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AMERICAN ACADEMY OF UNDERWATER SCIENCES

DEDICATED TO THE ADVANCEMENT AND PRACTICE OF SCIENTIFIC DIVING

the SLATE

NEWSLETTER OF THE AMERICAN ACADEMY OF UNDERWATER SCIENCES

May 1990

90:2

1990 AAUS SYMPOSIUM PLANS SET

by Walt Jaap

The Tenth Annual Diving for Science Symposium of the AAUS will be held in St. Petersburg, Florida, 4-7 October 1990. The Symposium will provide various activities to interest and educate diving scientists and technologists. All AAUS members are urged to participate and take advantage of this opportunity to discover new advances in undersea science and exchange information with their peers.

Members are offered an opportunity to display their photographic skills in an underwater photography exposition that will present prizes to the best in "documenting diving for science" and general underwater world photography. Please refer to your meeting announcement for details. We are also offering a 5 km fun run on Saturday morning. You must register in advance for both events.

The Diving Officers meeting and the Organizational Members meeting will occur on Thursday morning and afternoon, respectively. Registration is required to attend the meetings; refer to the registration form for details. The Diving Officers meeting will be coordinated by Mark Flahan, San Diego State University. Please review Phil Sharkey's minutes from last year's Diving Officers meeting and send suggestions for the agenda to Mark. It is important that we avoid wasting time on issues that were fully debated or resolved at the meeting in Woods

Hole. Walt Jaap will host the Organizational Members meeting. If you have agenda items, please forward them to Walt.

During the registration on Thursday afternoon and evening there will be an ice breaker and water volleyball tournament, poolside, at the University of South Florida. We encourage you to form teams from your geographic area (north, south, east, west) and/or your institution. The game is played in hip-deep water; 15 points are needed to win. On Wednesday, 3 October, a Gulf of Mexico orientation dive will be offered. It is being coordinated by

Treasure Island Divers. Space is limited, so if you want to dive on the USS *Blackthorn* and some shallow rock formations, call Treasure Island Divers, 813/360-6669, ask for Katy, and identify yourself with AAUS.

For those presenting papers, the deadline for manuscripts is 15 June. Full cooperation is needed to ensure that the Proceedings are published in time for the Symposium.

We look forward to hosting the Symposium and hope you will join us. For details call Walt Jaap at 813/896-8626; FAX: 813/823-0163; OMNET: R. Burkhart.

DIVING SAFETY PUBLICATION

The December 1989 issue of the *Marine Technology Society Journal* (Vol. 34, No. 4) is devoted to diving safety. Articles in this issue cover a wide range of topics including general medical considerations, mixed gas diving, causes and treatment of diving accidents, polluted water diving, saturation diving, and a review of a two-day workshop on physiological and human apparatus that was held at the University of Buffalo. Those interested in obtaining a copy of this issue of the *Journal* should contact the Marine Technology Society at 1825 K Street, NW; Suite 218, Washington, DC, 20006.

DIVERS ALERT NETWORK NEWS

DAN's 1988 *Dive Accident Report* is now available at a cost of \$8.00. DAN reports that 9% fewer diving accidents were reported in 1988 than in 1987. The DAN medical staff is currently investigating 370 recreational diving accidents from 1989, and requests that any undocumented accident cases from 1989 be sent to DAN for inclusion in the next accident report. The 1989 report will also contain information on sport and commercial diving fatalities. To obtain a copy of the 1988 *Dive Accident Report*, contact DAN at Box 3823, Duke University Medical Center, Durham, NC 27710 or call 919/684-2948.

COMMENTARY

Diving Proficiency in EPA Region 10, Seattle, Washington

by Duane W. Karna
Regional Diving Officer

After listening to a paper on diving safety given at the Oceans '89 Conference in Seattle, I decided to compare Region 10's dive program with other dive programs in the nation. An important point made by the author was that the number of accidents handled by the Divers Alert Network (DAN) at Duke University's Medical Center was directly related to two factors. The first factor was the experience of the diver; simply stated, inexperienced divers have more accidents. The second factor could be considered diving proficiency. The author presented information indicating that any diver who fails to remain proficient increased his/her risk for an accident.

Since all Region 10 divers receive advanced training from EPA or NOAA and are experienced, I was interested in our proficiency. To gain information on the level of proficiency, I summarized EPA Region 10 diving activity from 1985 to 1989. There were a total of 13 Region 10 divers during this period; 5 are no longer active or have separated from the agency. In the 5-year period ending on 31 December 1989, Region 10 divers conducted 888 dives. Of this total, 40% (358) were work dives, 36% (315) were training dives, and 24% (215) were off-duty dives.

EPA diving regulations recommend that EPA divers should complete an average of at least 2 diving days per month or 24 diving days per year to remain proficient. During 1989, the number of diving days per year logged by

all Region 10 divers ranged from 5 to 20 and averaged 10.5. From 1985 to 1989, the eight divers who are presently active had 5-year averages that ranged from 7 to 19 and as a group, averaged nearly 12 diving days per year.

By comparison, the number of dives per year logged by these divers ranged from 8 to 30 and averaged 18.2 dives during 1989; their 5-year average ranged from 13 to 32.4 dives per year, and as a group averaged 22 dives per year. Former EPA divers had an overall average of 22.6 dives for the 1985 to 1989 time period.

Clearly, Region 10's overall average diving days per year was well below the EPA recommended level for diving proficiency. In the past, however, I placed more emphasis on the total number of dives rather than the number of diving days logged each year. Using this number, the 5-year overall average (22.2 dives per year) for all Region 10 divers was about the same as the overall average (22.5 dives per year) reported for all NOAA divers in 1989 (Cliff Newell, Director of NOAA Diver Training, personal communication), and greater than the minimum average (17.3 dives per year) reported for AAUS divers in 1988 (Slate 1989:4).

It appears that Region 10's diving program is comparable to two other diving programs that have similar regulations. For the following reasons, this comparison does not bring me much comfort. I believe there are at least three addi-

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tional factors that need to be considered in gauging the proficiency of an active diving program. These are: 1) the number of divers in the program who are on the low side of the variance bracket around the mean; 2) the temporal spacing between dives, and; 3) the type of dives performed each year.

In Region 10 there is a wide variance bracket around the 22.2 mean. Some EPA divers on the low side of this mean are performing at or slightly below even the AAUS minimum proficiency standard (12 dives per year). For example, during 1989, one diver did not meet this requirement, and during the past five years, Region 10 divers were well below the AAUS standard on three occasions. Further, on six occasions, EPA divers logged only 12 dives per year during the 1985-1989 time period.

Regarding temporal spacing, the maximum time allowed between dives without having to complete a requalifying program is 2 months for NOAA and three months for EPA. AAUS requires 12 dives in a 12-month period, and at least one dive must be logged near the maximum depth of a diver's certification during each 6-month period. Only the AAUS regulations have a specification on the type of dive

to be performed.

Over the past five years, several Region 10 divers have exceeded the maximum time period of three months between dives. This has required the scheduling of a time-consuming requalification program. More importantly, considering the DAN statistics, it has increased the risk of accidents because the level of diving proficiency was reduced. Previously, a Region 10 diver could wait just under three months between dives and still maintain certification. I believe this type of diving is not adequate to remain familiar with polluted water diving gear (full-face mask and dry suit) and to practice safe diving habits.

As a direct result of this assessment, new Region 10 specific proficiency requirements were placed on Region 10 divers. The overall objective is to keep the dive team familiar with the dive equipment and protocols for polluted water diving. In the absence of a work dive, each diver will be required to complete a proficiency dive on a 6-week schedule using the diving dress for polluted water diving. Each diver is also expected to be involved with at least two projects requiring work dives and log a total of at least 15 dives each year.

CALENDAR OF EVENTS

SEASPACE 1990

SEASPACE 1990 will be held on 1-3 June 1990 in the Hyatt Regency Hotel, Houston, Texas. Jean-Michael Cousteau will be the featured guest at the Film Festival presentations on Saturday evening and Sunday afternoon. Sylvia Earle, W. Gregory Brown and Al Giddings will also make presentations. The Houston Underwater Club will also host its 17th International Underwater Photographic Competition. For more information contact SEASPACE, P.O.B. 3753, Houston, TX 77235-3753 or call 713/467-6675.

FLORIDA UNDERWATER ARCHAEOLOGY PROGRAM

A field school in Underwater Archaeology is being considered for the 1990 Summer Semester at FSU under the direction of the Department of Anthropology. Active participation at two ongoing research sites is being considered, viz: the Warm Mineral Springs Archaeological Research Project which is investigating early man, and the Tortugas Islands project working in conjunction with the National Park Service on shipwrecks. Participation will commence following an initial training period at the FSU Marine Lab. For further details, contact Mr. Wilburn Cockrell or Mrs. Barbara Benton, Academic Diving Program, 10 Montgomery Bldg, Florida State

University, Tallahassee, FL 32306, or call 904/644-3450.

ROV '90

ROV '90, the 8th annual subsea intervention conference and exposition will be held in Vancouver, British Columbia at the Vancouver Trade and Convention Center on 25-27 June 1990. The show will offer a wide range of technical presentations, exhibits and special events. For more information, contact Intervention '90, c/o ROV/Undersea Vehicle Committee, P.O. Box 261149, San Diego, CA 92126 or call 619/660-0408.

EMERGENCY DIVING ACCIDENT MANAGEMENT COURSE

The Catalina hyperbaric chamber is offering an emergency diving accident management course on 22-27 July 1990. Cost, which includes tuition, meals and lodging, is \$545. For more information, contact Ronald J. Ryan, Catalina Hyperbaric Chamber, P.O. Box 398, Avalon, CA 90704-5069, or call 213/743-6793.

HYPERBARIC MEDICINE JOINT MEETING

The International Congress on Hyperbaric Medicine, the European Undersea Biomedical Society and the Undersea and Hyperbaric Medical

Society will hold a joint meeting at the Hotel Okura, Amsterdam, 11-18 August 1990. For information, contact Jane Dunne at the UHMS, 9650 Rockville Pike, Bethesda, MD, 20814 or call 301/571-1818 or 1855.

NITROGEN NARCOSIS WORKSHOP

A nitrogen narcosis workshop will be held by the Great Lakes Chapters of the UHMS at their annual meeting, October 1990. For information contact Kevin Hamilton, Workshop Chairman, Defense and Civil Institute of Environmental Medicine, 1133 Sheppard Ave. West, Downsview, Ontario, M3M 3B9, Canada or call 416/635-2148.

EMERGENCY RESPONSE DIVER COURSE

The Catalina hyperbaric chamber is offering a course on emergency first response under field conditions. The principal instructor will be Gord Boivin, Canadian Coast Guard, Search and Rescue. The course will be held 21-26 October 1990. Costs, including tuition, meals and lodging, are \$645. For information, contact Ronald J. Ryan, Catalina Hyperbaric Chamber, P.O. Box 398, Avalon, CA 90704-5069 or call 213/743-6793.