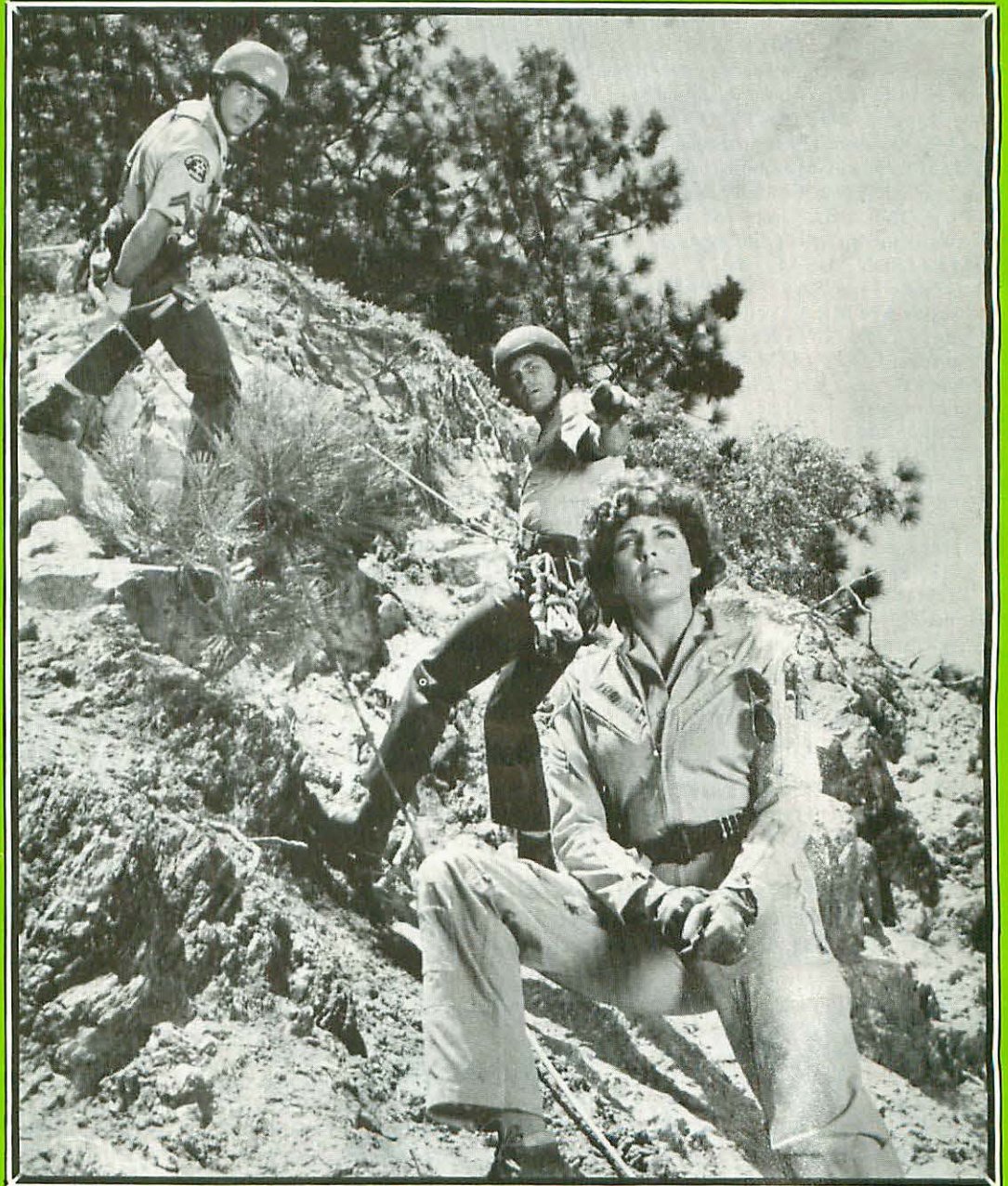FALL 1979

Search & Rescue

MAGAZINE

THE OFFICIAL PUBLICATION OF THE NATIONAL ASSOCIATION FOR SEARCH AND RESCUE

"240-ROBERT," the new hour-long ABC Television Network action/ adventure series premiering this fall, depicts the exploits of the Los ⬤eles County Sheriff's renowned ⬤rgency Service Detail — an elite group who serve as the official search and rescue unit for the country.

The series focuses on the professional and private lives of three officers assignment to this highly skilled organization. John Bennett Perry stars as Deputy Theodore Roosevelt Applegate, III ("Trap"), Mark Harmon as Deputy Dwayne Thibideaux and Joanne Cassidy as Deputy Morgan Wainwright.

SEARCH AND RESCUE MAGAZINE
P. O. Box 153
MO⬤ROSE, CA. 91020

PUBLISHER'S FORUM

by Dennis E. Kelley

TIMOTHY FIVES of Sylmar Mtn. Rescue Team, CA, has written an article on SAR for UPI... **JIM COX** handed in his resignation to the Los Angeles Co. Sheriff's Dept. Emergency Services Detail (ESD). He already has some offers from the show business industry... **RICK ROSNER**, creator/producer of the new TV series "240-Robert" was once a reserve deputy in ESD... **NORM BATTERSON** is the new Captain of the Altadena Mtn. Rescue Team, CA... **MINER HARKNESS**, renown ex-President of the Sierra Madre SAR Team stresses both participation and respect for senior team members... **J. J. POINDEXTER** of Catalina Island SAR Team sz it is startling to have the hauling line part completely in the middle of a 200'litter evac... **CHUCK LATHAM** renown ex-Captain of the Montrose SAR Team celebrated his 50th birthday... **BILL WADE**, NASAR 2nd VP, has bought himself a new Apple II computer. It has been suggested that those of us in SAR having one should start a users group around the beginings of **BOB MATTSON**... **HANS ERDMAN**, Oklahoma SAR, has designed a proposed EMT-W patch... **MARY ANN DAHM**, Rocky Mountain Rescue Group, was a real house mother at the MRA Nat. Conference at Estes Park, CO... COL. **BRUCE PURVINE**, USAF, received the U.S. Defense Meritorious Service Award for his efforts in Jonestown, Guyana... LT. COL. **BOB MATTSON**, USAF, has a very interesting presentation on computers in SAR... **PAUL WILLIAMS**, prominent ex-President of MRA, is coordinating the 1980 NASAR Nat. Conf. in Seattle... **DENNIS KELLY** of El Paso Co. SAR lives in Colorado Springs, CO... **TIM SETNICKA** of Yosemite NP has gotten married... **CHUCK DEMAREST**, MRA President, was unanimously re-elected to a 2nd term. Chuck presented an outstanding session on mountain helicopter flying at Estes Park... **BILL MARCH** of Calgary University, Canada reminds us that mountain rescue training should be regular, meaningful, safetied, and challenging enough so that the outcome is always a bit uncertain... The NOR-CAL SAR School was again a great success due to the magnificent efforts of **KEN ANDERSON, ED BEESE, BILL TEFERTILLER, BILL WEBER, ROSIE** and **BOB WRIGHT**, and **BOB HILL**... **GERRY HIGHFIELD** of Inlet Rescue Service, FL, is seeking someone knowledgeable in SAR liability insurance... **TOM TSCHOHL** of Sequoia NP, CA, is in the market for a litter wheel... **JIM BIGELOW** of CA Wing CAP has been appointed SAR Advisor to Nat. CAP Cmdr. Gen. **TOM CASADAY**... The CA Region MRA testing committee meeting brought out the following heavies; **NORM BATTERSON, LARRY CARLSON, BARBARA CHANEY, WALT ELSAESSER, ARNOLD GAFFREY, AL GREEN, TERRY HOUSTON, ALEX KIRKALDY, SPIKE LEWIS, RAD MAYS, BEN PEDRICK, HARRY SPIES,** and **PHIL**

NOR-CAL SAR School Board. *Left to Right, Top to Bottom:* Marlene and Bill Tefertiller, Rosie Wright, Bill Weber, Bob Wright, Ed Besse and Ken Anderson.

SHERIFF WARNS AGAINST MOUNTAIN RESCUE SOLICITATION

NEWS RELEASE — *Sheriff Peter J. Pitchess of Los Angeles County, California issued a warning today to citizens of the San Gabriel Valley against what he termed, "An underhanded scheme by an out-of-state organization to bilk funds from citizens through a vigorous phone solicitation campaign."*

The Los Angeles County Sheriff's Department has learned through numerous citizen complaints and inquiries to the Altadena Sheriff's Station that a publication known as the "Rescue News" of Portland, Oregon, has been soliciting funds on the pretense that the funds will be used to support local volunteer Sheriff's Search and Rescue Teams. The fund raising has in the past taken place in other western states and usually involves a solicitation campaign wherein discount coupons for local goods are exchanged for a donation to the organization. The funds are then allegedly used to support local Search and Rescue Teams.

