FALL 1982

SEARCH & RESCUE

MAGAZINE

Picture by WAYNE T. PAROLA, 140 Caswell Avenue, Staten Island, NY 10314

BOATERS RESCUED

A Third Coast Guard District Helicopter stands by as Launch #7 of the New York City Police Department Harbor Unit moves in to rescue the stranded occupants of a small boat. The boaters who had intended to stay just off the beach were caught in the strong New York Harbor current and became trapped in a group of pilings some 900 yards out. They were safely removed by the Harbor Patrol and returned to shore unharmed. The Police Department's Harbor Unit makes over 200 of these rescues each year.

CALENDAR

SEARCH & 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 lists interesting SAR related conferences, schools, seminars, and events sponsored in your local. Lead time is important so let us help you by keeping us abreast of current events in your area early.

September 13-17, 1982
AIRCRAFT CRASH AND MASS CASUALTY MANAGEMENT, Arizona State University
Contact: Center for Professional Development, College of Engineering and Applied Sciences, Arizona State University, Tempe, AZ 85287

September 16-19, 1982
NASAR 14th ANNUAL CONFERENCE
Las Vegas, Nevada
Contact: NASAR, P.O. Box 2123, LaJolla, CA 92038

September 17-19, 1982
DISASTER MANAGEMENT
Mirabel, Quebec
Sponsored by S.O.Q.A.S.M.U.
Contact: Helene Lamontagne, M.D., 1110 Pine Ave., West Montreal, Quebec, H3A1A3 Canada 514/844-7192

September 23-25, 1982
SELF RELIANCE & SURVIVAL EXPO '82
H. Roe Bartle Exhibition Center, **Kansas City, Missouri**
Contact: Paul Stenstrom, Blue River Marketing, Inc., P.O. Box 5446, Kansas City, MO 64131 800/821-3358

October 1-3, 1982
BARSTOW SEARCH & RESCUE SCHOOL
Barstow, California
Contact: Barstow Desert Rescue Squad, P.O. Box 108, Barstow, CA 92311

October 7-9, 1982
ANNUAL TACDA SEMINAR
Wichita, Kansas
Contact: The American Civil Defense Assoc., P.O. Box 1057, Starke, FL 32091 904/964-5397

October 8-10, 1982
THE CALIFORNIA REGION, MOUNTAIN RESCUE ASSOCIATION SEMINAR 1982
Yosemite Valley, California
Contact: Sierra Madre Search & Rescue, P.O. Box 24, Sierra Madre, CA 91024

October 10-14, 1982
ANNUAL USCDC MEETING
Portland, Oregon
Contact: J. Herbert Simpson, P.,O. Box 370, Portsmouth, VA 23705 804/393-6532

October 11-13, 1982
EMERGENCY MEDICINE TODAY
Raleigh, North Carolina
Contact: P. Michael Eddinger, North Carolina Office of Emergency Medical Services, Box 12200, Raleigh, North Carolina 27605-2200 919/733-2285

October 20-22, 1982
EMERGENCY 82
Geneva Exhibition and Congress Halls, Switzerland
Contact: Emergency 82, Congress Secretariat, P.O. Box 112, CH-1218 Grand-Saconnex, Geneva Switzerland

NEWS & RUMORS

EMS PRODUCTS CATALOG

Bob Davis, President of EMS Products of Latham, N.Y. announced a reorganization and renaming for this up and coming company. According to Mr. Davis the renaming came about as part of a nationwide expansion via regional representatives. The new name for EMS Products and its Emergency Care Training Institute will be EMS/Associates.

Vital and on the grow, EMS/Associates recently published a new 20 page catalog covering Emergency Medical Training equipment and supplies including CPR Training Manikins, Textbooks, Advanced Life Support training aids and featuring a section on CPR Manikin repair. Some of the special manikin repairs done by the EMS/Associates service staff include: replacement of old-style Laerdal infant heads; modifying and repairing the Laerdal infant's respiratory system and foam filling Laerdal inflatable Resusci Anne.

For copies of the catalog, please write: **EMS/Associates, Dept. NR-6, PO Box 272, Latham, NY 12110,** or call **(518) 272-2836.**

* * * * * * * * *

HELICOPTER RESCUES 2 ON HURON

Coast Guard ends pair's 12-hour ordeal

Two Lexington fishermen celebrated a happy Easter after the "Night Sun" located their disabled twin-engine boat on Lake Huron.

"It's a lesson in boating safety," said Bruce Strachan, 30, who along with his friend John Lawrence O'Keefe, 35, embarked on the maiden voyage of a 19-foot fishing boat.

The boat was so new that neither of the experienced salmon fishermen noticed the running lights were faulty and that they had no emergency flares.

When both 35-horsepower engines "conked-out," the fishermen anchored two miles from the Lake Huron shore to await help. As the sun set, the water temperature hovered around 35 degrees, the air temperature dipped to 31 degrees and 10 knot winds buffeted the tiny boat.

Nearly 12 hours later, the stranded fishermen were spotted by Airman Kent Woodward, a lookout on a Coast Guard helicopter equipped with a 3.5 million candlepower searchlight called a "Night Sun."

"Under the circumstances, it was very fortunate that we found the two men — their boat passed right through the Night Sun-s beam," said Lt. (jg.) Steven Palmquist.

The helicopter, piloted by Lt. Commander Charles Hermann and Lt. (jg.) William Rovas, was dispatched after neighbors notified the Coast Guard that the two men were missing.

From *The Detroit News*, 4/12/82
Submitted by F. R. Limon, Traverse City, MI

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INFRARED SEARCH SYSTEMS

Development of a Short Range Recovery Forward Looking Infra Red (SRR FLIR) system is complete under a contract awarded to Northrop Corporation of Anaheim, CA. The system was delivered to the Coast Guard 12 June 1981 at CGAS Los Angeles. During the night of 14 June the first ever rescue to use the FLIR system was accomplished by Lt. Nicholas Garcia, Lt. Claude Hessel and AE2 Jeffeory Berry. The FLIR system allowed them to find two people in a 9 foot boat 3 miles off Malibu and guide the Baywatch Malibu boat to the scene and still stay above 300 ft. That rescue began a one year operational evaluation of the concept-proving system to verify the selection of FLIR operating and performance parameters in actual situations and provide data for making a decision on equipping the HH-65A FLEET WITH FLIR. Present plans are to periodically transfer the test bed aircraft, if resources permit, thereby permitting a greater variety of operational testing conditions and allowing access to the FLIR system by more of our aviation personnel.

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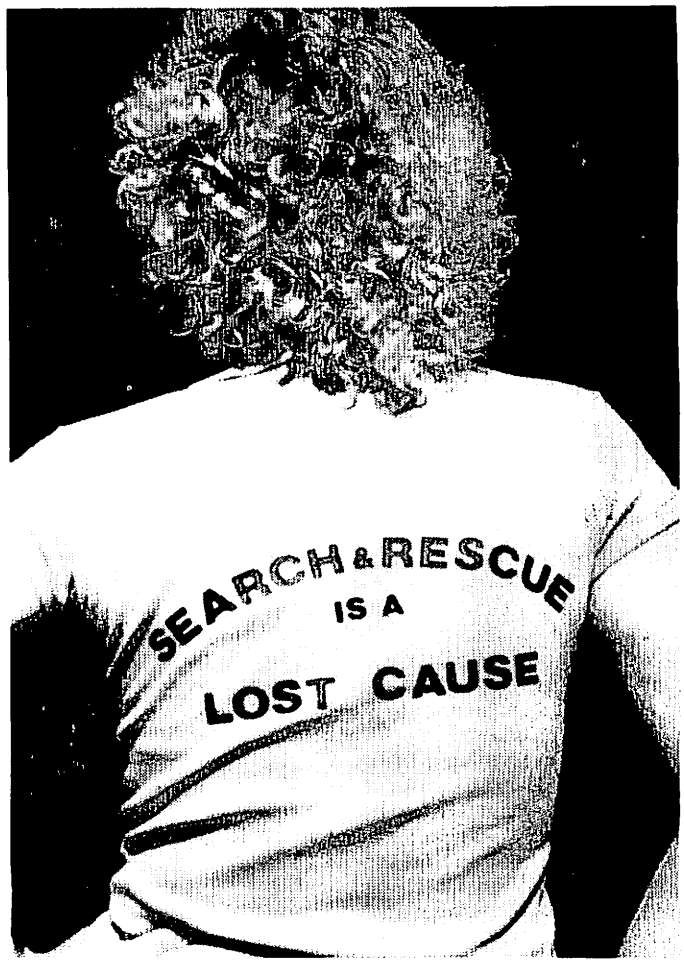
EDITORIAL CONTRIBUTIONS: Desirable articles and photo essays include but are not limited to dramatic rescues, first hand search and rescue experiences and techniques, survival situations, technical and "how-to" features, and most everything of interest to the SAR community. Serious contributors should purchase a subscription for editorial content and guidelines.

Articles should be accompanied by photographs and/or graphics for acceptance. Minimum photo size is 5x7 B&W and/or color prints. Material should be submitted with stamped, self-addressed envelope. Allow six weeks for acknowledgement.

CHANGE OF ADDRESS: Please send both NEW and OLD addresses. Include current mailing label if available. Give six weeks notice.

SUBSCRIPTIONS: It is the policy and responsibility of SEARCH AND RESCUE MAGAZINE to get you your issue, not the Post Office. Let us know if you did not receive your issue.

ADVERTISING: Advertising rates are available on request.



Lompoc Search & Rescue Team's motto has many meanings.

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Editorial Offices

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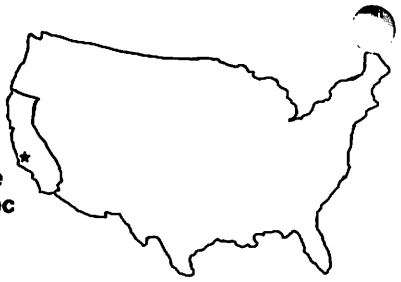
GETTING TO KNOW YOU



As the new editor of *Search and Rescue Magazine*, I would first like to introduce you to the team with which I am most familiar — the Santa Barbara County Sheiff's Search and Rescue Team - Lompoc, more commonly known as Lompoc (Lŏm Pŏke) Search and Rescue. Lompoc is a small town within Santa Barbara County, the same county where the Western White House is located and the future home of the Space Shuttle.

In 1962, the Santa Barbara County Sheriff's Search and Rescue Unit No. 2 - Lompoc was organized and patterned after the Santa Barbara County Sheriff's Search and Rescue Unit No. 2 - Santa Maria. The founding fathers of Unit No. 2 were a group of hunters and outdoorsmen who truly cared about others.

Local businesses and townspeople supported Lompoc Search and Rescue with generous contributions and donations. Many hours were spent revamping equipment for search and rescue purposes.

There were, however, problems as the group of volunteer citizens tried to integrate into a county agency during the 1960's. County officials and LSAR members were leary of one another. An example of this friction is cited in LSAR's original By-laws:

1. We will not be called to fight fires — public or private.
2. We will not be called except in case of search and rescue.
3. No member will use his identification as a member of this squad to gain access to any property except on official business. . .

11. Membership in the squad will be limited to sixteen members.

The By-laws inhibited the Team and its growth.

As LSAR proved itself an asset, the organization was utilized more and more. Lompoc Search and Rescue was summoned to extricate persons trapped in vehicle accidents, pull victims from raging rivers, search for drowning victims and lost children, as well as provide manpower for evidence searches.

After being in existence for eight years, things began to slow down. Call-outs dwindled, in field trainings became non-existant, and the public's awareness faded. The Team was guilty of relying on its past to promote its future. Whenever any organization feels it has done everything and knows all, it is openly inviting stagnation, and very possibly its demise.

In 1971, the team acquired a few motivated personnel who envisioned bigger and better things for LSAR. They were anxious to set things in motion, but they met with resistance. Whenever new ideas clash with established methods, there's bound to be conflict. LSAR has suffered many growing pains, but this had to be the most severe. Many 'old timers' resented the change and resigned from the Team. A few stayed on to see if the organization would survive — it did.

My husband Lynn, joined LSAR in November, 1971. I grew more interested in SAR after hearing stories of his experiences and meeting others from the Team. I made up my mind, I too, wanted to become a Lompoc Search and Rescue member. There was only one little problem, women were not allowed. After much discussion and some persuasion, I was finally voted on the Team. (Today our membership is comprised of 14 men and 11 women.)

Throughout the years, our Constitution and By-Laws have been amended on several occasions. No longer do we operate under such restrictive guidelines. Our objectives are more relative to SAR today. Besides providing a competent and well trained rescue team, LSAR is dedicated toward the betterment of its members, the safety of others, and the well-being of its community.

Lompoc Search and Rescue doesn't have a great number of calls per year (our average is 15). The area for which we are responsible can be uneventful for months at a time, then we'll have a wide variety of incidents in a week. We have provided trackers for the United States Marshal's office when they were searching for escapee, Christopher Boyce. Recently, we located four overdue males, all of whom made it emphatically clear they did not want to be rescued. Later we found out they were all burglary suspects. (Note: One of the juveniles was mandated by the court to pay $75.00 to our team for the inconvenience and confusion he had caused.) Our calls range from providing lights and power at a water pipe repair scene, to a three-day full scale SAR operation. It is for this reason, LSAR must remain prepared for anything, at any time.

We remain prepared by scheduling many different types of training. This keeps us busy and proficient in skills relating to SAR. Our training schedule is made up for a period of one year, thus eliminating the old excuse, "I couldn't attend, because I didn't have enough notice." Trainings are assigned to individual team members in hopes they will assert themselves more in that particular field. This also encourages participation by everyone.

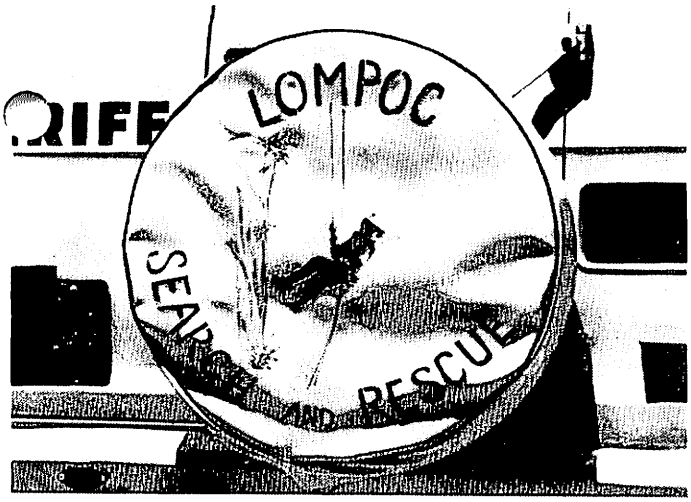
When new members join our ranks, we stress the point, "SAR is very time consuming." A 100% commitment is required for any hobby that boasts of saving lives. We emphasize that LSAR is not a social club, yet members must know and trust each other implicitly. Again this takes time. In order to compensate te members and their families, we have incorporated SAR weeke and projects that welcome family participation. Our team has built two 30 foot rappelling towers and an obstacle course in our local area. Family members were encouraged to help with the construction. We have voluntarily built and restored back country campsites for the United States Forest Service. They have been super, providing us the stoves, tables and miscellaneous gear. We pack everything in and assemble it. Again families are welcome. A few years ago, we initiated a yearly Team Vacation. Everyone specifies what it is they would like to do and an area that accommodates the majority is selected. Rock climbing, horseback riding, hiking, fishing and 4-wheel driving are only a few of the activities LSAR members and their families have shared together. All these activities draw the team closer and allows families to become part of this otherwise mysterious organization.

We realize not everyone is cut out to be a SAR member. Throughout our history, we lost four out of five applicants before they finish their six month probation period. It is disappointing and frustrating to train people in SAR and then lose them. It is rewarding when LSAR is used as a stepping stone for member's careers. We have had members go on to become paramedics, instructors, nurses, park rangers, and even magazine editors.

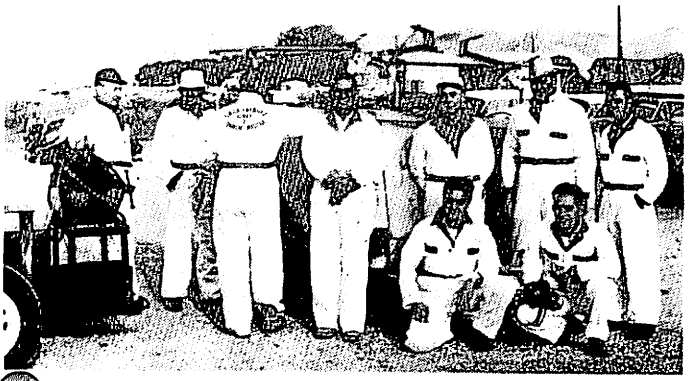
On many occasions, we have heard, "We really could have used your help, but we didn't want to disturb you," or "But you guys are volunteers, and it was 2 o'clock in the morning." It is hard to convince somebody that in order to keep up morale, you really do want to be called, at anytime. Whenever we are asked, "Why do you do this?" What do we say? "Because we care"; "To be helpful to others"; "SAR allows us to grow." It hard to put SAR into words that everyone can relate to. SAR is a people, helping people, to help people proposition, and LSAR intends to do just that for another twenty years, at least.

Editor's Note:

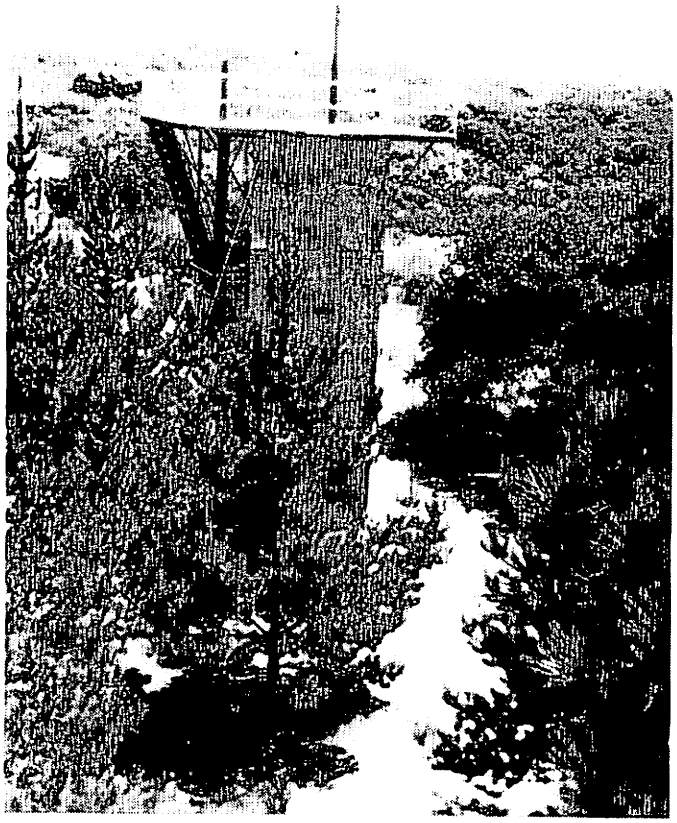
I am very proud of the Lompoc Search and Rescue Team, and I know you have pride in the group to which you belong. So, please, let me introduce you and your organization in the upcoming issues of *Search and Rescue Magazine*. SAR



34-R-I's wheel cover depicting LSAR's logo.



LSAR's Team in the early 60's.



One of the two 30 feet training towers built by LSAR members. Technical rescue, rappelling and traversing are only a few of the tchniques practiced by Lompoc's SAR Team.

LSAR's Team twenty years later. Today we carry the title of special deputy and wear an uniform, but we do not get involved with law enforcement. Team members: *front row* - Kim Lawson, Tracy Jo Whittemore; (Capt), Ruth Schuyler, Billie Jo Andrew, Ellet Wilson, Jim Hahn. *2nd row* - Nancy Feagans, Joe Glenn, Lynn Whittemore, Frank Schalles, Brian Lawson, Jerry Myler, Koreen Donnelly (Sgt), Carolyn Lank, Mike Hattrup, David Lank (Lt), Bob Vollmerhausen, David Donnelly, Will Schuyler, Bob Hill, John Farthing. *Not shown* - Dennis Kelley, Jackie Hyatt, Barbara Clarke, Larry Michels, Linda Gooch, Jerry Hernandez, John Dicus.

MORE ON SEA-SICKNESS

by CDR AL STEINMAN
from *ON SCENE* from
National Maritime SAR Review, U.S.C.G.
2100 Second Street S.W.
Washington, D.C. 20593

This article is addressed to all those boatcrewmen and cuttermen who, for some reason, think that sea-sickness is a problem that's "all in your head," and that the medications to prevent sea-sickness are nothing but sugar and water. There are even some people who think that there is something "non-macho" about having to take anti-sea-sickness medications, or that "experienced sailors don't get sea-sick," or that "if you get sea sick, you can't be trusted with a serious SAR case."

Now let me set the record straight. It is a medical fact of life that *anyone* can be made sea-sick under certain conditions. This is demonstrated over and over again at a USN medical laboratory in Pensacola, FL. This facility performs research on motion sickness using a special rotating room which can simulate any desired degree of pitch, roll and yaw. They often encounter swaggering, macho-type personnel who can bench press a Volkswagen, do one-handed push-ups with a refrigerator on their back, exude the "right stuff" from every pore, and who claim they can't be made sea-sick. A few minutes in the rotating room is about all it takes to reduce the "macho-man" to heaving jelly. So much for sea-sickness being non-macho. Now as far as sea-sickness being "all in your head" (meaning it's only a psychological problem and not a "real" problem) — baloney! Sea-sickness is caused by over-stimulation of the vestibular apparatus of your inner ear, which sends nerve impulses along your 8th cranial nerve to your brain and initiates nausea and vomiting. In other words, it's a *real* physical problem, not some imagined psychological phenomenon seen only in the faint-hearted. So it doesn't make any sense to belittle your shipmates for getting sea-sick any more than it would to belittle them for getting the flu.

The sea-sickness medications described in issue 1-80 of *On-Scene* magazine, and which have been provided to all floating units and SAR stations, and which are discussed at some length in Commandant Instruction 6710.15A dated 1 April 1982, are effective. In other words, they work for the majority of people. Our problem has been that crewmen are reluctant to use them because they are afraid to let their chief or shipmates know they need them. And so these individuals go out on SAR cases, get sick, and become incapacited or perform in a sub-par manner. This is obviously not what is expected from professional rescuemen. If you know you are prone to sea-sickness, by all means take advantage of the available anti-motion sickness medication. You're no help at all on a SAR case to either your shipmates or to the personnel in distress if you're leaning over the rail half the time. And I speak from personal experience. I've been there, I get sea-sick. But guess what? I don't get sea-sick anymore, because I take advantage of the available medications. I certainly want to be able to give 100% of my medical attention to my MEDEVAC patients, so I can't afford to be sea-sick. And I really don't care whether anyone knows I get sea-sick and that I require medications to prevent it. My major concern is putting out my best effort. Hopefully you boat coxswains, boat engineers, boatcrewmen and cuttermen feel the same way.

There are a few people for whom the anti-sea-sickness medications do not work. That is, they still get sea-sick despite the medications, or they get side-effects (drowsiness, etc.) from the medications. A new anti-motion sickness drug has recently been marketed which seems to work for some of these people. This medication is contained in a small patch which is worn behind the ear, and the medication is slowly absorbed through the skin. The chemical name of this drug is scopolamine, and the brand name if Transderm-V. This medication also has side effects (dryness of the mouth, drowsiness, etc.) which occur more frequently than do side-effects with the two drugs currently used in the Coast Guard. However, some people who get no relief or have side-effects from the present Coast Guard medication have reported good results with the Transderm-V.

Unfortunately, the Transderm-V is not stocked in the Federal Supply System, and so it must be obtained through your local medical department. If you still get sea-sick despite the Coast Guard supplied drugs, or if you get undesirable side effects from them, talk to your local medical department, officer-in-charge or commanding officer about the possibility of trying this alternative anti-motion sickness remedy.

Hopefully after you've finished reading this article you'll fe little less hesitant to seek relief from a malady that's been arou as long as there have been ships on the sea. There's no shame in getting sea-sick. There should be shame, however, in responding to a SAR case when you're not physically or mentally fit to handle the case because you're sea sick, especially when there are means at hand to prevent it. SAR

NATIONAL SEARCH AND RESCU PLAN — 1981

from *ON SCENE* the
National Maritime SAR Review, USCG
2100 Second Street S.W.
Washington, D.C. 20593

During calendar year 1981, the Interagency Committee on Search and Rescue (ICSAR) completed work on a revised National Search and Rescue Plan which has been approved by all of the signatory agencies. The revision is included in this article for the information of *On Scene* readers.

The changes made in the plan are:

a. A policy statement is incorporated at the start;

b. The wording includes persons or property in potential distress, as well as in distress, within the definition of search and rescue;

c. References to United States international search and rescue responsibilities are updated;

d. The Federal Emergency Management Agency (FEMA) is included as a signatory;

e. The Maritime Search and Rescue Region is defined more precisely; and

f. The responsibility of Regional Search and Rescue Coordinators in areas of the high seas where the United States has not accepted international search and rescue responsibility is clarified.

This action by the ICSAR continues the practice of comp review and revision of the plan at approximately ten year intervals.

1. POLICY

It is the policy of the signatory agencies to provide a national plan for the coordination of search and rescue services to meet domestic needs and international commitments.

2. PURPOSE

The purpose of this plan is to continue by interagency agreement, the effective utilization of all available facilities in all types of search and rescue missions. The National Search and Rescue Plan — 1969 is superseded by this agreement.

3. DEFINITION

Search and Rescue (SAR) is defined as the employment of available personnel and facilities in rendering aid to persons and property in distress or potential distress.

Continued on Page 8

A LESSON IN FUTILITY

KEN MacCAMMOND
401 North Brown Avenue
Tucson, Arizona 85710

I hardly knew my way around Tan Son Nhut, the Saigon airport — much less anything about South Viet Nam's coast from Cap St. Jacques to the Mekong River — when I flew an Air-Sea Rescue mission with a Vietnamese crew. I had spent almost four years in the United States Air Rescue Service, had flown many rescue missions and knew how to conduct a sea search. But this exercise in futility not only frustrated me but made me feel more like a bungling amateur than the professional I strived to be.

In April 1962, less than two weeks after I arrived, I flew my first mission as an American Advisor with a Vietnamese crew. Except for my flight check in the Douglas Skytrain, better known as the World War II Gooney Bird, I had not flown with a Vietnamese crew yet. Paired with a French trained pilot before this flight and one who spoke little English, I expected a language problem but, always the optimist, felt I could overcome it with a little patience.

In our rush to get off the ground I didn't know where we were going or what we were expected to do. Once airborne, however, I tried to find out.

"Where are we going?" I asked as Captain Tai turned southeast and followed the river toward the South China Sea.

"To Cap St. Jacques," he answered with a French accent.

"What for?" I asked wanting to know more.

"To look for passengers from a boat that turned over," Tai said slow and careful English as he turned the palm of his right hand to gesture a boat capsizing. Then without trying to explain anything further he called the navigator and radio operator up front.

As I sat in the copilot's seat I tried to tell from their reactions to each other and their gestures what was going on. First the navigator stood in the aisle between us and talked to Tai. While they talked I craned my neck to look at his map. A mark off the coast near Cap St. Jacques showed where the boat must have capsized. After the navigator finished his discussion with Tai the radio operator came up. Tai spoke down to him much more than he did to his navigator and didn't like whatever it was the radio operator told him. Tai's expressions and his tone of voice told me this before I realized that I'd already begun to adapt to indicators other than language to tell me what was going on.

I looked outside at the river we flew parallel to and at a small peak on its left bank ahead. From the navigator's map Cap St. Jacques would be on a peninsula at the mouth of the river beyond that peak. As I studied the river and the peak ahead I began to think about searching the sea for survivors and wondered what type of search pattern Tai would fly. How much did he know about sea searches? As a rule American aircrews without prior rescue training knew little about searches until someone gave them the procedures just before a search. As far as I knew this crew had not gotten any search instruction before we took off.

Over Cap St. Jacques the navigator brought his map to the cockpit again. I listened to him talk to Tai but once again, like last time, I didn't understand a word they said. As an experienced rescue pilot I really didn't need to be told what to do on a search mission but wondered about the crew I flew with. I wished I knew Tai better. If I could only communicate with him, maybe I could help him. But in the noisy cockpit, not the best place to try to break our language barrier, I didn't try.

When Tai didn't let down to search altitude over the point where we should have begun our search, I knew he'd never made a sea search and tried to get him to descend. I looked at him until I caught his attention and motioned with my hand to go down. But he just looked back at me for a moment, shook his head no and pointed to his earphones. Then not understanding his sign language I tried to talk to him.

"It's easier to see someone in the water from five hundred feet than it is way up here," I said slowly and as distinctly and diplomatically as I could.

Tai listened to the radio instead of me. Vietnamese, with a little French stirred in, poured through my headset. Tai continued to circle and listen to the radio. Frustrated, I looked outside and fruitlessly searched the sea beneath us from our altitude for awhile before giving up. Then it hit me and I knew what Tai's sign language meant. He had to stay this high to maintain line-of-sight radio contact with Saigon.

I couldn't imagine why he kept talking to Saigon except to get search procedures over the radio. He could also be receiving the coordinates of the area we were supposed to search but not hearing any other Gooney Bird crew talking to Saigon I knew we had to be the only searcher. We should be getting on with the search and not waste anymore valuable search time. I wanted to get the search started. But the unintelligible radio chatter went on. The circling and talking seemed to last forever.

Finally Tai descended to four hundred feet and began what must have been a line search. He flew far out to sea, much farther than the missing passengers could possibly have drifted even in a strong current. Beyond the sight of land, if continued, our course could have taken us to the Philippines. Then we turned and flew toward Cap St. Jacques.

As we flew this same course back and forth I searched my right-side sector and wondered what Tai'd do if we found someone. I couldn't help thinking he'd lose anyone sighted again before he could turn around. We didn't have any smoke bombs on board to toss out. Furthermore I didn't think he'd respond fast enough to make a right turn or even a slower and shallower calibrated turn which would put us back over a swimmer again. Once found it's hard to stay over someone located in the water with no land references around but if a person is to be saved the pilot must stay over him until a boat or helicopter arrives. It's too easy to lose him and not be able to find him again.

I tried over and over again to explain a few basic sea search procedures. But Tai either didn't understand or just wasn't ready to listen to a new advisor. After all the new advisor hadn't proven himself yet.

After flying back and forth over the same search area for six hours without the advantage of a planned flight pattern to give us better coverage of the area we searched, we gave up and flew back to Saigon. We say only bits of flotsam and a small freighter bound for the Philippines. No survivors.

Back at Tan Son Nhut I learned more about the useless search I'd flown. About one o'clock in the morning a Cap St. Jacques boat with fifty passengers bound for an island off the coast near the mouth of the Mekong River had capsized. At daylight, with thirty-two passengers still missing, the Cap St. Jacques Province Chief asked for help. That's what kicked off our search.

Every search has its mistakes but none as immoderate as those on this flight. A request for an air search should have been made earlier, before daylight. This would have given us time, until first light, to prepare for the search. Next, any search crew not familiar with sea searches should have been given some special instructions before it took off. And the most frustrating of all to me, I could not communicate any of my knowledge and experience to the crew.

No one will ever know if the capsized passengers drowned or were eaten by sharks after we reached the scene. But we might have saved some of them if we hadn't made so many amateurish mistakes and the passengers were still alive when we reached the search area.

NATIONAL SAR PLAN-1981

— continued

4. OBJECTIVE

To provide a National Search and Rescue Plan which will integrate into a cooperative network available U.S. Search and Rescue facilities which will be coordinated in any one area by a single federal agency in order to afford greater protection of life and property and insure greater efficiency and economy. It is not the intent for the plan to contravene or conflict in any way with search and rescue responsibilities agreed to by the contracting states of the Convention on International Civil Aviation, the International Maritime SAR Convention or other international instruments to which the United States may become a party.

5. SCOPE

The provisions of this National Search and Rescue Plan are applicable to all Federal agencies signatory hereto. Established State search and rescue organizations may wish to retain their established SAR responsibilities within their boundaries which result from activities which are primarily local or intrastate in character. In such cases, appropriate agreements will be made between the regional SAR coordinator and the respective state organization to accomplish this end.

6. FACILITIES AND SUPPORT ACTIVITIES OF PARTICIPATING AGENCIES

(a) The agencies of the Department of Transportation carry out the Department's broad responsibilities in the field of transportation safety. The U.S. Coast Guard has statutory responsibility for developing, establishing, maintaining and operating rescue facilties for the promotion of safety on, under and over the high seas and waters subject to the jurisdiction of the United States. The Coast Guard also has responsibility for safety inspection of most merchant vessels and for investigation of marine casualties. The Federal Aviation Administration has air traffic control and flight service facilities available to assist in search and rescue operations. The Maritime Administration operates a fleet of merchant ships for Government use and is responsible for promoting a safe Merchant Marine.

(b) Department of Defense components provide search and rescue facilities in support of their own operations; these facilities are used to meet civil needs on a basis of noninterference with military missions.

(c) The Department of Commerce participates in or supports SAR operations through the National Oceanic and Atmospheric Administration (NOAA) which provides nautical and aeronautical charting, information on tides and tidal currents, and marine environmental forecasts and warnings for the high seas and for coastal and inland waterways.

(d) The Federal Communications Commission promulgates rules and regulations for the non-government use of wire and radio facilities for the purpose of promoting safety of life and property, and through its long-range direction finder network cooperates in SAR operations.

(e) The National Aeronautics and Space Administration (NASA) has aircraft, spacecraft, and world-wide tracking, data acquisition and communications networks which could be used to assist in SAR operations. NASA will support SAR objectives through research and development or application of aerospace technology to search, rescue, survival, and recovery related equipment such as location tracking systems, transmitters and antennas capable of locating aircraft, ships, spacecraft, or individuals in distress or potential distress.

(f) Land managing components of the Department of the Interior (DOI) provide search and rescue service on lands and waters administered by the DOI and may assist in operations on adjacent jurisdictions. The degree of responsibility assumed in each DOI field area depends upon the legislative and jurisdictional character of the bureau and field area. Thus, response may range from support of law enforcement authorities or other locally organized units to primary SAR coordination and execution. Similarly, components assume varying degrees of responsibility for preventative measures designed to afford greater protection to the visiting public.

(g) The Federal Emergency Management Agency (FEMA) is responsible for establishing federal policies for, and coordination of, all civil defense and civil emergency planning, management, mitigation and assistance functions of executive agencies. Among its principal functions and activities FEMA assists state and local governments in the coordination of civil emergency preparedness, response and civil recovery activities; and develops and operates telecommunications, warning and electronics systems to support functions of civil emergency assistance. Within this framework FEMA will provide support to SAR activities.

(h) Certain States, local governments, and civil organizations have organized facilities which contribute to the effectiveness of the over-all SAR network.

7. THE PLAN

a. Coordination of Agencies

The Interagency Committee on Search and Rescue will, consistent with applicable laws and executive orders, coordinate the implementation of the plan. It will review search and rescue matters affecting more than one agency, including recommendations. It will endeavor to encourage federal, state, local and private agencies to develop equipment and procedures which will enhance the national SAR capability, and will promote the coordinated development of all national SAR resources.

b. Definition of SAR Regions

SAR Regions are defined as follows:

(1) Inland region. The inland areas of Continental United States, except the inland area of Alaska and waters under the jurisdiction of the United States.

(2) Maritime region. The waters subject to the jurisdiction of the United States; the state of Hawaii; the portions of the state of Alaska south of 58 degrees north latitude and east of 141 degrees west longitude; the high seas and those commonwealths, territories and possessions of the United States lying within the area designated as the "Martime Region" on the attached chart.

(3) Overseas regions. Overseas unified command areas, and the inland area of Alaska, which are not included within t Inland region or the Maritime region as defined above.

c. Designation of Regional SAR Coordinators

The below named Federal agencies are separately designated regional SAR coordinators for the SAR regions indicated:

The Inland Region. The Air Force.

The Maritime Region. The Coast Guard.

The Overseas Regions. The overseas unified command or Alaskan Air Command in each Overseas region as defined above.

d. Organization of Basic SAR Network

(1) The regional SAR coordinator will, consistent with applicable laws and executive orders, undertake to organize existing agencies and their facilities through suitable agreements in a basic network for rendering assistance to military and nonmilitary persons and property in distress or potential distress and to carry out the U.S. SAR obligations under the Convention on International Civil Aviation and other international instruments to which the United States is a party.

(2) Agreements between a regional SAR coordinator and the Army, Navy, Air Force, JCS Unified Command, or Coast Guard will provide for the fullest practicable utilization of the facilities of such agencies in regional SAR missions under the regional SAR coordinator, consistent with statutory responsibilities and authorities and assigned functions of such agencies, and will provide that such agencies delegate to the regional SAR coordinator authority for the coordination of their facilities committed to such missions.

(3) Agreements between the regional SAR coordinator and civil agencies of the Federal Government will provide for the fullest practicable cooperation of such agencies in regional SAR missions under the regional SAR coordinator, consistent with the statutory responsibilies and authorities and assigned functions such agencies, and will provide for such coordination by the regional SAR coordinator of their facilities committed to such missions as may be necessary and practicable.

(4) Agreements between the regional SAR coordinator and State, local, and private agencies will provide for the fullest practicable cooperation of such agencies in SAR missions under

the regional SAR coordinator, consistent with the willingness and ability of such agencies to engage in SAR, and will provide for such coordination by the regional SAR coordinator of their [illegible]ities committed to such missions as may be necessary and [illegible]ticable.

(5) The regional SAR coordinator will maintain files of such agreements and lists of such agencies and of the location of their SAR facilities.

(6) The regional SAR coordinator may subdivide the region for the advantageous execution of this plan and will designate an appropriate officer of his service or, by mutual agreement, an officer of any other participating agency, to be SAR coordinator in the region of each subdivision thereof. U.S. SAR region or subdivision boundaries should coincide with the boundaries of any pertinent international SAR area boundaries; where technical or operational requirements make this impossible or impracticable, appropriate amendments to the international boundaries organization, through the proper channels, by the agency primarily concerned.

(7) It is not intended that regional SAR coordinators be responsible for SAR in foreign territory or areas of the high seas which have not been accepted by the United States for international SAR responsibility. However, it is intended that the regional SAR coordinator or his designated subordinate act as the appropriate U.S. official for overseeing the coordination of all U.S. SAR interests in such territory or areas which lie within his region.

e. Conduct of SAR Operations

(1) The regional SAR coordinator will develop plans and procedures for the effective utilization of all available SAR facilities in the region or subdivisions thereof. The regional SAR coordinator will develop plans and procedures to carry out the objective of this plan in the event military forces are withdrawn from the region because of a military emergency or a change in the military missions.

(2) The regional SAR coordinator may be assisted by, or may [illegible]quest assistance from, interested Federal agencies having SAR capabilities within the region.

(3) Rescue Coordination Centers having international responsibilities will conform to the SAR procedures which have been established as standards or requirements by international conventions to which the United States is a party unless differences or reservations have been filed by the United States.

(4) The SAR coordinator in a region or subdivision thereof, through an appropriate Rescue Coordination Center, will coordinate and as appropriate, direct the operations of SAR facilities committed to any SAR mission therein, consistent with the provisions of sub-paragraphs d(2), (3), and (4) above, and will otherwise act to implement the plans of the regional SAR coordinator.

(5) The SAR coordinator may delegate "on-scene" coordination and direction to any appropriate unit participating in a particular incident under his cognizance.

(6) SAR coordinators of adjacent regional subdivisions of the same or different SAR regions will maintain liaison with and will support each other in SAR operations as necessary and practicable. Liaison and cooperation in SAR will be afforded to the SAR forces of other nations as necessary and feasible.

f. General Provisions

(1) The regional SAR coordinator will encourage the development and maintenance of proficiency in SAR techniques and procedures by participating agencies and will assist therein as appropriate and practicable.

(2) The regional SAR coordinator will encourage the continued development of State and local SAR facilities as appropriate.

(3) Boundaries of SAR regions established by or under this [illegible]n are not to be construed as barriers to effective SAR [illegible]erations or to the exercise of initiative and judgment.

(4) No provision of this plan or any supporting plan is to be construed as an obstruction to prompt and effective action by any agency or individual to relieve distress whenever and wherever found.

(5) No provisions of this plan or any supporting plan are to be construed in such a way as to contravene the responsibilities and authorities of any participating agency as defined by statutes, executive orders or international agreements, or the established responsibilities of other agencies and organizations which regularly assist persons and property in distress resulting from activities of a local nature.

(6) This plan does not encompass SAR for such activities as: salvage operations, military undersea rescue, special or unusual operations of the Armed Forces, rescue of persons or property in outer space, emergencies affecting the public welfare occurring as a result of enemy attack, insurrections, civil disturbances, earthquake, fire, flood, or other public disasters or equivalent emergencies which endanger life and property or disrupt the usual process of government. However, the SAR organization and its facilities should be utilized to the maximum extent feasible in connection with the above activities.

(7) Although Federal leadership in the search and rescue field may generally be recognized, the Federal Government holds no mandate to compel state, local, or private agencies to conform to a national search and rescue plan. The desires of state and local agencies to direct and control their own facilities in SAR missions resulting from the intra-State or local activities within their boundaries must be respected and insured. Cooperation, therefore, must be sought through liaison and agreements.

Signature: Andrew L. Lewis, Jr., Secretary of Transportation, Sept. 11, 1981, for the Department of Transportation.

Signature: Verne Orr, Secretary of the Air Force, for the Department of Defense, June 18, 1981.

Signature: Malcom Baldridge, Secretary of Commerce, for the Department of Commerce, May 1, 1981.

Signature: Jame G. Watt, Secretary of Interior, for the Department of the Interior, May 14, 1981.

Signature: A. M. Lovelace, Acting Administrator, for the National Aeronautics and Space Admin., May 4, 1981.

Signature: R. E. Lee, Chairman, for the Federal Communications Commission, May 4, 1981.

Signature: L. O. Giuffrida, Director, for the Federal Emergency Management Agency, July 14, 1981. **SAR**

SARSAT

Space-age tracking system will speed location of ELTs

by TSgt BOB MISKOWICZ
from *Rescue Review* MAC/PALP,
Scott AFB, IL 62225

"Mayday! Mayday! I'm going down!"

These are the words every pilot prays he'll never have to scream into a radio. For even if he survives a crash landing he'll possibly be injured, have little food or water, and be lost.

A lost pilot's chance of being rescued depends on several factors, but probably the most important factor is time . . . how long will it take for a rescue team to find him? Sometimes it can take only hours, sometimes days.

According to Aerospace Rescue and Recovery Service Headquarters, Scott AFB, Ill., a space-age satellite tracking system named SARSAT will soon help shorten this time span, dramatically increasing the pilot's survival chances.

Lt. Col. John A. Firse, chief of the project's U.S. Mission Control Center at Scott AFB, explained that SARSAT, or Search and Rescue Satellite-Aided Tracking, will involve the use of several satellites.

These satellites, flying in low, near polar orbits, will "listen" for distress signals from aircraft, and ships at sea. Eventually, he said, SARSAT will be able to locate emergency transmitter signals coming from any point on the globe.

Colonel Firse, explaining the basic SARSAT concept, said an aircraft or ship in distress that's equipped with a special transmitter, would send a signal that will be picked up by an orbiting SARSAT satellite.

"The satellite," said Colonel Firse, "will relay that signal to a Local User Terminal on earth. the LUT's computer will determine the location of the distressed airplane or ship and forward it, through the Scott MCC, to a selected Rescue Coordination Center.

"That selected RCC," noted the colonel, "will alert the rescue agency that's best able to handle the rescue operation.

"Ideally, a constellation of four satellites will orbit the earth picking up distress signals. This will significantly increase our ability to save lives.

"Studies have shown that people who survive an aircraft crash have a less than 10 percent chance to live if the rescue is delayed more than two days," continued the colonel. "In contrast, their survival rate is better than 50 percent if the rescue can be accomplished within eight hours."

Capt. John P. Lucas, a Scott MCC controller, said, "SARSAT will provide a rapid location service, reducing search and rescue time, dollar cost, and the time search and rescue teams are exposed to hazardous conditions."

The United States isn't alone in the SARSAT project. Canada, France, Norway and the Soviet Union are involved, and the United Kingdom and Japan have expressed an interest.

The United States expects to launch the first SARSAT satellite in early 1983, and the Soviets plan to launch their own earth orbiter, called COSPAS.

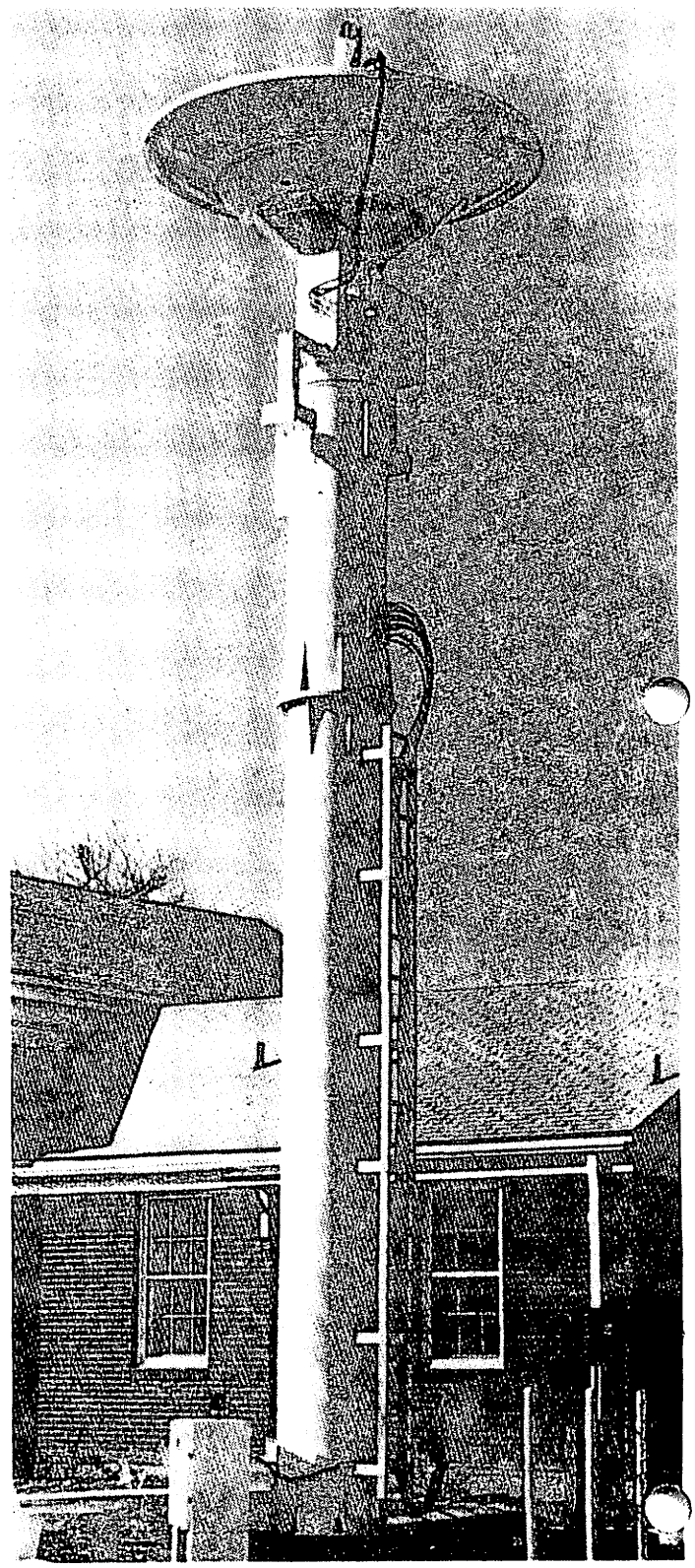
"No technical information will be given the Russians to help them build their satellite," said Colonel Firse. "We simply told them what is required of their satellite. They have to design and build it themselves."

The first SARSAT satellite won't belong exclusively to the SARSAT project. According to Colonel Firse, "we're going 'piggy-back' on a weather satellite."

The United States, Canada and France have cooperated to equip a TIROS-N weather satellite with the components needed to receive and transmit distress signals.

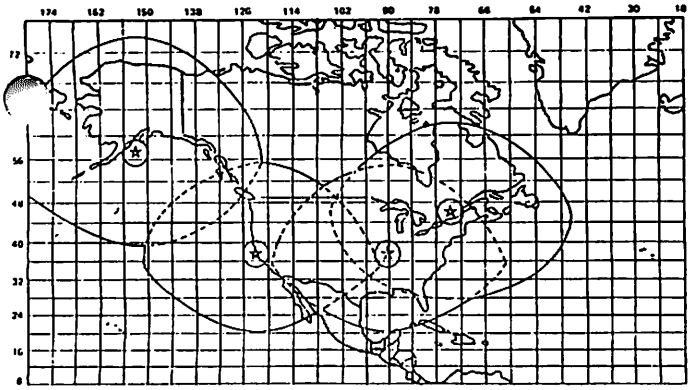
The National Aeronautics and Space Administration, U.S. Coast Guard, and the National Oceanic and Atmospheric Administration are working together to construct an American ground system, which will include the Scott MCC and three Satellite Receiver Stations.

One Satellite Receiver Station will be at the Scott MCC, s[illegible] headquarters officials. The U.S. Coast Guard will operate t[illegible] one at San Francisco and one at Kodiak, Alaska. A Canadian built terminal at Ottawa, Ontario, will extend coverage into the Atlantic Ocean.



U.S. AIR FORCE PHOTO BY SrA. JAMES W. BITNER

The SARSAT satellite receiving antenna points toward the sky near Aerospace Rescue and Recovery Service Headquarters, Scott AFB, Illinois.



SARSAT's North American geographical coverage is shown on this map. The circled stars represent the Satellite Receiver Stations in North America. Other countries will build their own stations to cover Europe and parts of Asia.

These four terminals, stated headquarters spokeman, will blanket the continental United States, Alaska, Mexico, the majority of Canada, and the maritime regions. France, Norway and the Soviet Union will build their own Satellite Receiver Stations that will cover Europe and parts of Asia.

Captain Lucas explained that, "the Scott MCC will be a central point of contact for the entire SARSAT ground system. All transmissions will go through us instantaneously, by computer.

We'll monitor the entire ground system in the United States, and basically be a focal point for communications between foreign MCCs. We'll have a direct tie in with all of them," said Captain Lucas.

Colonel Firse said SARSAT will operate in two modes, regional and global.

"In the regional mode, detection coverage will be limited to within 1,250 miles of an LUT and be accurate up to 12 miles using existing emergency transmitters.

"In the global mode," Colonel Firse continued, "full-earth coverage will be provided by the satellite storing data in its telemetry subsystem until it's in a good position to transmit the data to a ground station. This will provide coverage of areas out of the ground terminal's range."

The colonel also stated that the global mode will not be available immediately, because it requires the use of a new distress frequency and transmitter.

When the new transmitter becomes available it will, in addition to transmitting a distress signal, identify the nationality of the ship or aircraft, the number of people on board and the nature of the distress.

"The global mode will be evaluated during the initial phase of the project," said Colonel Firse. "Once the global mode is in use, we should be able to pinpoint the origin of a distress signal to within four nautical miles."

According to Colonel Firse, the first SARSAT-COSPAS launch will be followed by a three-month checkout, and a 12 month demonstration and evaluation phase to measure the system's coverage, accuracy, reliability and overall effectiveness.

Today's search and rescue system depends heavily on commercial aircraft pilots reporting distress signals they've picked up while in flight.

"This monitoring system provides irregular coverage," said Colonel Firse, "with large coverage gaps in remote regions where the need for rapid response is most acute."

Although the system may be irregular, it apparently works. MAC credits ARRS with saving more than 20,000 lives since 1946. That's enough people to populate a small city. Not all these saved lives were airplane and boat accident survivors.

Many were combat saves, lost hikers, medical evacuations and the like. But a percentage of the 20,000 were crash victims, and SARSAT may make the "crash-save" percentage rise very quickly.

Future pilots will still hope they'll never crash land, but they can gain confidence in the knowledge that, if they do, SARSAT will make it a lot easier for rescuers to find them. **SAR**

NEW PRODUCTS

O.A.R. OFFERS FREE COPY OF NEW 1982 "ADF PRODUCT LINE GUIDE"

The O.A.R. Division of General Indicator Corporation, located in San Diego, California announces availability of its ADF Product Line Guide for 1982. The 3-fold guide includes a product selection guide of portable, general-purpose Automatic Radio Direction Finders designed for various law enforcement/security, military, industrial communications, air traffic control, search-and-rescue and marine applications.

Thirteen different ADF models are described in O.A.R. Products Guide for coverage of various frequency bands between 50 KHz and 520 MHz. All of them are available with choice of land vehicle/aircraft or base station/shipboard antenna mount. Other options include computer operated remote control system, slave display units, digital readouts, and matched radio beacon transmitters for marking different types of objects to be tracked and/or recovered.

O.A.R. Automatic Direction Finder systems are currently in use throughout the world by Government Agencies as well as commercial customers. The Company has specialized in development and manufacture of specialized radio locating aids since it was founded in 1968.

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NEW RELEASES AID IN SUMMER SAFETY

The topics of three new 16mm releases from International Film Bureau are always timely, but they are especially appropriate for summertime activities. ***COMING BACK ALIVE,*** a 16mm film or videocassette, provides practical safety information for the recreational boater.

SECURE YOUR CHILD'S FUTURE, also available in 16mm or videocassette, emphasizes parental responsibility for choosing and using proper child car restraints.

The third release is a 4-part filmstrip series titled *BICYCLING THE SAFE WAY;* and it includes information, for bikers of *all* ages, on buying a bike, knowing the rules of the road, and keeping a bike in good repair.

For information on rental, purchase and purchase evaluation, contact: **INTERNATIONAL FILM BUREAU INC., 332 South Michigan Avenue, Chicago, Illinois 60604, (312) 427-4545.**

★ ★ ★ ★ ★ ★

IMPROVED AIR SPLINTS OFFERED BY FERNO-WASHINGTON

Full leg and foot-and-ankle air splints that open all the way to the toe are now offered by Ferno-Washington, Inc., Wilmington, Ohio. Extending the zip-open seam the full length of the foot facilitates application of both full leg and foot-and-ankle air splint models. Other quality features include two-wall vinyl construction with nylon zippers and screw-type air valves.

The new air splints are available individually or as components of Ferno-Washington Model 663 inflatable splint kit which includes full arm, half arm, hand and wrist, and half leg, as well as full leg and foot-and-ankle splints complete with carrying case. Ferno-Washington Model 662 inflatable split kit includes full arm, half arm, full leg, and half leg splints. Kits roll up into a compact storage package only 6" in diameter by 18" long.

For full details, write **Ferno-Washington, Inc., 70 Weil Way, Wilmington, Ohio 45177.**

★ ★ ★ ★ ★ ★

PERSONAL FIRE ESCAPE DEVICE

A personal fire-escape device allows a person to escape from a burning building through a window by sliding along a special rope. The device known as EXIT is neither heavy nor bulky. It consists of a cylindrical container (9cm in diameter, 25cm high, weighing 1 kilo) containing a harness and 24m of 6mm rope which is enough for the eighth floor. Easily carried in a suitcase, it can also be used outside the home particularly in hotels.

Continued on Page 23

LESSONS LEARNED FROM FIRE AT SEA

by TOM McCALLUM
Box 44, Rose Lodge, OR 97372

The ocean was subsiding and the sun was coming out. Perfect conditions for the beginning of a voyage which could, if the fishing remained slow, be the first leg of a trip home. Little did I suspect it would be the last trip my boat would ever make or that I would come so close to losing my life.

Unlike most trips, this one I was making alone. Several boats had finished their season and were home taking well-deserved rests, gearing up for the start of crab season.

I was leaving Brookings, Oregon, heading north for Newport, Oregon. Most other boats were still tied to their boards. Some skippers were home with their families, other were killing time waiting for the onslaught of women mudwrestlers that night in Crescent City.

Normally I would have been with them. But the past couple of seasons have been so unpredictable, short and so highly regulated by government that I was barely breaking even. So I owed it to myself, my family and my lifestyle to put in my time in hopes of connecting on a couple of good trips.

It was a Monday afternoon in September. At one o'clock I blew four tons of ice into the fish hold, topped off my diesel tank and buried two cases of bait in the ice.

It was 4:30 when I passed the Coast Guard tower and headed into the open sea. I ran west for half an hour, then headed due north and engaged the auto-pilot. I grabbed my gear box, line and snips, and hopped up on the cabin roof to retie all my gear. It was calm and hot — unusual for this time of year.

My gear was a disaster. The past couple of trips, the water had been plaqued by a sticky, plankton-like crud that fisherman call jelly weed, or more affectionaly, buffalo snot. It sticks to everything like glue and almost impossible to clean. All you can do is retie each spread continually.

By 7:30 that night everything was tied, neatly coiled and ready to go. I was hot, and my hands ached from clinching a knot on every snap and plug. I knew the best way to ease the pain was hold onto a cold can of beer. So that's what I did.

I fired up my stove, started dinner, popped another cold beer, and checked my chart to see where I was. I could tell I would drift to the north with the currents and wind, so I decided to run another twenty minutes and shut down. By morning I would be right on the spot I wanted.

I spent the evening with the TV on, going over my books and finishing my daily allotment of four beers. Beer is not just a way to slow down and relax, but more important, a way to help forget that a person who stops a boat sixteen miles offshore and goes to sleep probably doesn't have both oars in the water.

Tucking my books away for the night, I climbed down in the fo'c'sle and tried to sleep.

In the morning, I headed toward the canyon on the edge of the Rogue River Reed, where it drops from eighty to three hundred fathoms — a great spot for large "King" Chinook Salmon.

At about six I slowed down. My recorder showed several columns of bait with a scattering of fish among them.

I hopped back in the trolling pit and eased my first line into the water, attaching either a whole herring or a plug every three or four fathoms until I was fishing eighty fathoms top to bottom. I repeated the same with four others, and was beginning to put in my sixth line when I smelled something burning. Probably my hydraulic pump belts slipping, I thought.

Grabbing two wrenches and a large screwdriver, I climbed down to the engine room, flipped on the light and opened the door. My heart jumped into my throat.

The engine room was full of smoke.

I slammed the door and ran up to check the wiring. Plastic or rubber burning. The ammeter was pumping a full eighty-five amps somewhere. I opened the breaker panel and checked for hot wires. There were none.

So I knew it must be the starter, alternator, or an exploded battery.

I grabbed a large extinguisher and unloaded it in the engine room, slamming the door shut. But the smoke was now so heavy, I had to go into the fo'c'sle to breathe.

The engine quit.

I opened the door again. More smoke, plus crackling and an awful humming noise.

By this time hot, thick smoke was billowing up the ladderway into the cabin. I climbed back up in the cabin holding my breath. I couldn't see a thing and my eyes were burning.

I fumbled around and found one of my VHF mikes. Needing some air, I kicked open the side cabin door and jumped out, gasping. The mike cord was stretched as far as it would go.

"Umpqua River Coast Guard, Umpqua River Coast Guard, do you read me? Over." I knew I was off the Rogue River. Why the hell did I call the Umpqua. The first of my many mistakes. Slow down, dummy.

"Vessel calling, this is Chetco River Station, Say again. Over."

"Coast Guard, this is the *Altoona*. I have a fire on board."

"*Altoona*, this is Chetco River Station. What is your location? What are your Loran readings? Over."

"Coast Guard. I can't read my instruments. . . ." And that's all I got out. I couldn't breathe any more. But I knew I had screwed up. The Umpqua is north of the helicopter station, and here I am a hundred miles south.

Then I remembered my EPIRB — just inside the cabin door. I held my breath and crawled in the back cabin door, grabbed two survival suits and the EPIRB and crawled back out. The engine room was burning good now. I could feel the heat. Smoke was coming out of the trolling pit in the stern and from under the fish-hold hatch.

My raft. It was in the fo's'cle next to the engine-room bulkhead. I had to have it. The water was warm here, and we had been harassed by sharks for the past month.

I climbed around the cabin and opened the skylight hatch cover. No flames. I jumped down on my bunk. The heat and smoke were almost unbearable. Then I found that the raft was too big to fit through the hatch. Another mistake.

So I grabbed the raft and threw it up and out the cabin door. The wall behind the ladderway was on fire now, and by the time I reached the top, so were my pantleg and shoe. I had also singed my arm. Well worth it.

I dragged the raft aft and took it out of the bag. It was not the kind that inflates when you pull a cord. That would have been too easy. Rather, it was a white-water river raft that needed to be pumped up. And I didn't know where the pump was.

I took one survival suit out and laid it on the burning cabin floor, then crawled into the cabin to find the pump, which I thought was in a cupboard under the sink. It was, luckily.

I pumped frantically. Things were getting real uncomfortable.

The raft was only about one-quarter full when the rear cabin window blue shut. The door sailed by me and off the stern.

That was my cue.

I tied the raft to the stern cleat with about fifteen feet of slack and threw the limp raft into the water.

Before lowering myself into it, I threw in my remaining survival suit, the oars, pump, flare kit and, of course, my EPIRB.

Once in the raft, I continued to pump until all chambers were full. By this time my boat was almost entirely in flames.

I was about to cut the raft loose when I remembered that my pocket knife was on my keychain, which was at the service station in Brookings, where I had left my son's truck the morning before.

What a fiasco. Could I possibly have screwed things up any more if I had tried?

I had to pull myself up eight feet of bullwarks — some burning — then hop back in, grab a cleaning knife, climb back out, hop into the raft and cut the line loose. Finally I was free of the boat.

Rowing around, keeping close to the boat yet out of the smoke was a chore. The swell was about six feet with a two-to-three-foot chop. Winds were ten to fifteen knots. I knew if I had to row to shore it would surely be an exciting trip. Not only would it be bumpy, but if I made it at all, the shoreline would greet me with a series of rocks, bluffs and reefs.

My main hope was that my EPIRB was transmitting. I had owned it for two years, and had already used it successfully in another emergency. But I had never changed the batteries. The red light that indicates proper operation was flashing, so I could only assume it was still working.

If you're not familiar with EPIRBs, here is a crash course: An Emergency Position Indicating Radio Beacon broadcasts radio signals over 121.5 mhz, the civilian international distress frequency, and 243 mhz, the UHF for military aircraft in distress. Rescue aircraft can home in on the EPIRBs signal with radio direction-finding equipment. Mine was a Class A EPIRB manufactured by ACR Electronics of Hollywood, Florida.

The last time I used it, I found out just how effective it was. After an unusual series of events, I found myself almost one hundred miles off Cascade Head in the middle of the night with six feet of water in my engine room. I had called the Coast Guard and kept them informed of my progress and position every half hour. Eventually the air intake of the engine submerged, leaving me dead in the water and without any communications. I immediately activated my EPIRB, and after two hours in the darkness, I could see two choppers approaching. They knew only my approximate position but were heading directly for the signal and, more importantly, me. They dropped four pumps which saved the boat. I was more than impressed.

I had always wondered if EPIRBs were worth the expense, and more specifically, if they would actually help someone rescue me. Mine certainly had.

Circling the boat was by now becoming increasingly painful. The caulking was burning between the planks almost to the waterline. The front of the cabin had caved in, and my new radar receiver was on fire.

This boat, to me, was a piece of art. It had been built in 1903 as a tender, picking up salmon on the Oregon and Washington coasts then delivering them to Altoona, Washington. The hull is very sound, and I had added a new cabin, bulwaks, engine room, and built a hemlock and mahogany fo'sc'le second to none. It was not only a lot of work and money, but it was also a part of me. And here I sat watching its destruction.

About an hour and a half after my EPIRB was activated, I noticed a streak of smoke on the horizon. As I followed it, I soon recognized it to be a chopper bearing down on me.

It circled in closed overhead. The pilot hovered directly above, lowering a cable with a small stainless-steel ring and a piece of line attached to it. Not knowing what else to do, I held onto the ring, at which point they began to lift me out of the raft. As soon as my feet were clear, the helo swung away from the burning boat and seemed to climb. At the same time I began to spin. What a feeling. I felt like the girls in the circus hanging on by their teeth and spinning.

I was glad to feel someone grab my shoulders and stop me. I always assumed that when they hoisted you into a helicopter, you ended up inside. Wrong. I was still dangling from a davit three feet from the hatch, with a Guardsman yelling at me not to let go. He must have thought I was nuts. You couldn't have pried my fingers from that ring. I could have hung on until they got to shore.

Eventually I swung my foot up and pulled myself on board. Once inside, I was asked a few questions to see if I was okay. When they determined I was, the pilot decided to retrieve the EPIRB from my raft, as it was quite disturbing to hear. I was given a headset to communicate with the crew and could hear the EPIRB continually beeping until they finally got it on board and gave it to me to deactivate.

When we landed at Brookings, I was given an accident form to fill in and was introduced to the radio operator I had spoken with. He thought I had passed out when I was coughing in my last report. They then gave me a ride to the service station where I had left my son's truck.

At this point, I think I was finally in shock. It was like a dream to have gone through all the things I had just been through: to have all the worst thoughts go through my mind, and then suddenly find myself on shore out of danger.

It was ten o'clock. The pickup wasn't ready, so I wandered across the street to have breakfast, carrying my EPIRB like a little kid with his teddy bear. It was all that was left of what was once a beautiful part of my life. **SAR**

POSTSCRIPT: *IF I HAD IT TO DO OVER AGAIN*

Needless to say, I was poorly prepared for an emergency. I hope others will learn from my mistakes. I know I will.

Here are a few things I would do differently if I had it to do over again:

1. Buy a good, self-inflating raft and stow it close to open deck space.
2. Give an EPIRB priority even over a survival suit, which I had never done. But make sure you have both.
3. Never have a survival suit far from reach. It's amazing how fast things can happen in an emergency.
4. Always carry a good knife **on your person.**
5. Never panic. Try to use common sense and act quickly.

WELLNESS FOR BIRDING TRIPS

NORMAN A. MELLOR, M.D.
Professional Corporation
720 Magnpolia-Suite C3
Corona, CA 91720

The advent of rapid and easy transportation along with the increase in world-wide birding trips to the most primitive yet populated areas has created the need for precautions against a number of medical problems. Many Americans who travel abroad or in our own wilderness areas become ill needlessly from drinking contaminated water.

Travelers' diarrhea, Delhi belly, Montezuma's revenge, etc., is the most common illness seen. It occurs world-wide and it can incapacitate individuals or entire groups for several days or weeks. Although it has a high morbidity rate, it has virtually no mortality rate. It is caused by one or more of various enteropathogens. The most common cause is from an infection with a different serotype (subspecies) than we have of the normal intestinal bacteria, Escherichia coli. This is enterotoxic to us but not to the people who carry it in their intestine. They give it to us most commonly in contaminiated water. It is also found in ice made from that water, on raw foods, and in unpasteurized milk or ice cream.

A wide-spread pollution in the United States of most of our streams and lakes is shown by the results of Public Health testing. Many times this confirms the presence of pathological viruses, (poliomyelitis, hepatitis, and enteroviruses), by bacteria (salmonella, shigella, and typhoid), and by protozoa, (amoeba and giardia). These preclude the use of unclean or unpurified water in this country.

On any trip the sterilizing of water by boiling is at best an inconvenience and is usually impossible. Boiling does not kill the hepatitis nor enteroviruses nor the cysts of amoeba.

This article presents a common-sense outline for avoiding intestinal diseases and for the use of aqueous iodine to sterilize water as a part of a program to avoid gastrointestinal illness while on a trip.

The use of an aqueous solution of elemental iodine[1] is a simple, safe, easy to carry, rapid and completely effective method to sterilize water. We have used it very successfully for four years with over one hundred and fifty birders in eight groups from Point Barrow to Central and South America, and hundreds of patients who have traveled safely world-wide. It became a required technique for the Riverside Mountain Rescue unit after six of their men developed Shigellosis from a stream and they found that all streams in the San Jacinto Mountain Wilderness Area showed heavy contamination when cultured. The only contraindications to its use is for a person who is sensitive to iodine or for a person being treated for hyperthyroidism. We have used it copiously in a hot climate for two weeks and it has not raised our blood iodine determination above normal.

Aqueous Iodine Technique

Four grams of elemental U.S.P. resublimed iodine (I_2) is put in a one ounce glass (not plastic) medicine bottle that has a screw cap. When used as a measuring cup this cap holds approximately three milliliters (cubic centimeters) of liquid. Keep this bottle filled with water and refill it immediately as it is used. Only the aqueous saturated supernatant fluid is used. The crystals that float to the top are discarded. The crystals are not used directly for sterilization but if some are indavertently swallowed they are not harmful. One capful (3 millileters) of the supernatant iodine solution is added to each glass, or two caps per pint, or four caps per quart, or five caps per liter, of the best water available. If the water is at room temperature it is completely sterilized of enteroviruses, of bacteria and their spores, of algae, and of protozoans and their cysts in fifteen minutes. If the water is near freezing, heavily contaminated, or turbid, allow a half an hour or more for sterilization. Iodine is effective over a wide pH range and also in the presence of organic contaminants.

The four grams of iodine crystals will sterilize about 1000 liters of water. We give one of these bottles to each individual or couple of traveling companions. Any pharmacy can special-order elemental iodine and make up and label the bottles. A physician's prescription is required in the United States because iodine crystals are toxic. We order the bottles in batches of twenty-five or fifty since it is easier for the pharmacist.

Other Methods

We do not recommend the use of commercial 2% tincture of iodine because it is too concentrated and the drops coming from different dropper bottles cannot be calibrated. This creates the possibility of under or over dosage and the tincture also makes water unpalatable.

We no longer recommend the use of Halazone R (chlorine). It loses its potency in the bottle on the shelf in a few month's time; it loses it very rapidly if exposed to a warm area, and it loses it in two days if exposed to air. It combines with organic solids in water and loses its efficiency and it is ineffective in alkaline water. It is not effective against the interoviruses or against the cysts of amoeba.

Globaline R (tetraglycine hydroperiodine) tablets are more convenient but we do not recommend them because we cannot be sure of their potency. They have a somewhat longer shelf life than Halazone but one third of their potency is lost after a four-day exposure to air.

The recent reports[2] on the successful use of Vibramycin R (doxycycline) is a one-a-day prophylactic pill to prevent travelers' diarrhea is good news — but not all of the news. It does not have any effect on viruses, on bacteria other than the enterotoxic serotype of E. coli, or protozoans. It also has the side effect of photosensitizing some people to sunburn. It produces a permanent gray staining the infant when taken by the pregnant mother or from her breast feeding, and in children up to age eight. Its u: is therefore very limited.

Renders Water Safe

A new product useful to backcountry travelers is available in Boise. The item is a water purifier. Called the Pocker Purifier, the item is a pliable plastic straw which is a miniature waste treatment plant. The straw has different filters and chemicals in various stages in the cylinder. The purified renders water safe from a list of bacteria, algae, protozoa, parasites and viruses. Of interest to Idaho search and rescue people is its ability to kill Giardia Lamblia, a protozoan responsible for beaver fever or Giardiasis. Beaver fever symptoms include extreme diarrhea, cramps, nausea and weakness.

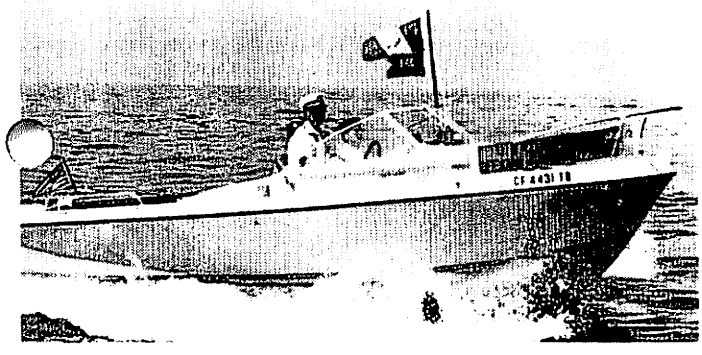
Operation of the purifier is simple. The user places the staw in the water and sucks the water through it. The water is drawn through a primary filter which removes suspended particle matter. The water than passes thorugh a medium of resin to kill bacteria. The purifying media is a polyhalide converted ion-exchange media. When water containing micro-organisms passes through the resin bed, the polyhalide resin releases polyiodide ions that instantly render bacterias and viruses nonviable. The remaining filters and bone char-carbon are to make the water tasteful. The purifier can't be used on salt or brackish water. A certified laboratory shows that even urine is safe to drink after going through the purifier. One advantage of the purifier is that it can be used in the winter also. With the straw being made of pliable plastic, freezing does not break or damage the purifier nor does freezing break down the iodine resin. The straw will thaw quickly if the water is sucked or blown out before allowing to freeze. The straw is manufactured by Calco Ltd. of Rosemont, Illinois, a water treatment company. Tests were conducted by Aqualab of Streamwood, Illinois, a certified laboratory. Tes conducted at Aqualab indicate that the purifier is 100% effecti against Giardia. Tests conducted by BYU show that the purifier is 99% effective against Giardia. The LDS Church has been using the purifier for its missionaries in South America for the last six months with good results.

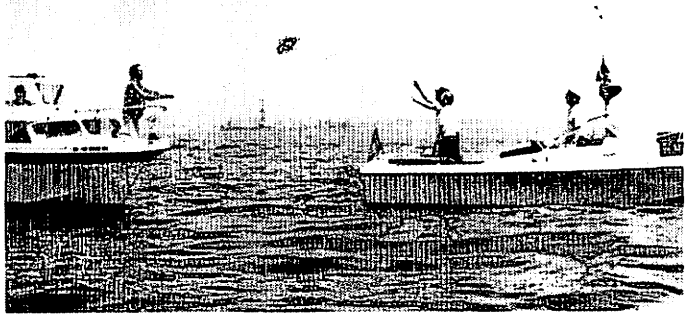
Continued on Page 19

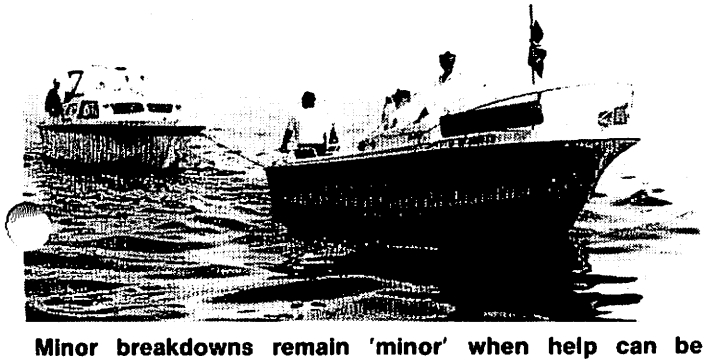
EPIRBS ARE STILL SAVING PEOPLE

from *ON SCENE* the
National Maritime SAR Review, U.S.C.G.
2100 Secton Street, S.W.
Washington D.C. 20593

The following incident reveals the continuing effectiveness of the Emergency Position Indicating Radio Beacons for the rescue of persons at sea. On 15 April 1981 commercial aircraft reported hearing EPIRB signals between San Juan, Puerto Rico and Grand Turk Island. An HC-130 aircraft from Coast Guard Air Station Clearwater determined that the signal was coming from an area 170 miles East-South-East of Grand Turk but was unable to locate the source due to equipment failure. An HH-3 helicopter from Air Station, Borinquen homed on the signal and located the debris from the Canadian registered sailing vessel *Canadian Goose*. Two adults and three children in lif preservers were found clinging to the wreckage. The helicopter hoisted the five people from the water and transported them to Puerto Rico. The survivors indicated that their 40 foot catamaran broke up and sank at 0400 on the 15th. They had clung to the wreckage until recovered at 2300 that night.







Minor breakdowns remain 'minor' when help can be summoned via radio or EPIRBS.

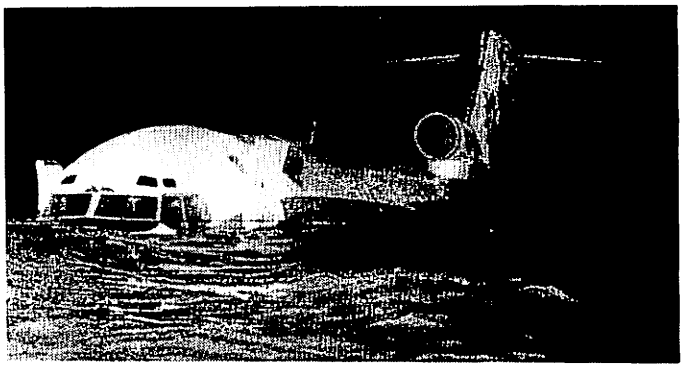


PHOTO BY UPI

Boaters are advised to equip their crafts with EPIRBs. Maybe this concept should be expanded?

The helicopter pilot reported that he began climbing to 3000 feet approximately 50 nautical miles from the estimated position. A strong lock-on on 121.5 MHZ was obtained. A very weak signal was heard on 243 MHZ. The helicopter homed for about 12 minutes until a needle swing indicated that the helicopter had flown over the position. It then began descending in 500 foot increments to insure that direction finder contact was not lost. With a strong needle swing at 1000 feet MSL, a 45 minute smoke float was deployed. Another was deployed at 500 feet. The helo crew began visual search at 300 ft. with night sun and search lights. After approximately five minutes of search, debris and survivors were located. A third float was deployed, effectively marking both sides and the up-wind end of the vessel debris. Hoist operations were commenced and all five persons were rescued. **SAR**

PHOTO BY UPI

Fair weather seldom accompanies rescues at sea. Such was the case for these Sea King helicopters and the capsized Danish freighter *"Merc Enterprise."*

CRASH STUDY

by JERRY WELLMAN
840 East 6th Avenue
Salt Lake City, Utah 94103

I don't remember who it was, but an ROTC instructor once lectured that to win a battle, one must have studied and must know the enemy.

While it would be absurd to refer to a search victim as the enemy, the parallel can be applied — know your territory.

Early on in 1977 a series of inquires concerning old crashes spurred a project that is only now nearing completion — that of researching plane crashes within the State of Utah. Repeated calls to government sources brought only the reply that the requested information was not available in the format requested and for a "reasonable" fee the government would be glad to research the data for me.

Being a normal 'SAR person' with few funds, the prospect of paying the government hit me about as neatly as April taxes.

So I did the next best thing, I researched all the crashes on file in the Utah Civil Air Patrol search records. Realizing that only crashes that resulted in CAP missions would be on file, I began looking through microfilm copies of *The Salt Lake City Tribune*.

What resulted in 1982 is a 130-page book listing all the crashes of record from 1941 to 1981. Others are still being found (no newspaper is perfect!) but what were found represent a goodly portion (statistically significant?) of the crashes (both on and off airport).

Then came the interesting part — putting them all into my Radio Shack TRS-80 computer and generating a 37-page listing by latitude and longitude.

Three weeks later, I had a picture of where the crashes were in the state — both latitude/longitude from the computer and by month/year from longhand as they were researched.

For some reason May and November were light crash months and the locations were typically centered around Salt Lake City — presumably where most Utah pilots reside.

Why the two months were light, or why others were heavy isn't important. What is important is to further breakdown the statistics and find out what months are heavy or light that are SAR crashes or remote-area, SAR-type crashes.

And the breakdown by location was interesting — the 109° was surprisingly light even though it contains some of the state's roughest territory.

It would be obvious that SLC, Ogden, Provo and Hill AFB would contribute to crashes in Northern Utah, but what about the central part of the state and around St. George? Is this the corridor from north to south for the state?

So after five years of recording data from newspaper microfilm, checking libraries, getting what data was available from federal sources I have a composite listing of crashes in Utah.

In the next months the statistical analysis is what's left, deciphering 977 air incidents to discover what percentage are SAR associated, military, commercial, fatal, on airport, perhaps weather related, etc.

This would be done by both location and month — allowing SAR people to allocate resources based on a 40-year period. It will also allow planning as to when the peak months (over 40 years) are and what airports might be the most accident-prone.

The bottom line is familiarity with Utah air crashes, like the *Syrotuck* series on missing persons — this will offer some insight to Utah air crashes.

Down the road perhaps weather can be thrown in, terrain factors, etc. — there's a lot to do and it can keep me busy for months.

It has proved interesting and provides a listing at least of *known crash sites* — we're always finding them on a search! And the latitude/longitude list will help verify old or new.

NOTE: Persons from other states interested in how to get such a project going and what non-government businesses to contact, please contact me. If you have a TRS-80, Model I, 48K disk computer system, I'll be more than happy to copy my crash [illegible] onto a disk.

37 Degress — 109 Degrees

	BRIEF	SAR	MIL	FATAL	SURVIVE
1.	Takeoff Mexican Hat			2	
2.	Near Butler Wash				3
3.	Takeoff dirt strip nr bluff			3	
4.	Into San Juan River			3	
5.	Takeoff Blanding			1	
6.	Hit Power Line E. of Blanding				2
7.	Boulder Mountain	Y			3
8.	N. of Blanding on road			1	
9.	Landing on dirt road				2
10.	14 miles S. of Monticello			1	2
11.	10 miles N. of Blanding			1	1
12.	6 miles NW of Blanding	Y		4	
13.	15 miles NW of Blanding	Y		2	
14.	10 miles W of Monticello				2
15.	Wires W. of Monticello			1	
16.	White Canyon		Y		1
17.	Dark Canyon Plateau	Y			3
18.	Takeoff Monticello				3

SYNOPSIS: (TOTAL)
18 incidents, 41 persons, 19 Fatal, 22 Survive

Military: 1, 1 hurt
Civilian: 17, 19 killed, 21 hurt
Known SAR: 4, 6 killed, 6 survive
(22% of incidents; 14% fatal)
MISC: 5 takeoff/landing; 2 hit power lines

37 Degrees — 110 Degrees

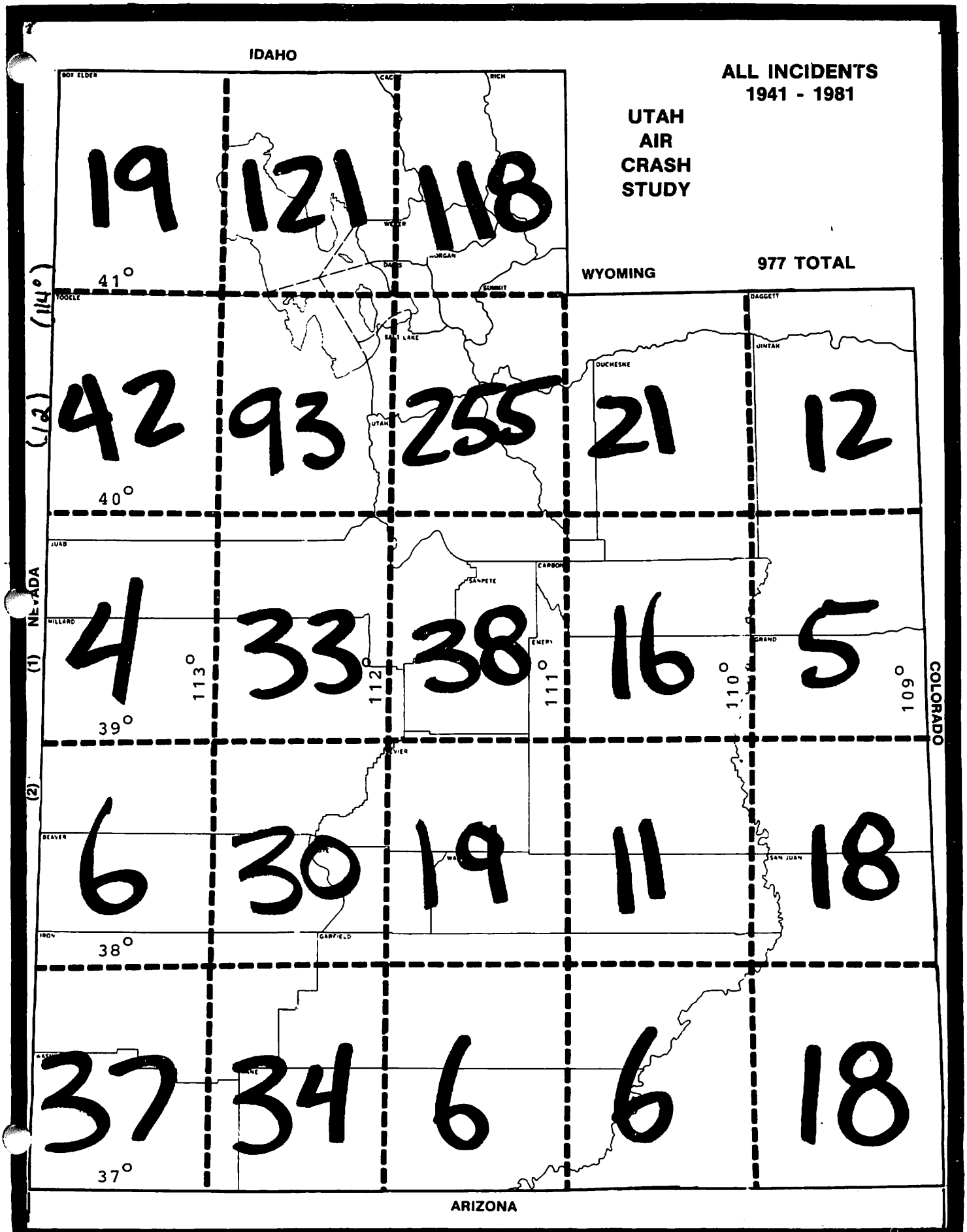
	BRIEF	SAR	MIL	FATAL	SURVIVE
1.	Landing Monument Valley				3
2.	Into Colorado River				1
3.	12 miles N. Colorado R.			2	
4.	Happy Jack area			3	
5.	40 miles S. Hanksville			5	
6.	40 NW of Blanding				2

SYNOPSIS: (TOTAL)
6 incidents, 16 persons, 10 killed, 6 survive
SAR: None
Military: None

37 Degrees — 111 Degrees

	BRIEF	SAR	MIL	FATAL	SURVIVE
1.	Kaiparowits Plateau	Y			4
2.	In Lake Powell			2	1
3.	Spencer Point			1	
4.	East of Escalante			2	
5.	Near Boulder				2
6.	East of Antimony	Y		2	

SYNOPSIS: (TOTAL)
6 incidents; 7 fatal, 7 survive
SAR: 2 incidents, 2 fatal, 4 survive
Military: None


IDAHO
ALL INCIDENTS
1941 - 1981
UTAH
AIR
CRASH
STUDY
977 TOTAL
WYOMING
COLORADO
NEVADA
ARIZONA
(1)
(2)
(114°)
(12)
41°
40°
39°
38°
37°
113°
112°
111°
110°
109°
19
121
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TRACY JO's OPERATION REPORT

by TRACY JO WHITTEMORE
Editor
Search & Rescue Magazine

As the new editor of *Search and Rescue Magazine*, I'd like to briefly introduce myself:

OPERATION REPORT
SHERIFF'S DEPARTMENT SEARCH & RESCUE
Santa Barbara County

VICTIM INFORMATION:
SEARCH ___ RESCUE___ RECOVERY___ OTHER X
DATE: **9/1/82**
NAME: **Whittemore Tracy Jo** AGE **29** D.O.B. **12-6-52**
ADDRESS **512 So. 'T' St., Lompoc, CA** PHONE **805-736-3902**
SEX **F** RACE **Cauc** HEIGHT **5'6"** WEIGHT **125**
HAIR **Blond** EYES **Blue**
CLOTHING: **Khaki Shirt, Green Levis, Hiking Boots**
SPECIAL INFO: **Lompoc Search & Rescue's Team Captain**

REPORTING PERSON:
NAME: **Whittemore, Lynn Thomas** AGE **37** D.O.B. **11-6-44**
ADDRESS: **Same**
RELATION TO VICTIM: **HUSBAND**

BODY OF REPORT:
LIST OTHER VICTIMS IF APPLICABLE: **N/A**
CONDITION VICTIM FOUND: **Anxious to implement her ideas with Search and Rescue Magazine**
LIST ALL PERSONNEL INVOLVED: **SARM Staff, Dennis Kelley, Brenda Williams**
SUMMARIZE DETAILS OF ACTIVITY: **Tracy has been seen very little since taking the position of Editor for SARM, thus a report was filed for ONE MISSING WIFE !!**

I was introduced to search and rescue in 1971, when my husband first joined Lompoc Search and Rescue. I have been actively involved since 1973.

SAR has provided me with many learning experiences, plus the opportunity to meet interesting people and to help others. I have SAR to thank for many things in my life today. I would like to show my appreciation by sharing the enthusiasm and good intentions of SAR personnel throughout the world.

I intend to gear *SARM* to you and your organization. *SARM* issues will provide you a means of keeping up on the latest SAR techniques and equipment. This will be accomplished by filling each issue with innovative ideas and captivating stories. I want to introduce you to different organizations throughout the world; organizations that have set goals similar to your own. I want to exchange the experiences of these groups, their successes, as well as their failures. Hopefully, we can all learn from one another.

In order to keep this promise, I will need your help. I am asking you to please keep in touch with *SARM*. Share with us your ideas, activities, war stories, or thoughts, good or bad, we will spread the word.

SARM will be delivered in a timely manner. Remember it is *SARM's* policy to please our readers. If you are having any difficulty in receiving *SARM*, i.e., incorrect address label, late delivery, etc., please let us know. We will rectify the problem, if we are aware of it.

I am reorganizing *SARM* headquarters, with the help of Brenda Williams, and Dennis Kelley. Eventually we will locate everything that hs been misplaced, mislaid, or misfiled. Until then, for those of you making inquiries about specific articles or such, please be patient. I have not forgotten you.

I feel *SARM* has an exciting future, and I hope you will be there to share it with us. SAR

Continued from Page 14

The Pocker Purifier is now available in the ⅜-inch size, but I would recommend buying the ½-inch size. The ⅜-inch size cost is under $10.00 and the ½-inch size is between $12.00 and $1[illegible]. The ½-inch size is easier to draw water through.

Reprinted from Rescue, Idaho Mountain Search and Rescue, Inc., P.O. Box 741, Boise, ID 83601 376-4485 Larry Novak, Editor

Conclusion

To avoid pathological viruses, baceteria, or protozoa, never drink unclean or unpurified water or ice, or unpasteurized milk or ice cream, or eat uncooked vegetables or unpeeled fruit. Fruits or vegetables such as pineapples or carrots, can be sterilized by soaking for fifteen minutes in previously iodized water. Raw meat or incompletely cooked beef or pork can contain parasites including tapeworm or trichinella and should be avoided.

We never break technique. We never trust any water in a foreign country or in the outdoors no matter what guarantees the natives give.

When we sit down at a foreign table with fruit juice mixes or water we put our capful of aqueous iodine in it and fifteen minutes later we enjoy it. To us, to do otherwise, is not worth the risk of missing even one good bird!

REFERENCES

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2. Sack, David A., et al; *Prophylactic Doxycycline For Travelers' Diarrhea.* The New England Journal of Medicine, 758-762, April 6, 1978. SAR

TRACY JO WHITTEMORE
NEW EDITOR OF *SEARCH & RESCUE MAGAZINE*

Don't Drink the Water

Reprinted from *Rescue*,
Idaho Mountain Search and Rescue, Inc.,
P.O. Box 741, Boise, ID 83701
376-4485
Larry Novak, Editor

Stacy Gebhards, Chief of the Idaho Fish and Game Department's Fisheries Bureau, is well known in Idaho, many persons having heard him giving talks on winter survival or having seen his tantalizing color slides showing winter travel and camping on the Sawtooths. He is also well known as a licensed lead guide with Back Country Skiing and Winter Expeditions.

"Idaho Wildlife" in its May/June, 1981, issue ran an article on the dangers of drinking water in which the nasty little parasite known as Giardia might be lurking. Since the article comments on the personal experiences of Stacy Gebhards and his son, John, *Rescue"* believes its readers will be interested to learn more so it is reprinting it with permission of *"Idaho Wildlife,"* magazine of the Idaho Department of Fish and Game:

"Do you want to lose 25 pounds in three weeks?"

"You're right; there's a catch to it. The catch is diarrhea, intestinal gas, cramps, nausea, vomiting, weakness, a general fluish feeling. In other words, considerable discomfort that can last from a few days to several months.

"All a person has to do is drink a cupful of water from one of Idaho's crystal clear, cool streams. Floating in the water may be tiny parasites called Giardia (Gee-ar-dee-a).

"Once inside a person, the parasites get right to work bringing the symptoms of giardiasis. It is one of the newest and ugliest eats to the increasing number of people who eat and drink outdoors.

"Giardia, single-cell protozoans, come in two forms — a cyst form and another that looks like a radish with a few extra roots. Of course, neither form can be seen with the naked eye. They have to be found in a laboratory by microscopic examination of stool samples. It seems to associate itself most often with beavers and the streams these animals use. It may also be found in other mammals.

"If you happen to wind up doing the cooking chores in a camp this summer, you only need to talk to a victim of giardiasis for a few minutes to make sure you purify any water you use to drink or for cooking.

"Stacy Gebhards, chief of the department's Fisheries Bureau, drank water from the wrong stream on a recent elk hunt in one of the state's wilderness areas.

"'I was well off the trail and alone when the chills started,' Gebhards said, 'and although I was dressed like an Eskimo, nothing would stop the cold.'

"The bundles of clothing soon became a problem when almost every ten yards required a stop when the explosive and extremely foul smelling diarrhea hit. Despite frequent rest stops Gebhards said he was so weakened from loss of body heat, vomiting and dehydration that he was forced to crawl the last mile into camp. He passed out twice.

"'For three days following the onslaught, all I could keep down was the broth from boiled grouse,' he said. 'I lost 25 pounds in three weeks before it was diagnosed and successfully treated.'

"And, winter hikers or campers are not immune either. Gebhards' son, John, contracted the scourge of the outdoors on a winter cross-country skiing trip. Symptoms may develop in one to nine days.

"While Gebhards rushed a stool sample to the hospital for analysis soon after his son became ill, the problem became rapidly worse for John. 'John's a track enthusiast,' Gebhards said, 'and he doesn't have 25 pounds to lose.' In the hour and a half it took to get the test done, he said, John already had passed out from dehydration. It took 24 hours of intravenous feeding to replace liquids John had lost.

"It becomes clear right away, Giardia is not something to play with, especially since you're most likely to get it in the outdoors and far away from medical help. It is serious. A person hiking alone could die from dehydration, both from the illness itself and from a weakened condition that pinned him to the mountainside.

"What can be done?

"Giardia is curable if a person gets medical help right away. However, prevention is a lot easier. Here are the necessary precautions:

"• Boil all drinking water taken from springs or streams at least 15 minutes before drinking. This must be done either in summer or winter. John Gebhards contracted giardiasis from drinking water he chopped through ice to get.

"• Do not try to use chlorine to purify drinking water. You would have to use enough chlorine to harm yourself before it would knock out the tough little parasites.

"• Get medical help right away for anyone who shows any of the symptoms. Although the symptoms are similar to flu, it may be more serious and giardiasis gets serious right away. The diarrhea cannot be controlled with conventional medications. The parasite itself has to be eliminated.

"• It is infectious, riding from one person to another by whatever means it can.

"• If you must drink water outdoors without boiling it, try to select small streams on a mountainside that are unlikely to be used by beavers."

(Editor's Note: *"Idaho Wildlife"* is a very fine magazine put out by the Idaho Department of Fish and Game and it deserves the support of every person interested in the fish and wildlife in Idaho. The articles are well written and illustrated with excellent photographs. It is without doubt, a rare magazine.)

Search & Rescue Magazine BOMB

BOMB is your direct line to the editor's desk. Each month, the two top-rated authors receive bonuses based on your votes. To cast your vote, first look at the list of this month's articles below — then, after reading, rate each article as **Very Good, Good, Fair** or **Poor** with an **X** in the appropriate box. Your feedback helps to produce the best possible magazine.

PG	ARTICLE	VERY GOOD	GOOD	FAIR	POOR
4	GETTING TO KNOW YOU	☐	☐	☐	☐
6	MORE ON SEA SICKNESS By Cdr. Al Steinman	☐	☐	☐	☐
6	NATIONAL SAR PLAN - 1981	☐	☐	☐	☐
7	LESSON IN FUTILITY By Ken MacCammond	☐	☐	☐	☐
10	SARSAT By TSgt. Bob Miskowicz	☐	☐	☐	☐
12	LESSONS LEARNED FROM FIRE AT SEA By Tom McCallum	☐	☐	☐	☐
14	WELLNESS FOR BIRDING TRIPS By Norman A. Mellor, M.D.	☐	☐	☐	☐
15	EPIRBS ARE STILL SAVING PEOPLE	☐	☐	☐	☐
16	CRASH STUDY By Jerry Wellman	☐	☐	☐	☐
18	TRACY JO'S OPERATION REPORT	☐	☐	☐	☐
19	DON'T DRINK THE WATER By Larry Novak	☐	☐	☐	☐

CURRENT MEASURES AGAINST RABIES

Unless swift action is taken, the rabies ultravirus reaches the brain after a clinical process taking between a month and forty days, at the end of which death is inevitable. This illness affects mammals whether carnivorous or not, the most vulnerable being those that roam about freely both wild and domestic. The fox, being very mobile and prolific, is the main carrier of the disease as it has wide possibilities of spreading it. Grazing sheep and cattle are very exposed to infection from a bite, however, slight, by a fox or a dog, against which they are defenseless. Contamination may result from a bite or simply from contact of the froth with the mucous membrane or a scratch, but the incubation period takes several days before the animal, although dangerous, shows any observable symptoms. The victim shows signs of despondency or excitement, sometimes both; these are followed by hydrophobia, at which point even the sound of running water is unbearable to him, and an almost continuous hyperesthesia putting him in a state of nervous hypersensitiveness. Towards the end of the development, the final phase is indicated by imperious aggressiveness followed by periods of prostration with delirium and mental abberation.

What measures should be taken against this returning disease?

Prophylaxis:

Destruction of carriers: that of the fox, for example, is encouraged, with rewards occasionally being offered.

Vaccination: for gamekeepers vaccination is compulsory, huntsmen should also be vaccinated. . . In danger areas it is wise to vaccinate dogs and cats — in some countries this is compulsory. In affected areas dogs and cats should be kept on leads; any animal wandering loose may legally be killed. Immunity through vaccination varies from one individual to another, but the success rate is sufficient to justify vaccination as a safety precaution.

Information: In contaminated zones it is necessary to alert anyone who is likely to come across animals showing strange behavior.

Therapy:

Action for sick animals: It is practically impossible to save the life of an infectd animal, since by the time the symptoms are observed or a vet recognizes the disease, the process has begun and it is too late to intervene. In such cases, they must be killed, handled with protective objects and the remains carefully buried.

Action for Humans: when a person has been in contact with, even though not actually bitten by, an animal suspected of carrying rabies, he should consult a doctor as quickly as possible. The latter will most probably give him an injection of anti-rabies serum, even if he has already been vaccinated. The injection should be given as soon as possible, as once the process has begun nothing more can be usefully done and death is certain. It is not possible to give a detailed study of this disease in a few lines. It would be wrong to class it amongst the scourges of the century, but it should nevertheless not be ignored. Farmers and those living in the country are exposed but award of the dangers. However, week-end houses, hunting and country excursions expose city-dwellers to dangers of which they are generally ill-informed or naturally unaware.

Public information is therefore indispensable to spark off effective and reasonable action. Taking the necessary precautions for animals enables them to be kept. Having a 55cc serum injection is not pleasant, but it could save one's life. Man is well armed today against rabies, but he must still know how to use these arms.

Source of Material: International Civil Defence, 10-12 Chemin de Surville, CH-1213 Petit-Lancy, Geneva, Switzerland.

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STUDY QUESTIONS VALUE OF 911 SYSTEMS

Washington (AP) — A federally financed study calls into question the value of expensive police "911" emergency telephone systems, concluding that they can increase arrests at the scene of the crime by three-tenths of a percentage point at most.

In fact, the three-year study released Sunday found that in one city a 911 system caused delays in crime reporting by citizens trying to determine whether they were dealing with legitimate emergencies.

The study was based on analysis of 3,332 burglaries, robb[illegible], aggrivated assaults, motor vehicle thefts, larcenies and rapes between April 1979 and January 1980 in Jacksonville, Gl., Peoria, Ill., Rochester, N.Y., and San Diego, Calif.

The Police Executive Research Forum conducted the study using police data and interviews with more than 4,000 victims, witnesses and bystanders. The work was financed by a $530,000 grant from the National Institute of Justice, research arm of the Justice Department.

The forum's executive director, Gary P. Hayes, said the results cast new doubt on "the time-honored tenet that police departments must send patrol cars immediately to all crime calls because the chances of making arrests are good."

The report provides the first confirmation of a controversial 1977 study in Kansas City that found that because of delays in reporting crime, fast police responce could affect the chances of arrest for only a very small percentage of serious crimes. The latest study sheds new light on the reasons for those citizen delays.

The study found that rapid police response leads to on-scene arrests in only 29 of every 1,000 cases and concluded that the best reporting and response systems could increase the arrest figure only to 50 to 60. It said a fully effective 911 system could at best raise the arrest figure to 32.

The major reason for the low arrest rate is that 75 percent of all serious crimes are discovered after the criminal has escaped, the study said.

Fast response can make a difference in only about 25 percent of crimes, where the victim was confronted by the criminal, the study concluded. The researchers found it took the average citizen between 4 and 5½ minutes to report such crimes.

Of the four cities, only Peoria had a 911 system, which was installed in 1976 and widely publicized for emergency calls only. Contrary to expectations, the researchers found "citizens w[illegible] more likely to delay the call by looking through the (telepho[illegible] book in Peoria. Moreover, this relationship held true even for the most urgent cases."

They found that 20 percent of Peoria callers looked through the book even when someone had been injured or the crime was still in progress, a higher percentage than in any of the other cities, in part because citizens were misclassifying critical calls as non-emergencies and trying to find police administrative numbers to avoid burdening the 911 system.

The study also found that using 911 was only an average of 10 seconds faster than dialing the operator.

The researchers suggested that police departments establish citizen neighborhood watch programs to increase the reporting of crimes in progress, call-screening systems to reserve fast responses for those cases where it will make a difference, and witness aid programs to reduce citizen reluctance to get involved.

The four chief police executives acknowledged in a joint introduction that they had been among skeptics of the Kansas City study. They said the new study had convinced them that "even if we could achieve the best of worlds where citizens always report immediately and where police always respond quickly, only 5 or 6 percent of serious crimes are likely to result in response-related arrests."

From *Omaha World-Herald,* Monday, April 12, 1982
Submitted by J. Janice Hatt, 1508 14th Ave., Central City, NEB

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DET. 1 SAVES INJURED CLIMBER

Dry mountain air rapidly cooled as the sun slowly disappeared behind the Baboquivari Mountains 40 miles southwest of Tucson, Arizona.

About mid-afternoon on Nov. 7, 1981, 18-year-old Thom[illegible] Powell of Lake Havasu, Ariz., was completing his descent fr[illegible] Baboquivari Peak along an almost-vertical shear cliff wall more than 300 feet high.

The student of the Arizona School for the Deaf and Blind neared the end of his climb when he was struck on the head by a rock loosened by a fellow climber above him. The stone hit with

such intensity that it shattered Mr. Powell's helmet, made him lose his grip and sent him to the bottom of a gorge.

A member of the Southern Arizona Search and Rescue Association who happened to be hiking in the same area found the [illegible]m and radioed for help to the Pima County Sheriff's Department Rescue Coordination Center.

Center workers relayed the call to Det. 1, 37th Aerospace Rescue and Recovery Squadron, Davis-Monthan AFB, Ariz., which immediately put together a rescue aircrew.

Commanding the H-1 Huey was 1st Lt. Daniel Garner with Capt. Kim Shrinak, co-pilot; TSgt. Gary Brown, flight mechanic, and Maj. Ronald Wicks, flight surgeon.

They arrived at the mountaintop at 5:30 p.m., but were unable to land or hover within a quarter mile of the hiker because of the terrain and dimming daylight. Major Wicks was lowered to the ground on a forest penetrator and hiked up to the victim. He diagnosed the man's condition and called for a stoke's litter.

Ground party members built fires as nightfall drew closer and the possibility grew that the patient might go into shock.

It took three hours for rescuers to stablize Mr. Powell's condition and transport him to the pick-up site — too long for the Huey crew to stay in the area. At first the aircrew flew to a nearby missile site to conserve fuel, but the lengthy recovery forced them to return to Davis-Monthan to top off their tanks.

Sergeant Brown ran out of legal duty hours while back at base, and he was replaced on the crew by A1C Phillip Taylor.

When the Huey crew got the go-ahead to return to the mountain, they were quickly under way and arrived for their recovery try at 8:30 p.m. They successfully completed a treacherous mountain night-hoist recovery and flew the patient to the Tucson Medical Center where he was listed in stable condition.

From *Rescue Review*, January 1982

★ ★ ★ ★ ★ ★ ★ ★ ★

FLIGHT CREWS, CONTROLLER CITED IN MEADOWLANDS MID-AIR ACCIDENT

The mid-air collision of a helicopter and light plane over the New Jersey Meadowlands sports complex Sept. 23, 1981, was caused by the failure of each flightcrew to see and avoid the other aircraft as well as the local controller's failure to perceive the conflict because he was preoccupied with a non-essential administrative telephone call, the National Transportation Safety Board ruled, Tuesay, May 18, 1982.

The crash occurred during daylight in good weather as a Ronson Aviation Bell 206-B helicopter and a Seminole Air Charter Piper PA-34 airplane were about two miles from their intended landing at Teterboro Airport.

Both occupants of the helicopter were killed, but the airplane, with about 8 feet of its left wing and its right engine missing, made a gear-up landing in a nearby marsh, in which both persons aboard survived. The pilot was seriously injured, while the passenger received minor injuries.

In its probable cause determination, the Board cited the fact that the controller, who was also the tower chief, was preoccupied with a two-minute administrative phone call prior to the accident and during the time the helicopter and airplane first attempted to contact the tower. The distraction of the phone call forced postponement of communication with several aircraft and led to a subsequent period of "catching up with the traffic situation" that resulted in a period of congestion on the radio frequency.

The pilot of the Piper told Board investigators he was not able to respond to a controller request that he report crossing the position-reference point called the outer marker because of the congestion.

"Contributing to the accident was a delayed position report from the airplane pilot due to his failure to activate his marker [illegible]con receiver and to controller induced congestion on the radio [illegible]quency and an inaccurate position report from the helicopter pilot," the Board said.

A combination of circumstances led the controller to believe the helicopter was well ahead of the Piper in their paths toward the airport. The controller believed the Piper was beyond the marker distance until receiving a report that placed it much closer to the intended runway. At the same time, the helicopter's pilot had inaccurately reported that it was "coming up on the sports complex" when it was actually some 1.6 miles from it. The crash took place over the sports complex.

The Board said that because of a relatively vague position report from the helicopter, the delayed position report from the airplane, and the earlier distraction of the controller by an administrative chore it concluded that the "controller had an erroneous perception of the relative positions of the two aircraft and therefore did not consider them to be in potential conflict."

The Board noted that the Teterboro air traffic control tower is a non-radar visual flight rules tower, but that it has a BRITE radar display connected to the nearby Newark Airport approach control radar. "Although the BRITE radar had been installed in the tower for 1½ years, no effort had been made to certify the controllers at Teterboro to use the BRITE radar as an aid in controlling traffic and it was not being used." BRITE is an acronym for a radar display that is bright enough to be seen during the daylight.

The Board cited the failure of the FAA to train and qualify tower personnel in the use of the BRITE radar display as contributing to the cause of the accident and recommended that the FAA provide all pertinent personnel working traffic at BRITE-equipped non-radar control towers with the proper training and certification regarding the use of that equipment.

Another recommendation dealt with the helicopter routes for flights in and out of Teterboro that were contained in an advisory letter issued by the FAA in an effort to reduce noise complaints around the airport in Bergen County. The Board said the FAA should revise the helicopter routes contained in the Teterboro Letter to Airmen 81-2 to provide improved separation and thereby minimize the potential for conflicts between helicopters and fixed-wing aircraft traffic.

In a third recommendation to the FAA, the Board said that, through pilot training and examination programs, the FAA should emphasize to pilots the importance of accurate position reporting in communications with air traffic control facilities.

Copies of the Safety Board's complete printed report may be purchased by mail from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

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HELICOPTER PULLS FISHERMEN FROM ST. CLAIR ICE FLOE

Eighteen ardent ice fishermen were rescued from an ice floe on Lake St. Clair after ignoring a warning to leave the weakening ice, a Coast Guard official said.

"This happens every year about this time at the end of March," said Lt. Art Halvorson of the Coast Guard air station at Selfridge Air National Guard Base. "People stay out there until the last minute and get caught."

A year ago, the Coast Guard rescued 27 fishermen and a dog after the ice they were fishing on broke away and drifted into the lake.

On this morning a three-man Coast Guard helicopter crew on an offshore training mission noticed 50 to 60 ice fishermen on ice that had cracked near Selfridge. A member warned the anglers over the helicopter's public address system to return to shore. Some fishermen heeded the warning but others remained on the ice about a quarter-mile from shore, Halvorson said.

The Coast Guard helicopter returned to rescue the fishermen after people on shore telephoned that the ice floe had broken free. None of the 18 fisherman — including a two-to-three-year-old child – had a life preserved, Halvorson said. They were stranded for 10 minutes. There were no injuries and all of those rescued "seemed to be in fairly good spirits," he said.

The weak ice was caused by warm temperatures and strong southwesterly winds, he said.

Reprinted from *Detroit Free Press*, 4-1-82
Submitted by F. R. Limon, Traverse City, MI

Continued

CLIMBER HURT WHILE SCALING MT. WHITNEY

ASH MOUNTAIN (AP) — Sequoia-Kings National Park rangers said a climber fell and broke his left ankle near the top of Mt. Whitney, the tallest peak in the contiguous 48 states.

A ranger flown by helicopter to the accident site at 14,000 feet gave Frank Diemal, 25, emergency medical help and spent the night with him.

A Lemoor Naval Air Service helicopter was dispatched the next morning, but its engines weren't strong enough to lift the injured man out because of the think air at that altitude.

Rangers then were flown to the site to move Diemal down the slope 1,000 feet so the helicopter could remove him.

Reprinted from the Santa Barbara, CA *News-Press*, June 17, 1982

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HIMALAYAN RESCUE ASSOCIATION NEEDS A STRETCHER

The Himalayan Rescue Association is located at Pheriche at about 14,000 feet, deep in the Himalayas beyond Namche Bazar. It is a low, one story rock building supported by the Tokoyo Medical College, Everest High Altitude Medical Institute. There are a constant parade of trekkers by its door headed for the so-called "Everest Base Bamp." In reality, most treks terminate at Cala Patar at 18,000 feet. It is a high ridge across from Everest hiding behind Nuptse. You don't really see the bulk of the mountain until you are approximately 16,000 feet headed for Cala Pattar. Before that you only see tempting glimpses. Since a lot of trekkers fly into Lukla, 8,300 feet, and start up, there is a very high incidence of P.E. At the present time a P.E. victim is transported down piggy-back on a tiny but sturdy Sherpa. The stretcher that they have is a tubing monstrosity that's never been used, and the association is greatly in need of a fiberglass and aluminum stretcher. Among us we should be easily able to raise the cost of the stretcher, and then we can deliver it to them. After that, we may as well wander up to Cala Patar and take a look at Mt. Everest. The hike in will take approximately 20 days, complete with Sherpas and a Sardar and with porters. Total hiking time will be approximately 24 days. Allow a month with some sightseeing in Kathmandu. Living accommodation in Kathmandu would be simple but adequate (two star). The hike in takes you over a whole series of ridges through the fascinating Nepalese villages, with their chickens and goats and rice. There will even be the opportunity to shop in Namche Bazar and buy silver trinkets from the Tibetan roadside merchants. Cost estimated at $1,000. to $1,200., plus air cost. If you are interested, fill out the slip below and mail it.

From MRA Newsletter

HIMALAYAN RESCUE ASSOCIATION TREK

Name _____

Address _____

_____

Phone Number _____

INTEREST LEVEL: ☐ Moderate ☐ High

TIME AVAILABILITY: ☐ prefer October, November
☐ prefer February, March

(October, November is better weather)

Number of persons interested _____

Mail to: **Paul M. Williams**
143 Fifth Avenue North, Edmonds, WA 98020

SHARK ATTACK SURVIVOR

ORMOND BEACH, Fla. (UPI)— She was fleeing in terror from the screams behind her, fighting against the choppy Atlantic, when the shark brushed her leg with its sandpaper f

"I kept stroking, but I kept thinking about death." said Tam. Ennis, one of the survivors of a shark attack that took the life of a 19-year-old woman. Miss Ennis, 21, a hotel restaurant waitress at Daytona Beach, recalled the horror that struck after she and three companions were dumped into the ocean, 3 miles off Ormond Beach, when their 16-foot catamaran capsized. One her her companions, Randall Cohen, 26, was hospitalized for treatment of exhaustion and exposure. Miss Ennis and her boyfriend, Daniel Perrin, 21, owner of the sailboat, were resting from their ordeal.

Christi Wapnairski, 19, of Chicago, who had been working as a secrtary at Embry-Riddle Aeronautical University during the summer to earn her tuition for the fall term, did not come back. Miss Ennis said after their boat capsized and partially sank, the four clung to the single pontoon left afloat until the following morning. But they found they were being swept farther from shore by the current and a storm appeared to be building, so they decided to swim for the beach. Miss Ennis, a swimmer on her high school team at Mentone, Indiana, was in the lead. "Christi was 100 yards behind. Randy and Daniel were bringing up the rear," she recalled. "I looked back and saw Christi bobbing up and down. She started yelling. "She was calling to Randy, 'I've been bitten! Come here, Randy! Swim to me. I think I'm going to die!'

"I heard Randy say, 'Tammy, I think she's drowning.' "I told them to stay away from her because I was afraid the blood would draw more sharks. I said, 'Randy, don't go.'

"But Randy swam to her. I didn't know what to do. I saw Daniel and Randy with her. I just turned around. I was too scared," Miss Ennis said. "I kept swimming alone. Then something brushed against my leg and my toes. It was a shark. It must have been 5½ feet long. It was as big as I am. But it didn't attack me." she said. "I kept stroking, but I kept thinking ab death."

Lompoc Record, Lompoc California, August 13, 1981

FILMS & BOOKS . .

The following Film Cassettes are available from:

WORLD SERVICE
P.O. Box 12444
San Diego, CA 92112

STOCK #P-824 — *"BASIC RAPELLING"* is a highly detailed training cassette teaching all aspects involved. You will learn about all types of equipment used including which is the safest and most dependable. The instructor also gives the stress and limitation factors of each article and then demonstrates how to hook up and rapell. Whether it is rescue, helicopter, building, or, mountain rapelling, this is a cassette to have. $75.00

STOCK #S-821 — *"SURVIVAL I"* is a first in a series of new survival films. It goes strictly into the equipment aspect of urban or woods survival. Topics included are medical supplies, weapons, food, pack gear, and much more. $75.00

STOCK #S-822 — *"SURVIVAL II"* is an indepth film that focuses on all types of survival weapons such as blow guns, bows, crossbows, rifles, shotguns, handguns, etc. A film for the true survivalist. $75.00

STOCK #S-823 — *"SURVIVAL III"* teaches surviving off of the land. Topics covered are poaching and trapping, buildin temporary shelter, edible vegetation, ways of starting a fire, much more. $75.00

The following book is available:

SURVIVAL — FM21-76. 288 pages. The Best Manual on Survival. $6.50

MORE NEW PRODUCTS

Instructions for use: hook the end of the rope to any secure point; [illegible]he harness under the armpits leaving the arms free; throw the [illegible] out of the window and slide down exerting a slight pressure on the rope so as to be able to descend slowly hand under hand. It is the pressure on the rope as it passes through the harness buckle which acts as a brake and shows down one's descent; 3 kilos of pressure is sufficient to block it. Those who are unable to use it by themselves (old, disabled or unconscious persons) can be helped by others lightly pulling on the lower end of the rope. **H. Hegeman AB, Box 46032, S-400 35 Göteborg, Sweden.**

★ ★ ★ ★ ★ ★

NEW EMERGENCY TRAINING MANIKIN

Med-E-Train Trauma, simulating a 1,75m male, is made of self-skinning foam and has joints at the neck, shoulders, elbows, hips and knees for easy positioning. An indicator light box monitors correct chest compression, ventilation and incorrect hand position. The box can be positioned in the student's view for practice or out of view for testing. The manikin has three bleeding injuries operated by a manual pump, and a removable impaled object in the abdomen. **Anderson Research Laboratories Inc., Stamford, CT. USA).**

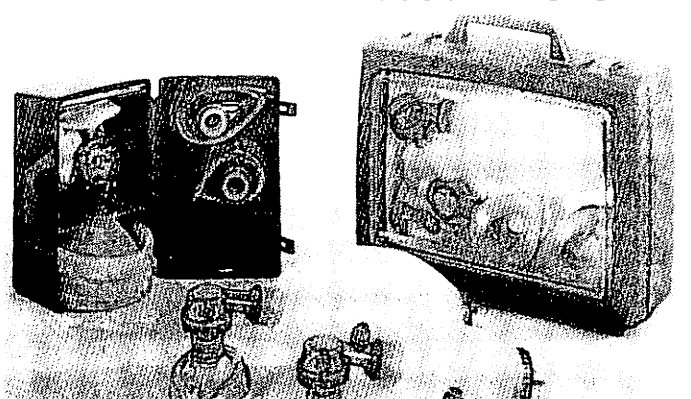
★ ★ ★ ★ ★ ★

PORTABLE ANTI-FALL DEVICE

A portable anti-fall device makes a loud beeping sound of 112 decibels in the event of a serious fall making it possible to find the victim rapidly. It is recommended for persons working in dangerous surroundings — firemen, construction workers, mountain climbers, speleologists. The device is 19cm long and is set off by a mercury-operated switch. It can also be set off by pulling a pin. The **Life Rescue SOS 1000** is water-proof and battery-operated. **Majima Company Ltd., 44-2 Kita Karasuyama [illegible]rome, Setagaya-ku, Tokyo 157, Japan.**

★ ★ ★ ★ ★ ★

LAERDAL INTRODUCES NEW SILICONE RESUSCITATORS



Laerdal Medical Corporation has introduced a new series of hand-operated portable resuscitators that retain all of the innovations of the original models while adding many significant features and improvements.

The new resuscitators which are available in Adult, Child and Infant sizes have components made of silicone and polysulfone. These new materials provide longer useful life and can be steri[illegible]d by steam autoclave (up to 270°F), ETO, pasteurization or [illegible]d sterilization methods. In addition, the **Laerdal Silicone Resuscitators** are extremely resistant to high and low ambient temperatures.

The new models feature new silicone masks that are easy to grip and provide an excellent leak-proof seal. A new swivel connector between the patient valve and mask allows the operator to change positions and use the unit in confined situations such as ambulances without disturbing the face mask or endotracheal tube. In addition, a snap-on coupling of the valve to the bag provides firm attachment and prevents disengagement during use. All of the models can be used to provide PEEP and CPAP. All three sizes are available in compact carrying cases, complete with masks, airways and Hi O_2 Kit for administration of up to oxygen.

All of the new polysulfone parts are interchangeable with the present PVC models, allowing the hospital or emergency medical provider to gradually change over to the new design. The new **Laerdal Silicone Resuscitators** are immediately available from the local Laerdal dealer.

★ ★ ★ ★ ★ ★

FIELD PERSONNEL NOW USING HAND-HELD RESUSCITATOR

Maryland's Med-Evac helicopters and ambulances that serve various high-risk areas of the state of Maryland are equipped with a surprisingly uncomplicated and inexpensive device that also is used in the MIEMSS Shock Trauma Center and hyperbaric chamber. According to MIEMSS Associate Director for Prehospital Education and Training Ronald Schaefer, the hand-held 10-ounce Harrigan Cardiac Resuscitator gives rescuers the instant feedback and control needed to apply external cardiac pressure that is optimal for each individual victim. It also eliminates the guesswork and deviations that are often unnoticeable and unavoidable with only the bare hands. The device consists of a compression force gauge and a resilient rectangular "chest compressor" filled with nontoxic pressure-transmitting fluid.

During cardiopulmonary resuscitation the device is placed directly on the victim's lower sternum, and chest compressions are applied through the rectangular portion of the resuscitator. The correct procedure is to begin with slightly shallow compressions, then increase depth and force in a stepwise fashion until compressions are just adequate to create a carotid pulse that feels normal. The rescuer then continues at this force, sternal deflection, and rhythm as long as necessary.

The instant feedback provided by the Harrigan resuscitator has several advantages, according to Mr. Schaefer. The most important is that the device helps ensure that CPR is performed correctly. By watching the needle on the pressure gauge, which registers compression force from 0 to 150 pounds, the rescuer knows precisely the depth and force applied. The needle's movement also helps in maintaining a steady rhythm. Without such feedback CPR often is a matter of guesswork, even for skilled professionals; with it, near-normal mean arterial pressures (MAPs) can be achieved. Pressures generated with bare-hands CPR typically are one-third normal — barely enough to sustain life.

Common errors in administering CPR include beginning with too forceful compressions and using jabbing, irregular motions; or, worse still, using compressions too shallow to achieve the desired results. The resuscitator minimizes such errors and almost eliminates the danger of thoracic injury, a problem that occurs in a majority of cases with bare-hands CPR, even when performed by professionals. The gauge also helps assure consistency during changeovers in two-person CPR. Of course, the resuscitator should be used only by people thoroughly trained in CPR. It is not designed for use with infants or small children.

Mr. Schaefer has compared pressures generated with CPR using the bare hands, the Harrigan Cardiac Resuscitator, and a mechanical cardiac compressor. The results were impressive. Regular manual CPR produced a MAP of 50mm, the gas-powered mechanical compressor (which cost thousands of dollars) generated a MAP of 70mm, while with the $100 Harrigan device MAPs of 90mm or more were achieved.

The dramatically higher arterial pressure, Mr. Schaefer explained, means better myocardial oxygenation; and in CPR the heart must be well oxygenated if it is to contract in response to external chest compressions. Citing cases of spontaneous conversion even after advanced cardiac life support techniques had failed, Mr. Schaefer concluded, "I think it's an indispensable piece of equipment for emergency vehicles. One day such devices may even hang on the wall next to the fire extinguisher." SAR

What's in store for Winter '82 Search and Rescue Magazine?

SAR soars to new heights with ultralight aircraft. *SARM* broadens your horizons; no longer is the sky the limit.

How will you survive the winter?
How will your neighbor survive?
Let *SARM* bring in a warming trend, with regards to winter survival. Then you too, can help to spread the word.

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'DON'T TREAD ON THIN ICE!" — but if you should, *SARM* shows you how to rectify this chilling experience.

Has avalanche rescue gone to the dogs?
***SARM* reveals the dog-gone truth of the matter.**

Getting from one side of the river to the other is not done swiftly in all cases. Go with the flow, read *SARM.*
We'll make the going easier.