

FALL 1980

SEARCH & RESCUE

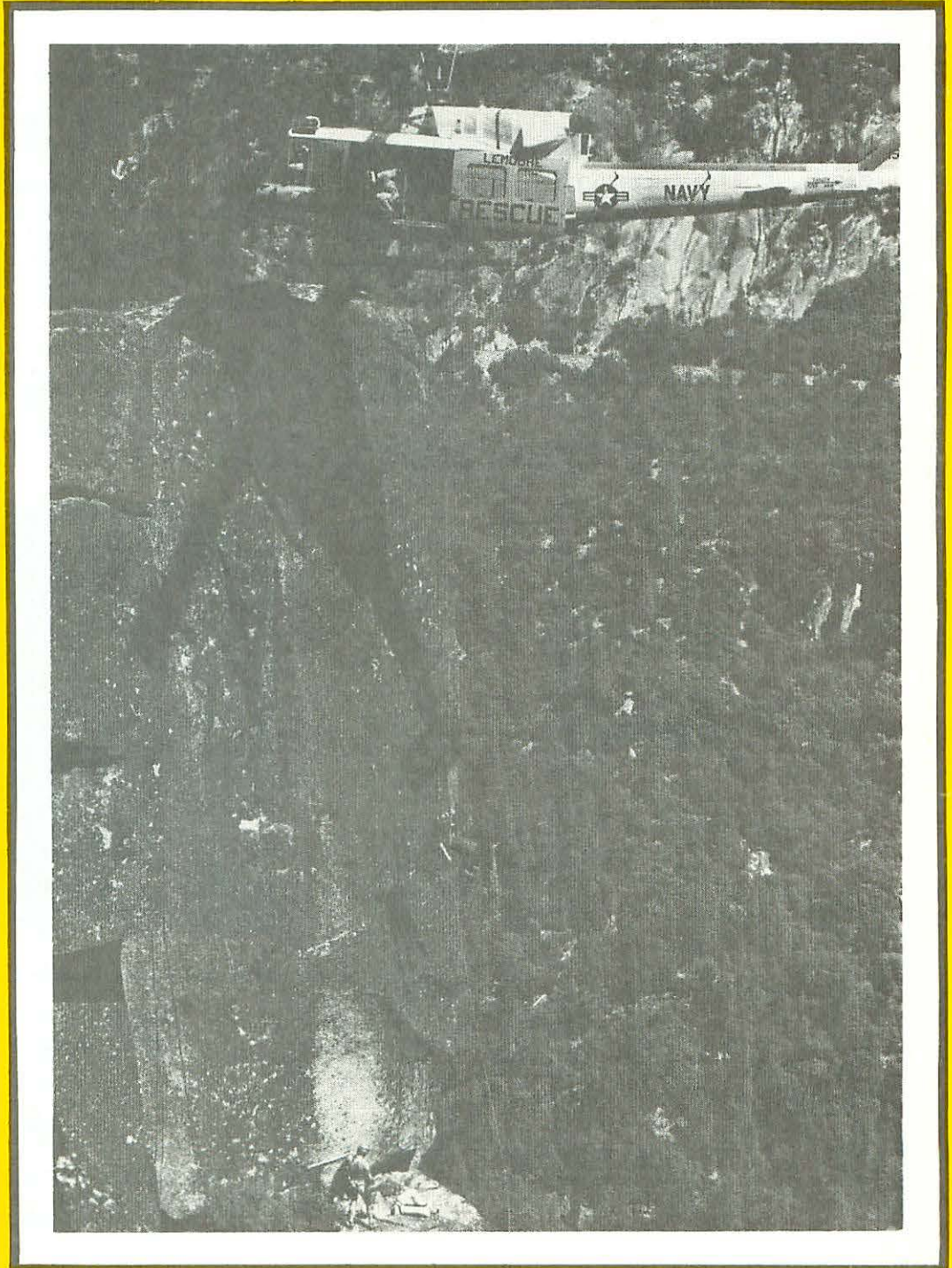
MAGAZINE

Rappelling out of
hovering helo to
climbing accident
victim on ledge,
Yosemite National
Park.

See article excerpt
from exciting new
Tim Setnicka
book.

Page 16

Photo by Kenneth Andrasko



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PUBLISHER'S FORUM

By Dennis E. Kelley

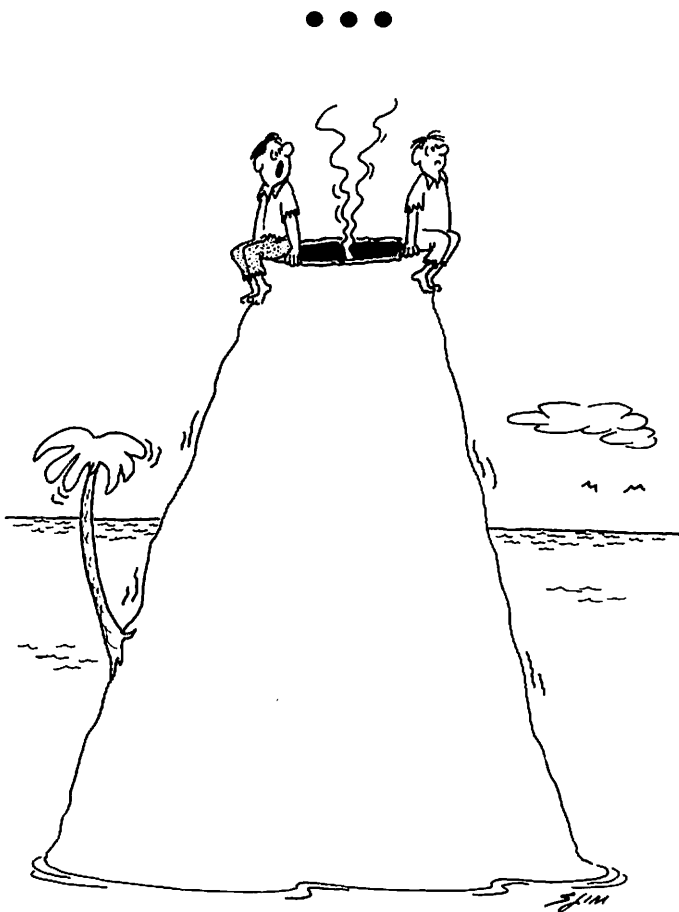
One of the real shortcomings of SAR in this nation is the parochial attitude toward SAR training. Specifically, there is no shortage of training in most techniques. But there are many, many organized local SAR trainings, seminars, conferences, etc. These occur with no interest shown in sharing or in participating with others in the SAR community. It seems that many SAR organizations, including those at the Federal, State and local level, refuse to seek or spread new data on SAR outside of their own immediate groups.

This paradox in this fast growing technical oriented society defies a simple explanation, but there are some notable exceptions. First of all, the National Parks Service's Albright Training Center has opened its SAR Management Course to non-Park personnel for years. Interestingly, this course is without doubt the most advanced on the subject and truly pioneered the formal teaching of Inland Ground Search Management.

Secondly, California's San Bernardino County Sheriff's Barstow Desert Rescue Squad SAR School has not hesitated to broadcast the SAR word. This is no small achievement when viewing the hundreds of participants each year considering the remoteness of Barstow.

I don't mean to slight other exceptional events like the U.S. Coast Guard's National SAR School, Washington State SAR Conference, NOR-CAL SAR School, New York Volunteer Rescue Squad Conference, U.S. Air Force's SAREX, NASAR's Conference, etc.

The point is, just look around you and notice how many SAR training events are for insiders only. You can change this!



"DID YOU HEAR A RUMBLE?"

NEWS AND RUMORS

NEW LITTER-CARRYING SYSTEM OFFERED BY ARALUEN

A litter-carrying system that uses specialized backpack frames and accessories to place the weight of litters on the backs and legs of the litter bearers rather than on their wrists and arms is offered by ARALUEN INC. of 7851 Airpark Drive, Building 210, Gaithersburg, Maryland 20760. The weight rides just as it does with ordinary backpacks. Bearers maintain an upright and well-balanced position and hands are left free. The danger of strain to bearers is reduced and smaller numbers are required to complete rescue missions.

In addition to the specialized backpack frames, the ARALUEN CARRIER consists of Carrying Poles each of which attaches to the pack frames of two of the bearers, who then walk side-by-side as a pair. A Carrying Strap connects each pole to the frame members of a litter. At the rescue site, the patient is placed in the litter as it rests on the ground, the ends of each carrying strap are attached to the two side bars of the litter, each bearer puts on one of the backpack frames, and the two ends of each carrying pole are snapped to fittings designed to receive them on two of the backpack frames. With the members of each pair of bearers standing on opposite sides of the litter, all then raise the litter and snap the carrying straps to the carrying poles and the team is ready to move off. Ordinarily four bearers carry at one time, but an additional pair may be added for particularly heavy patients.

The manufacturer claims that this design affords a high degree of operational flexibility, making it possible for the rescue squad to pass through chokepoints or along narrow trails not much wider than the litter itself.



U.S. Air Force News Release:

AIR RESERVISTS DECORATED FOR SAVING ELEVEN SEAMEN

By Jeryl L. Marlatt
Public Affairs Officers

SELFRIDGE ANG BASE, Mich. Apr. 7— On May 18, 1980, the Air Force Reserve will formally honor the heroism of 12 of its own from the Detroit area for "distinguishing themselves by extraordinary achievement while participating in aerial flight, rescuing 11 seamen from the foundering Canadian freighter *Labradoc* in Lake Erie, approximately 18 miles north of Ashtabula, Ohio."

The *Labradoc*, a 315 foot lake freighter loaded with 160,000 bushels of corn, listing at 22 degrees, was foundering in 25 foot waves and 55 knot winds. The cargo had shifted and the ship was taking on water.

Continued on page 20

SEARCH & RESCUE

MAGAZINE

FALL 1980

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ADVISORY PANEL

Emergency Medical --	Stan Bush, Colorado SAR Board President
Training -	Rick LaValla, Washington State SAR Coordinator
Communications --	Rick Goodman, New Mexico SAR Coordinator
Survival --	Gene Fear, Survival Education Assn. President, Washington State
Data Collection	Maj. Bob Mattson, USAF, CAP Liaison, Alabama
Equipment --	Jon Gunson, Summit County Rescue Group, Colorado
Mountaineering --	Bill March, University of Calgary, Physical Education Facility.
Cave --	Tom Vines Appalachian Search & Rescue Conference

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MOUNTAIN RESCUE IN THE CANADIAN NATIONAL PARKS

By Bill March

The National Parks of western Canada like the National Parks of the United States are controlled by the Federal Government. The parks system had its roots in the takeover by the Federal Government of the Banff Hot Springs following an ownership dispute in 1885. Today this initial reserve has grown from its original 26 square kilometers to 6,641 square kilometers constituting the Banff National Park. Unlike the Provincial Parks and the American National Parks the staff are called wardens (garde in French) not rangers, although they fulfill the same functions. The early wardens were backwoods men, horse packers and hunting guides and had little or no technical mountaineering background. Consequently, when in 1955 12 fatalities occurred within the park (8 school children on Mount Temple and 4 Mexican climbers on Mount Victoria) the Parks Service hired the Swiss guide Walter Perin to train wardens in mountain rescue. The park was divided into areas each the responsibility of a warden who was expected to handle the rescues in his area.

In 1968 Walter Perren died and Peter Fuhrmann, a man who was eventually to lay the foundation of the modern rescue service was appointed as regional alpine specialist. There were two regional alpine specialists, Peter who was responsible for Banff, Yoho, Kootenay, Pacific Rim and Baffin Island National Parks, Cape Breton Island, Gros Morne, and Willy Pfisterer who was responsible for Glacier Wateron Revelstoke, Kluanie, Nanannie, and Jasper National Parks. The safety of the public in the National Parks is the responsibility of the wardens in the back country areas and of the R.C.M.P. in the towns and on the highways. Public safety does not only include mountaineering but also all the other activities taking place in the wilderness and back country areas such as backpacking, camping, boating, etc. Initially a mandatory sign-out procedure operated in all the parks but this became unwieldy and time consuming and was replaced by voluntary sign-out procedure. This meant it was not necessary to sign-out for day climbs and walks and greatly reduced the amount of paper shuffling and checking on return permits. More importantly it has

laid the onus on the public to be more responsible for themselves, an essential component in any wilderness recreational activity. The system does appear to be working quite effectively with people undertaking serious climbs following the sign-out procedure. An overnight use permit which does not have to be returned is necessary for back country camping but this is issued for environmental control reasons rather than as a sign-out system. It also gives the wardens an opportunity to warn of any local hazards such as bears, fires or avalanches.

The task facing the alpine specialists in the National Parks was a formidable one — Size: the parks are four times the land area of Switzerland; Isolation: much of the park is difficult of access with few roads; Technical Problems: the basic structure of the mountains is decaying sedimentary rock making face rescues extremely hazardous. In addition, there are extensive glacier and ice fields with the associated problems of crevasses and ice falls. Finally there is the weather which is an unpredictable and complex as the European Alps. All of these factors combine to make the problem of effective mountain rescue extremely serious and formidable. In 1971 Peter Fuhrmann established a link with IKAR, the International Commission of Alpine Rescue in Europe and in conjunction with Jim Davies developed the sky rescue techniques utilizing a helicopter and a fixed rope sling system. It was not before time with the number of rescues jumping from 5 in 1967 to 35 in 1968 and the membership of the Alpine Club of Canada doubling in 1970. In the last three years the statistics are:

1977 — 60 Rescues — 6 Dead (1199 man hours)

1978 — 73 Rescues — 6 Dead

1979 — 37 Rescues — 6 Dead (1300 man hours) — to date

The difference in man hours between 1977 and 1979 reflects increasing complexity and seriousness of the rescues undertaken.

It was obvious that the old system of leaving wardens to handle rescues in their areas was no longer viable especially with the increasing number of people attempting more serious climbs. The solution was to develop a system of helicopter evacuation utilizing a fixed 40 foot rope attached to the bottom of the helicopter in conjunction with a one point suspension sling stretcher or jenny bag and a rescue expert in a special harness. For seriously injured



Loading casualty into Jenny bag.

Photo by Bill March

MOUNTAIN RESCUE — continued

patients an aluminum scoop stretcher was carried in conjunction with the jenny bag. Peter Fuhrmann eventually managed to convince Transport Canada to accept this rescue method and a special bracket was fastened to the helicopter to provide for the rope attachment. In 1971 Jim Davies of Banff performed over 100 successful vertical lifts including 12 which were life saving. The suspension point was immediately below the rotor shaft and consequently facilitated controlled flying which was essential when one is flying with a human cargo suspended 40 feet below. The 40 feet was a fixed distance which the pilot trained with and was able to develop the fine judgment that was necessary in bringing the rescuer to the victim. The end of the 40 foot rope was weighted to stabilize it whilst it was in flight unladen. The 40 foot rope would be lengthened an additional 20 feet to give a 60 foot sling capacity. The difficulty of rescue especially with the fixed rope or slinging method led to the evolution of three possible options of increasing difficulty to handle rescue situations:

Option A — to land the helicopter at the accident site and evacuate the casualty without slinging.

Option B — to land the rescuer near the casualty, travel to him on foot and prepare him for slinging out by helicopter.

Option C — to sling the rescuer directly into the casualty, prepare him for evacuation and sling him out.

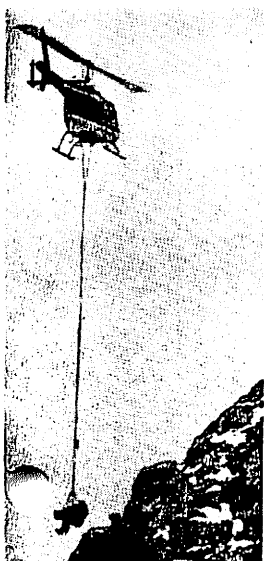
The application of these three options kept the slinging time whilst flying to a minimum. Communications between the casualty and the helicopter on first contact is by a portable loud hailer and a system of carefully designed questions which require yes-no answers. In this way information on the incident can be gathered facilitating the smooth planning of the evacuation. It also avoids the situation of rescuing people who do not require assistance! Communication is one of the most important parts of any rescue operation especially in such a large area and fixed relay stations are used augmented by portable repeaters. There is also communication between the pilot and the rescuer below the helicopter as the latter wears a bone conductant mike inside his net.

There is little doubt that the National Parks service have evolved an efficient rescue service, staffed by capable wardens who are concerned with public safety. Their mandate is limited to the area of the National Parks although in an emergency they will operate outside their normal boundaries. The area outside of the Parks is the responsibility of the R.C.M.P. In British Columbia there is provincial emergency networks and voluntary rescue teams and in Alberta the Calgary Mountain Rescue Team. As in the U.S.A. the Armed Services have a rescue role and air wrecks are the responsibility of the Air Force Search and Rescue. As with all agencies there is a need for more coordination especially with

regard to the utilization of National Parks Rescue Teams which contain a number of professional mountain guides who receive E.M.T. training. The Provincial Parks in Alberta which are developing rapidly are following a similar program to the National Parks in developing a helicopter rescue capability.

Western Canada thus has a well developed mountain rescue capability. In 1979 two relatively inexperienced climbers were rescued from the north face of Mount Bryce attempting a route which was in some respects too serious an undertaking for them. For one of the unfortunates, it was his second rescue by the parks personnel. There is the nagging doubt in my mind that we may see an increasing number of this type of rescue almost as if the climbers are relying on the back-up of a professional rescue team to pull them out if they do not make it on a difficult route. This kind of attitude is anathema to the true spirit and purpose of mountaineering. The presence of a highly mobile rescue team should not be a factor to consider when undertaking a major route. The all too common sight in the Mount Blanc Massif in Chamonix is the rescue helicopter retrieving climbers whose aspirations are greater than their abilities. Perhaps the root of the problem lies in the 'instant success syndrome' so prevalent in our culture. Young climbers seek quick recognition without realizing they must fulfill the long apprenticeship required for successful alpine climbing if they wish to survive. The reiteration of the basic tenants of mountaineering must also include a commitment on the part of the individual mountaineer and wilderness user to support volunteer rescue teams. Unless the mountaineering fraternity maintains a commitment within the field of rescue they may find themselves subject to an increasing degree of control and restrictions. The situation is best summarized by the joint doctrine of responsibility and freedom — the greater degree of responsibility we assume for ourselves the greater our freedom of action will be.

• • •



Slinging out of a rescue.
Photo by Bill March



Rescuer with casualty on rescue rope
—note the weight on the rope.



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BLACKTHORN

Los Angeles Times, January 30, 1980

HOPE FADING FOR 17 MISSING SAILORS VICTIMS OF FLORIDA SHIP COLLISION

ST. PETERSBURG, Fla.(AP)— Divers searching the flooded compartments of a sunken Coast Guard cutter found the bodies of five more sailors Tuesday, raising the death toll to six, and hope was running out for 17 others missing after a collision with an oil tanker. "As time goes by, the hope grows less," said Coast Guard Capt. Marshal Gilbert.

Twenty-seven crewmen from the cutter Blackthorn were rescued and one was found dead shortly after the Monday night collision with the 605-foot tanker SS Capricorn. Some were found clinging to pilings of the Sunshine Skyway bridge, which crosses the entrance to Tampa Bay. Rescuers held out hope that some crewmen had found lifesaving air pockets in the cutter, lying on its side in 50 feet of water, but divers tapping on the hull heard no response. They began a slow search through flooded compartments and passageways.

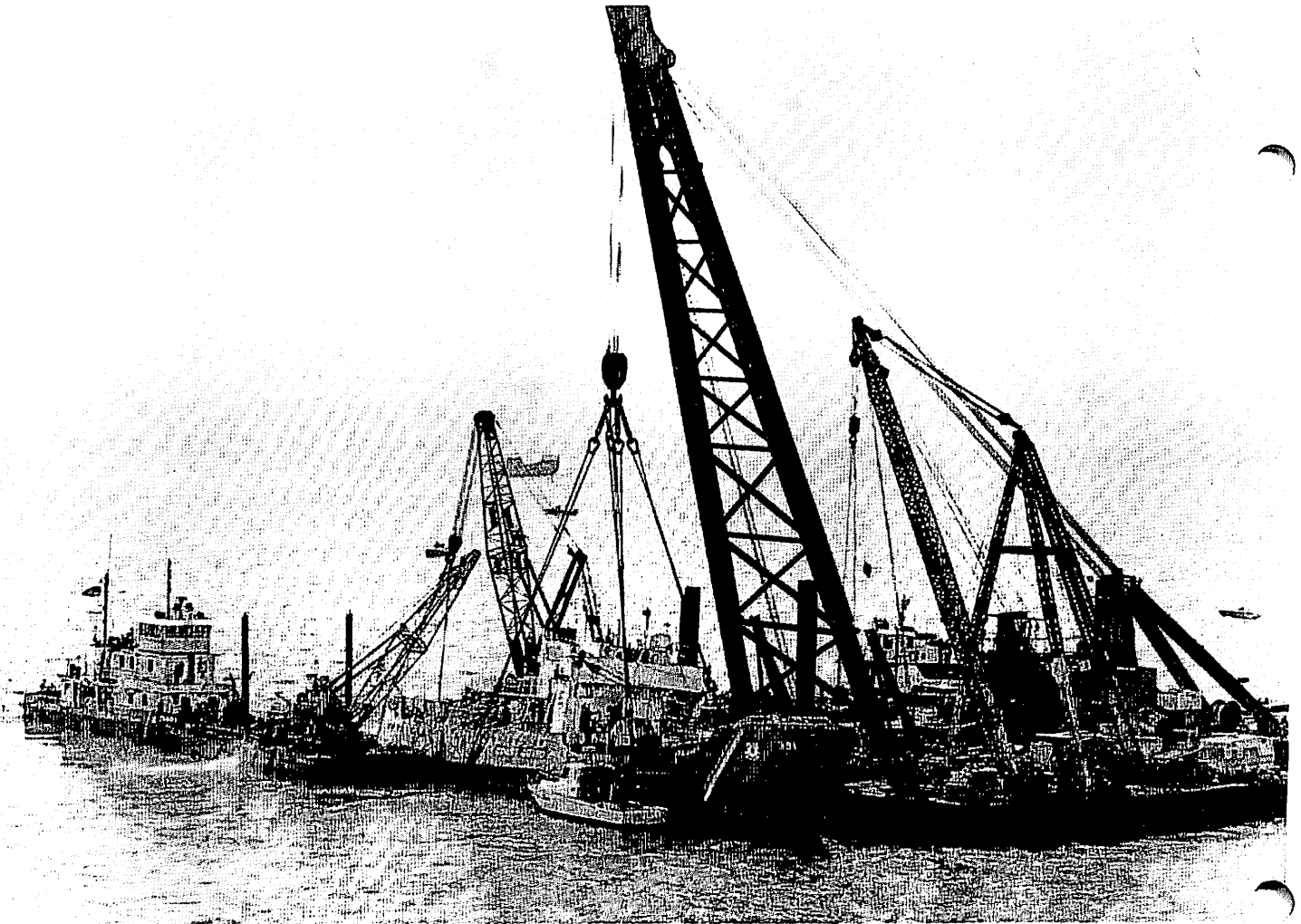
Gilbert said the cause of the wreck had not been pinpointed but added there was "nothing to indicate" the 180-foot cutter was at fault. He didn't blame the tanker either. The tanker, which ran aground, did not spill any oil, but fuel leaked from the cutter. None of the 34 tanker crewmen was hurt. Efforts to refloat the tanker

failed Tuesday, and the Coast Guard said some of the ship's oil cargo would be drained off to lighten its load. The ship was blocking Tampa's shipping channel, closing the busy port. Gilbert said the only radio transmission from the Blackthorn was a "mayday" at 8:20 p.m. Monday. The Coast Guard named Rear Adm. Norri Venzke of St. Louis to head a three-member board of inquiry to determine why the collision occurred on a calm, moonlit night just outside Tampa Bay. The National Transportation Safety Board sent a team of specialists to join the investigation.

It was only the third sinking of a Coast Guard ship since World War II. The latest was Oct. 21, 1978, when the cutter Cuyahoga was lost in a collision in Chesapeake Bay and 11 of the crew of 29 perished. The first was Dec. 7, 1978, when the White Alder sank off New Orleans, and 17 members of a crew of 20 died.

Survivors of Monday night's sinking said they heard a collision alarm only five seconds before the crash. "We saw the boat coming," said Ensign John R. Ryan, 23, of Galveston, Tex. "We tried to take evasive action. We tried to steer away but it was obvious we were going to collide." Ryan said he jumped free and was rescued by a shrimp boat that was credited with rescuing 22 survivors from the oil-fouled water. "We could see them thrashing around and there was oil everywhere," said shrimper Nick Whitelow, 21. "Most of them were sick and scared. . . . Some of them had lost their sight. . . . Some were really bad off. . . . Most were seasick. Some said they were stinging from the fuel in the water. I had them go into the shower and wash off and when I got done pulling them in I was totally slick (with oil)."

The cutter "went down very quickly, in a matter of a minute or two," said Gilbert. ::



The U.S.C.G. ship BLACKTHORN is hoisted to the surface after being lodged on the bottom of Tampa Bay for twenty-three days. The ship collided with oil tanker CAPRICORN on the night of January 28, 1980, as the ill-fated crew departed Tampa Bay, Florida for their home port of Galveston, Texas. Twenty-three of the fifty crew members of the BLACKTHORN died in the Coast Guard's worst peacetime disaster.

MARCH ON SAR

By Bill March
Faculty of Physical Education,
The University of Calgary
2500 University Drive, N.W.
Calgary, Alberta, Canada T2N 1N4

EQUIPMENT NEWS

ICE GEAR

Forrest Mountaineering have developed a completely new line in ice climbing equipment; an ice axe and a north wall hammer with a series of interchangeable picks. The equipment is an extension of the original Forrest idea found in the Mollinjer hammer. The new picks combine the latest in design technology and have been tested in a wide variety of ice conditions on some of the hardest Canadian winter waterfall climbs. Vector I is an inclined pick with its upper surface concave to facilitate extraction. The key to successful high angle ice climbing is not penetration and holding — all the specialized tools do this — it is the ease of extraction which conserves energy wasted hanging struggling to release a well placed tool. Vector II is a curved pick with serrated teeth all the way to the shaft. It is excellent for Alpine climbing and for hollow ice but is excelled by Vector I for overall use. A third interchangeable pick is available in the form of a tube pick so the climber has a comprehensive range at his disposal.

A considerable amount of design and development work has been invested in this equipment by Bill Forrest and his 'metal man' Frank Lampton. On field tests I found the Vector I to be the best piece of equipment I have used since the advent of the 'new ice technology.' The new tools are fitted with newly designed sewn on wrist loops which are superior to any I have used in the past.

GORTEX BIVOUAC SACK

Another Forrest development is the one man bivouac sack with a waterproof nylon base and gortex top. It has a large zipped opening from head to naval with a two way double zip to allow the anchor rope direct access to the waist. If using it with an ensolite pad make sure you place the pad inside the bag. The bag has been tested in conditions from -30°C in winter to the rain of the Monashees in summer and has stood up well. All the seams are taped and the bag is well constructed and roomy.

RE-CHARGEABLE BATTERY

A new rechargeable battery has been developed for climbers by Orion Equipment of Ft. William, Inverness-Shire Scotland. The unit comes complete with its own charging unit and is made in three sizes giving 6, 10, and 20 hours of light when used with an 0.2 amp 3.5v bulb. Three nickel cadmium cells are carried in a case 8x6x4 cm. and the total weight is 210 gm. The units are expensive £22.08, £25.70, £32.79 respectively but the manufacturers claim 800-1000 charge/discharge cycles. This equipment may be of use to mountain rescue teams especially considering the escalating cost of batteries.

PIEPS II AVALANCHE TRANSCEIVERS

In 1979 during a German Guides course a comparison test was made between Pieps I and Pieps II and several disadvantages of Pieps II were discovered.

1) Locating a buried person took twice as long with Pieps II as the Pieps I. The reason given was that there are fewer signals per time unit.

Due to the non-continuous volume control for the receiver it is difficult to locate the buried person once one is near. Also the lowest volume is still too loud.

3) The Pieps II has a strong influence on the compass needle which has not been detected with the Pieps I.

Persons using the Pieps II should watch for these reported deficiencies. Information via *Alpismus Magazine*, October 1979.

CAVING DESCENDERS

Keith Lewis of Preston, England, has developed a new climbing and caving descender. The Lewis descender takes a rope from 9 to 11 mm., used either single or double. In addition to the normal constant friction properties of conventional descenders, it has an intriguing safety handle. When this handle is released, the device is locked onto the rope thereby preventing further descent until the handle is squeezed again. Within the fixed limits the amount of friction with which the operator slides down the rope can be varied according to the position of the handle. This makes the descender particularly useful for mountain rescue work. The descender cannot be used on polypropylene or polyethylene rope and it is rather heavy weighing 12 ounces.

Further details are available from Keith Lewis at 15 Birchfield Drive, Long Ridge, Lancs, PR3 3HP, England.

LIABILITY

There has been an interesting development in the field of legal liability of pro pos private mountaineering. Christopher Marsh, a 17-year-old school boy, who survived a disastrous accident on The Tour Ronde in the Mont Blanc range is facing six manslaughter charges. Christopher was roped to two British friends when they slipped and fell during a descent from the summit, dislodging three other groups of climbers below them. The eight dead included four Britains and three members of a West German family. Under French law he cannot be held responsible for the deaths of the two Britains to whom he was roped. The examining magistrate at Annecy who is involved in the case said the main allegation against Christopher was that the three climbers in his group were not properly roped together and broke strict alpine rules. The French guide witness told the police that the crampons on the boots of Christopher's party were packed with ice and useless. He also added when descending climbers should be roped diagonally across the slope and the woman who was the weakest member of the party should have been the first in line. However, if found guilty Christopher faces no more than a nominal suspended prison sentence. The case has caused a considerable storm of protest amongst the British climbing fraternity. The general feeling appears to be that people involved in mountaineering must accept the dangers associated with participation in this sport. However, there is a grey area where one must act with a degree of prudence and not endanger the lives of fellow climbers, and it will be interesting to see the development and results of this case.

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LETTERS TO THE EDITOR

Dear Dennis,

Haven't heard from you in almost two years, nor have I seen a copy of *Search and Rescue Magazine* in ages.

What's going on with the S&R people, of late?

International Backpackers Assn. (IBA) is still on going although there is talk of a merger with the American Hiking Society. With a reduction in the large numbers going to the great outdoors world, perhaps our environment will begin to recover and also there will be less S&R missions (hopefully).

Lance Feild, President
International Backpackers Assn.
P.O. Box 85, Lincoln Center, ME 04458

Dear Dennis,

Thank you very much for the information about Brian Zane and Barstow. I am tentatively planning on attending. I am glad to hear the magazine is 'alive and well.' I would like to get the following paragraph in the next issue or so of *SAR Magazine*.

"I am writing a Masters of Science Thesis on *"Psychics in Law Enforcement."* This definitely includes SAR, body recoveries, etc. I would be very much interested in hearing from anyone who has been involved with such psychic operation, knows of someone who has been involved, or knows of such an operation. The more fact I have the better the information although I will welcome any assistance you have to offer."

Butch Farabee
P.O. Box 32,
Yosemite, CA 95389

Hello Search and Rescue Friends,

I am free! (or at least inexpensive). My Border Patrol duties can no longer interfere with my teaching tracking to Search and Rescue groups. My wife Dorothy and I retired in November and we plan to travel the states and teach *dedicated* Search and Rescue groups how to track lost people.

We are trying to set up an itinerary using NASAR Headquarters as our 'booking agent.' If you are interested, contact NASAR Training Committee, c/o NASAR HQ, P.O. Box 2123, La Jolla, CA 92038. Please choose 3 preferred dates.

Once we have received a list of groups interested, we will send you a tentative itinerary. We can adjust the schedule with you so that I can make a 1-2 or 3 month swing through the western states. This should mean a minimum of expense to each of you.

We will try to spend at least 3 or 4 days in each place and more if your group can participate over a longer period of time. If you have a Law Enforcement agency that will help you with expenses, we will teach them some applications of tracking to police work also. We plan to keep the price to you as low as possible — charging only expenses from one group to the next.

We expect to travel the western states depending on weather and demand. We will need a room to show slides, and a piece of dry ground 10 yards wide for each 3 participants. This training area should extend for 50 to 75 yards in depth. So for 30 people you would need an area at least 100 yards wide x 75 yards long.

If you're not trackin', you're 'back-in'.

Ab Taylor,
P.O. Box 2123, La Jolla, CA 92038

Gentlemen:

I am a subscriber to *"Search and Rescue"* and have just received the book entitled *"Man Tracking."* We are forming a Search and Rescue Team and would like to know where we can get the patch shown on the inside of the front of the book? (National Association of Search and Rescue). I would also like information on how to join this group.

James Smith
22331 Elsinor, Katy, Texas 77450

James —

Re patch and membership info contact: Lois Clark McCoy,
NASAR Administrator, P.O. Box 2123, La Jolla, CA 92038 —
(714) 268-3266
Editor

Dear Dennis,

We missed you in Kansas City! The Board meeting was exceptionally productive, and we were in high speed again — if we can just keep up the momentum.

It is unfortunate that you must resign from the Board at this time, just as we are seeing a little light at the end of the tunnel; however, I do accept your letter of resignation and am forwarding a copy to Bill Wade for file with the individual caucus.

Publications were discussed extensively. The Board took these actions:

1. Did not accept proposals you submitted for the Baton Rouge Conference.

2. Voted to distribute a mimeographed Significant Activity Report (SAR), of one or two pages each month to the membership to keep them informed about NASAR and what those who are doing things really are doing.

3. Voted to continue to produce *"Briefings"* at least quarterly until other publications arrangements are firmed up.

4. Hunter Holloway is preparing a brief summary statement of guidelines and purposes of NASAR publications.

5. Using the guidelines, General Saunders (you'd have been very proud of his involvement at Kansas City) will solicit proposals from various sources, including you, to produce the desired NASAR publications. These proposals will be submitted for Board action at the Conference in Seattle.

In the meantime, Dennis, I'd like to convey the entire Board's (and membership's) appreciation to you for your contributions and support to NASAR and SAR in general. Few, if any, have done more. We are all proud to say you are a part of us. We look forward, with genuine positive anticipation, to your involvement in NASAR and on the Board and to the good things we can all do together.

Arthur G. Jones, President, NASAR
P.O. Box 2123, La Jolla, CA 92038

Dear Dennis,

Just a couple lines to you to mention that I'm putting together the Eighth Annual Search and Rescue School at the Barstow College for Oct. 3-5. The tuition will probably be again \$15, though this is not confirmed yet.

Proposed classes will include: ELT, Command Post Operations, Survival, Mountaineering, Mine and Cave Rescue, Communications; and new classes on Knot Tying, "The Twilight Zone", Emergency Field Care, Disaster Coordination, "The Survivors," Water Rescue and Venomous Bites. We will also have old classes with a new twist on Day and Nite Tracking, Day and Nite Map and Compass, Air Search and Rescue, and Search Dogs.

As you see there will be several new classes. "The Survivors" will include these fortunate souls that have been found that may have presented a particularly difficult situation to either themselves or the searchers. Unfortunately, these people don't stick around too long to talk about their experiences, which is where I need your help. I am open to suggestions as to the name, address, and phone, of located missing subjects that are willing to tell their stories. How they got lost, and how they survived; where we went wrong. And the lost person's advice to the SAR person, turnabout fair play. One such person I am trying to secure is Daniel Roberts of Idaho, who eluded SAR for three months and was declared dead.

The "Twilight Zone" includes parapsychology and psychics. Dr. Bernard Barber from Phoenix, Arizona and Clarissa Bernhardt have tentatively agreed to attend the seminar and explain their abilities. Clarissa is a member of San Jose Search and Rescue and is world renowned. Dr. Barber is not familiar with SAR but has done some important work in the world of searching — through the minds with hypnosis.

And what better opportunity to do this than on a real live search. For openers, Dr. Barber will hypnotize our consenting "survivors" and find out what really happened out there, and find out where we went wrong and what the survivor did right, this to avoid similar future mistakes.

MORE LETTERS

Secondly, there are two unsolved missing person cases that we have worked on. I am going to invite the witnesses and informants from those two cases to attend and with their consent submit to hypnosis to see if we can get information that wasn't known at the time of the search. If information warrants, Clarissa permits it, we will go to the point last seen, both spots are no more than 50 miles from the college. Shorter than that by helicopter. With any luck at all, two unsolved cases may be solved. Sounds neat, huh.

Also hopefully scheduled for that same weekend will be our first Telethon, broadcasted live via cable to the Barstow residents and over radio through a local station.

There have been three Telethons in Barstow so far. The first and the worst netted about \$14,000. The second for a heart transplant patient netted over \$130,000 that included donations from Hollywood and recording personalities. The third was a little less successful for "Toys for Tots," but was considered a success in its own right.

Our endeavor is to secure donations from the public to purchase equipment for the safety services of the high desert and to establish a scholarship fund for local handicapped children. Two pieces of equipment we have in mind includes a SAR repeater and the vehicle extrication tool "Jaws of Life." I think with a lot of work and determination this Telethon will materialize. Just imagine how exciting a weekend it can be.

Brian Zane, 1980 School Director
 Sheriff's Barstow Desert Rescue Squad
 P.O. Box 108, Barstow, CA 92311

Dear Dennis;

This is just a brief commentary on a recent disappointment, and a little bit of encouraging news to balance it off.

Unfortunately, "240-Robert" has been cancelled, and replaced by, of all things, "Laverne and Shirley." For the time being I am content to watch CBS, but I still have hope. My father, who has been active in radio and television station management and ownership for over thirty years, and hence, knows about such things, feels that due to the money that Mr. Rosner and Filmways put into "240-R," we may see it rise again as a summer replacement, as it's competition, "The White Shadow" did last year.

In the meantime, we cannot afford to let any momentum which the show may have brought about fade away. As you stated in your editorial in the fall issue, "240-Robert" can be the catalyst for SAR that "Emergency" was for fire and ambulance services. We in SAR are said to be resourceful people. I'm sure that even with just 13 episodes of the show, we have gained much needed exposure, and can find ways to utilize it.

The encouragement came from a movie which was shown in our EMT refresher class last night. The film, "Trauma Patient," was shot in L.A. County, and was narrated by a L.A. City paramedic captain. I am the only SAR team member in the class, the remaining 33 being made up of volunteer fire ambulance/rescue and commercial EMS personnel. The film was very well done and realistic, and did a very unbiased job portraying both fire and commercial medical crews, AND . . . to my great surprise and pleasure, Search and Rescue medics as well. In its own way this too will serve to project the fact that we too are emergency care professionals, especially in areas like New York, where we are not yet a recognized part of the emergency service community.

By the way, if any of your readers have black and white pictures of their units in action, their vehicles, public relations activities, or other SAR related things, please send them to me. I need between one and three hundred pictures for a book which I am trying to put together on SAR teams across the country. I will return any or all that I am requested to, if the sender will include his or her address.

Hans L. Erdman, EMT-W
 Wilderness Volunteer SAR Team
 P.O. Box 770, Dryden, N.Y. 13053



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**L-TRONICS, 5546 Cathedral Oaks Rd.
 Santa Barbara, CA 93111 Attn: SAR Dept.**

BUSH ON SAR

By Stan Bush
2415 East Maplewood Avenue
Littleton, CO 80121

HOW IS YOUR SARYM?

Yes, how is it working in your area? What's a SARYM?? — That's a total Search and Rescue SYstem! You have your team and it's active; trains regularly; is enthusiastic; is called by the local authorities; and finds the missing persons. BUT, do you *really* have a total SARYM?

A total SARYM is one that includes ALL of those resources that are available in your area to manage the search function. They have been identified, evaluated, cataloged, contacted to see if and when and how they will respond — and they are used.

These resources fall into two general categories. One is that which is considered most frequently in the training of SAR teams. That is the category of those organized units who can be called to perform the search and rescue function in a given area. They include the Sheriff's Department, Police Department, Posses, Fire Rescue Teams, Ambulance Services, the Emergency Medical System of your area, other SAR teams and speciality teams.

These groups are very important to the SAR function and it is critical that you — as a team — know their availability, capabilities and that you work harmoniously with them.

However, there is another category of individuals and organizations that is often overlooked in the development of the victim oriented total search and rescue system. That is the support help that is available in most communities only for the asking. It is vast, and most of the members are willing to give of their time and talents, but they have to be contacted. Meetings must be held. Mobilization plans must be developed. Individuals and groups must make a commitment. There must be training and coordinated exercises. They then will be most effective.

Many of the SAR teams and state organizations around the country have made these contacts and have the massive resource files that can be used to mobilize full support for a particular specialized incident — like a plane crash with many survivors or an extended multiunit mission for a missing person. But in other areas these resources have NOT been involved and that means that it is the victim that suffers.

The procedure is simple. Study your community. Secure a listing of all of the organizations that might be of help (see below). Set up a meeting with their representatives and go from there. But, the important word is "DO" — *DO it!* Then you'll have all of the people who might be of help to you working for the victim and you'll have a total SARYM.

As a guide toward this approach, here is a listing of **SOME** of the possible support and action services that might be available in any particular community. They are not listed in any order, and the list can certainly be increased. But, if you find **ONE** resource on this list that you hadn't thought of it will be worthwhile. Check it carefully

- **Specialty teams** in your area (mine, cave, kayak, underwater recovery, Coast Guard, avalanche, technical rock, etc.)
- **4-wheel drive clubs and units.** (Also any ATV units)
- **Over snow units and the National Ski Patrol** (in appropriate areas)
- **Motorcycle clubs and organizations.**
- **Mounted Posses and other equestrian groups**
- **The American Red Cross** — fabulous for relative support and feeding
- **The Salvation Army** — the same.
- **Man Trackers** — check with law enforcement and prisons in the area
- **Amateur Radio Emergency Service** — a fantastic nationwide resource for communications.
- **Citizens Band Groups** (the trained REACT teams who will respond efficiently)
- **Police Departments** — for interrogation teams and in-town contacts)

- **The Civil Air Patrol** — this resource has been vastly underused. They have not only proven to be able to find missing persons from the air, but they can also serve as an "Air Boss" if you have a number of aircraft in the area; warn if the approach of major storms; relay messages in difficult terrain and relay persons and supplies to search bases.
- **Aerial Photography** — check with your nearest air base.
- **The National Weather Service** — checking with their 'Lead Forecaster' can often give you access to immediate and long range weather conditions in the Search area as well as access to weather satellite data.
- **Dog Teams** — either tracking or scenting dogs.
- **Military support** — not only with helicopters, but also with trucks, busses and field equipment (tents, kitchens, water supplies, etc.)
- **Commercial helicopter and fixed wing companies.**
- **The Media** — YES, a definite resource. They may have information that you do not have and they should be involved in your SARYM.
- **Psychologists and Psychiatrists** — who may help develop the profile.
- **Ministers** — for their help with relatives and in the event of a fatal.
- **Map services** — with how to access the service; get quick copies and get them to the mission base.
- **Duplicating companies.** If you don't have quick copy facilities with your team it is excellent to be able to get a quick print of missing person data.
- **State Patrol personnel.** For rapid relay of information, personnel, supplies and equipment.
- **Medical Personnel.** In addition to the team's physician advisor it is important that each team know precisely how to interface with the Emergency Medical System in its area and be able to contact hospitals, clinics and ambulance services. Have them participate in the planning and they will be more willing to help with the mission.
- **Scout Groups.** Some may be SAR teams, but others can serve as cooks, couriers, 'gophers' and in many other functions.
- **Schools** — for housing, bussing, feeding and other support services such as providing a secretary to keep the mission log at base camp.
- **Hiking Clubs** — to provide SAR personnel, support personnel and also because they will generally have trained people who KNOW the area and can lead SAR teams to it.
- **Field Kitchens** — any available?
- **Balloons (?)** — Yes, see if they are available with helium (small ones) or other types that could be raised above base camp to quickly identify it from the field.
- **Searchlights** — sources with portable generators to identify high points and/or base camp at night.
- **Utilities.** Public Service, phone and other companies that can provide power, lights, field phone lines and other support.
- **Air Traffic Control Centers** — if you are dealing with a downed aircraft.
- **Computer Centers** — where SAR data can be analyzed quickly.

There are many others, but consider these — make those contacts — hold those meetings — and make sure that **YOUR SARYM** is complete.

It's the victim who will benefit from your efforts. ::



"I STILL HAVE A FEELING WE'RE NOT DOING IT LIKE THE BOOK SAYS."

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Highway fatalities and all transportation related deaths rose in 1979, but the increases were significantly less than they had been in the previous two years, according to preliminary statistics released today by the National Transportation Safety Board.

Both categories increased by from 3 to 5 per cent in 1977 and 1978. In 1979, highway deaths rose 1.5 per cent and total transportation fatalities were up 1 per cent.

On U.S. highways, where historically most transportation fatalities occur, 51,083 persons were killed last year as compared with 50,331 in 1978, according to preliminary data. All transportation modes registered 55,858 deaths in 1979; there were 55,349 in 1978.

Safety Board Chairman James B. King, in releasing the 1979 statistics for Transportation Week (May 11-17), said the Board "finds little comfort in these fatality statistics."

"Transportation accidents are killing more than 55,000 persons each year. More than 50,000 of them still are dying on our highways despite strong evidence that the skyrocketing cost of fuel is reducing the use of those highways.

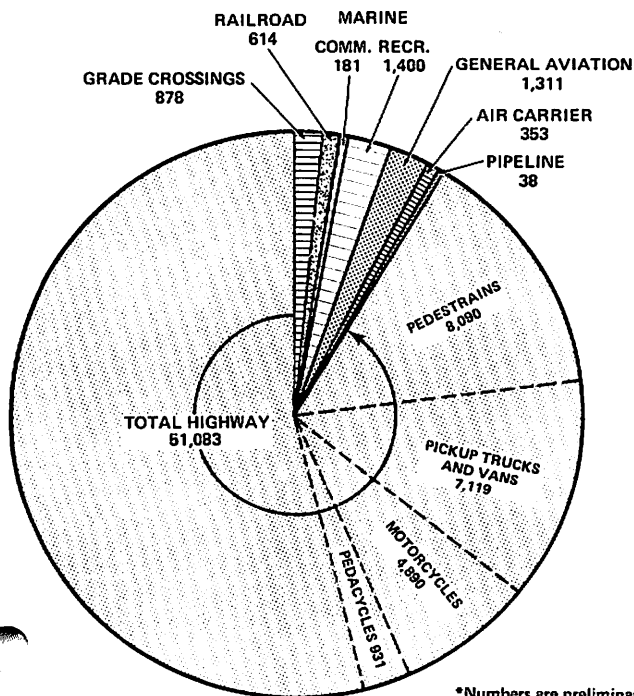
"There is one possible trend which is hopeful. Rail-highway grade crossing fatalities last year were down by 17.5 per cent, and state-by-state totals indicate the primary factor may be the spread and the impact of statewide 'Operation Lifesaver' programs attacking this specific problem area."

In addition to grade crossings, the aviation and railroad modes showed fatality decreases in 1979. Air carrier deaths more than doubled, from 161 to 353, but a reduction from 1,628 to 1,311 in general aviation offset this and produced an overall decrease of 7 per cent. Railroad fatalities were down from 632 to 614, or 2.8 per cent.

The Safety Board's statistics are further detailed in this table and the attached pie chart:

	1978	1979
Highway		
Passenger Cars	28,153	27,788
Pedestrians	7,795	8,090
Pickup Trucks and Vans	6,636	7,119
Motorcycles	4,577	4,890
Heavy Trucks	1,008	1,046
Pedalcycles	892	931
All Other	1,270	1,219
Total	50,331	51,083
Grade Crossings	1,064	878
Railroad		
Intercity: Crew, Pedestrians and Others	569	545
Intercity Passengers	13	7
Rail Rapid Transit	50	62
Total	632	614
Marine		
Commercial	179	181
Recreational	1,321	1,400
Total	1,500	1,581
Aviation		
General	1,628	1,311
Air Carrier	161	353
Total	1,789	1,664
Pipeline		
Gas	30	35
Liquids	3	3
Total	33	38

TRANSPORTATION FATALITIES* 55,858 IN 1979



*Numbers are preliminary estimates.

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Washington, D.C. 20594

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PIGEONS SERVE AS "EYE IN SKY" FOR USCG SEARCH & RESCUE OPS

By Bob Leffelbein
Shetland Acres
Valley Lee, MD 20692

"I have nothing against working with humans. But then you've got to find a way to pay them. Pigeons work cheap." That's the summarizing comment of John A. Nevin, recipient of a \$100,000 grant from the National Science Foundation to team white carneau pigeons with a computer in an attempt to "work out basic statements on the laws of behavior." And this is only one of a multitude of ongoing experiments with animals in attempts to discover and use animal expertise to benefit *homo sapiens* — from teaching porpoises to talk and gorillas to communicate via computerized symbol-using typewriters to simpler, but more immediately useful, search and rescue operations by U.S. Coast Guard trained *Columba Livia* pigeons.

In this latter program, monitored by the Coast Guard Research and Development Office for the Naval Ocean Systems Center, results of tests have been so impressive the trained pigeons in coming months will be assigned to work out of Barber's Point Naval Air Station in Oahu, Hawaii as the first officially designated pigeon search and rescue team. Eventually, as more birds are trained, the Coast Guard hopes to place a "spotter team" at each of its 12 regional air-sea rescue stations located around the United States.

In at-sea trials during 200 flight hours by personnel of the Kaneohe Marine Corps Station's Operations and Maintenance Squadron the pigeons completely outperformed human spotters, even when the air crew knew roughly where to look for the targets and the birds didn't. Pigeons spotted floating targets 90% of time on their first pass; the trained helicopter crews' best score was 38%. During tests, in fact, the spotter pigeons several times further proved their skill by scoring sightings of non-target items. Once they spotted an orange-colored surfboard that had somehow floated out to sea, another time, a small reddish colored shipping crate, and still another time some fishing floats with small red-orange flags attached. The five pilots assigned to the program had a combined total of 34 years of aviation experience and 11 years of search and rescue flying. Furthermore, about 20% of these training runs were conducted in poor weather conditions — high wind, rain and heavy cloud overcast.

Suggestions that falcons or hawks, with their even more acute eyesight, might be used more equitably were discounted early in the project. "Pigeons are easier to handle," Conley explained. "They are much more docile. And they are also much cheaper to secure than exotic birds."

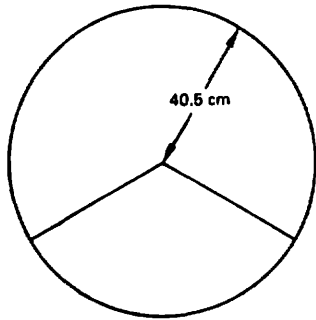
TRAINING METHODS

The first step in training the birds, according to Douglas Conley, who until recently — as a Division of Safety and Advanced Technology staff member — was spokesman for the special Coast Guard project, is to teach them to peck on a special key that activates an auditory signal to alert the copter operator to observe a visual display indicating the direction for search. "They are rewarded with food — corn kernels usually," he continued. "Then they are trained during daily two-hour sessions to peck only when they see orange — first an orange flag, then an orange lifejacket." By that time they have become completely acclimated to their

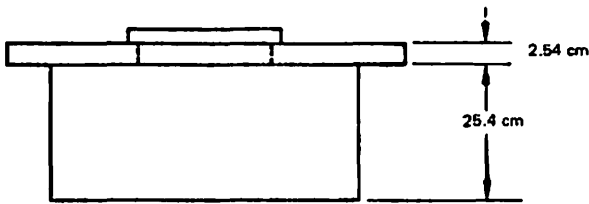


Flight chamber for the spotter pigeons is located directly under the open hatchway, behind the front wheels, on the Coast Guard H52 helicopter. Photo by Robert L. Loeffelbein

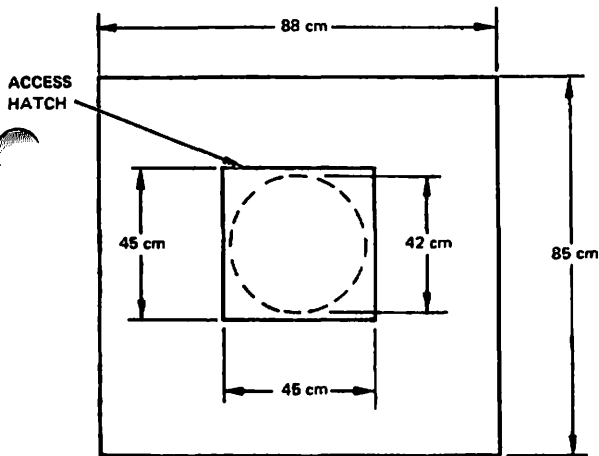
PIGEONS - "EYE IN THE SKY" — continued



TOP VIEW OF BIRD COMPARTMENTS

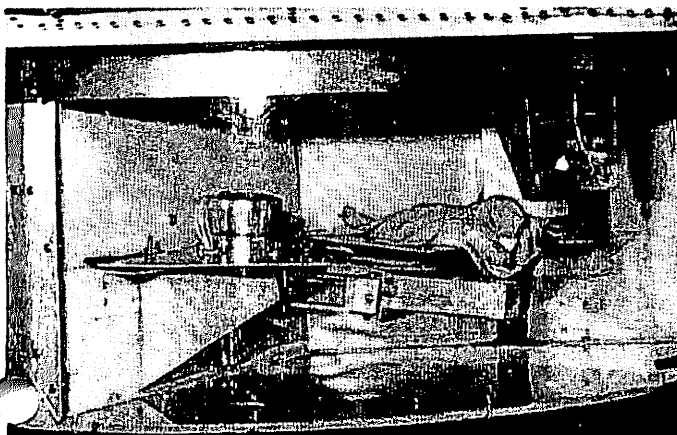


SIDE VIEW OF CHAMBER W/ ATTACHMENT PLATE



TOP VIEW — ATTACHMENT PLATE & ACCESS HATCH

Figure 1. Approximate dimensions of flight chamber.



Spotter pigeon positioned for search and rescue flight inside transparent flight chamber has a visual field of about 200 degrees. Each bird's visual field overlaps as a safety factor.

Photo by Robert L. Loeffelbein

planeboard compartments. Sightings are made from aboard, not from free flight. Each of the three birds used per team has a 200 degree visual area, each overlapping that of the other two.

Once the birds have learned to recognize a lifejacket, they are subjected to helicopter noise until they become used to it. Then comes final exam time. They are taken up in a copter — berthed snugly in newly designed plastic pods on the side of the plane — and given new training spotting and reporting towed orange buoys several thousand feet below on the sea surface.

Training of the spotter pigeons has been done at Kailua Bay in Hawaii. The birds will shortly be completing the training course, which varies between six and eight months since birds don't all learn at the same speed anymore than humans do. Program personnel hope at least six of the 10 that started the course will graduate to the actual search and rescue mission tryouts planned from Barber's Point.

In spite of the fact the first pigeon trainees were lost at sea in a copter crash, setting back the program schedule, the program results have been so positive that further training is being planned — where the pigeons will learn to report various other floating items in addition to orange lifejackets, such as floating ship debris and, of course, people not wearing lifejackets. By early 1979 three of the four pigeons in training had already progressed to reporting red and yellow floating items as well. Those were lost in the crash, however.

The copter crew was saved from that crash, but the pigeons were trapped in plastic cages under the copter's body. "It was a pity," Conley noted. "They had piled up impressive records as spotters." Now a new holding capsule has been designed for the birds, which can be reeled in if such an emergency should occur again.

So far that has been the only setback. The program has moved forward so successfully a report by J.E. Foels, acting C.O. of Barber's Point Coast Guard Station, concerning his evaluation, stated: "... the development costs are cheap, and where else are you going to get superior, expert searchers to work for 'chicken feed'?" That has about summed up the feelings of everyone reporting on Project Sea Hunt. ::

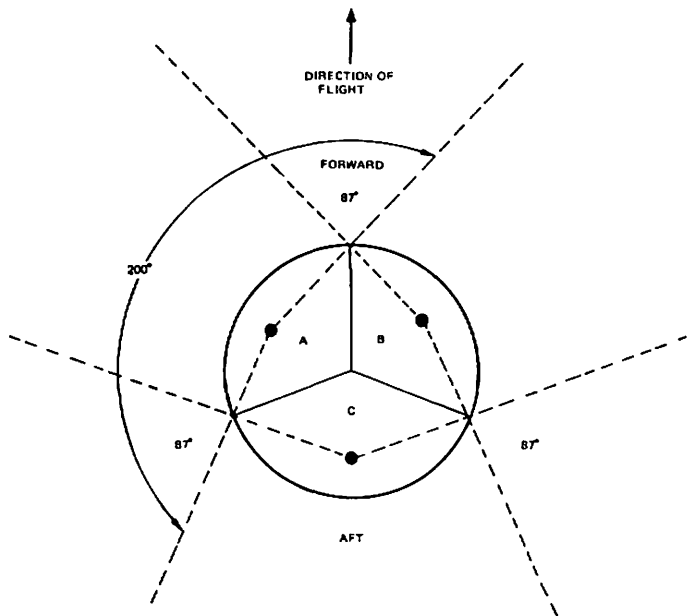


Figure 2. Approximate visual fields of the pigeon in each compartment. The position of each pigeon's (A, B, or C) head is indicated by the small closed circle within each of the three compartments. The visual field for each bird is about 200 degrees, as is indicated by the area between the dashed lines extending from the closed circles. Bird A shares the most forward area with bird B and the left aft area with bird C; likewise, bird B shares the right aft area with bird C. Since each bird shares about 87 degrees of the viewing area with the adjacent bird, six areas are thereby discriminable.

NATIONAL REGISTRY UPDATE

By Rocco V. Morando
Executive Director, NREMT,
1395 E. Dublin-Granville Road,
Box 29233, Columbus, OH 43229

Many changes have occurred at the National Registry of Emergency Medical Technicians (NREMT) as the organization works hard to keep up with the realistic needs of the field, the state of the art, and recognized national standards. We appreciate this opportunity to brief you as to NREMT's background and current status.

The National Registry was formed in 1970 through the efforts of a Task Force of the American Medical Association which was appointed at the recommendation of President Lyndon Johnson's Committee on Highway Traffic Safety. The Committee recognized that there was a need for a national certification agency to establish uniform standards for personnel active in the delivery of emergency ambulance service.

The Registry, headquartered in Columbus, OH is a not-for-profit, non-governmental, independent certification agency that evaluates knowledge, both cognitive and manipulative, and awards certificates of National Board Registration based on its requirements of training, experience and examination. The Board of Directors, liaison members and consultants represent all major EMS organizations in the nation.

Requirements for becoming Nationally Registered are set for each of the three levels of certification. The certification levels are as follows:

- EMT-Ambulance** — Basic level, with training based on the 81 hour National Curriculum (DOT)
- EMT-Intermediate** — Based on modules 1, 2, and 3 plus EOA of the National Standard Paramedic Curriculum; assesses competency in 4 skill areas, i.e., trauma patient assessment, IV, EOA and anti-shock garment

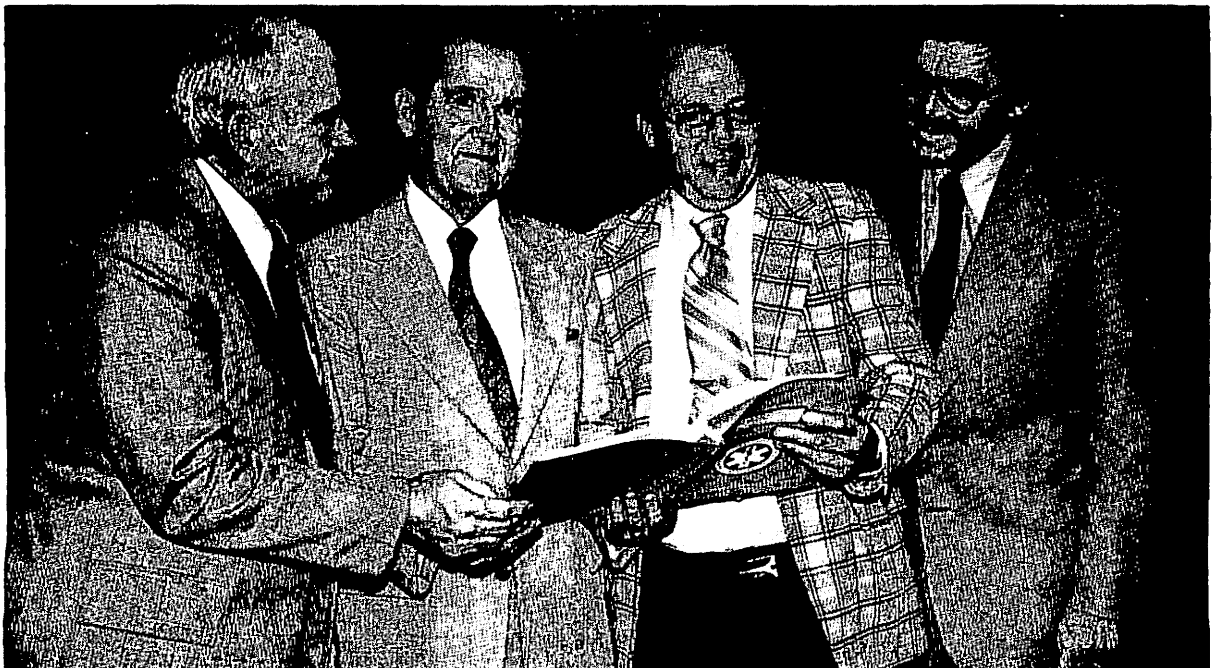


EMT-Paramedic — Advanced level, with training based on the 15 module National Standard Curriculum

NREMT also has a non-ambulance classification at the basic level for those who are involved in patient/health care but are not active in ambulance service. Recertification is required for all levels every two years to assure continued skill and cognitive knowledge through adherence to continuing education standards.

The Registry's certification fees are the lowest of any allied health agency and have remained the same, in spite of inflation, since 1973.

- EMT-Ambulance** — \$15 Registration
\$10 Reregistration (biennially)
- EMT-Intermediate** — \$25 Registration
\$10 Reregistration
- EMT-Paramedic** — \$40 Registration (\$10 is returned to test site to help defray cost of practical exam)
\$15 Reregistration



National Registry Board members (left to right) James Finison, Kenneth F. Kimball, M.D. David Hill, Jr., and Roger D. White,

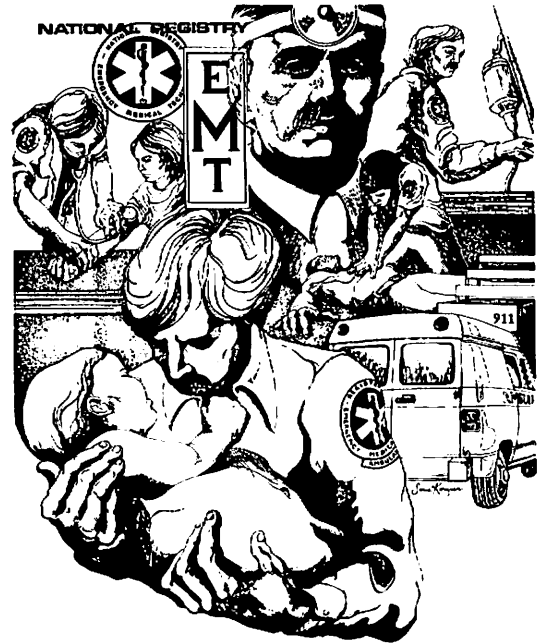
M.D. review Registry proceedings at a recent Director's meeting in Chicago.
Photo by S.C. Roberts

NATIONAL REGISTRY UPDATE — continued

All fees charged by the Registry are service fees. They are not levied by clubs, unions, or associations. The following represents the distribution of each dollar received in fees by NREMT:

Salary, Wages, Payroll Taxes	\$.33
Computer Services (initial application, examination, scoring) .....	.12
Newsletter .....	.08
Travel & Meeting Expenses .....	.06
Printing (applications, exams, pocket cards, certificates, etc.) .....	.06
Rent .....	.06
Insurance & Professional Fees .....	.06
Postage & Shipping .....	.05
Office Supplies, Equipment & Furnishings .....	.05
Program Development .....	.05
Emblems .....	.04
Telephone .....	.02
File Maintenance & Miscellaneous .....	.02
	<hr/>
	\$1.00

The National Registry has recently installed an in-house computer system which gives us the capability of printing individual listings which are sent to the candidate, test site, and state EMS office, with the individual's score for each of the sub-tests as well as the average score for the entire group, sub-test by sub-test. New examinations will be offered with increasing frequency as the growth of the large bank of test questions continues. The Registry encourages in-put into the question bank by qualified individuals and maintains open communications with those utilizing Registry services in regard to various facets of our operation.



when the unexpected strikes

We are highly aware of the individuality of the fifty states in this country, and while adhering to our charge of promoting quality pre-hospital patient care through national EMT training and examination standards, we also have some built-in flexibility to deal with the unique problems faced by any given state. We look forward to an ever-growing relationship with EMTs and others in America's EMS community and would be pleased to hear from you if there is further information you desire. #



Chief Harmon Dutko of Columbus, OH Fire Department (left) and Tom Parr watch as Rocco Morando interbates with the

helpful suggestions of Bud Ott (right) at the International Rescue and Emergency Care Conference. Photo by Rocco V. Morando

"This article is an excerpt from a book by one of this nation's outstanding authorities on mountain rescue, Tim Setnicka. Book title is WILDERNESS SEARCH AND RESCUE, by Tim Setnicka, edited by Kenneth Andrasko, published by the Appalachian Mountain Club, 5 Joy Street, Boston, MA 02108, \$9.95, about 400 pg, 150 photos, 175 drawings. Major sections on search theory, technical rescue tools and techniques, rescue systems, cave SAR, whitewater SAR, snow and ice and avalanche SAR and field medical considerations."

Helicopter Technique

"Like all novices, we began with the helicopter . . . but soon saw that it had no future and dropped it . . . If its engine stops, it must fall with deadly violence for it can neither float like a balloon nor glide like the aeroplane. The helicopter is much easier to design than the aeroplane but it is worthless when done."

—Wilbur Wright,
inventor of the airplane

HELICOPTERS IN ACTION — THE POWER AND THE GLORY

In May 1978, two climbers were climbing the 600 meter standard route on Quarter Dome in Yosemite, a Grade VI, i.e., a route taking over two days.

At about 1 P.M. on the first day, the leader was looking around for a place to rest some 20 meters above his belayer when he suddenly fell. He pendulumed into the rock, critically injuring himself and finally coming to rest hanging free on the rope, three meters above his partner. The belayer slowly lowered his friend to a small one-by-two meter sloping ledge. He knew immediately that the leader was severely injured because his face was covered with blood and he was not fully conscious, only moaning in pain. Eventually, mouth-to-mouth resuscitation was necessary and the injured climber started breathing again.

His partner went for help by rappelling seven pitches and running five kilometers to a telephone. He reported the incident at 5 P.M. It was immediately decided to ask for military assistance from Naval Air Station LeMoore, which has performed extensive search and rescue work in Yosemite and Sequoia-Kings Canyon National Parks.



Landing in open meadow, Yosemite

Photo Tim Setnicka

From the Park Service contract helicopter, SAR rangers witnessed a dramatic scene. The injured climber was waving his arms sporadically, hanging virtually upside down on a sheer rock wall, his face covered with blood. He was about 300 meters down from the top of Quarter Dome; it was obvious that he would not live long without immediate help.

Plans for a major rescue operation took shape, including flying twelve climbers to the top of Quarter Dome and lowering one or two down the wall to the victim. At best, this would take hours, and it was 5:45 P.M. and getting dark. There was little choice, so the contract helo began to shuttle equipment and rescuers to the top of Quarter Dome.

At 6:25 P.M. "Angel-1," a twin-engine Huey type helicopter arrived in Yosemite Valley, and immediately embarked on a reconnaissance of the scene. Aircraft Commander John Sullivan and copilot Don Swain hovered near the injured climber and blood-splattered rock, devised a plan, and sped back to the Valley floor.

"He's still alive, Butch," Sullivan told Ranger Butch Farabee, "but he won't live long."

"Yeah, we know. What is your plan?" Butch inquired.

"I think we can get him off by doing a cliff evolution. I think we can swing Benny (the crewchief) into him if we hover high enough." Sullivan answered.

"Okay, go for it," Butch said. "We'll tell the rangers on top." Sullivan's crew emptied the helicopter of all excess gear to lighten it.

A cliff evolution is a type of helicopter rescue developed by the search and rescue personnel at LeMoore, similar to fixed-rope helicopter technique common in Canada and Europe. One or two crewmen rappel down fixed ropes from a hovering helicopter, stabilize an injured person, attach him to the ropes, and then hang tight while all personnel are flown away, still suspended underneath the helicopter, to a landing zone where they are eased down. In this case, the victim would be unable to help himself, and the distance beneath the helicopter would be extreme — 65 to 100 meters.

As Angel-1 lifted off again toward Quarter Dome, Lt. Sullivan and his crew briefed this plan over the helicopter intercom system. Crew Chief Revels would rappel out of the helicopter, assuming Sullivan and Swain would ease the helicopter in close enough to the face to get over the injured climber. Crewman Decicco would watch the main and tail rotor clearances as the helicopter hovered near the wall, and monitor Crew Chief Revels while he was out of the helicopter. Crewman Delgado would belay Revels on a separate line, in case of a problem with the main rope.

After four to five minutes of experimenting, Sullivan and Swain found a spot where they could hover above the victim, but it was much higher than optimal due to the steepness of the face.

Sullivan began to ease his helicopter toward the wall. During this process, the pilot concentrates on the helicopter's controls and watches a single reference point outside. The copilot watches the hundred or so gauges and lights and reports engine, fuel, torque, and temperature information to the pilot every 20 to 30 seconds. When hovering, there is no forward air speed to help lift the aircraft; only engine speed and rpm's keep it in the air. The engines and gearbox may overheat during prolonged hovering, causing a mechanical failure or a hastily aborted hover. Anyone suspended below the helicopter would be killed or seriously injured.

As Sullivan continued to ease next to the wall, Decicco stuck his head out the side door, and called out the main and tail rotor clearances to the pilot over the intercom system. Once over the injured climber, Sullivan held his hover.

"Okay Benny, anytime," Sullivan told the crew over the helicopter's intercom system (ICS). A hundred-meter rope was dropped out of the right side door. Revels knelt there while Decicco gave him a last-minute safety check. Decicco looked at Delgado, Revels' belayer, and when the thumbs up was given, Revels backed out of the doorway and began his spiraling descent. Sullivan continued to hold Angel-1 close to the rock; the main rotary blade was less than three meters from the cliff.

"He's about 50 feet down, Sir," Decicco called over the ICS, "75, 100, about halfway . . . 175 . . . 250. He's even with the climber now, but we'll have to move him in closer to the wall." Still one meter away from the struggling victim, Revels radioed, "Move in, I can't reach him!"

Techniques — continued

Sullivan told his crew, "Get ready! Decicco, watch that damn wall!"

"Yes, Sir," said Decicco, lying flat on his stomach, helmeted head sticking out of the door watching both Revels and the rock. "Easy, Sir; easy, Sir; right, six feet Sir; tail is clear; hold your hover, Sir; HOLD your hover."

The main rotary blades of the helicopter were now less than two meters from the wall. The only possible escape in the event of an engine failure would be to drop to the left without turning the tail rotor into the rock. Enough control might possibly be reestablished for an autorotation — into 30 to 40 foot trees — but it would be certain death for both Revels and the victim.

Revels rerigged the climber's harness so it could be clipped onto his own harness. Revels was twisting around, unable to stand on anything; the victim was barely conscious and kept sporadically fighting him. Continuous bleeding all over Revels' hands made it difficult to determine what his injuries were.

After fifteen minutes of hovering, Sullivan could feel the sweat running down the inside of his flight suit. After twenty minutes of hovering, he felt his arms and back tense up from the tension of constantly working the controls.

Finally after twenty-two minutes of hovering, Revels radioed that he was ready for lift-off. Sullivan prepared to take the extra 90 kilogram load on one side of the helicopter. Revels was still restraining the barely conscious victim and keeping his airway open, while making three attempts to cut him free from his ropes. At last, the two of them swung out beneath the helicopter.

Decicco helped Sullivan ease Angel-I away from the rock. "Easy; left Sir; the tail is clear . . . easy left . . . okay to start a turn to the left . . . Benny's looking good down below — minimum swing . . ." and so forth until touchdown in Ahwahnee Meadow, a five-minute flight away. Some 70 meters below the moving helicopter, Revels was still trying to keep the climber from hurting himself or Revels, or, worse yet, unknowingly disrupting a piece of equipment.

Once on the ground, Revels swiftly unbuckled himself and the injured climber while rangers supported him, still miraculously alive. He was rushed to the local medical clinic where doctors stabilized his condition. Angel-I waited to transport the injured climber to a hospital outside the Valley for immediate surgery to relieve the pressure on his brain. The entire rescue took less than one hour from the time Angel-I first landed in Yosemite Valley.

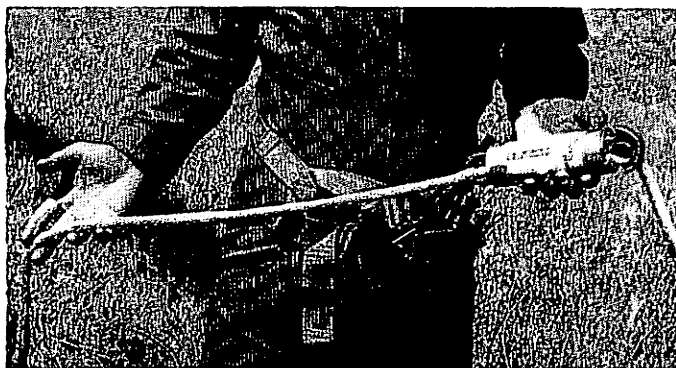
General Considerations for Helicopter Use

Over the past fifteen years or so, perhaps nothing has changed SAR work more dramatically than the development and refinement of helicopters, especially those with turbine engines. Their widespread use in the Vietnam war helped rapidly introduce them to all aspects of American life, from firefighting to shuttle service to medical evacuation. The new helicopters allow quick and easy access to, and extrication from, almost any remote area. The speed and efficiency of many recent SAR operations has been primarily a function of the availability of these versatile workshops.

Some of the more powerful ships have been provided an aerial operations platform to work from while hovering ten meters from a big wall or steep slope.

Many of the traditional limitations of aircraft in SAR use have been minimized or overcome entirely. High intensity lighting, infrared goggles, close range radar systems, and special navigation techniques have increased capabilities for night operations. Rescue sites are now more accessible because highly trained crews in the new ships employ techniques like one-skid landings or hovers above ground, with rescuers rappelling down or being hoisted out. Some of the military ships carry crewmen whose sole duty during takeoff, landing, and bad weather is to observe and continuously report to the pilot main and tail rotor blade clearances and other obstruction information. This vastly increases the work capacity and precision of the helicopter by allowing safe operations in very confined spaces with constantly changing factors, like updrafts in mountain canyons. Also, larger engines make it possible to do things like high altitude hovering, or landing on the summit of Mt. McKinley (6194 m/20,320 feet).

Along with these newer helicopters have come some modern heli-rescue techniques which, combined with older techniques now made safer by the new machines, gives the rescuer a full bag of tools to solve SAR problems.



Sky Genie military rappelling device attached to crewman's harness. Photo Kenneth Andrasko

Helicopters are Great SAR tools and have significantly decreased the time an injured person must remain on the field. Helicopters have saved time, effort, and lives. But one must maintain an alternate SAR plan, a "Plan B," and always evaluate the total effectiveness of using a helicopter in each phase of a given operation.

In many parts of the country, such as National Parks and Wilderness Areas, the use of helicopters is illegal unless there exists a critical situation. One must always contend with the problems of fuel, wind, air density, altitude, temperature, and torque. Mechanical breakdowns tend to be infrequent, but they do occur, with very serious consequences, and pilot error is not unknown. Weather and darkness have made flying hazardous ever since the Wright brothers first got the whole idea off the ground. SAR personnel must always consider the negative impact of any one of these factors: bad weather, malfunction, darkness. We therefore want to stay *helicopter independent* in SAR planning and thinking, in spite of the seductiveness of constant reliance on helo support.

There are innumerable military and government manuals on helicopter safety. The National Park Service and National Forest Service both have excellent publications on hand signals, wind direction, landing zones, clearances, and selections. Study these if you will be involved in ground support work. The following comments summarize some of the important points contained in these publications. The best SAR pre-plan for helo support is founded on personal familiarity with the particular helicopter and crew you will be working with, and training in the procedures they prefer. On-the-job training is much better than reading books (like this one).

When evaluating the option of helicopter use in a particular operation, one must consider several questions.

- 1) How serious is this SAR? Does it warrant the cost and complexity of helo support?
- 2) Given the type of helicopter available, what are its limitations under optimum conditions?
- 3) What is the pilot's experience and willingness? Has he flown already today?
- 4) What are the current weather conditions, and how many hours before dark?
- 5) Where is the helicopter now, and how soon can it be where it is needed?
- 6) Is there a faster (but perhaps more strenuous) way of doing the operation?
- 7) Is there a safer way to do the operation, especially considering the dangers introduced by and the safety of the helicopter and crew?
- 8) Should a fuel truck be ordered to stand by during the operation, with "professional" heliport personnel available to assist?

The decision between use of the helicopter and alternative strategies is based on what functions one needs performed, within certain safety and time frame constants. Likely tasks include:

- 1) Reconnaissance of a situation and victim location
- 2) Simple victim pick-up from a landing zone
- 3) Transportation or rescue personnel to and from the scene

Continued on page 23

May 15, 1980

CANADIANS WIN OVERALL SAREX TROPHY

MARCH AFB, Calif. (MNS)—Canadian pararescue forces regained their dominance over the Americans as the visitors from the north won the overall title in the International Search and Rescue Exercise which ended at March May 15.

The 413th Transport and Rescue Squadron of CFB Summerside, Prince Edward Island, Canada, won the Saunders-Mackenzie Award for best overall SAREX 80 team.

Pararescuemen from the 1550th Aircrew Training and Test Wing, Kirtland Air Force Base, N.M., placed second in the competition which included 12 teams — six each from the United States and Canada.

Military Airlift Command's Aerospace Rescue and Recovery service sponsored SAREX 80. The exercise included three Air Force active duty units, two Air Force Reserve and one Air National Guard entry.

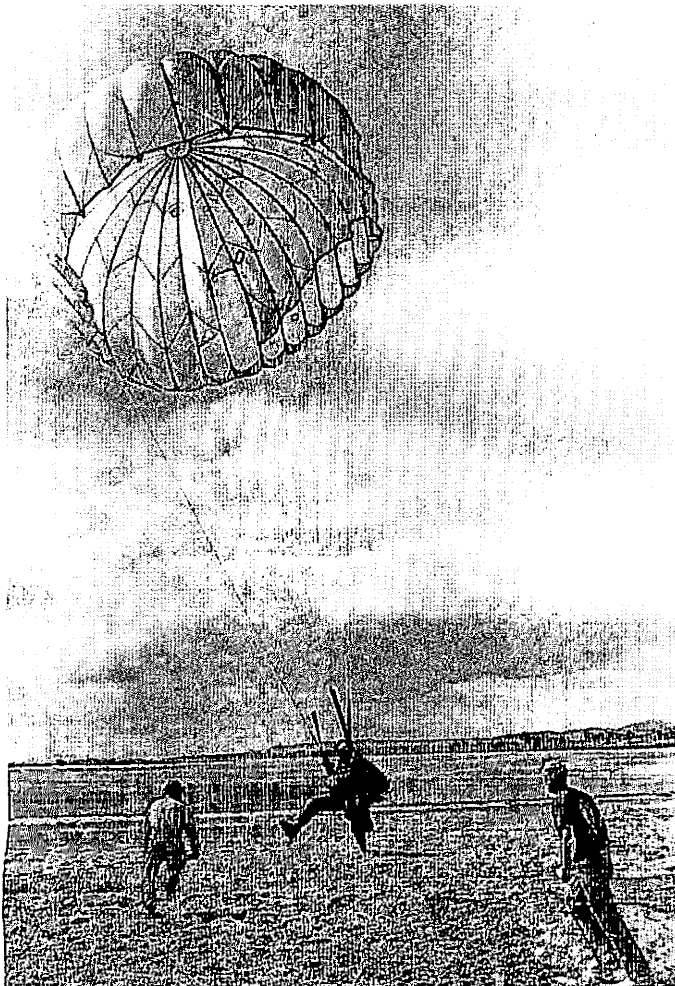
SAREX 80 events featured parachute jumps, medical exercises and search and rescue exercises for a four-day period. The 1550th ATTW team won the Sullivan Cup for its medical exercise techniques.

The 303rd Aerospace Rescue and Recovery Squadron, an Air Force Reserve unit at March and winner of last year's SAREX, played host to the exercise and won the Allison Trophy for best team parachute jumps.

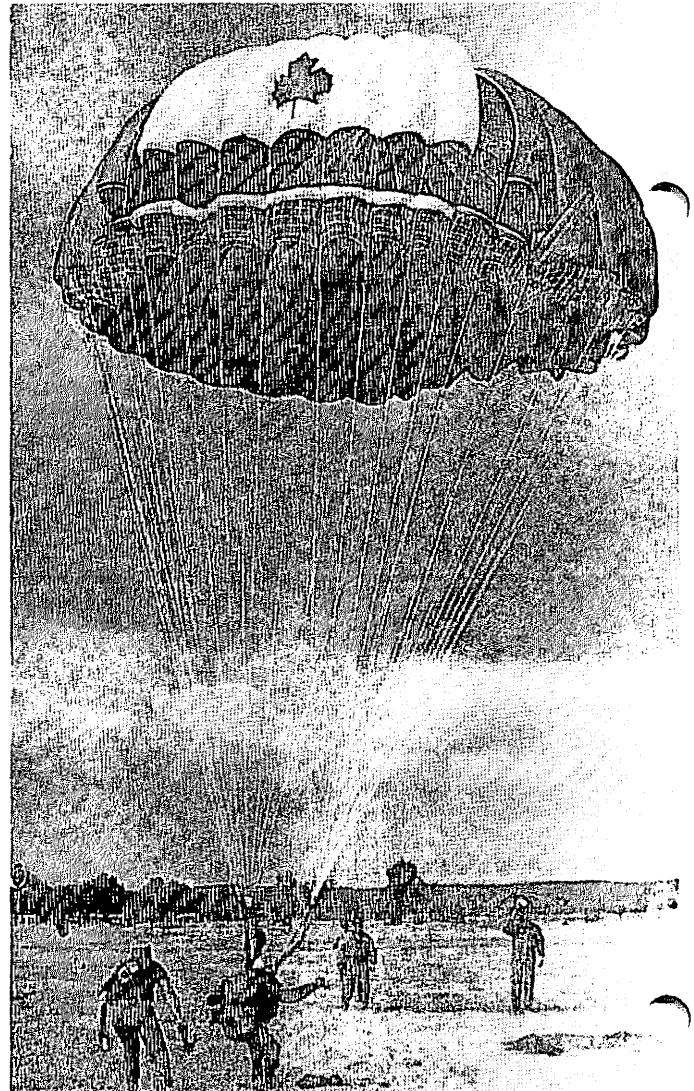
Master Corporal Robert P. Beattie of the 413th TRS received the Pararescue Memorial Trophy for having the best individual SAREX jumps.

The best team in the search and rescue portion of SAREX was the 442nd TRS of CFB Comos, British Columbia.

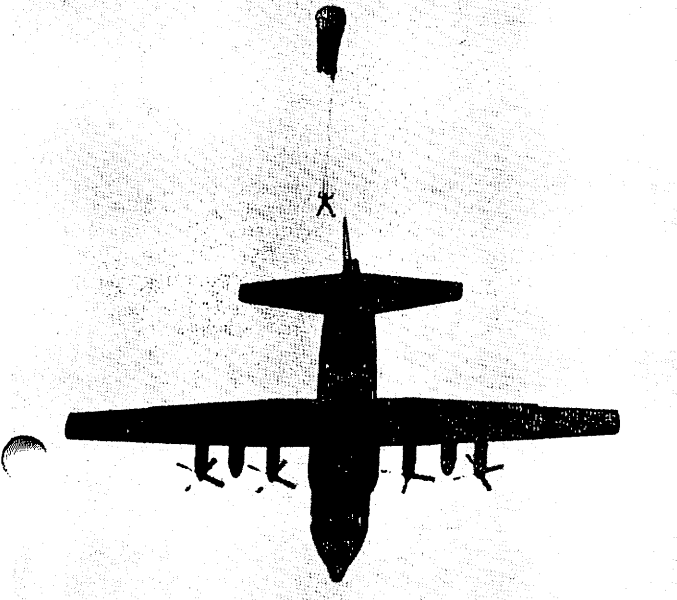
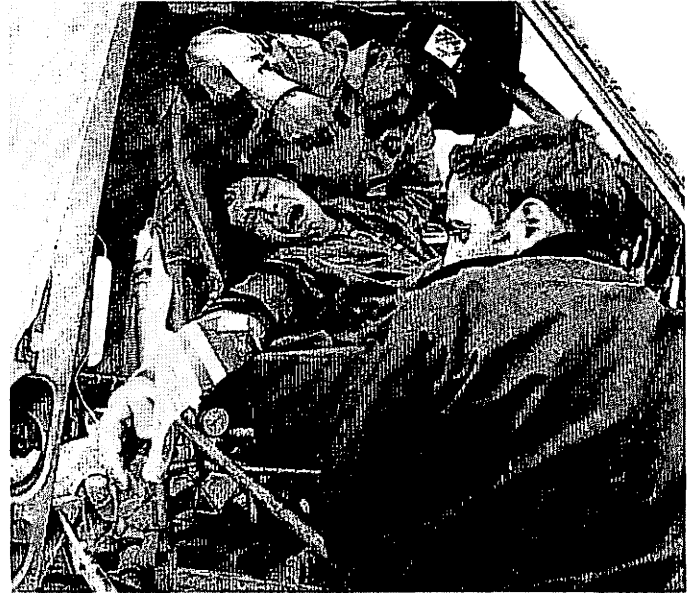
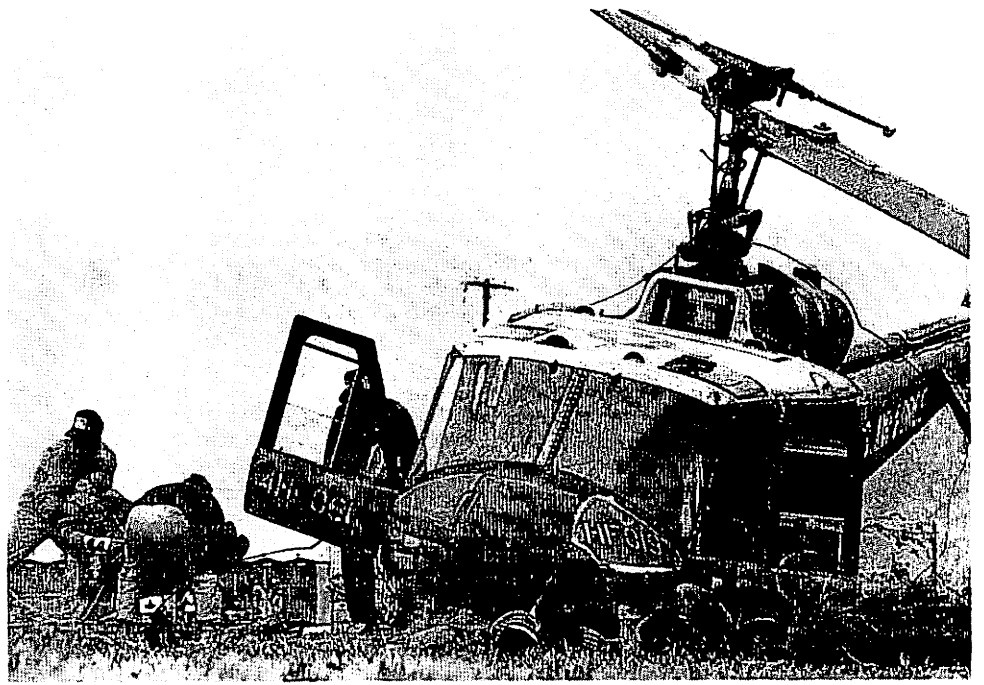
SAREX competition is alternated each year between U.S. and Canadian soil. Aside from rescue contests, SAREX' purpose is for pararescuemen of both nations to get together in an exercise where they can practice and exchange ideas on the best rescue techniques. ¶



An American pararescueman touches down during the parachute jump competition. U.S. Air Force photo



A Canadian pararescueman touches down during the parachute jump competition. U.S. Air Force photo



Photos from lower left, clockwise:

A pararescueman from the 55th Aerospace Rescue and Recovery Squadron at Eglin Air Force Base, Fla., jumps from an HC-130 Hercules aircraft during the parachute jump competition.

U.S. Air Force Photo

SSgt. T.E. Beranek Jr. of the 33rd Aerospace Rescue and Recovery Squadron, Kadena Air Base, Japan, attends to a survivor after a simulated helicopter crash.

U.S. Air Force photo

An American pararescueman closes in on the target during the parachute jump competition.

AAVS photo by Technical Sgt. Bob Wickley

Canadian pararescuemen attend to victims at a simulated crash site during the medical exercise competition.

AAVS photo by Sgt. Joe Coleman

Canadian pararescuemen attend to the survivor of a simulated helicopter crash.

U.S. Air Force photo

NEWS AND RUMORS — continued

The Air Force Rescue Coordination Center, after receiving notice from the U.S. Coast Guard of the need to evacuate the ship, notified the commander of the 305th Aerospace Rescue and Recovery Squadron, a unit of the 403rd Rescue and Weather Reconnaissance Wing co-located at Selfridge ANG Base, Michigan. The 305th scrambled an HCH-3 Jolly Green Giant helicopter at 10:55 a.m. on Apr. 6, 1979 and was on the scene 40 minutes later.

As the helicopter approached the *Labradoc*, heavy ice covered much of the ship and waves were breaking over the bow, surging across the forward 200 feet of deck. Capt. Oral W. Carper, the pilot from Utica, Mich. and Capt. Albert E. Taff, copilot, from Sterling Heights, Mich., maneuvered the helicopter into the wind and approached the vessel from the stern.

Tech. Sgt. Russel L. O'Neal, the flight mechanic of Flat Rock, Mich. and Staff Sgt. Robert M. Rohde, pararescue technician of Mt. Clemens, Mich., helped secure Tech. Sgt. Louis DeMartino, another pararescue technician from New Baltimore, Mich., to the penetrator winch cable for descent to the ship's deck. Heavy turbulence made movement inside the aircraft nearly impossible.

Carper hovered over the stern of the *Labradoc* as DeMartino made his departure descent from the helicopter.

O'Neal positioned himself with head and shoulders outside the helicopter's door to control DeMartino's descent and provide Carper with directional information. The combination of heavy turbulence, severe wind and freezing temperatures made it extremely difficult for O'Neal to safely maintain his position. Meanwhile, Taff monitored the helicopter's performance while Carper tried to maintain the hover.

As DeMartino continued his descent to the ship, and the cable length increased, the force of the wind carried him diagonally to the rear of the helicopter. To prevent damage and possible failure of the cable and pulley assembly, designed for upright operation, O'Neal struggled, leaning outside the aircraft, to pull the line as near vertical as possible while continuing to lower DeMartino.

Railings, guide wires, supports, antennas, and masts encircled the boarding area on the stern of the ship. As O'Neal guided the pararescueman into the small opening approximately 6 by 15 feet, he directed Carper to slowly move the helicopter forward to compensate for the wind effect on DeMartino.

As the pararescueman neared the deck, O'Neal attempted to coordinate the operation of the hoist to the pitching of the vessel. He successfully managed to drop DeMartino onto the deck as the stern was descending. However, at that instant, the helicopter was struck by a severe wind gust. The abrupt movement of the aircraft dragged the pararescueman across the deck and into a lifeboat support frame. The cable tangled in the superstructure and tethered the helicopter to the ship. O'Neal immediately deployed additional cable to prevent pulling the ensnared DeMartino through the steel supports. With cable slackened, DeMartino was able to escape from his precarious position and entangle the line.

The helicopter climbed and moved clear of the ship as DeMartino made his way toward the assembled seamen. The severe wallowing of the ship in the stormy seas compounded the problem of movement on the listing deck.

DeMartino shouted instructions above the roar of wind and water, but discovered only a few of the ship's crew could understand English. By using the ship's captain to translate, and demonstrating penetrator procedures, he was able to adequately prepare the mariners for evacuation.

Still another problem was encountered as the helicopter maneuvered into position for the first pick-up. Without DeMartino's weight, the penetrator was being blown 90 to 100 feet to the rear of the helicopter. This required repositioning the aircraft forward of the point used to lower the pararescueman.

The new position deprived Carper of visual reference to the ship. Taff, however, managed to retain sight of the upper portion of the forward mast through the windscreen at his feet. By using the directional information provided by O'Neal and altitude information from Taff, Carper managed to maintain a 15 to 20 foot hover above the superstructure while inserting the penetrator to DeMartino.

Because of the requirement to evacuate at least 10 seamen, DeMartino planned on sending mariners up the hoist in pairs. The operator's manual states that the device could overheat and become inoperative if used for more than five operations in a 45-minute period.

O'Neal placed the penetrator on the deck and DeMartino began the attempt to secure the first crewmen to the device. The bulkiness of their life vests and thick garments, coupled with the constant rolling and pitching of the ship made the task impossible. As DeMartino was making a final effort, the ship heaved violently and tossed the trio forcefully against a bulkhead. One of the mariners received a head laceration as a result of the sudden impact.

Not knowing the extent of the injury and unable to achieve two-man retrievals, DeMartino attempted to contact the helicopter with his survival radio to report the situation. Communication could not be established due to the excessive noise created by the wind, water, and aircraft.

DeMartino secured the injured mariner to the penetrator and signaled O'Neal to begin the evacuation. The flight mechanic carefully directed the pilot to slowly back the helicopter as the wind induced slack was being removed from the cable. The instant the mariner became airborne, O'Neal directed Carper to climb as rapidly as possible to clear the maze of obstacles surrounding the pick-up area. The reel-in operation continued as the helicopter pulled free of the ship's superstructure.

Approaching the door of the aircraft, the mariner slipped from the penetrator seat and immediately began to fight the device. O'Neal managed to twist the cable positioning the injured seaman's back to the door, and with Rohde's aid, pulled the survivor into the aircraft. He immediately began directing Carper back into position for the next pick-up. Rohde attempted to question the bleeding survivor about additional injuries, as he bandaged the head wound. However, he encountered the same language problem as DeMartino. He placed the injured mariner on a litter and continued his examination while monitoring the survivor's vital signs.

As the evacuation continued, Rohde returned to the door to aid O'Neal as each survivor approached the aircraft. It required efforts of both men to pull the mariners into the helicopter because of the heavy turbulence and high wind. Once inside, Rohde seated the survivors, checked their physical condition and then returned to check the status of the injured survivor.

As the penetrator was being lowered for the fifth survivor pick-up the helicopter was struck by another strong gust. The device hit the ship's deck, slid under the railing, and into the stormy lake. DeMartino pulled the penetrator from the water and made his way with it back to the pick-up area to continue the evacuation.

After the eleventh mariner was lifted into the helicopter two Coast Guard helicopters arrived to evacuate the remaining *Labradoc* seamen.

Carper, assured that the others would be removed from the ship, picked up DeMartino and landed the survivors at Lost Nation Airport in Ohio, so that definitive medical care could be provided the injured mariners as soon as possible.

Meanwhile, a Canadian Air Force HC-130 Hercules (four-engined rescue aircraft) was replaced by an HC-130 from the 305th ARRS. This aircraft assumed on-scene command duties, directing rescue operations and maintaining other aircraft in the area at a safe distance.

The Captain of the *Labradoc* had declared the situation urgent and requested immediate evacuation of all twenty crew members.

The 305th ARRS command HC-130 Hercules was piloted by Lt. Col. William J. Nielson of Troy, Michigan. Copilot was Lt. Col. Charles F. Snull, also of Troy. The other aircrewmembers were: Capt. James W. Hudspeth, Jr., Mt. Clemens, the additional copilot; Master Sgt. Raymond J. Lyon, flight engineer from New Haven, Mich.; Master Sgt. Norman L. Regnaud, radio operator from Each Detroit; Tech. Sgt. James H. Shaugnessy, loadmaster from Niagara Falls, N.Y.; and Senior Airman Donald Turk, loadmaster from Beloit, Ohio.

Both loadmasters prepared rescue equipment for delivery and loaded flares with great difficulty in the heavy turbulence.

Although winds were in excess of 55 knots, the command aircraft continued to direct the evacuation of crewmembers from the now sinking ship. Several other private aircraft arrived on the

MORE NEWS AND RUMORS

scene while the evacuation was in progress. Because of the severe turbulence they departed as quickly as possible. Colonel Srull provided control of the aircraft separation while Colonel Nielsen directed them individually over the ship.

By providing the vital communication link between the various elements of the rescue forces the crew members of the 305th ARRS's HC-130 command aircraft contributed in large measure to the successful evacuation of all twenty mariners from the sinking ship.

Each of the five crew members of the 305th ARRS's command ship will receive the Air Force Commendation Medal for outstanding professional skill, knowledge and leadership as the vital communications link in the hazardous rescue operation.

Tech. Sgt. Louis DeMartino will receive the Airman's Medal for distinguishing himself involving voluntary risk of his life and humanitarian regard for his fellow man.

Capt. Oral W. Carper will receive the Air Medal for distinguishing himself by extraordinary achievement in aerial flight. He displayed exemplary knowledge and outstanding airmanship under extremely hazardous conditions.

Capt. Albert E. Taff, Tech. Sgt. Russell E. O'Neal and Staff Sgt. Robert M. Rohde will each receive the Air Force Commendation Medal for distinguishing themselves by extraordinary achievement in aerial flight. Each one displayed exemplary knowledge, courage and professional competence under extremely hazardous conditions.

The 403rd Rescue and Weather Reconnaissance Wing at Selfridge ANG Base, Michigan, commanded by Colonel Richard L. Hall, is the only such wing in the Air Force Reserve. Major units of the 403d include the co-located 305th Aerospace Rescue and Recovery Squadron; the 301st ARRS at Homestead AFB, Fla.; the 303d ARRS at March AFB, Calif.; the 304th ARRS at Portland IAP, Ore. and the 920th Weather Reconnaissance Group at Keesler AFB, Miss.

Peacetime mission of the 403d RWRW is to provide command and staff supervision for assigned units in developing and maintaining operation capability to provide world-wide search for location and recovery of aerospace personnel; to support aerial weather modification operations to meet requirements of the commands as directed by the Chief of Staff, USAF. In wartime, the 403d RWRW will be assigned to the Military Airlift Command and will execute missions and tasking as directed by MAC.

Rescue units of the 403d RWRW are equipped with 10HH-1H Huey and 8 HH-CH-3E Jolly Green Giant helicopters; 16 HC-130H Hercules; and two HC-130N Hercules (refueling tankers for the HH-3E helicopters). The weather reconnaissance group is equipped with seven WC-130H Hercules. In all, the 403d RWRW is equipped with 18 helicopters and 25 four-engined aircraft.

All 403d RWRW units are continually flying active duty missions, including 70 percent of all hurricane missions in the Gulf of Mexico, the Caribbean and Atlantic Oceans assigned to the U.S. Air Force, as well as winter weather and storm missions in the North Atlantic and the Gulf of Alaska.

Rescue missions flown include actual searches tasked through Air Force Rescue Coordination Center, Scott AFB, Ill.; coverage for astronauts during launch, earth orbital and recovery phases of space flight missions; support of Air Force One and Two (President and Vice President); coverage of single-engine military aircraft on extended over water flights; Air Defense Command exercises over water or remote areas; strip alerts; and other specialized missions. The 403d RWRW is credited with saving 55 lives in 1979 alone.

The 403d RWRW has the most continuous active service of any wing in the Air Force Reserve, and marked its 30th anniversary on June 21, 1977.

THREE STRANDED FISHERMEN RESCUED

GLEN ARBOR— Three Cedar residents were thawing out after spending a cool Sunday evening on Lake Michigan.

"It was really cold out there," said John Steimel, 32. He was accompanied on his first fishing trip of the year by David Schaub, 33, and James Swarthout, 14. "We began fishing about six o'clock," he said. "Late in the evening when we were about two miles offshore we couldn't restart the engine. We yelled to a guy

fishing inshore and flashed a light we had. He saw us and reported to the Coast Guard, who sent a helicopter out from Traverse City. They dropped a flare to mark our location and later the Leelanau Sheriff's marine patrol arrived."

Sheriff's officers received the report from the Coast Guard at 10:24 p.m. and the search began shortly thereafter. The men were back ashore unharmed by 12:30 a.m. Steimel said the boat was an open 16-footer with an outboard engine. "At least we managed to catch two trout," he said.

From *Traverse City Record-Eagle*, Traverse City, MI 49684, April 21, 1980

MOVIE TO IMMORTALIZE BORDER PATROL EXPLOITS

For 30 years, Ab Taylor of Imperial Beach realized Every-man's dream — earning a living in a job he loved.

And when he retired in November, he was considered among the best in his trade — an ace tracker for the U.S. Border Patrol.

Reward enough, in Taylor's estimation. But the best may be yet to come. Taylor's skills and exploits drawn largely from his experience are about to be immortalized in a new motion picture, tentatively titled "Borderline." Some of the film's exteriors recently were shot at locales around the South Bay. And just about everybody got into the act. Close to 50 Chula Vista sector Border Patrol agents and some of their families took part as extras in the filming of a funeral scene. Sector Chief Donald Cameron made a cameo appearance.

Taylor said even his and his wife's housekeeper got in on the fun. The housekeeper played the part of a woman who is severely burned while being smuggled into the U.S. in the engine of a car. The scene was shot at the San Ysidro Port of Entry.

The 55-year-old Taylor was the natural choice of producer Jim Nelson to serve as the film's technical advisor. Nelson ranks high in Taylor's esteem. "He gave me a free hand as far as technical details were concerned. He even let me change some scenes to make them look more realistic." Taylor also was stand-in and extra during much of the filming, which began in September. He ended up, though, with a small speaking role, playing an assistant agent to the film's hero, played by Charles Bronson. "I had some great lines, like, 'Come on out' or just 'Out!' Always in Spanish. Nelson told me that qualified me for a Screen Actor's Guild card, but for \$500 a card, I decided I could get along without one."

Bronson portrays a character called Jeb, described as "a Border Patrol agent-in-charge of the La Mesa station."

Jeb is an expert tracker who locks horns with the bureaucracy over his "old fashioned" methods of crime-solving as he sets out to find the illegal alien smuggler who killed a veteran agent. There's little doubt who the character is based on. Taylor was agent-in-charge of the El Cajon station from 1968 until his retirement late last year. "I've had some of the same lectures myself about 'running around playing cowboy' when we have so much new electronic equipment," Taylor chuckled. "That's the way a lot of modern law enforcement officers, in their double-breasted suits, feel about tracking. A lot of people don't realize it, but the famous No. 9 burglar was captured primarily through tracking." Taylor felt Nelson once described it best: "Tracking is an ancient tool that can still be used in modern law enforcement."

"I'd like that to be my epitaph," Taylor said. But the vigorous, out-going Taylor shouldn't be in need of an epitaph for some time to come. He mentioned some long-range plans, which don't include acting, but right now he's awaiting the release of the film he was instrumental in bringing about.

The seed was planted several years ago when a young freelance writer named Steve Cline dropped by the El Cajon station to observe operations. According to Taylor, Cline originally intended to write an article, but "really got involved" after riding around with agents for a couple of weeks. He said Cline then decided to write a book and over the next few years, "came by now and then for two or three days" to watch Taylor and his agents in action. "Tracking was our speciality at the El Cajon station," Taylor noted. "We were renowned for it."

Taylor said Cline "came back a little over a year ago and introduced me to the man who directed the film, Jerry Freedman. He told me then that he had decided to write a screenplay.

Continued on page 22

MORE NEWS AND RUMORS

Freedman got in touch with Nelson, and he put the package together." Taylor is about to begin a new career, which will combine "business with pleasure" and carry through something he started 10 years ago — lecturing on tracking at seminars for search and rescue groups. "I still feel tracking is the best method of finding lost children," he said.

The National Search and Rescue Assn. in California is setting up a lecture itinerary covering most of the western half of the country. So Taylor and his wife plan to board their motor home in the near future for some "traveling and teaching." About his original career and experiences in film-making, Taylor observed: "The movie was a beautiful way to wind up a beautiful career. I loved the Border Patrol and the movie is a real capper."

Joan Browles, Staff Writer, *The Star News*, Sunday, Jan. 6, 1980

PLANE CRASH FATAL TO SEVEN

GRAND CANYON, Ariz. (UPI)— A plane taking off on a sightseeing tour of the Grand Canyon crashed and exploded in flames, killing seven of the eight people aboard, including a Nigerian family and two Japanese tourists.

Members of the National Transportation Safety Board were dispatched to the scene shortly after the twin-engine Scenic Airlines Cessna 402 lost power and crashed Monday afternoon 5 miles south of the Canyon's south rim. The sole survivor of the crash, Chuck Calhoun, 31, was flown by helicopter to Phoenix's Maricopa County Hospital burn center for treatment. The Grand Canyon Village helicopter mechanic was listed in critical condition early Tuesday.

Calhoun was thrown out of the aircraft after it crashed, said a spokesman for his employer, Grand Canyon Helicopters. "He appeared to be badly burned but he was conscious. He was talking."

A Baton Rouge, La., newsman vacationing at the Grand Canyon said he was on a plane behind the craft when he saw it go down. "This aircraft took off from the Grand Canyon airport 60 seconds before us," said Nicholas Champion. "It was a Cessna 402, fully loaded with passengers. It apparently lost power shortly after takeoff. There was a huge explosion and ball of fire. There appeared to be no survivors, no wreckage, the damn thing just exploded, leaving nothing but burning trees."

The victims were identified as: Rick Mierhouse, 33, Las Vegas, Nev., the pilot of the craft. A family of Nigerians identified only as M. Parab, D. Parab and their daughter L. M. Parab and son B. M. Parab. Miss H. Mizawa of Japan. Miss S. Minato of Japan.

Karl Fahr, president of the Las Vegas-based airline, was unable to explain what caused the crash.

CRASH OF PLANE KILLS PARENTS: GIRL SURVIVES

DUCKTOWN, Tenn. (UPI)— The searchers in the helicopter hovered over the snake-infested mountainside wilderness, trying to find some sign of life in the remains of the wrecked single-engine Piper Arrow. "We could see two lifeless persons in the aircraft," said Mike Dover, chief pilot for the Tennessee Department of Public Safety. There was nothing else. The plane, after a single frantic Mayday call Monday, had plowed through trees into the side of the mountain in an area of the Cherokee National Forest Dover said looked like the jungles of Vietnam.

It was Tuesday afternoon, some 24 hours later, before the State Patrol helicopter located the plane, its engine and one wing ripped away. Seeing no one alive, Dover was about to wheel away when Lt. Eual Evans cried out. In the wreckage, a tiny hand had twitched into view. Melissa Babb, 12, was alive — "an absolute one out of 2,000 miracle," said Dover. "I couldn't believe she survived it. She laid in that aircraft with her dead parents and maintained her sanity." Troopers Ken Parrott and Tommy Hale rappelled out of the helicopter on ropes, brought Melissa — battered, hungry and thirsty — back up, and rushed her to Erlanger Medical Center in Chattanooga.

Roger Babb of Greenville, S.C., the girl's uncle, visited with Melissa late Tuesday and found her in "good spirits" but badly hurt. She was undergoing surgery for internal bleeding. "She got mad because they cut off all her pretty hair," he said. Babb said his niece had suffered a compound fracture of a leg, a broken wrist, a

fractured skull, fractured ribs and the still undetermined internal injuries. "She did not recall the accident," he said. "She does not know they (her parents) did not make it." ■

CALENDAR

October 2-5, 1980

25th ANNUAL STATEWIDE CONVENTION OF THE NEW YORK STATE VOLUNTEER AMBULANCE & FIRST AID ASSOCIATION

Homowack Lodge, Spring Glen, New York
Contact: Ronald Shields, 110 Henry St.,
Huntington Station, NY 11746
(w)516/271-1741, (h)516/427-6076.

October 3-5, 1980

SHERIFF'S BARSTOW DESERT RESCUE SQUAD EIGHTH ANNUAL SEARCH & RESCUE SCHOOL

Barstow College, Barstow, California
Contact: Brian Zane, Sheriff's Barstow
Rescue Squad, P.O. Box 108, Barstow, Ca 92311

October 17-19, 1980

AMERICAN ASSOCIATION OF TRAUMA SPECIALISTS' 5th ANNUAL CONFERENCE ON PRE HOSPITAL CARE AND TECHNIQUES

Aladdin Hotel, Las Vegas, Nevada
Contact: Pat Mattered, AATS, 3528 N. Ashland, Ave.,
Chicago, IL 60657 312/935-6777

October 20-24, 1980

NATIONAL ASSOCIATION FOR SEARCH & RESCUE SAR MANAGEMENT TRAINING COURSES

Prince Williams Forest Park, Virginia
Contact: Tom Vines, NASAR, P.O. Box 2123,
La Jolla, CA 92038 301/652-2589

October 27-29, 1980

CONFERENCE ON MANAGING THE PROBLEMS OF AIRCRAFT DISASTERS

Registry Hotel, Minneapolis, Minnesota
Contact: Gordon Arundson, University of Minnesota,
Department of Conferences, Room 207 Nolte Center,
315 Pillsbury Dr., SE, Minneapolis, MN 55455 612-373-7839

December 12-13, 1980

THE NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS — EMT PRACTICAL EXAM WORKSHOP

Hyatt House, Des Moines, Iowa
Contact: Janet Schwettman, P.O. Box 7131,
Des Moines, IA 50309 515/247-8731

February 9-13, 1981

NATIONAL YMCA SCUBA PROGRAM — BASIC SCUBA SEARCH & RECOVERY PROGRAM

Key West, Florida
Contact: Stephen F. Hardick, National YMCA
Underwater Activities Center, P.O. Box 1547,
Key West, FL 33040 201/859-4384

February 16-20, 1981

NATIONAL YMCA SCUBA PROGRAM — ADVANCED SCUBA SEARCH & RECOVERY SEMINAR

Key West, Florida
Contact: Stephen F. Hardick, National YMCA
Underwater Activities Center, P.O. Box 1547,
Key West, FL 33040 201/859-4384

SEARCH AND RESCUE MAGAZINE provides a way for rescuers from coast to coast to keep current with significant SAR events. Every issue we run a 'Calendar' column that simply lists SAR related conferences, schools, seminars, and events sponsored in your local area. Lead time is important so let us help you by keeping us abreast of current events in your area early.

MORE HELICOPTER TECHNIQUES

- 4) Equipment transport via sling loading
- 5) A hover jump operation
- 6) A one-skid landing operation
Rescuer rappels from the helicopter onto the scene
- 8) Hoist maneuvers involving rescuers or the evacuation of victims by hoist
- 9) Pendulum techniques introducing a rope, hoist cable, or load onto the scene for a variety of purposes.
- 10) Fly aways, with the victim and rescuers underneath the helo on fixed ropes

Helicopter Search and Reconnaissance

A helicopter can be used not only as an aerial observation platform to search for a victim, but also for reconnaissance of an area or situation. Precise information on terrain, natural barriers, trail routes, and hazards can be gathered immediately, facilitating the planning of an operation. Direct contact can be made with the victims by hovering away from them and asking questions through a P.A. system or with hand signals. In a few instances, a helicopter has dropped a radio to the people involved, and avoided a major operation by allowing SAR personnel to talk them to safety. The idea of using a large board on which messages could be printed and displayed from the air has been discussed.

Specific search patterns for aerial search have been developed by the military; they usually involve some form of grid search. Helicopters are especially useful for hasty and Type II and Type III grid searches if sufficient money and fuel are available.

The practical considerations of where and how to land a helicopter in the field accompany all reconnaissance and search tactics, and virtually all field use. Wilderness landing zones not listed with the FAA or on any aeronautical chart fall into two categories. The *helispot* is any designated landing area that does not have road access. A *heliport* is a designated landing area that is accessible by road. ❊

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HELICOPTER TECHNIQUES

IN FUTURE ISSUES. . .

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