Sheriff Pitchess stated, "All of the Sheriff's Department Mountain Search and Rescue Teams are nonprofit, volunteer organizations. Each team normally solicits donations for their own team or seeks assistance in the form of private foundation grants."

This publication has very cleverly disguised their solicitation request to lead the prospective donor to believe that he/she is helping to support a local team. In reality, only a token donation, if any at all, is given to the local mountain rescue team. The vast majority of donations collected is retained by the Rescue News Publication.

Sheriff's Department investigators are currently meeting with members of the District Attorney's Office to look into the possibility of fraud charges being filed.

The Los Angeles Sheriff's Department does not endorse any solicitations by "Rescue News" of Portland, Oregon.

Publishers Note: This news release is to my knowledge the first government official's public stand on this scheme which is being practiced in almost all western states. It is tragic that this scheme has continued unhampered for years without notables in the SAR community taking a public stand. For is it not the victim that in the end suffers? My congratulations and praise to Sheriff Pitchess for his honest efforts to warn the public.

UMHOLTZ... **AB TAYLOR** is retiring from the U.S. Border Patrol and has gotten married to his Dorothy. He plans to tour this nation giving tracking seminars... **TOM STAADT**, NASAR Sec/Trea. has moved to Kansas City, MO for a better job with his company... **BOB SKAGGS**, NASAR Board member, and **HANS M. RODER**, NSPS Nat. Ski Mountaineering Advisor, are working to spread the word on rescue rope and the new mission report... **MIKE REGAN**, L.A. City CD Coordinator, is still a great source of help and encouragement... **WALT MURPHEY**'s METTAG for triage is gaining in popularity... **STEVE HUDSON** and **TOM VINES**' rescue rope article (SU79) is getting great acceptance... CA OES's **BOB HILL** has gotten SAR statistics for the whole state for the first time... In a letter received from *"Mountain Gazette"* Editor **GAYLORD T. GUENIN**, he announced the demise of that excellent magazine... **GEORGE CONNELL** was reappointed Nat. JEEP SAR Assn. Executive Secretary... **TONY ANDERSON**, NPS, Ranger Activites Div., announced that SAR funding is now available in our parks. Tony also reports that there were 3218 SAR operations in the Nat. parks in 1978... **LOIS CLARK McCOY**, NASAR Administrator, reports that NASAR has three new grants for a pilot preventative SAR program for elementary and high school age levels... **RICK LA VALLA** has been promoted to Washington State's Div. Manager for State OES Ops. and Preparedness. **LAURA MURPHY** will become the State SAR Coordinator... **RICK LA VALLA** sz **DAVE RIDER**, formerly with the 9th District USCG OPCEN, now attending Eastern Washington University has worked the summer as SAR Coordinator for Okanagan County Emergency Services in Washington State. Dave was both in the Coast Guard and Navy for about 10 years and worked in a lot of RCC's around the country... says he still has a lot of friends who work the RCC's and read *SAR MAGAZINE*. ●●

Search & Rescue
MAGAZINE

Table of Contents

FALL 1979

FEATURES

DEPARTMENTS

MANUSCRIPTS
SUBMITTED FOR
WINTER ISSUE
MUST BE RECEIVED
BY THE EDITOR
NO LATER THAN
OCTOBER 1

"240-ROBERT"

The action in "240-ROBERT" (which is the team's radio emergency call) is fast paced and continuous, yet uniquely non-violent. As members of the Emergency Service Detail (E.S.D.), Deputies Trap and Thibideaux (Perry and Harmon) are, in addition to being full time law enforcement officers, certified scuba divers, skilled mountain climbers and licensed paramedics. They must constantly rely on their skills, wits and physical conditioning — along with the aid and assistance of helicopter pilot and co-worker Morgan Wainwright (Joanna Cassidy) of the Sheriff's Aero Bureau — while facing the challenge of rescuing victims often on the brink of disaster.

With over 70 percent of Los Angeles County being made up of either rugged mountain terrain or coastline, Trap and Thibideaux depend heavily upon their customized four-wheel drive wagon to traverse the side of a mountain, or go right to the water's edge if need be. With Morgan Wainwright's skill in maneuvering a jet helicopter into difficult places under arduous conditions, the 240 team can be counted upon to react rapidly, efficiently and with the utmost professionalism.

Deputy Trap is a stand-out of the rescue unit and has an eye for women, a hustler's grin and strapping good looks. Deputy Thibideaux is more idealistic than his partner. Sometimes pensive, he is devoted to his work and harbors a keen interest in medicine. He has been dubbed "the singing Deputy" and has developed into a talented composer. He's had a hit record, but music remains of secondary importance to him. Their co-worker Morgan Wainwright is a female first. She's the first woman to fly a specialized cropdusting airplane and the first woman to be accepted into the Aero Bureau and assigned to E.S.D. Foruntately, besides being a consummate pro, she delights in putting people on — especially Trap. He has definite ideas as to a woman's place and, through humor, Morgan manages to keep his male chauvinism in check.

"240-ROBERT" is a Filmways TV Production, in association with Rosner Television. The producers have been granted exclusive privilege to adapt actual case histories from the E.S.D. files as well as the use of the Sheriff's Department badge, seal and uniforms.

The series was created by Rick Rosner, who also serves as Executive Producer. Richard M. Rosenbloom is the Producer. "240-ROBERT" will be filmed on location in Southern California.

Left to Right: "240-ROBERT'S Dep. Trap (John Bennett Perry), Dep. Morgan Wainwright (Joanna Cassidy), Dep. Thibideaux (Mark Harmon)

An opinion by Dennis E. Kelley

A bomb of dramatic change has exploded on the search and rescue (SAR) scene. That explosion is is "240-ROBERT" the new hour long ABC Television Network action/adventure series that premiered this fall. For the very first time in this nation's history continuing national attention will be focused specifically on the SAR community. There will be a great impact on us all as the public becomes aware of this humanitarian side of public service that is uniquely adventure for a reason.

"240-ROBERT" is the catalyst that will revolutionize the SAR community, as did "Emergency" for the emergency medical system. This substantial impact will come in many forms that are; good, non-consequential and bad. For example:

At the Federal level of SAR involvement, it will put teeth into the efforts to support inland ground SAR. Don't be surprised if more than one Federal agency suddenly steps forward to assume responsibility for this presently fragmented and localized SAR endeavor. Then, there is always new legislation and grandiose programs to raise the quality of this nation's SAR. But where will the real Federal thrust emerge? There are possibilities for the Federal Emergency Management Administration (FEMA) as well as the U.S. Air Force Rescue Coordination Center (AFRCC). There is the possibility that the Department of Labor (DOL) will even increase its involvement through the Comprehensive Employment and Training Act (CETA). The point is that the National SAR Plan does give numerous agencies the ability to become involved to a much greater degree than now exists, particularly in the area of inland ground search and rescue.

At the State level one can be assured of much greater involvement. This will take the form of certification, training, coordination, testing and control. For example, minimum emergency medical care standards for SAR personnel could be raised to the EMT capacity. Card carrying certification of individual skills could be imposed by cognizant state agencies, such as Oregon has already done. One would expect the State employee associations and unions to mount an even greater push to get volunteers out of SAR. Since most volunteers are affiliated to agencies it is easy to impact them with job requirements legislation. "240-ROBERT" is after all an example of paid rescue personnel becoming dramatized. Finally at the state level in most cities there is a void that hopefully will be filled. If a SAR advisory does exist, then in most states these advisory boards do not represent all the state SAR interests. There is no formal point for SAR representatives to meet and exchange ideas and solve problems. Unfortunately, most states do not have a SAR advisory council or board, but the expectation will quickly emerge now.

At the local level, responsible agencies will recognize their own role better and then quickly visualize all the positive public relations inherent in doing these crowd-pleasing good deeds called SAR. It will also then become another official reponsibility offsetting the Proposition 13 syndrome. You will see local budget line items for SAR for the first time. Funding for personnel, training and equipment will be sought as statistics are now kept for the first time. The intensity of the fight for local agency control of the SAR responsibility may even become outrageous. Expect eventual public intervention when the overkill results.

Volunteer teams will be flooded with employment applications. New volunteer teams will spring up everywhere. Most will lack two key attributes that will present problems. First is expertise and second is official sanctioning by the responsible SAR agency. This will reinforce the need for certification. Volunteer team fund raising will become easier with this new national visability. Interestingly, as the volunteer capacity increases with the influx of manpower and funds, the role will decline because of the increased responsibilities of paid personnel. There will be a need to address the resultant rise in the public's expectations for SAR performance as well as the new expectations of our own new volunteers.●●

Once I knew a climber who tried several times to drop a rope to rappel on. My partner and I were waiting at the bottom to climb the same pitch. A strong wind was blowing. Each time he threw the rope, the whole 165-foot coil would foul in mid-air and fly back against the rock.

Finally, he tied a monkey's fist on the end of the rope, putting a sizeable stone in its clutch. I can only imagine the satisfaction he felt in this ingenious solution as he yelled, "Rope!" and threw it again. This time the rope did not foul — but neither did his hastily tied knot hold onto the big stone. "Rope!" was hardly an accurate warning for the missile that buzzed past us and shattered on the next ledge with a startling crack.

Here we climbers have something to learn from sailors — not, however, related to what kind of language to use in this situation. Sailors were in the business of heaving lines centuries before men took to the mountains. Aboard ships the monkey's fist is a permanent working knot tied to the end of a special heaving line that is bent to the eye of a hawser. It is a complicated knot and hence is rarely tied at the moment of use.

A seasoned sailor doesn't need a monkey's fist to heave a small 11-millimeter line. Instead, he anchors one end to a belay point and carefully coils the line in two halves. Then he holds the anchored half of the coils loosely in his left hand and heaves the other coiled half with his right. The coils in the open hand (left) pay out over the same arc as the heaved coils, and the line lies across the target without fouling. The only modification that I would suggest for a strong wind in the mountains is to heave forcefully overhand.●●

"ROCK!" or "ROPE!"?

Richard Doege

DOGGING THE TAILS

A method of applying tension to suspension and load ropes

by

Dr. Anthony S. G. Jones and David K. Salter
Ogwen Valley Mountain Rescue Organisation, Wales.

1a
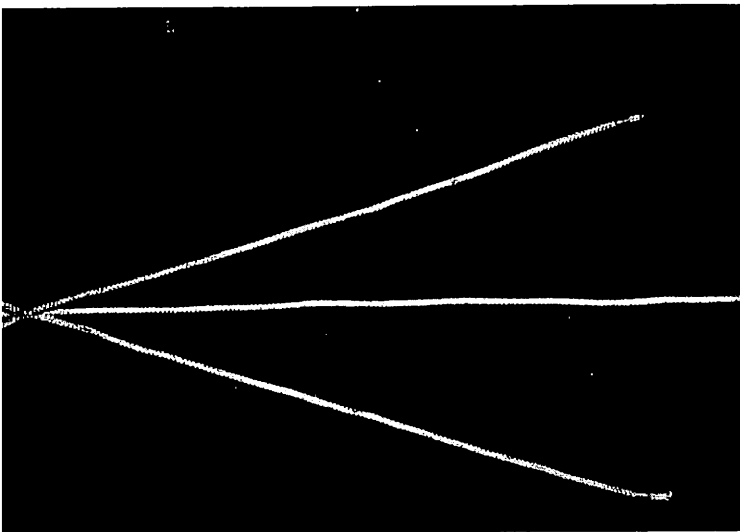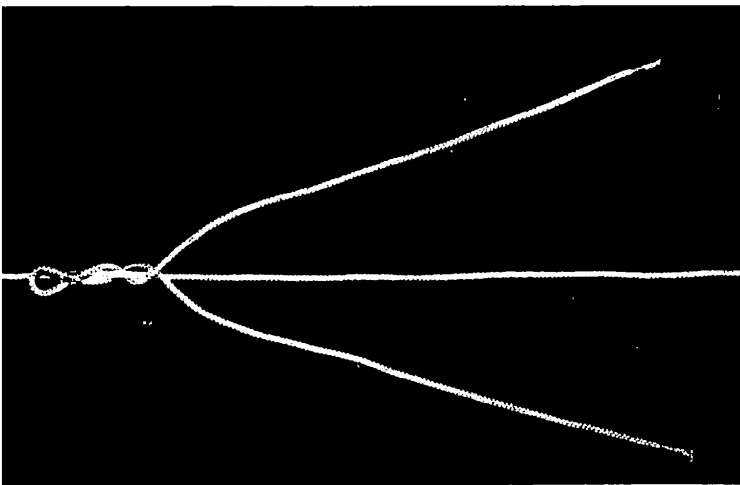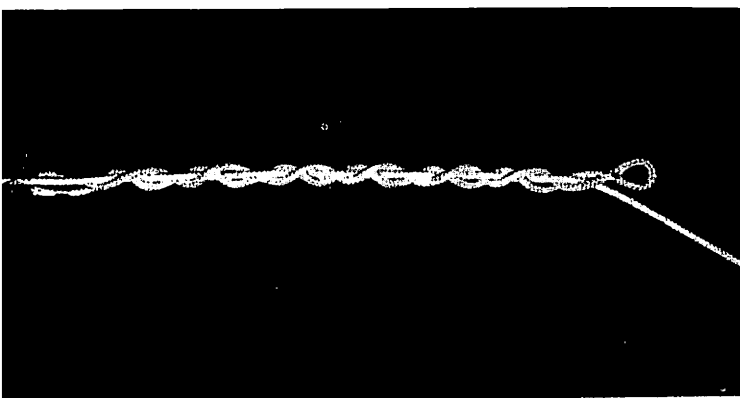
During the past ten years or so a variety of methods have been suggested for applying tension to suspension and load ropes used in many techniques of cliff evacuation. Most of these methods depend on the use of mechanical clamps such as Cloggers, Gibbs Ascendeurs or even Jumar clamps. The tensioning system is attached to the suspension or load rope by means of one or two of these clamps. It has been reported (see *SAR Magazine*, Fall 1978) that these clamps, not being used for their design purpose, have damaged suspension ropes of a variety of contructions with loadings of only 1000 lbs. (450 kg) on the winching system. With respect to Kermantel (core and sheath) type ropes this damage can be particularly hazardous as there have been examples of a severely damaged core covered by an unmarked sheath.

The first recorded use of the knot to be described was by the Ancient Greek mariners. Through the era of sail the knot was used extensively for the attachment of hauling ropes to load ropes. The knot was introduced into Her Majesty's Coastguard with the establishment of life saving companies around the coasts of the United Kingdom early in the last century.

A set of tails is easy to fashion. A made up set of tails consists of a length of rope 88 inches (223 cm) long with a thimble whipped in the centre. Commonly 11 mm diameter rope is used. Both ends are whipped with light line leaving short tails of about 6 inches (15 cm) on each end. It is just as practical to use an open sling of suitable length with a figure of eight knot tied in the centre. Seven, nine or 11 mm diameter slings of hawser laid and core and sheath construction have been used with success.

The tails must be laced as shown in Figure 1a, b and c. Facing the direction of tension the tails are placed on top of the load rope. They are laced so that the tail in the right hand is always against the load rope. On completion of the lacing the tail ends must be equal. The ends may be secured with the light line as shown in Figure 1c or may be secured with a reef (square) knot as shown in Figure 1e. Tension is applied via the thimble or karabiner.

It is necessary to alter the location of the tails on the main load rope release the tension by sliding the tail ends towards the thimble or figure of eight knot, thus slacking the lacing. The tails can be moved easily to the new position on the load rope. When setting the tails it is important to ensure that the lacing stays equal and tidy. It is advisable to keep the lacing as tight as possible after adjustment to prevent any slipping. Figure 1d shows the slack tails ready for movement on the load rope.

Figure 1e illustrates a variety of tails on different types of rope. From the top they are:
i) No. 4 Hawser laid on 11 mm Kermantel
ii) 7 mm Kermantel on No. 4 Hawser laid
iii) No. 3 Hawser laid on Braided, prestretched terylene
iv) Braided terylene on braided terylene.

1b

1c

1d
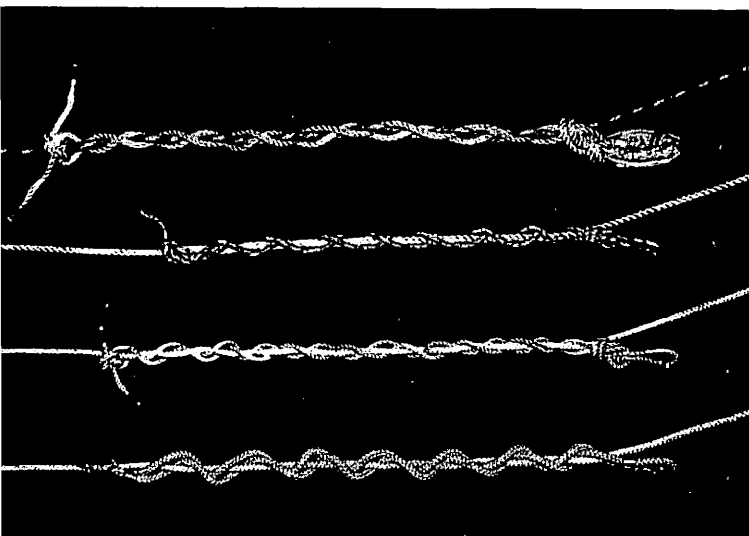
1e

All have been used successfully in applying tension to the load ropes.

A number of tests were carried out by members of H. M. Coastguard Cliff Rescue Team at Holyhead, Wales.

A 5 ton spring balance and a 2 ton chain block were attached to a crane hook. The load rope was attached to a floor block weighing 3,300 lbs. Tails and ropes used in the tests were:

    No. 4, 1⅛" Viking Hawser laid rope
    11 mm Kermantel climbing rope
    12 mm Core and sheath, prestretched Braidline
    10 mm Braided, prestretched terylene.

The tails were laced to their full length (15 turns) and tension was applied. On reaching a load of 1568 lbs. a slip of about 1 inch was observed. This caused a relief to 1344 lbs. The tension was increased to a load of 2240 lbs. at which stage the test was stopped. The test results were identical with the four types of load ropes. On the hawser laid rope there was some evidence of fusing on the surface but none was visible on the core and sheath ropes. During the tests it was observed that there was no weight on the last 6 turns of the tails.

Wet tails were laced to wet and dry ropes and vice versa. There was no loss of grip. In addition a length of Kermantel rope and a set of tails were soaked in water for 1 hour and then placed in a deep freeze for 24 hours. The subsequent tests as described above were just as successful. (Carol Salter did object to her deep freeze being filled with soggy ropes but was charmed into letting them stay there.)

Tests carried out by the British Mountaineering Council (EC/3/77 Low stretch ropes for mountain rescue) showed that mechanical friction clamps (used incorrectly for tensioning load ropes) reduced the breaking strain of the ropes by over 60 per cent whilst, with at least 8 turns of the tails, the breaking strain was reduced by less than 20 per cent.

Jon Robinson of the O.V.M.R.O. took the photographs.●●

RESCUE MISSION FEVER

by
Annelou Neunzert

Rescue mission fever:
Dropping all else, they load the gear
Radios, food and clothing,
Backpacks, Boots,
Gators, skis
A sense of purpose
Dedication

A plane is down, iced-over
Lost in the driving blizzard
And through the night they come
Directing electronic gadgets
Toward the ELT
Breaking tracks on mountain roads
Searching.

By dawn Code One:
Victims alive and found
Huddled in the debris
Of the cracked fuselage
Wounded, stunned,
Frostbitten in the night
Hoping.

Snow-Cats go churning through the drifts
While arctic gusts
Blow horizontal snow.
Blue the medics' hands
Probing blood-clotted clothes
Of victims numb with shock —
Helping.

Rescue mission fever —
The word is GO, and fast
Night turns to day
High mountains shrink
Blizzards are tamed:
Lives are at stake
Right now.

Later the records tell the story
In terms of time, equipment, place,
Manhours, victims helped.
But neatly missing from the pages
The distance logged away from those
Who stayed behind
Waiting.   ●●

Find yourself!
Join NASAR.
P.O. BOX 2123, LA JOLLA, CA 92037

SAR MANAGEMENT SIMULATOR

by Dennis E. Kelley

The purpose of the Montrose Search & Rescue Team SAR management simulator is to reinforce the role of the search boss or operations leader function. This simulator is needed to fill a training void that presently exists because the only place to get search boss experience is on actual searches.

The actual benefits derived from this simulator to date have been first in role reinforcement. The hunt for a lost person is the wrong place to learn search management because the priorities are for the victim. The simulator gives you realistic experience to make you an effective boss. Unfortunately, most SAR organizations recruit field skilled rescuers, such as mountaineers, and not managers. This makes management training all the more important. Procedural practice on the simulator is a second benefit. This simulator permits you to try old forms as well as new forms in enhancing your personal proficiency in properly documenting your missions. Finally, since search strategy is very subjective, you will want a consensus strategy. The simulator lets you compare and practice strategies for success.

Credit for this simulator goes to the members of the Montrose Search and Rescue Team who invested numerous hours in its development. Jon Gunson and Bob Mattson contributed greatly at the National Association for Search and Rescue (NASAR) Spring 1979 Business meeting at New London, CT. The overall design comes from my Apple II computer games and the USFS avalanche simulator adopted by Sandy Bryson of WOOF for inland ground search.

The scope of this simulator is the search for lost persons in wilderness areas and the subsequent rescue. This simulator is intended to be realistic, not bizarre. Scenarios are to stress the players with a balance of problems, and skills developed necessary to overcome them with resultant successes. There are no gimmicks, computers, or complicated equipment. Time is accelerated to 1 hour=4 hours. A timer is used for time, dice for random events, and normal forms and maps. Critiques at the end of the simulator should be based upon specific skills performed, problems solved and the consensus assessment of strategy used. Remember that this is a prototype simulator and it should be adopted to your political, organization, and terrain environment.

The players identified in this simulator are functions not individuals. That is, one or more persons can perform a function by that person with the responsibility delegating tasks to helpers. Because of the dynamic nature of search management delegating is encouraged.

The sequence of events (SOE) is the method or framework for the simulator. The SOE specifies everything's who, what, where, when, why, and how. It has:
- event # = step in the scenario.
- time = time of event. To be logged.
- by = function/role initiated event.
- to = function/role affected by event.
- description = detail description of event.
- mode =mode of the simulation.
- form = form or paper work used in event.
- skill = skill use check off in that event.

It is intended that each player step through the simulator in the suggested sequence of events spelled out in detail by the SOE. Some random events are programmed, but they are initialed in the SOE and then maintained with the times and dice as is the modes of the simulator.

Included are samples of the SOE and list of materials to help illustrate this article. An effort is being made to make available a complete prototype simulator for simple modification to your own local. *Search and Rescue Magazine* will keep you informed.

SEARCH AND RESCUE MAGAZINE ● FALL 1979 ● PAGE 8

Event Number	Time	By	To	Description	Form	Applied Skill?
1	_____	SIM	ALL	Start simulator in Lost mode. For Lost mode set mode timer = 15 minutes.	SOE	n/a
2	_____	SIM	ALL	Briefing. The purpose of this simulator is primarily role reinforcement. However, other applications are; training evaluation, recreating and critiquing actual missions, identifying procedural problem areas, checking out old and new forms, and testing strategy and tactics.	SOE	n/a

Briefing. Ground rules for simulator players are:
- Scenarios are realistic and variable, but not bizarre.
- Scenarios have a balance of problems, skills applications and successes.
- Both player roles, Operation Leader and Coordinator, participate equally.
- Simulation duration is approximately 3 hours.
- Time is compressed to 1 hour = 4 hours.
- During this simulation, the SIM role is the ultimate authority.

Briefing. Role definitions. ALL = all roles.
- Operation Leader (OL) = strategist, tactician and search boss.
- Coordinator (COORD) = administrator, liaison, and responsible agency representative.
- Resource (RES) = squadleader, dog handler, pilot, scuba diver, tracker, etc.
- Informant (INF) = any human clue source like an eye-witness, relative, friend, associate, etc.
- Victim (VIC) = subject, patient, missing person.
- Simulator (SIM) = all roles except players.

Briefing. Forms definitions.
- Callout Wooksheet (CALLOUT) = Initial data that started this search.
- Mission Report (MISSION) = Detail planning data obtained from informant.
- Map (MAP) = search area representation to be marked up with the consensus strategy.
- Field Personnel Control (FIELD) = Record of resource assignments and tasks.
- Operation Chronological Log (LOG) = Search and radio event record.
- Tracking Worksheet (TRACK) = Detail description of known and discovered footprints.
- Sequence of Events (SOE) = Detailed procedure for executing simulator.

Event Number	Time	By	To	Description	Form	Applied Skill?
3	_____	SIM	ALL	Identify roles and players. OL = _____ COORD = _____ SIM = _____	FIELD	n/a
4	_____	SIM	ALL	Assign or let players choose simulator difficulty, 1 through 6, where 1 = easy, 3 = typical and 6 = hard See chart below. Difficulty number = _____	SOE	n/a

Event Number	Time	By	To	Description	Form	Applied Skill

Difficulty definition chart.

#	Weather	Location(map)	Hours Gone	Time of Day
1	pleasant 70°F	Narrows (Condor Peak)	2	dawn
2	cool 55°F	La Paloma Flat (Condor Peak)	8	noon
3	20 mph wind 55°F	Clear Creek (Chilao Flat)	12	midnite
4	cold 35°F	Chilao Station (Chilao Flat)	24	midnite
5	rain 35°F	Mt. Wilson	48	dusk
6	rain storm 35°F 20 mph wind	Mt. Waterman	72	dusk

5 _____ SIM ALL — Handout search problem and forms as indicated below. Remind players to review forms carefully during the following short break. Handouts are: — SOE — n/a

OL and COORD = Mission Report (blank)
                 Callout Worksheet (completed)
                 Map (Not marked up)
                 Field Personnel Control (blank)
                 Operation Chron. Log (blank)
                 Tracking Worksheet (blank)

SIM = Callout Worksheet (completed)
       Mission Report (completed)
       Map (marked up with points victim last seen
           and/or significant clue found and where
           victim found)
       Map (blank)
       Field Personnel Control (blank)

6 _____ SIM n/a — Determine mode variable numbers with random number generator, 1 to 6. See chart below summarizing. — SOE — n/a

Mode	Number
Lost	= (difficulty)
Planning	= _____
Deployment	= _____
Shift Change	= _____
Significant Clue	= _____
Victim Found	= _____

Scenario and mode definition summary chart.

Mode	Lost	Planning	Deployment	Shift Change	Significant Clue	Found
Mode Variables	Scenarios (difficulty)	1st Resource Response	% of Resource Turnover	2nd Resource Response	Type of Clue	Rescue Problem
Skills Used	n/a (briefings)	Interviewing Strategy Mobilization Briefing Tasking Recording Delegating	Tactics Clue trans- mission Demobil- ization Debriefing	Handover Strategy Mobilization Briefing Tasking	Tactics Clue trans- mission Logistics	Tactics Demobil- ization Accounting Critique

Event Number	Time	By	To	Description	Form	Applied Skill
7	_____	SIM	ALL	Start simulator in Planning mode. For planning mode set mode timer = 30 minutes.	SOE	n/a
8	_____	SIM	COORD	Provide onscene resource response when Planning mode variable number = _____ , from event 6, where:	SOE	n/a

Resource Response Chart.

Resource Response	Call Sign	Variable Number					
		1	2	3	4	5	6
Mountaineers	WT-1,2...	15	10	8	6	4	2
4WD vehicles	125A,B...	3	3	2	2	1	1
2WD vehicles	120 ,B...	3	3	2	2	1	1
Helicopters, lrg.	Air-51	1	1				
Helicopters, sml.	Air-41	1		1	1		
Paramedics	240-R1	2	2	2			
Dog Handlers	WT-1,2...	2	2	1	1		
Possemen	WT-1,2...	6	4	3	2		
Forest Rangers	US-1	1	1	1			
State Troopers	CA-1	1	1		1		

Event Number	Time	By	To	Description	Form	Applied Skill
9	_____	SIM	ALL	Start random distractions. The purpose of these subtle surprises is to give the players problems to solve in the midst of the normal routine. The random number generator, 2 to 12, is used to both space these distractions with time and to determine the type of surprise. Therefore set the random distraction timer = _____ minutes and also the number = _____ , where the number indexes the surprise below.	SOR	n/a

Repeat this sequence and keep resetting the random distraction timer for the next different surprise throughout the simulation until the end.

#	Unit	Distraction
2	_____	Searcher problem, needs evacuation.
3	_____	Civilians show up to help.
4	_____	Field unit find himself in wrong location.
5	_____	Base Camp loses communications with unit.
6	_____	Unit transmits clue description.
7	_____	Searcher problem causes unit delay.
8	_____	Unit leader requests additional victim data.
9	_____	Unit leader expresses difference of opinion.
10	_____	Informant changes mind or remembers something.
11	_____	Poor communications with unit.
12	_____	Press wants interview.

Event Number	Time	By	To	Description	Form	Applied Skill
10	_____	SIM	n/a	Skills demonstrated:	SOE	n/a

Skill	Form	
Interview informants.	MISSION	_____
Plan strategy. Mark up map.	MAP	_____
Mobilize needed resources. Specify and request.	FIELD	_____
Brief all resources. Handout maps and victim data.	MAP	_____
Make resource assignments and tasks.	FIELD	_____
Record all events including resource actions.	LOG	_____
Delegate tasks in base camp.	FIELD	_____
Other. _____		_____

Event Number	Time	By	To	Description	Form	Applied Skill
11	_____	SIM	ALL	Start simulator in deployment mode. For deployment mode set mode timer = 60 minutes.	SOE	n/a
12	_____	SIM	ALL	Notify players of shift change of resources in 4 hours simulation time and 1 hour real time.	SOE	n/a

Event Number	Time	By	To	Description	Form	Applied Skill
13	_____	SIM	ALL	When OL queries all search resources to determine who can stay and who must go,' use the following chart for response. Note that the mode variable number determined in Event #6 was _____	SOE	n/a

Variable Number	Resource Turnover	Call sign of Units Affected
1	30%	_____
2	40%	_____
3	50%	_____
4	60%	_____
5	70%	_____
6	80%	_____

Event Number	Time	By	To	Description	Form	Applied Skill
14	_____	SIM	n/a	Skills demonstrated during deployment mode.	SOE	n/a

Tactics. Use of resources. — FIELD
Clue transmission between base camp and resources. — TRACK _____
Demobilize resources that do have to leave. — FIELD
Debrief all resources before they leave. — MAP _____
Other. _____

Event Number	Time	By	To	Description	Form	Applied Skill
15	_____	SIM	ALL	Start simulator in shift change mode. For shift change mode set mode timer = 30 minutes.	SOE	n/a
16	_____	SIM	COORD	Provide onscene resource response when shift change mode variable number = _____, from Event 6, where: (Use Resource Response Chart from Event 8 again.)	SOE	n/a
17	_____	SIM	n/a	Skills demonstrated.	SOE	n/a

Handover. Starting a new set of forms. — ALL _____
Review strategy. Markup new map. — MAP
Mobilize needed resources. Justify and request. — FIELD _____
Brief all new resources. Handout maps and data. — MAP
Make resource assignments and give tasks. — FIELD _____
Other. _____

Event Number	Time	By	To	Description	Form	Applied Skill
18	_____	SIM	ALL	Start simulator in significant clue mode. For this mode set mode timer = 15 minutes.	SOE	n/a
19	_____	SIM	OL	Provide significant clue when variable number = _____, from Event 6, where:	SOE	n/a

Variable Number	Significant Clue	Unit #	Location
1	Victim seen	_____	_____
2	Signal seen	_____	_____
3	Destination found	_____	_____
4	Tracks found	_____	_____
5	Tracks found	_____	_____
6	Clue found	_____	_____

Event Number	Time	By	To	Description	Form	Applied Skill
20	_____	SIM	n/a	Skills demonstrated in Significant Clue mode.	SOE	n/a

Tactics. Use of resources. — FIELD _____
Clue transmission between base camp and resources. — TRACK _____
Logistics. Equipping and transporting resources. — FIELD _____
Other. _____

Event Number	Time	By	To	Description	Form	Applied Skill
21	_____	SIM	ALL	Start simulator in found mode. For this mode set mode timer = 15 minutes.	SOE	

Event Number	Time	By	To	Description	Form	Applied Skill
22	_____	SIM	OL	Provide victim found and his situation when the variable number for the Found mode = _____, from Event 6, where:	SOE	n/a

Varible Number	Victim Situation	Rescue Situation
1	OK	Unit # ____ can handle.
2	OK	Unit # _____ needs help.
3	Injured	Unit # _____ needs Paramedics.
4	Injured	Unit # _____ needs Paramedics and help
5	Injured	Unit # _____ needs Paramedics and help
6	Medical emergency	Unit # _____ needs Maximum help

Event Number	Time	By	To	Description	Form	Applied Skill
23	_____	SIM	n/a	Skills demonstrated in the Found mode.	SOE	n/a
				Tactics. Use of resources in rescue.	FIELD	_____
				Demobilization of operation.	FIELD	_____
				Accounting of all resources and logging them out.	LOG	_____
				Critiquing operation and completing report.	MIS SION	_____
				Other. _____	_____	_____
24	_____	SIM	ALL	Start critique mode setting mode timer = 15 minutes.	SOE	n/a
25	_____	SIM	ALL	Record players used _____ out of _____ skills identified. Record consensus of players strategy in percentage agreement. _____%	SOE	n/a
26	_____	SIM	ALL	End of simulation.	SOE	n/a
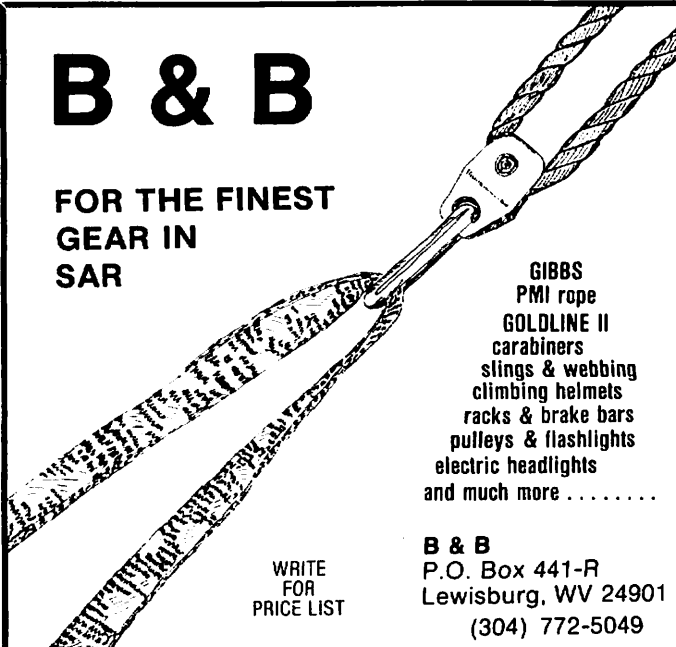
LIST OF MATERIALS
SAR Management Simulator

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FOR ALL SEARCH AND COMPUTER PERSONNEL

Lt. Col. Bob Mattson USAF
Civil Air Patrol Liaison Officer

This article is written for two groups of people. One group is involved in search activities such as looking for lost persons, crashed aircraft, or other missing people or things. This group has a humanitarian interest in saving lives, and reducing the suffering of those who are lost. The second group is interested in using computers (micros, minis, and up) to their utmost. This group is constantly exploring ways in which the computer can be used. There seems to be no limit to what can be done, given the time and money to develop the appropriate software and hardware. In their quest to challenge their machines, the computer buffs develop more involved games and ever more complicated programs.

Get Together

I would like to get these two groups together because each can benefit from the other. Our search group needs to keep accurate records of available resources, which resources are used, which areas have been searched, and how effective the search has been. These, of course, are simple tasks for the computer. The computer could also be used for determining the areas with the highest probability of containing the subject, and for determining an optimal search plan for using available resources. These are much more challenging tasks, but initial programs are available and additional programs could be developed.

The merging of the two groups can have a significant advantage for the computer group also. The best benefit will be to get computer groups involved with a truly meaningful application for their computers. Using the computer to assist in search planning will be more rewarding than any game, if you win you may save a life!! Additional benefits would be the challenges of developing and improving sophisticated programs to assist search management personnel.

To get you started, a number of programs have been developed and listings are available free, or at the cost of reproduction and mailing. The available programs are listed at the end of this article.

The next question is how do we get the two groups together? The most direct way is to seek out members of the opposite group and show them this article. If you are from the search group, ask for support. If you are with the computer group, offer your assistance, and possibly the support of your computer club, to the search group.

Computer Store

Where will you find members of each group? Finding computer groups is easy if there is a computer store in town. If not, you can contact schools and businesses using computers, or maybe even make a public service announcement requesting interested persons to contact you. To find the search volunteers you can start by contacting the local Civil Air Patrol (CAP) unit. The CAP prosecutes all types of search missions but specializes in searches for downed aircraft and searches for activated electronic locator transmitters (ELT) (a radio transmitter which is activated when an aircraft crashes). You can usually find CAP personnel by contacting personnel at the local airports. To find other local search personnel, ask the sheriff for contacts in units active in ground search for missing children, hunters, etc.

I stress local contact because you will have to work very closely with one another when getting started. Together you will have to work out the details of what is needed and what can be offered. There will be a need for each group to educate the other concerning the problems and limitations of their respective organizations. I am certain that the relationship can be a beneficial one if both sides keep in mind that the end result is to save a life. Good luck!!

Following is a list of computer programs currently available for micro computers. Most of the advanced programs require at least the equivalent of the TRS-80 Level II basic and up to 35K of user memory. Some of the programs can run with as little as 4K of user memory. I would like to give credit to CAP Major Bob Gregory, Group 30, PA Wing, for his support in preparing the programs.

Other contributions and listing requests — If anyone takes the trouble to convert some of these programs to other languages (e.g., CBASIC to RADIO SHACK Level 2, etc.) we would appreciate getting a copy of the new program. Just be sure to identify and give the original programmer credit in your program. Postage and reproduction costs are skyrocketing so do not ask for listings that you cannot use, due to either hardware or programming limitations. By the time you see this article there will undoubtedly be additional programs available. In your request for programs please include the type of equipment you are using so that additional programs which you can use may be included. I can point you in the right direction but you will have to do the majority of the work in making the programs really operational.

Finally, computerized SAR is an entirely new field where we can all make some extremely valuable and lasting contributions but we must learn to share and help each other. So, if you have written a worthwhile SAR program, be it either a super-log-keeper or a SAR simulation game, send it in and let others use it. Address all your correspondence concerning computerized SAR to: Lt. Col. Bob Mattson, USAF c/o *Search and Rescue Magazine*, P.O. Box 153, Montrose, CA 91020.

ELTPOD.BASD— (3K source listing) — this program calculates and prints tables of aerial search ELT probability of detection as a function of terrain, altitude and track spacing. This program is written in BASIC-E but is easily converted to any version of basic that has the EXP and SQR functions available. Minimum equipment is 4K free memory. Optimum equipment includes a 72 column printer. (author: Mj Gregory CAP)

VISPOD.BAS—(3K source listing) — This program calculates and prints tables of visual aerial search probability of detection as a function of visibility, track spacing, altitude and terrain. This program is written in BASIC-E but is easily converted to any version of basic having the EXP function. Minimum equipment is 4K free memory. Optimum equipment includes a 72 column printer. (author: Mj Gregory CAP)

ADDPOD.BAS—(1K source listing) — This program calculates and prints a table that allows the user to combine two visual pod's or two ELT pod's. This program is written in BASIC-E but is easily converted to any other version of basic that has the LOG and EXP functions available. Minimum equipment is 4K of free memory. Optimum equipment includes a 72 colunn printer. (author: Mj Gregory CAP).

HOW FAR-WHICH WAY?—(2K source listing) — This program, written in SWTPC 8K Basic, will input latitude (degrees and minutes) and longitude for two points, and then compute the true bearing and distance between these points. It was published in the July 1977 issue of the magazine '*BYTE*' and uses a rather interesting synthesis of the ARC SIN, ARC TAN, and ARC COS functions (SWTPC 8K Basic does not normally support these functions). (author: Capt. Rene Petit CAP)

RJCASP.BAS—(3K source listing — This SAR resource allocation program uses rather sophisticated algorithms to assist the mission coordinator in placing his search forces in the optimum search areas. This program is usable for either aerial or ground search of either regular or irregular search cells. Required data inputs are cell identification and initial probability of target (user estimated) for each cell. An inputted probability of detection for a searched cell will modify the program output. This program is written in standard basic and requires string capability, LOG and EXP functions. The program may be modified to eliminate the requirement for string capability. A FORTRAN version of this program is also available. Minimum equipment is 4K of free memory. (author: Lt.Col. Mattson USAF)

CASP=1.BAS—(14K source listing) — This program is an expanded version of RJCASP.BAS and includes an extensive visual search analysis routine. It is very heavily commented and includes plain language listings of the visual search POD,POT and POS equations. This program is written in BASIC-E at a level equivalent to 8K basic or RADIO SHACK Level 2. However it may be converted to other versions of basis with little difficulty since it uses highly descriptive variables (eg 'max' 'speed' 'area', etc). Minimum equipment is 16K of free memory. Optimum equipment includes a video terminal and hard copy capability. (author: Lt.Col. Mattson USAF, Mj Gregory CAP)

CASP=2.BAS—(17K source listing) — This program combines all the features of 'CASP+1.BAS' with the optimum search recommendations of the program 'OPT.BAS'. It combines an exhaustive visual search analysis for debriefing with recommendations for next-sorties search areas and search durations. It not only tells you where to go, but how long to stay there. This program is written in BASIC-E and requires a 32K CPM system (or equivalent). Disk capability is not required. (authors: Lt.Col. Mattson USAF, Cmdr Discenza USCG, Mj Gregory CAP)

CASP=3.BAS—(19K source listing) — This program, written in BASIC-E, adds the capability for disc storage of POT+POD data to the visual search and search optimization analysis routines of CASP+2.BAS. This makes it possible to re-use previously inputted data for second day searches or to run several scenarios simultaneously (as in a state-wide SAR exercise with multiple targets). Minimum equipment is a 32K CPM system (or equivalent) and disc storage capability for sequential files. (authors: Lt.Col. Mattson USAF, Cmdr Discenza USCG, Mj Gregory CAP)

CAESAR.BAS—(22K+2K+2K+4K source and files listing) — This sophisticated air operations log keeping program uses seven interactive disc files (four sequential files and three random access files) to store up to fifty sortie briefing/debriefing reports. A flight log is automatically maintained and updated using the briefing/debriefing inputs and a short form mission summary is generated by this program. This program is written in BASIC-E and requires a minimum 32K CPM system memory (or equivalent) and disc capability. Optimum equipment includes a fast video terminal and a fast printer. (author: Mj Gregory CAP)

BITCASP.BAS—(18K source listing) — This program is another enhancement of the program RJCASP.BAS and uses a tablet digitizer to transfer map information for pod analysis. This program is written in CBASIC and requires the poke command (to change the console device) and modification of CPM's BIOS (I/O routine). This program requires the use of a Summagraphics BITPAD and 20K of free memory due to the arrays (ie. a minimum 35K CPM system or equivalent). Disc capability is not necessary. Optimum equipment includes a fast video terminal. (author: Mj Gregory CAP)

CASPGAME.BAS—(20K source listing) — This program was written as a demonstration device for the program BITCASP.BAS and includes the capability of storing a mission scenario on random access disc file for later retrieval. This program has been written as a training game and challenges the user to find an unknown target on the map by using pod's. The minimum system requires mass storage and 21K of free memory (ie. a 35K CPM system). (author: Mj Gregory CAP)

C.A.P. SEARCH V1.0—(5K source listing) — This program is a game played on a 512 grid map. It challenges the user to find a downed aircraft given the starting point and destination grids and various random clues, which the program generates from time to time. The user is given three playing pieces ie. a land team and two aircraft (one with electronic search capability). This rather interesting game teaches the fundamentals of proper utilization of various search capabilities. This program was written in SWTPC 4K Basic V2.0 and is usable on nearly any basic having 6K of free memory. (author: Capt. Bream CAP)

SERCHGME.BAS—(9K source listing) — This program is essentially the same as C.A.P.SEARCH except it has been reorganized and rewritten using subroutines and a command menu. This program was written in CBASIC and requires about 10K of free memory when an interpreter is used. The memory requirements may be considerably reduced by deleting the many comments and remarks or by compiling the program to about 2K. (author: Mj Gregory CAP)

OPT.BAS—(2K source listing) — Given the estimated probability of target for several or many grids and given the total effective search force, this program recommends the optimum distribution of forces in accordance with the mathematical theory of search. Example: the output might be — "search grid PL41 for a POD of 49% and grid PL42 for a POD of 78%." This program is written in BASIC-E and is easily converted to any other basic language. It is ideal as a subroutine for the programs RJCASP or CASP+1 and requires about 3K of free memory. (author: Cmdr Discenza USCG)

CONTINUOUS FIX II—(112 steps on HP67/97 calculator) — This program, written for the Hewlett-Packard Model 67 or 97 calculator, calculates an approximate location for an ELT transmitter, using the rectilinear coordinates of the radio search teams and the bearings to the RF source. (author: John Moore)

CONTINUOUS FIX III—(212 steps on HP67/97 calculator) — This program is an improved version of 'Continuous Fix II' and, like it, is written to run on an Hewlett Packard model 67 or 97 calculator . It is designed to estimate the approximate location of an ELT transmitter and the estimated error of position (i.e. ellipse of position). (author: John Moore)

N-ELT1.ASC—(10K source listing) — Microsoft version

N-ELT1.BAS—(10K source listing) — CBASIC version

N-ELT1.DOC—(3K of text) — Documentation and Instructions
This radio direction finding program assists a user to localize an unknown radio frequency transmission. Besides 16K of free memory, the only special equipment required is a map which has any arbitrary grid (latitude+longitude are not necessary) overlay. (author: C.P.Kelly New Mexico ARES)

DFELT.BAS—(7K source listing) — This program is essentially a rewrite of the program 'N-EWLT1' (by C.P. Kelly). It is written in CBASIC and requires a 35K CPM system (or equivalent) due to the arrays. These memory requirements may be reduced drastically by changing the dimension statements (i.e. reducing the number of locations/bearings that may be handled simultaneously). See 'N-ELT1.DOC' for documentation. (author: Mj Gregory CAP)

LOCGRID.BAS—(4K source listing) — This program, written in BASIC-E, converts latitude and longitude coordinates to the AFRCC standardized grid system. It will identify all of the 17,648 grids and 70,592 sections in the continental USA aeronautical sectional maps. It also correctly handles the five sectional maps that overlap. Minimum equipment is 4K of free memory. (author: Mj Gregory CAP)

GRIDLOC.BAS—(4K source listing) — This program, written in BASIC-E, converts AFRCC grid names to latitude and longitude coordinates. It will identify the four boundary latitude and longitude lines as well as the midpoints of all 37 sectional maps, 17,648 grids and 70,592 sections on the continental USA aeronautical sectional maps. Minimum equipment is 4K of free memory. (author: Mj Gregory CAP)

RCCGRID.BAS—(6K source listing) — This program, written in BASIC-E, combines the two programs LOCGRID.BAS and GRIDLOC.BAS. It will convert all the continental USA AFRCC map/grid/section names to latitude and longitude coordinates or vice-versa. Minimum equipment is 6K of free memory. (author: Mj Gregory CAP) ●●

MARCH ON SAR

GEAR

Silva has brought out a new compass — the new Silva 54 Optical Sighting Compass which has a built in sighting system in the compass housing. The compass needle is replaced with a 360 degree graduated card which is remarkably steady and quick to settle. The sighting system is a magnifying lens leading the eye to an angled mirror. To take a bearing in the field you close one eye and get close to the lens. Next, you turn yourself and the compass so the bearing figure from the graduated cord is aligned with the object for which you are aiming. A hairline shows up in the picture and can be neatly aligned with the object so you can navigate to an accuracy of one degree (standard) models with needles are graduated in 2° units). There is no parallax. If the eye is moved across the lens the hairline is aligned to a new correct bearing. The OSC can also be used to take a normal bearing from the map as in the Silva 123 system. It can also be converted to a wrist compass by removing the compass from its plate and switching it onto a plastic wrist holder. There is a double graduated version which also shows back bearings through the mirror making it useful for mountain rescue. The base plate has two Romers and scales for 1:25,000, 1:50,000 ml. and 1:63,360 millimeters and inches. The compass weighs 1¾ ounces and operates in temperatures between -40° and +50°C. This new model should be available from Silva dealers in the USA.

BRITISH MADE ROPE

Ibex of Ashton under Lyme are the first British firm to manufacture a climbing rope. The rope is UIAA certified and has a static breaking load of 2840 Kgs. It weighs 68 g. per metre and is available in lengths of 30, 40, 45, 50 and 90 metres or in special order lengths. It is made of Nylon 6, the core being multi ply twisted strands, parallel laid with contrary twists every other strand to minimize kinking and rotation under a freely suspended load. Ibex ropes are manufactured in 9mm and 11mm lengths and comes in a variety of colors including a bi-color, where the color changes at half length. Trade inquiries to Ibex Ropes Ltd. Britannia Works, Manchester Rd. Morrley, Ashton under Lyne Lancr, England.

RESCUE INSURANCE

The rescue insurance scheme run by the British Mountaineering Council to cover British climbers climing abroad in Europe has had to raise its premium to £17 ($2.60 = £1) because of the increasing number of accidents! It would appear that 1978 was a very bad year for British climbers with 10 climbers being killed in Alpine accidents. In the French Alps above 25 British climbers were injured and had to be rescued. British climbers are now second only to Germans in the accident list. It is possible that the insurance scheme has to some extent encouraged climbers to over extend themselves and there may be a danger in having paid rescue linked with rescue insurance schemes. It is interesting to note that the Federation Francaise de la Montagne rescue reports indicate that the majority of accidents happen in the period midday/early afternoon, in fairly decent weather, on easy routes or descents.

SWISS ACCIDENT STATISTICS

The Swiss Alpine Club statistics for 1977 indicate that it was the worst year ever for accidents in the Swiss Alps. 170 people were killed, 78 in the two months of July and August. The causes of death are interesting — 37 were killed by falls on rock, 27 killed by avalanches, 20 killed by falls on snow and ice, 6 killed by falls in crevasses, 35 died from exposure, heart attack, etc. The 1978 statistics are not yet available but they appear likely to be even worse! There is little doubt that these figures reflect the essentially hazardous nature of "Alpine climbing." It is not enough to be a high standard technical rock climber in order to undertake alpine ascents — one must also have a sound general mountaineering background with knowledge of snow, ice and glaciers. The increasing interest in Alpine climbing especially by young rock climbers may lead to more accidents in North America.

ACCIDENTS IN THE EUROPEAN ALPS/HIMALAYAS

1978 was an extremely bad year for mountain accidents with 43 people killed in the Valais Alps alone. No less than 15 death claims have been made on the British Mountaineering Councils' Climbing insurance scheme. There have also been a number of deaths to "Alpine style" expeditions in the Himalayas — 2 British died on Brammah One (21,036 ft.) in the Kishtwar Himalayas, one died in the Kulu Himalaya and Ben Beattie, an instructor from Glenmore Lodge died on Nanda Devi East. All the Himalayan deaths were on "alpine style ascents" and it would appear that this will be the trend as the boundaries of adventure are extended. There is little doubt that "alpine mountaineering" and alpine style ascents in remote mountains both require a great deal of experience, skill and judgment and are not to be undertaken lightly.

NEW JOURNAL

There is a new Journal, the "Indian Mountaineer" giving useful information on Himalayan climbing. It is available from Mr. M. C. Matwani, Editor, Indian Mountaineer. S/X 11 — 1324, Ramakrishra Puram New Delhi — 110022 for $5.00 per annum.

GRADE VII

The Union International Association d'Alpinism agreed at a meeting last year in October to introduce Grade VII on the highest grade of rock climbing within the UIAA system. This will be the grade adopted for the hardest new free rock climbs in the European alps.

Bill March
The University of Calgary ●●

NEWS & RUMORS

'COPTER CRASHES OVER NUDE SUNBATHER

BIG SUR, CA. — According to a recent item in Legal Eagles News, a publication for lawyer-pilots, "While a helicopter pilot landed to ask a young lady sunbathing in the nude for a date, his helicopter fell over on its side and beat itself to death."

Owners sued the manufacturers, the State of California whose non-pilot fire fighters were on board, and the firm which rebuilt the helicopter into a different configuration.

The accident occurred during a flight where three California fire fighters were on their way to fight a fire in the Big Sur area. En route, they spotted a young lady sunbathing in the nude. First, the pilot circled taking pictures; then he landed to ask the lady for a date. Unfortunately, he left the helicopter running and three passengers on board.

While the pilot was talking to the girl, one of the passengers felt the helicopter coming off the ground and pushed the cyclic control forward. The helicopter promptly fell on its side and destroyed itself. There were no injuries.

As they say in the television detective programs, the facts are not in question. The plaintiff's theory was that a positive control lock should have been in the bird to prevent anyone from moving the controls while the pilot left three passengers on board the running helicopter.

Defendants argued that under the circumstances of the pilot's anxiety to make a date, he would not have bothered to install control locks in any event.

Although the trial lasted three weeks, it took the jury 40 minutes to decide in favor of the defense. We do not know if the pilot managed to get a date with the sunbather or not.

from SAFE Journal — Vol. 9, No. 2

ROBERT MOTLEY DIES: HIGHWAY SAFETY OFFICIAL

Robert E. Motley, 54, a leader in the development of training for emergency medical technicians or paramedics, died Tuesday in the National Institutes of Health of a blood disease. He lived on Wilmett Road in Bethesda.

Motley was a highway safety management specialist for the Department of Health, Education and Welfare before joining the Department of Transportation's National Highway Traffic Safety Administration in 1969.

Since working for the NHTSA he participated in the development of emergency medical technician training of all types. Motley helped develop the nationally recognized job descriptions of paramedics and he was a consultant and adviser in the development of national emergency medical service organizations.

As part of his work for the NHTSA, Motley was technical adviser, project director and technical monitor for a number of DOT contracts involving emergency medical technician training courses and manuals. He was an adviser for several films on paramedic training.

In 1977, Motley received the Joseph D. Farrington Award of Excellence for "his dedicated achievements in pioneering the birth of the emergency medical technical and paramedic in the United States." He also received the Administrator's Award of the NHTSA that year.

Last year the National Association of Emergency Medical Technicians named its annual award for outstanding contributions in emergency medical technician training in honor of Motley.

From 1948 to 1959, Motley did research administration work for HEW and with various institutes in the U.S. Public Health Service. He next was a management analyst in the office of hearings and appeals of the Social Security Administration. From 1962 to 1969 he was chief of field services of the emergency health services division of the Public Health Service.

Motley was born in Erie, Pa. He attended George Washington University and Strayer College here. He served in the Navy from 1943 to 1946.

He leaves his wife, the former Mary J. Walsh; four daughters, Kathleen M. Jones of Gaithersburg, Barbara A. Gross of Silver Spring and Deborah P. and Carol J., at the home; two sons, Robert Jr. and Michael J., also at the home; his mother, Beatrice, of Rockville, a brother, retired Navy Capt. Arthur W., of Virginia Beach, a sister, Mary L. Turmin of Bethesda; and a grandchild.

The family suggests that expressions of sympathy be in the form of contributions to the Little Sisters of the Poor, P.O. Box 9318, Baltimore, Md.

from *The Washington Star*, Thursday, April 19, 1979

NEWS FROM MCDONNELL DOUGLAS CORPORATION

SUSPENDED MANEUVERING SYSTEM

SACRAMENTO, Calif., May 10, 1979 — McDonnell Douglas Corporation's flying fire engine showed its unique rescue and fire fighting capabilities in a dramatic demonstration here earlier this month before a crowd of fire and emergency service chiefs from many parts of the nation.

The device, called a Suspended Maneuvering System (SMS), is designed to fly under its own propulsion suspended from a helicopter on a 1000-foot cable.

In the May 2 demonstration the SMS attacked a simulated fire in a high-rise structure. The vehicle docked at a window 100 feet above the ground to put firemen into the structure, moved out with a hose they attached to an inside standpipe to throw a heavy stream of water through a higher window, then docked again to evacuate the "victims."

It was the first public demonstration of the SMS involving actual transfer of people between the SMS and a high-level structure. The building was the high steel tower of a former Saturn S-IVB rocket test stand at the McDonnell Douglas Sacramento Test Center, with a plywood facade installed to represent the wall of a skyscraper.

Sacramento city firemen staged the demonstration, working smoothly and professionally with only one day's training.

Following the successful Sacramento demonstration, the company now is offering to produce the vehicles for fire departments, safety agencies or commercial or industrial users, with deliveries to begin in 1981.

The SMS has been under development for three years. The seven-by-eight foot platform, weighing 2800 pounds, is carried to the scene of need by a helicopter. Using its own ducted-fan propulsion system for independent maneuvering, the SMS can approach and dock against a skyscraper building, tower, ship, cliffside or any terrain with obstacles that could make normal helicopter access too risky. The copter can hover safely far above any hazard while the SMS does the work.

The SMS is powered by a six cylinder 210-horsepower light aircraft engine driving a 36-inch diameter fan. Four swiveling nozzles direct the 400 pounds of thrust provided to swing the dangling platform about in response to control stick movements by an on-board operator. He can fly forward, back, sideways, make circles or figure-eight turns and bring the platform's steel bumpers securely against a vertical wall.

Radio and intercom systems keep the operator in contact with the helicopter and ground forces. A television camera mounted behind him can give the helicopter crew a platform-level view of the whole operation.

The platform can carry up to eight firemen with their equipment, or as many as 16 people on a rescue mission, depending on the helcopter's lift capability. Twenty gallons of fuel provides approximately one hour of operation before refueling.

Continued

LITTER LUGGERS

They call themselves the Litter Luggers of 1st Field Ambulance, Canadian Forces Base, Calgary and they wrote themselves into the Guinness Book of World Records between May 5 and May 7, 1979 by carrying a 140-pound patient non-stop over a distance of 120.4 miles.

Their trek started at the Junction of Highways 25 and 3 in Alberta at 2213 hours, May 5 and finished 41 hours and 12 minutes later on May 7.

In 1975, the 1st Field established a Guinness record by carrying a patient non-stop a distance of 80.1 miles. But the Australians took the record away by carrying a patient 100.4 miles.

In early February, 1979 Lt. Franco Torrito, march organizer, went in search of members interested in the Litter Lug. The team trained for 2½ months.

To set the record, the 1st Field had eight people - in two groups of four - carrying alternatively the stretcher with a 140 pound patient at all times with no rest breaks allowed, and teams changing over when breaks were necessary; and the record is measured by the number of miles completed with time only included for interest sake.

The training schedule included: weight-lifting, rope climbing to build up the shoulders, 10-miles a day road marches carrying a 175 lb. live body on a stretcher, and a special high protein diet.

Their 1975 World Record of 80.4 miles which took 24 hours and 25 minutes was later beaten by the U.S. Army based in Germany and later by the Australian Army.

But this time, the men of the 1st Field were not to be denied. Hardships, such as blisters, sore muscles and fatigue were overcome by these men. Their biggest problems were the Alberta weather and boredom. They walked into snow or rain for 90 percent of the time. Boredom was overcome by music and people who joined the Litter Luggers and walked with them for a spell. Each Litter Lug team would walk for one hour and rest for one hour. At all times, even when making team changes the litter was kept moving. They averaged 3 miles an hour during their trek.

Acting as patients for this challenge were Ptes. