
| April 6 | Underwater Film Review | Boston, MA |
| April 7 | Diving Equipment Exposition & Seminar | Beverly, MA |
| April 20 | Underwater Film Review | New York, NY |
| May 11 | Diver Rescue Workshop | New Rochelle, NY |
| Sept. 21 | Diver Seminar | Boston, MA |
| Sept. 21 | Underwater Film Review | Boston, MA |

Instructor Courses

| | | |
|-------------|---|---|
| April 13-20 | Certification Course | Portland, ME |
| May 4-5 | Certification Course (1st of 5 weekends) | Rockport, MA |
| June 28-30 | NAUI/YMCA Crossover Certification | Rockport, MA |
| July 20-21 | Qualification Courses | New York, NY; Portland, ME; Worcester, MA; Boston, MA; Hartford, CT; Albany, NY; Manchester, NH; Providence, RI; Syracuse, NY; Rochester, NY |

10. Canada Branch



Stefan Kozak
10 Monet Avenue
Etobicoke, Ontario, Canada
416/621-0783

Special Events

| | | |
|------------|------------------------|------------------|
| April 7 | Diving Medical Seminar | Calgary, Alberta |
| June 21-23 | Dive Master Seminar | Tobermory, Ont. |
| June 28-30 | Dive Master Seminar | Victoria, B.C. |

Instructor Courses

| | | |
|---------------------|---|---|
| April 19-21 | Qualification Courses | Ottawa, Ont.— Montreal, Que. St. Jean, Que. |
| May 18-26 | Certification Course (French language) | |
| May 24-26 | Qualification Courses | Peterborough, Ont.— Victoria, B.C. |
| May 31— June 3 | NAUI/YMCA Crossover Certification (French-English) | St. Jean, Que. |
| June 7-9 | Qualification Course | Sarnia, Ont. |
| Aug. 24— Sept. 1 | Qualification & Training Course | Vancouver, B.C. |
| Nov. 15-17 | Qualification Course | Montreal, Que. |

12. Headquarters

22809 Barton Road
Grand Terrace (Colton), CA 92324
714/783-1862

Special Events

| | | |
|---------------------------------|---|-----------------|
| April 6-13 | Extended Bio-Marine Seminar | San Diego, CA |
| August 5-9 | Basic Bio-Marine Seminar | San Diego, CA |
| August 26-30 | Basic Bio-Marine Seminar | San Diego, CA |
| October 3 | NAUI/NDA General Member- ship Meeting | San Diego, CA |
| October 4-6 | International Conference on Underwater Education | San Diego, CA |
| Oct. 18, 19, 20 (4 weekends) | Industrial Orientation Course | Los Angeles, CA |

NDA GROWS TO MEET YOUR DEMANDS

Contact your local branch about any event listed on these pages. These events and programs are for you to use.

NAUI/NDA ACTIVITIES

CHICAGO - INDUSTRIAL ORIENTATION COURSE TO MOVE TO MIDWEST



Photo by Paul Termonia

Using a mixed gas regulator.

The Midwest will be the third area of the country which will host an Industrial Orientation Course this year. The NAUI/NDA Introduction to Industrial Diving will be held this summer either in the Chicago area or in Midland, according to Course Director Leonard Greenstone.

What is becoming known as 'Lenny Greenstone's Twisting, Road Show' already is scheduled for Industrial Diving courses in the Northwest and Southwest United States. The first is at Redondo, Washington from June 7 through 10, and there will be a four weekend course in the Los Angeles area beginning the weekend of October 18 to 20.

Purpose of the Course, according to Greenstone, is to offer training and experience in the use of industrial and commercial diving equipment. This background can form the basis for continued instruction in Industrial Diving or it can be put to use in a variety of ocean and scuba instruction activities.

More than \$100,000 worth of sophisticated underwater gear will be available for student practice. Participants will work with Hard Hat and Chamber Operation, Underwater Communication Gear, Underwater TV, Cryogenic, Mixed Gas and Saturation Systems. The students will practice everything from Light Salvage and Recovery to Underwater Navigation.

For more information, contact NDA Headquarters, 22809 Barton Road, Grand Terrace, CA 92324.

SAN DIEGO - DIVING VACATION COMBINED WITH EDUCATION OFFERED

Fun, adventure and education. How does that sound for two days of fantastic boat diving, excitement, companionship, and excellent food this summer?

All this is available to NDA members and basic divers in two Advanced Diving Courses given aboard the Bottom Scratcher out of San Diego. The courses run June 10 to 14 and July 8 to 12. NAUI Instructor Glen Kennedy promises that he and his staff will lead his merry crew of vacationers on three to five dives each day.



The "Bottom Scratcher" is a platform for fun and education.

The Vacation/Advanced Diving Program offers diving off San Clemente and Catalina Islands, wreck diving on the "John C. Butler", night diving, and deep diving. A diving physician, Dr. Ken Orrey, will give seminars on marine biology, diving medicine and first aid. Other seminars will include equipment and technique.

Diving accommodations on the boat are excellent, according to Kennedy. There's plenty of hot, fresh water for showers. The galley prepares great food for hungry divers, and everyone will sleep well in the boat's comfortable bunks after the long day's activities.

Kennedy said each program will begin with an orientation ocean beach dive and lecture tour of Scripps Institute on the preceding weekend. You can contact him for more information and to sign up by writing Glen Kennedy at 4353 60th St., San Diego, Cal. 92115. Get ready to grab your tank and have a great diving vacation-education this summer.

LAKE TAHOE, CALIF. - HIGH ALTITUDE DIVING WORKSHOP TO DRAW PARTICIPANTS FROM U.S. AND CANADA

The Director of the first High Altitude Diving Workshop expects to attract researchers in many diving areas at the NAUI/NDA Workshop on August 24 to 25 in Lake Tahoe, Nevada.

The Director, NAUI Instructor Bob Tolar, has heard from researchers in High Altitude Diving, Limnology, and many Diving Instructors. There is room for much input, according to Tolar, because the field of high altitude fresh water diving is new.

The Workshop will involve original research presentations in High Altitude Decompression, High Altitude Diving Techniques, and Physical, Chemical and Biological Limnology.

There will be ample opportunity for dual diving in the clear water of Lake Tahoe, Tolar said. There is also plenty of after-dark entertainment and good restaurants in the area.

Tolar may be reached at 1308 La Loma Drive, Carson City, Nevada. Those who wish to attend or present their own research should contact him there.

REDONDO BEACH, CALIF. UNDERWATER PHOTO COURSES AVAILABLE

Six Underwater Photography Courses will be offered this year by NAUI Instructor Jim Blake at his dive store, 1911 South Catalina Ave., Redondo Beach. Cpl. Blake is an accredited instructor for the Ron Chisick School of Underwater Photography.

The NDA/NAUI Courses meet all requirements for NAUI's Underwater Photography Specialty Course. Three of the Courses are 14 hours in length, and three extend to 20 hours of more advanced underwater photography. Look at these starting dates, and decide which is best for you.

Fourteen Hour Courses: April 24, June 12, Aug. 12.

Thirty Hour Courses: May 9; June 11, Sept. 5.

To register, contact Jim Blake at Seal Sea Store or by calling (213) 373-6355.

DIVING HINTS

LOOSE COMPASS BEZEL

After some use your compass bezel around the outside of the compass dial may become worn and loose. A simple solution is to wrap dental floss between the compass base and the bezel. On the last loop, tuck the end of the line through the loop a couple of times and pull it tight so it will form a smooth knot to hold the end in place after cutting.

GAME BAG IDENTIFICATION

On dive boat trips many divers have the same type game sacks. On the closing clip around the game bag handle paint your initial with water proof paint, such as wet-suit paint.

S. Miles, NAUI Diver

WET SUIT ZIPPERS

Is it hard to grab your wet suit zipper with cold wet hands? Take a short piece of 3/16-inch nylon parachute cord, (available at hardware and surplus stores) put it through the zipper pull tab hole and tie with a half-hitch knot. Use a match to melt the ends of the nylon cord so it will not unravel.

CORRODED SPEARGUN TRIGGERS

Speargun trigger parts often become corroded and stick as a result of use in salt water and/or storage between dives (even if washed out). A simple long-lasting solution is to fill the trigger parts and housing with water pump grease or a good wheel bearing grease, once a year. It will keep parts free, will not wash out easily, and will last for approximately one year of hard diving.

*Kenneth Yeakam, NAUI Instructor 2102
Flower Garden Ocean Research Center
Galveston, Texas*

BEACH DIVE FIRE WOOD

Ever run short of fire wood at a beach dive? If you want to cut your own firewood, you can do so in the National Forests by getting a permit from a ranger's station or the U.S. Agriculture Dept., listed under U.S. Government in the white pages of your telephone book. The permit allows ONLY the cutting of dead timber.

*Richard Spencer, NAUI
Instructor 1025*



Buckling up for safety

Weight Belt Dropping

Does your weight belt have a clear drop path? If you're like most, you'll stand up on dry land and flip the buckle to see if the weight belt will fall off, and it more than likely will. Next time you try it, however, be in open water with full gear, and then see if your weight belt will fall off when you flip the buckle. If it doesn't, you better find out why!

WATCH HOLDER

Normally the watch is worn near the wrist, but often slips around the wrist. Most rubber gloves extend four or five inches up beyond the wrist. To prevent slippage, cut a round hole in the glove so the watch can be worn under the glove and held in place. This allows the watch to be easily seen and also prevents it from being lost if the strap breaks.

Bob White, NAUI Instructor 1926

FACE MASK FOGGING

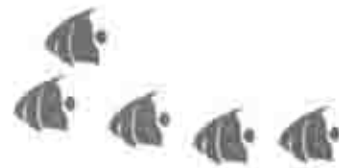
Use a couple drops of liquid detergent dish soap on the inside of your face mask to remove any coating on a new face mask and to avoid fogging during a dive. Rub the liquid soap around and rinse it out before the dive.

A freshly cut potato rubbed on the inside of a face mask and rinsed also helps avoid fogging.

Dive stores have special defogging liquids you can purchase which also work well to prevent fogging.

During an ideal dive, when everything is under control but your face mask fogs up, is an excellent time to take off your face mask underwater to rinse it. This also is a very good periodic practice in mask clearing, because you never know when a buddy's fin or other object can accidentally knock your mask off. Be prepared and be safe.

—Ed Cargile, NDA Program Manager



COOKING YOUR CATCH

Poaching is an easy and good way of cooking for divers. Too many fried foods make divers fat! Bring the liquid and seasonings to a boil, place whatever you intend to cook in the "pot" and lower the heat to a simmer.

If you are cooking fish, add vinegar to the poaching liquid to keep the fish firm. Try it, you'll like it.

*Richard Spencer, NAUI
Instructor 1025*

SNORKEL HOLDER — ANOTHER IDEA

If all else fails, a heavy duty rubber band will work very well as a snorkel keeper until you can get back and buy another.

BENEATH THE SURFACE

BUOYANCY COMPENSATOR INFLATOR

How about using the exhausted air from your regulator to inflate your buoyancy compensator or vest? To accomplish this, make a sleeve from wet suit material. Stretch one end over one port of the regulator exhaust port and the other end over the compensator inflator hose. The sleeve end on the regulator should be secured. The end on the inflator hose should be just loose enough so it can be separated if necessary. One occasion would be when it is necessary to expel all the air from the vest.

Normal breathing exhausts the exhaled air through the open regulator exhaust port. To get air into the vest, the oral inflator is opened and the open port of the regulator exhaust is blocked off with your hand. The exhaust air can only go through the sleeve into the vest.

Packing the vest is also done the normal way. Disengaging the oral inflator will allow air to escape through the open regulator exhaust port. There is some added exhalation resistance.

*Nolan DeMarco, NAUI Instructor 2028
No. Providence, RI*

UNDERWATER LIGHT

Need an underwater light in a hurry? An ordinary flash light will work. Use it just as it is with no special seals and no special batteries. It will fill with water and afterwards you probably will have to throw it away, but it will work. It will last longer in fresh water than in salt water.

RETURNING SHELL BEAUTY

Soak shells or beach stones in mineral oil to bring out the natural beauty that might have been covered up by exposure to the weather and ocean. It doesn't smell like soaking them in water.

*Richard Spencer, NAUI
Instructor 1025*

PACKING GAUGES AND REGULATORS

A simple and inexpensive way to protect your depth gauge, compass, decompression meter and other diving instruments is to pack them in a sponge lined shaving bag. Household and packing sponge both work well. Use another shaving bag lined with sponge to protect your regulator and submersible tank pressure gauge.

*Ed Gargile, NDA
Program Manager*

ATTENTION — OVERSEAS READERS

In an effort to solve some of the problems our members in areas not served by the U.S. Postal Service are having in receiving Diving World and NDA News, NDA Headquarters is attaching Postal Service form No. 2976 to the envelopes which carry these two items. The form is a green sticker which you will find on the front of the envelope, stating that the contents is printed matter. We believe this will help and would appreciate any comments you might have as to if this system is speeding your service.

Please let us hear from you. We are trying to improve the foreign mail situation. Only you can tell us if it helps.

BREATHING

Hyperventilation is NOT the secret to extend your breath holding time. Relaxation is. Next time out tell yourself to relax, relax, relax. Tell all your muscles to relax. Practice it by lying down and think — relax, relax, relax. Purposefully relax all your muscles, then practice holding your breath while relaxing. If you relax while using scuba, you'll use less air. You'll feel better and you'll enjoy the dive more.

PACKING DIVING EQUIPMENT

An easy way to check all your diving equipment for a dive, to speed suiting up and to ensure all your diving equipment gets back into your diving bag in the order your diving equipment is packed into the bag. Put everything into your bag so that when you suit up the first thing you put on is on top, and so on down to your fins on the bottom. Having your fins on the bottom helps protect the more delicate items in the middle, such as gauges, regulator and face mask. Your wet suit should be on top.

*Ed Gargile, NDA
Program Manager*

DIVING ENERGY

When you dive, eat very light foods to prevent gas buildup.

Because you breathe dry air when diving, you get thirsty. Drink lots of liquids. Use a liquid from cooked or canned vegetables for soup stock or added to tomato juice for a vitamin-packed drink. Liquid from canned fruit should be saved in a thermos or can — not glass, which can cut feet if dropped. Use the liquid in a gelatin dessert or as a punch drink.

*Richard Spencer, NAUI
Instructor 1025*

GLOVE PALMS

Reinforce the palms of your diving gloves with the rubber material that ping pong paddles are covered with. It works super well, increases the grip and will provide better protection.

DIVING EQUIPMENT CARE

After you wash off your diving gear — sponge it off. This removes excess water, allowing the equipment to dry faster and reducing the chance of large water spots.

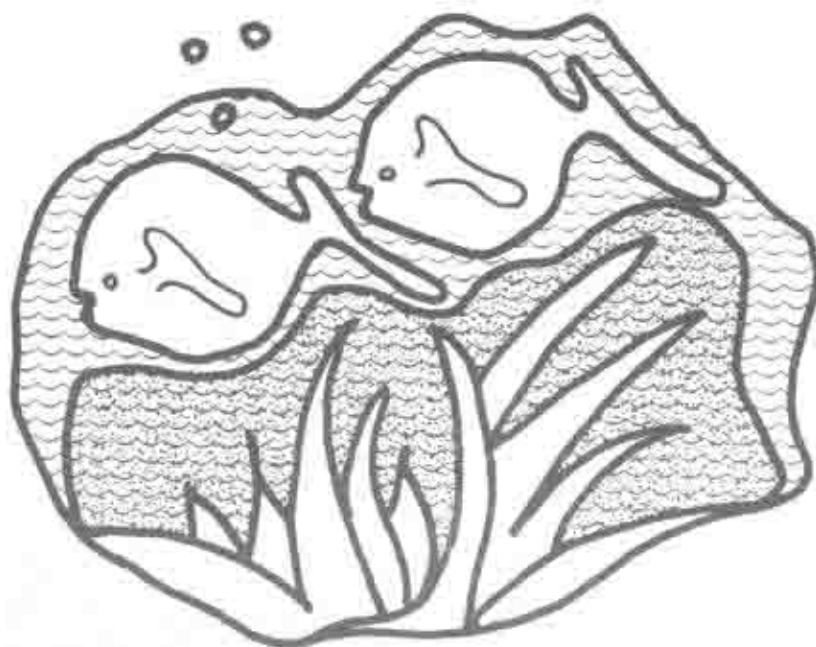
If your diving jacket or sweater has grease spots from your last boat dive, remove the spots by using a solution of 1 part salt to 4 parts alcohol.

*Richard Spencer, NAUI
Instructor 1025*

- BENEATH THE SURFACE -

TEXAS ARTIFICIAL REEFS

At a recent symposium sponsored by NAUI and the Houston Underwater Club, Senator A. R. Schwartz reported that the federal government has made 12 surplus Liberty ships available to coastal states to use for artificial reefs. The Texas legislator stated the Liberty ships are now docked in Beaumont, Texas. The ships must be settled in 80 feet of water, as imposed by the Corps of Engineers. Research projects are now underway to determine the ecological effect the scuttled ships might have on the environment, the best location and other areas of concern. This is a tremendous opportunity for both sport fishermen and divers.



FLORIDA SHORELINE AND BEACH STATISTICS

Of Florida's total shoreline:

- 77% is in private ownership
- 18% is federally owned
- 5% is owned by state, counties,

and municipalities.

Less than 5% of Florida's total shoreline is presently available for public recreation. Approximately 2.3% of the total shoreline consists of beaches that are publicly owned and developed for public recreation purposes.

Beaches comprise approximately 13% of Florida's total shoreline:

- 35% of Florida's beaches are presently developed
- 35% of Florida's beaches are undeveloped and privately owned
- 30% of Florida's beaches are undeveloped and publicly owned - this includes federally owned land where beaches are not available for public use.

*From Florida Department
of Natural Resources*

KAMABOKO - JAPAN'S SOLUTION

Expanded sources of fish are needed because of an increasing population and per capita consumption in the United States. A more efficient use of harvested marine resources and the exploitation of abundant but not presently fished species will go far to meet the increased food demand.

The Japanese have developed tasty and highly nutritious products from a variety of fish, many found in abundance. Kamaboko, a popular traditional fishcake developed prior to the 15th century in Japan, can be modified to meet American consumer tastes that now place a demand on many overfished species. The use of under-utilized species in Kamaboko-type products could provide American fishermen an additional economic incentive for harvesting them as well as now unused fish species.

ESTIMATING WAVE SPEED

To gauge a wave's speed, in miles per hour, count the number of seconds between two arriving crests, then multiply by 3.5. For example, two waves arriving ten seconds apart are traveling 35 m.p.h.

GIANT TURTLES GROWING ON JELLYFISH

The leatherback turtle is the largest of marine sea turtles, reaching weights close to 2,000 pounds. Research at the Miami Seaquarium, in cooperation with the Florida Bureau of Marine Science and Technology Field Laboratory at Stuart has shown that the main diet of the leatherback turtle is the jellyfish. Three turtles now under study at the Seaquarium gain up to one pound per week on jellyfish. Prior to this, only limited success has ever been achieved in keeping these large turtles alive in captivity.

- DIVING HINT OF THE MONTH -

WINE BOTTLE CORKS

Use old wine bottle corks to cover your spear heads. Wine bottle corks make good safety floats if your keys are tied to them.

*Richard Spencer, NAUI
Instructor 1025*

Editor's Note: We hope you divers don't start corking too many spear heads!

NIGHT DIVING TECHNIQUES

by Dennis Graver

1. Only dive those areas with which you are very familiar, and then visit the area during the day before the dive.

2. Check weather, surf, swell, tide and moon conditions.

3. It is best to dive at night from a boat, but be sure the boat is rigged for legal night operation. If a boat isn't available, you can make a beach dive provided the surf is small, the entry isn't rocky, and heavy kelp can be avoided.

4. Night diving in turbid water is very dangerous. Terminate the dive if conditions aren't right.

5. Use a buddy line — approximately 6-8 feet of strong line wrapped around the palm — not tied. This method also works well during daylight diving in dirty water. Signals can be sent by tugging on the line — agree on these in advance.

6. Buddy diving is easier at night since you can see your buddy's light without turning your head.

7. A compass is not an optional piece of equipment, but required because of fog, etc. A tank pressure gauge is also recommended to aid in planning the dive so that the divers can return to their starting point on the bottom.

8. When beach diving, leave someone ashore with a lantern to mark the starting point.



Pre-Dive Instructions

Photo by Dennis Graver

9. If your light should fail in mid-water, you can find up by removing your weight belt and holding it in your hand.

10. A police whistle is an effective device for surface signalling.

11. Be conscious of surge and currents to avoid being carried into unseen rocks.

12. When going out through surf, lie down and start swimming in knee-deep water to avoid falling and losing equip-

ment. When returning to shore, swim as far onto the beach as possible and keep all gear in place until clear of the water. If you stay flat, you won't get knocked flat.

13. Don't use new or modified gear on a night dive. Stick with familiar equipment, since you'll already have many changes to cope with.

14. A thermos of hot soup is really warming after a chilling dive during the winter months of lobster season.

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ADDRESS CORRECTION REQUESTED

A SCUBA RESCUE WORKSHOP BACK BEACH, ROCKPORT, MA OCT. 27, 1973 — RESULTS OF SCUBA RESCUE QUESTIONNAIRE

by David Michael NAUI 1921

24 mailed to participants 16 returns — 66%
of workshop 10/27/73

26 mailed to random N.A. Branch 02 returns — 8%
Instructors average of response 36% — 18 Total

1. You are diving with an inexperienced buddy at 35'. You surface to find him struggling and thrashing at the surface to stay afloat. Your surface float is 30' away! List in order what you would do.

Answers:

5 responses were to duck u/w, ditch weight-belt to victim, and mechanically inflate victims vest; 4 responded — talk to the victim, and (somehow) mechanically inflate victims lifevest; 4 retrieved the float first; 3 would use a rear approach; 1 would submerge to get away from victim; 1 would inflate his own vest to give victim support.

2. A panicked buddy "climbs" at you at the surface. What would you do? Why?

Answers:

12 answered that they'd duck u/w, inflate the victims vest and/or drop or remove victims weightbelt; 3 would snatch victim's mask off, then drop u/w and give buoyancy; 1 would first retreat, then approach from the rear; 1 would inflate vest of victim



Dave Michael

(how?); 1 would inflate his own vest to give victim buoyancy, as it would serve as a "safety barrier" between them. Why would they react the way they did? 11 answered to give the victim buoyancy, or that the victim wouldn't follow them u/w. 7 gave no response as to why.

3. Your buddy is unconscious at the surface. What type of carry would you use to tow the victim 50 yards to safety? Why? How long would it take?

Answers:

6 used the tank valve carry; 4 used the cross tank carry; 3 used the vest curl carry; 1 used the armpit carry; 1 carried via the tank harness; 1 used the surface float for carry; 1 dropped the victim's tank and used the cross chest carry; 1 dropped V's and R's tanks and weightbelts for fast carry only one mentioned M to M resusc. before a carry. Why? "most control", "easiest", "fastest". How long would it take? 3 said less than 2 minutes; 3 said 2 minutes; 3 said 3 to 5 minutes; 1 said 8 minutes; 2 said 10 minutes; 1 said 20 minutes; 4 gave question marks (?).

4. Do you, an accomplished diver, need support while performing M to M resuscitation in deep water? 14 yes, 4 nays. Could you give 4 or 5 breaths of M to M resuscitation without any support? 11 yeses, 7 nays. Are you sure? 11 yes, 3 no, 4 maybe.

5. My preference of support while performing M to M resuscitation in deep water would be ... 10 answered mechanical vest inflation; 5 would use the surface float (one R ditched V's tank); 1 ditched the weight belt (whose) and used float; 1 orally inflated his Fenzy; 1 used the unsuit.

6. Do you personally demonstrate M to M resuscitation in you basic course? 14 yeses, 4 nays. If not, how do you cover this area of the curriculum? 1 uses slides and explanations, one uses film (Pulse of Life) 2 don't.

7. Do your students in a basic course ever attempt M to M resuscitation? 10 answered yes, 8 answered no. On the deck? 8 yes. Shallow water? 4 yes. In deep water (Pool)? 7 yes.

8. How many divers do you certify per year?

Answers:

2 said it varies, 10, 15, 20, 25, 30; 2 at 35; 2 at 40, 50, 60; 2 at 80; 3 at 100. The samples average out to 51 per year/instructor answering. How many of those divers are capable of performing M to M.

Answers:

5 answered none; 5 answered a few; 3 said some try, 10%; 2 said 50%; 3 said all the students could!

9. You have just towed you unconscious buddy to standing depth water. The beach has little surf, but is rocky. Describe how you would get the victim onto the beach, TIME IS CRITICAL!

CONT. ON NEXT PAGE

Results of Rescue Questionnaire ... (Cont.)

Answers:

6 replied they would do M to M resuscitation first; 13 would ditch the victim's tank; 11 rescuers would ditch their tanks. (some also took off their fins); 14 would pull victim backwards onto the beach (drag); 3 would use the firemans or saddle-back carry; 1 floated victim in as far as possible, shouting for help.

10. What method would you ascend an u/c diver to the surface from 50'? (Victim's mouth-piece is still in place.)

Answers:

12 would ditch one or more weightbelts; 2 would ditch victim's tanks below; 5 would inflate one or more vests below; 7 favored the tank valve; 3 preferred a modified "bearhug"; 7 would hold mouthpiece in place and use chinpull; 1 favored head carry.

11. Would you use a different technique if the victim's mouthpiece were out, or the facemask was flooded? 13 said no, and 5 said yes. 2 would remove V's facemask u/w; 2 would ascend with the victim feet first (upside down); 3 would have inflated the V's vest; and 4 saw it necessary to bring victim up as fast as possible.

AFTERTHOUGHTS OF RESPONSES TO QUESTIONNAIRE

1. There was general agreement that giving support to the victim is crucial, but not at the rescuer's expense of jeopardizing himself. If the float could be pulled in fast enough and extended to the victim — great. Otherwise, duck underwater and mechanically inflate victim's vest and/or remove or ditch his weightbelt.

2. There was 84% agreement here on ducking, inflating and/or ditching.

3. The workshop on October 27 reviewed many carries that are useful for scuba rescue. One team modified the cross tank carry, so that both rescuer and victim were face up. The rescuer found he had good control, could view the victim, (Almost cheek to cheek) was in the horizontal plane with freedom to kick, and could breathe easily. Now ... if he could just see where he's going!

The answers to carrying an unconscious victim 50 yards needs review. Let's examine the

problem. Mouth to mouth resuscitation should be in order, at least at the beginning. The armpit type "push" carry adapts quickly for switching to M to M resuscitation. How about the float being used both for support in M to M, as well as a carry. Ditching *one* or *both* tanks would be inevitable, as you'll want to get the Victim out of the water quickly. Remember that we swim much faster without tanks. (If you have some time to experiment in a pool, be sure to include time as a factor during the rescue, particularly if you're not doing M to M.) After a hard, fast 50 yard carry, you won't be in any shape to give resuscitation. In fact *YOU* may need it.

One last comment on No. 3 question. Lots of ifs — *If you don't* do mouth to mouth resuscitation before you start off on a 50 yard rescue of an u/c victim, and *if it takes you 3 minutes* or longer in an emergency situation, *there's no more ifs left*. Add one more scuba fatality. Think about it! An unconscious victim without air for more than 3 minutes.

THAT'S WHY WE SHOULD TEACH DEEP WATER M TO M RESUSCITATION!

Questions 4 thru 9 directly or indirectly relate to M to M resuscitation. Read thru the responses and see where you fit in. Looks like we better get some gum to sweeten our breath. Add a couple of hours onto the course if necessary but let's not kid ourselves. If we as instructors don't do it, and our students aren't given the proper guidance, it's a good bet our scuba fatality rate will increase, just as fast as the sport grows.

Questions 10 and 11: Who knows? we all have different ideas. This certainly should be a topic of more discussion at a future workshop. What we really need to do is experiment alot in a pool. Have you ever brought a victim up feet first? What happens to a victim on the bottom when his weights are dropped, and his vest inflated?

Got a couple of nice notes as feedback on the workshop. To sum them up — we tried to do too much in too little time. Let's do it again, SOON! Each team should cover different topics, etc. Well, Tom, Sue, Charlie, Gus, Kris and Jake are meeting at Sam's house on the 5th — — —

—NN—

DEADLINE FOR PAPERS

July 1, 1974

GET BUSY ... WRITE NOW.

Contact: Glen Egstrom



IN-HOUSE NEWS

STUDENT INSTRUCTOR RATIO RETURNS TO TEN TO ONE

Note: See the discussion on this topic in the Feb. NAUI News, pages 11-12.

Due to misunderstandings and requests from the field to rescind the change to the General Standards, the following action has been completed by the President:

The following change in the NAUI General Course Standards on Student-Instructor ratios has been confirmed by the Board of Directors:

"The maximum allowed student to instructor ratio is ten to one during water work. A NAUI Instructor is to be present and in control of the class at all times.

It is recommended that assistant instructors be utilized to increase the safety and control factor in the exercises. It is required that these assistant instructors be qualified as Assistant Instructors or Skin Diving Leaders according to the appropriate NAUI program. Other advanced or experienced divers who are utilized as safety divers must be trained and clearly assigned to responsibilities for which they have been trained."

The matter will be pursued further at the next Board of Directors meeting. This topic is invited for further discussion in NAUI News.

SEAWEAR AND NAUI DISSOLVE AGREEMENT

Seawear and NAUI are in the process of terminating their agreement in effect for the past 3 years.

Seawear will be liquidating the stocks of official NAUI apparel still on hand. After these stocks are consumed, Seawear will discontinue acting as the creator and marketing agent of NAUI attire.

Seawear will provide a special reduced price list of remaining stocks to NAUI members who inquire. All shipments of remaining stocks will be shipped via C.O.D. within the U.S. All other orders must be prepaid in U.S. funds.

Those having orders pending should contact: Seawear, c/o 4933 Marlboro Dr., San Diego, CA 92105

NAUI INSTRUCTOR DIRECTS CLUB ACTIVITIES

Student members of the Slippery Rock State College Scuba Club have initiated a service to the community that will aid the ecology movement as well as serve as practice for the student divers.

SRSC students belonging to the diving club cleaned up a nearby strip mine lake, Cupec Quarry, located near Slippery Rock, Pennsylvania.

The students, under the direction of Dr. Joseph Russell, NAUI 3441, a member of the SRSC Physical Education Department staff, dived into the lake to retrieve cans, bottles, parts of automobiles, and other debris from bottom of the lake using the same search and recovery methods used in emergencies.

According to Dr. Russell, this helped clear pollution from a popular swimming area so swimmers can better enjoy the area next summer.

Approximately half of the students actually dived with scuba gear, while the others worked on the shore of the pond sorting the material that was brought up by the divers. All material will be recycled through local recycling agencies.

The SRSC Scuba Club welcomes any invitations by communities or organizations in Western Pennsylvania who wish to have a body of water cleaned of debris. Dr. Russell can be contacted at the Physical Education Department, Slippery Rock State College, Slippery Rock, Pa. 16057 (phone 412/794-7339).

Future plans for the club include a dive trip to the Bahamas. Fourteen members of the club, accompanied by Dr. Russell, will travel around various islands in the Bahamas on an 84-foot schooner.



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- IN-HOUSE NEWS -

SPECIAL CALENDAR FOR INSTRUCTORS

- Mar. 30 Orange County Instructor's Dialogue, Santa Ana College, Santa Ana, CA. No Charge. Contact: John Reseck, Santa Ana College, 1530 W. 17th St., Santa Ana, CA 92706.
- April 6-7 NAUI Crossover Certification Course for YMCA Instructors, Philadelphia, PA. Contact: NAUI Mid-Atlantic Branch, P.O. Drawer C, Deepwater, NJ 08023.
- April 27 Diving Accident Prevention Seminar and Mid-Pacific Branch Meeting, San Jose, CA YMCA. 8:00 a.m. Contact: Mid-Pacific Branch, 816 Columbia St., Santa Cruz, CA 95060.
- May 11 Diver Rescue Workshop, New Rochelle, NY. Contact: Dave Michael, 27 Concord Road, Acton, MA 01720.
- May 18-19 NAUI Crossover Certification Course for YMCA Instructors, Philadelphia, PA. Contact: NAUI Mid-Atlantic Branch, P.O. Drawer C, Deepwater, NJ 08023.
- May 31- June 3 NAUI Crossover certification Course for YMCA Instructors, St. Jean, Quebec, Canada (French-English). Contact: NAUI Canada, 10 Monet Ave., Etobicoke, Ontario, Canada.
- June 1-2 NAUI Instructors Lost Weekend at Catalina. Cost: \$35 includes transportation, food, lodging, air and social at Toyon Bay, Catalina. Limit of 35 participants. Contact: Jon Hardy, Bus. Mgr./Diving Off., Catalina Island School, P.O. Box 796, Avalon, CA 90704.
- June 8 Orange County Instructor's Dialogue, Santa Ana College, Santa Ana, Ca. No Charge. Contact: John Reseck, Santa Ana College, 1530 W. 17th St., Santa Ana, CA 92706.
- June 28- NAUI Crossover Certification Course for YMCA Instructors, New England. Contact: NAUI North Atlantic Branch, Box 291, Back Bay Annex, Boston, MA 02117.
- July 19-21 NAUI Crossover Certification Course for YMCA Instructors, Chicago, IL. Contact: Mid-America Branch, Box 14156, University Station, Minneapolis, MN 55414.
- July 20-21 NAUI Instructor Qualification Courses:
- | | |
|-----------------|------------------|
| * New York, NY | * Providence, RI |
| * Syracuse, NY | * Manchester, NH |
| * Rochester, NY | * Hartford, CT |
| * Albany, NY | * Boston, MA |
| * Portland, ME | * Worcester, MA |
- Contact: NAUI North Atlantic Branch, Box 291, Back Bay Annex, Boston, MA 02117.

-WHAT'S YOUR SCHEDULE?-**-NN-****STUDENT REGISTRATION
FOR SPECIALTY COURSES**

Many Instructors are registering students at Headquarters for various Specialty certifications,

including Ice Diving, Search and Recovery Diving, Diving Leadership, etc. Here is some information Instructors need to know before registering:

1. The registration fee is \$2.50 per student.
2. The credentials (card and certificate) are not yet available. These materials will be forwarded as soon as available. The certification will be retroactive.

Until the new credentials — depicting the Specialty activity — are on hand, please issue a Letter of Participation to students.

Remember, approval must be obtained from your Branch Manager *before* a particular Specialty Course may be taught.

-NN-**NORTH PACIFIC INSTRUCTOR RAP**

NAUI, PADI, and NASDS Instructors gathered in Seattle on October 24 to broaden their understanding of professional scuba instruction. The four hour rap was attended by 28 instructors from Washington and Oregon. Discussions were informal, covering a wide range of subjects from why is mail slow to the pros and cons of mouth to snorkle rescue techniques. The Pierce Productions rescue breathing training film was shown and several instructors were able to offer additional views and techniques.

The instructors explored such things as: Promotion of continuing education courses; Merits of diving tour business originating from North Pacific areas; Likelihood of enforced Washington State uniform air quality standards; Role of NDA in the field and its relationship to instructors; North Pacific Ethics committee composition and duties; A special student questionnaire for advanced classes.

As usual for these sessions attendance was disappointing (in numbers only). However, for the first time numerous instructors acknowledged the special announcement sent to them and let us know they were interested but couldn't make it. All NAUI Instructors are reminded that teaching membership requires them to participate in sessions such as this.

Your next big chance to rap with fellow professional instructors will be at the MAN IN THE SEA SYMPOSIUM scheduled for Seattle, March 23-24, 1974. Put that date on the calendar. We are confident the program will sell out in advance as it has done for 3 years.

-NN-

COMMENT AND DISCUSSION

Articles and letters received on the subject matter of the articles and editorials appearing in NAUI News will be presented here with editorial comment. All views expressed by authors in this section are those of the author and do not necessarily reflect the policies of NAUI.

NEW IDEAS ON TEACHING

Recently, Arthur Ullrich, NAUI General Manager, sent a letter which was also printed in the August/September NAUI News on page 19. This letter had four ideas on diving instruction for consideration, trial and review by instructors. A great deal of interest and a valuable exchange has been generated by these ideas. Here are additional ideas and the comments made by NAUI Instructors. Other ideas and comments can be reviewed in the Oct/Nov '73 NAUI NEWS on page 17.

Dear Mr. Ullrich:

In reference to your letter of some time ago, in which you suggested that we "consider some tests to determine the feasibility of certain teaching approaches," I have found all of these suggestions to be extremely helpful to my courses of instruction with New England Divers, Seattle.

By switching mask clearing to a scuba-oriented exercise, I have been able to instruct a class of ten students in the mask-clearing procedure in as few as five minutes. Using the past method of mask-clearing during the skin diving phase of my class instruction, it took me as much as 45 minutes to work out the bugs.

Teaching only the displacement method of snorkel clearing also proved to be effective, and I did find that the blast method followed along naturally, being self-taught by the students as the need arose. In addition, by permitting my students to use mask, fins and snorkel without any previous instruction as to how they are put on, how they fit, etc., I do sense the streamlining of this area of instruction as a consequence. I am quite certain that instructional suggestions are greeted with a higher degree of receptivity using this method.

My only departure from your suggested course of action concerns the use of the personal flotation device and gloves in the pool. I am still playing around with various timings in the introduction of the personal flotation device, but it is likely that I shall settle upon your suggested course of action. I have not introduced the use of gloves in the pool, however, for I have never found the

finger dexterity problem to be so severe as to be incapable of being dealt with in the open-water facets of my course.

Thanks so much for your really helpful suggestions. This is the type of information that I like to see coming from Headquarters! With continued cooperation in these types of areas, I'm confident that we can do our part in efficiently training safe, happy divers.

Kenneth W. Talbott
NAUI 2487

Dear Mr. Ullrich:

In a previous letter you had a fair request that you would like us to give a try. In a previous class of seven:

Request No. 1 — Mask clearing is easier done with scuba, but still feel it should be taught with basic equipment. It builds the student's ego, I found in many cases, and it gives them the satisfaction of achievement.

Request No. 2 — I always teach displacement snorkel clearing first. I believe as you do, the blast method is usually self taught. Displacement in clearing big barrels is so much easier and also teaches students heads up and hands up.

Request No. 3 — We also use this method. It not only saves time but it gives the instructor a chance to see little errors and makes teaching much easier to each individual.

Request No. 4 — I don't agree on all of Request No. 4. We use vests during skin diving and diving Life Saving. We do not start the course with the vest before basics. Gloves... well, if gloves are easy enough to come by, great, but we find gloves do get quite expensive for pool work, and they take enough beating on rental use, let alone teaching. I feel students have ample enough time in open water training to use gloves.

Faye Kurisko
NAUI 2832

Dear Art:

In the August-September NAUI News you asked for responses on several "New Ideas" toward teaching.

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New Ideas on Teaching (Cont.)

I would like to respond to No. 3, letting students try mask, fin, and snorkel before instruction. There is some real advantages to this approach because it first is not dangerous to the student and it begins to move the direction of instruction from teacher centered (command style of teaching) to student centered (guided discovery style of teaching), as embraced by most educators. The student in this setting will develop specific problems that he will have a desire to "learn," rather than being taught about these problems.

I think you might find a paperback book; "Teaching: From Command to Discovery," by Muska Mosston, (Wadsworth Publishing Company, Inc., Belmont, California) very interesting.

One of the major changes that must take place in our teaching is to direct it toward a learning environment (student centered) and away from the teacher-ego status it presently has in many situations around the country.

Bob Leahy,
NAUI 2568

—NN—

COMMENTS ON CPR

by Lee Somers, Ph.D.
NAUI A-13

I offer the following comments for NAUI's consideration:

1. Each state in the union appears to have a different policy regarding CPR. Therefore, any NAUI statement must include a clause to the effect "in compliance with state and local laws or standards, generally recommended by the state or local heart association". It is very important from a legal standpoint that the "local standard" be of prime consideration.

2. NAUI can lobby on a state-to-state basis for a "proper" action that will benefit NAUI instructors as well as work closely with National ARC and American Heart Association representatives. Hopefully this will lead to a single National standard.

3. In our local ARC the CPR is taught to advanced first aid classes under direction of Michigan Heart Association (MHA) personnel.

4. The MHA State Committee on CPR is in the process of preparing a recommendation that CPR be taught to all 8th graders and reviewed once per year through high school.

5. The MHA gives a basic certificate in CPR. The course is 3 to 4 hours in length and the individual remains current by demonstrating his CPR ability to an instructor 3 times in the first year and once per year thereafter up to 5 years.

6. The MHA certifies CPR instructors based on an 8-hour course and being observed by an Instructor Trainer during the instructors first class.

7. Selected people with proper background and/or need (not necessarily medical people) are qualified as CPR Instructor Trainers, during a two-day course given by the MHA at selected locations.

8. CPR training is considered "necessary" for all citizens in Michigan, not just lifeguards, first aiders, etc.

9. A movie is an inadequate substitute for actual supervised practice, however is beneficial in making the student "aware" of the CPR program in the event the scuba instructor is not qualified to instruct CPR.

10. We should encourage the use of locally certified CPR instructors as resource people in our basic classes.

11. In the states where CPR instructor ratings are available, we should encourage all of our instructors to immediately seek this certification. They should hold the basic certification even if they do not hold the instructor rating. However, they cannot teach CPR with a basic rating.

I feel that we have to develop a statement at the next BOD meeting and circulate it to our membership. In preparing such a statement we should keep in mind number 1, 10, and 11 above.

—NN—

IS 80 TOO FAST?

by Robert Leahy
NAUI 2568

I read the article "Emergency Resuscitation for the Scuba Diver" in the December, 1973, NAUI News and felt that 80 compressions per minute was a questionable figure. Diving rescue and lifesaving is a field that is in its embryonic stage; a lot of interest, but little significant research.

While in agreement with much of Mr. Springers' assessments of cardio-pulmonary resuscitation, I feel that the heart compression rate is excessive. Although this high rate may be useful to the victim initially, my concern is with the rescuer

CONT. ON NEXT PAGE

Is 80 Too Fast? (Cont.)

maintaining this rate effectively. After questioning the Youngstown, Ohio Heart Association with respect to this concern, the only answer for the prescribed rate was simply, as the rescuer got tired he would drop to a 60 compression per minute rate. However, the real problem is that the fatigued rescuer may not only fall to 60 compression per minute, but far below that with the compression becoming less effective.

One might suggest beginning at 60 compression per minute in order to maintain that rate *effectively* for a longer time period.

My second concern is the cardiac muscles' ability to be manipulated at 80/minute and still take in reasonable volumes of blood. Because of the cardiac arrest, the only force moving blood would be gravity and partial vacuums in each of the chambers. As a result the time to move the blood into the chambers may conflict with such a high rate for cardiac resuscitation.

Divers with medical and/or research background are encouraged to respond to this article in order to develop a more factual approach.

-NN-

COMMENTS ON USE OF WHISTLES BY DIVERS

Dear Mr. Egstrom:

On December 6, 1973, the National Surf Life Saving Association of America at its National Board Meeting in San Diego so moved and passed that a safety whistle would become standard equipment for Scuba divers.

This action was a proposal by Mr. Ralph Singer, Chairman of the Safety Committee, Los Angeles County Underwater Association.

This whistle will be worn on the diving vest and be used only as a distress signal of one sharp blast.

Any assistance you can offer in getting this information to your members and dive shops would be greatly appreciated by our National Board. I would like to thank you for the excellent cooperation we have received from you in past educational matters and look forward to the future for safer diving.

B. G. Belshe
Secretary, Executive Board
National Surf Life Saving Association of America

Dear Mr. Belshe:

I received your letter regarding the passage of a requirement for scuba divers to wear a whistle . . . "Moved and passed that a safety whistle would become standard equipment for scuba divers."

I note with interest that you have one national chapter outside California and that is located at the artificial surf machine in Arizona. This leads me to my point:

I will support your proposal and will recommend that NAUI publicize it since I feel it is very important here on the west coast and probably in other open water areas.

I would, however, appreciate some additional information:

1. Do you feel the whistle is necessary for cave diving, quarry diving, wreck diving or in other areas where the whistle cord might become entangled? In circumstances where divers are working in a small column of water the whistle may not be appropriate, in my opinion.

2. What type of implementation program do you propose that will lead to standardization of the use of the whistle? For the past couple of years many groups have promoted such things as flares, a couple of kinds of whistles, smoke signals, various arm and hand signals, etc. I am pleased that your group is trying to standardize the procedure and therefore I would ask that you also deal with recommendations on the following:

- a. What kind of whistle?
- b. Where should it be worn?
- c. Should the whistle blast be accompanied by a signal? If so, what do you recommend? (Currently there are two variations: arm held straight up or arm waving.)
- d. Can the whistle be placed so that entanglement is minimized?
- e. Should the whistle be used before or after the diver takes measures to become positively buoyant? I personally believe that any safety signal technique should follow ditching weights and vest inflation. If you give people a NSLSAA recommendation it really should include information about what priority steps the diver should take and what kind of aid he can expect.

I would really like to see a closer working relationship between NAUI and NSLSAA and would see this project as a mutually beneficial one. Certainly this should be true of the other

CONT ON NEXT PAGE

Comments On Whistles . . . (Cont.)

instructor groups as well. I would be more than happy to cooperate in whatever way practical including the promotion of the safety whistle concept. I do, however, feel that each proposal should be spelled out clearly before mandates are issued. Perhaps we need a joint meeting of representatives of the various interested groups.

Keep up the good work!

Glen H. Egstrom, Ph. D.
President

NINETY SECONDS DEEP SCUBA RESCUE

by G. D. Harpur M.D.

Without a doubt one of the finest articles we've seen in "NAUI NEWS". With a welcomed, calm reservedness, Dr. Harpur has brushed aside several mindless schemes and presented 'Deep Scuba Rescue' in a straight forward practical way.

—Fred Calhoun

— END OF COMMENT AND DISCUSSION —
NN

LETTERS

Gentlemen:

Many of you recently received copies of correspondence from Lou Fead of the Diving Locker in San Diego, California, proposing a standard set of hand signals. I suggested to Lou that a committee of NAUI members be formed to suggest a series of hand signals and then to determine their standardization and make a recommendation ultimately to the Board of Directors for the approval and acceptance of such signals.

I consider the effort on the part of Lou to be an honest and sincere endeavor to accomplish this mission.

I suggested to Lou that he act as Committee Chairman of a Headquarters appointed Committee to seek out the recommendations from members of the organization who might serve on that Committee and ultimately be prepared to make recommendations to the Board of Directors.

The Committee understands that it does not have authority to establish standard signals, only the authority to seek out recommendations from

the membership and standardize those recommendations into a set of standardized hand signals that would be proposed to the Board of Directors.

Therefore, I have appointed Lou Fead as Chairman of this ad hoc committee to act under a set of guidelines outlined and found acceptable by me. I would only request that each of you give your strong support to the Committee's efforts to gather the kind of information essential to make this Committee work.

Arthur Ullrich
NAUI General Manager

Dear Art:

In my letter of August 7, 1973, I omitted mention of the insurance companies which offered life insurance without a diving rider because I did not feel justified in providing free advertising for those companies. On second thought, however, if they are willing to give us proper considerations, why not.

I dealt with two insurance companies while trying to get life insurance to cover the mortgage on our house. John Hancock was the first. Because of the long delay during their deliberation about this matter, I looked into another company which was available to me as a military officer, called USAA Life Insurance Co. (USAA stands for United Services Automobile Association.) This is an insurance company which covers only military officers, however. In both cases, a letter was added explaining my background and training.

I hope this information can help others to solve this difficult problem with insurance coverage.

A. A. Bove, M.D., Ph.D.
NAUI 3055

A NOTE TO FRED CALHOUN FROM SKIN DIVER MAGAZINE

Hi Fred:

I'm returning the attached list as we don't run basic diving classes in the Instructor column . . . and wanted to let you know that starting in April SDM, we are cutting back the listing to include only scuba instructor certification courses. The Calendar will be a service for events in diving such as festivals, etc. and the Instructor listing will return to its original concept of a service listing scuba instructor courses.

Connie Johnson

Dear Dennis:

I received my NAUI News the other day and I am taking you seriously about the need for support materials for the new Speciality Diving Courses. Enclosed are a few of the more pertinent laboratory handouts which I use in my limnology course. They would need to be modified for general use, but maybe they will help form a data base for the Underwater Environment course.

I have also been successful in obtaining a course for credit on the Virginia Polytechnic Institute campus. The Health and Physical Education Department wasn't interested, but my department chairman agreed that such information could be quite useful to scientists and engineers. Hence the fancy name. In spite of the name, it is a basic course, a beginning, and we do have University support.

This brings me to another point. I have noticed NAUI sponsored courses in marine biology, photography, etc. and wondered whether or not you feel that Instructors in general would be interested in a limnology course along the same lines (approximately 1-2 weeks). This information could be very valuable to instructors who wanted to develop projects in the Underwater Environment speciality course. We have a very strong limnology program at V.P.I. and I feel we could present an array of possible ideas and instruction for the average instructor's use. College credit could be possible if desired. My own research projects revolve around using scuba to sample submerged plant communities (macrophytes) and macrobenthic invertebrates. We could also obtain access to an artificial reef for fish study and photography as well as have a guest lecture, or two, on how to establish such reefs in freshwater, etc. The latter would make an ideal community project in some areas of the country.

At any rate, don't let the lab outlines put you to sleep as they do some of my students. If you feel that the majority, or sufficient number, of instructors would be interested in a limnology course, let me know and we can work out details (length, cost, credits, etc.). Also, if I can be of service in helping design the Underwater Environment speciality course, please get in touch.

Thank you for your attention of these matters.

George M. Simmons, Jr., Ph.D.
Asst. Professor of Zoology
NAUI 3449

Editor's Note: Thank you Dr. Simmons, for your support. Interested instructors should write directly to Dr. Simmons and send a copy to NAUI NEWS.

-NN-

EMPLOYMENT

Due to the large number of requests and success of past listings, each month NAUI News carries both instructor's needing positions and positions which are open. Please send listings to the Editor, NAUI News. Each listing will be run once, and you may request to have it repeated if necessary.

EMPLOYERS NEEDING INSTRUCTORS

Expeditions Unlimited
30 N.E. 28th Avenue
Pompano Beach, Florida 33062
(305) 942-8448 / (305) 946-9187
Attn: Bill Tubbs

INSTRUCTORS NEEDING POSITION

Jack Brackett No. 2935
P.O. Box 151
Cardiff, CA 92007
Phone: (714) 436-2898
Resume available on request.

Butch Basinski, NAUI 2962
390 Sandwich Street
Plymouth, MA 02360

Will be attending Commercial Diving Center starting June 7, 1974. Would like evening and weekend work in the Wilmington area. 15 years diving experience, ex-Navy diver, single.

Dear Sirs:

I cannot join your organization right now, as I am presently unemployed. I do, however, plan to join as soon as I find work. Since I live near King Harbor in Redondo Beach, I have been considering working in the field of underwater salvage and maintenance, etc. I am sending you this in the hopes that you might send me some information and possibly even refer me to someone who can help me in this field. It would be greatly appreciated.

Gene Kurka
1701 Carlson Ln.
Redondo Beach, CA 90278

-NN-

NAUI is a tax exempt non-profit professional organization. All proceeds are used for the operation of the Association and the promotion of safe diving. Contributions, bequests and gifts are deductible by the donor.

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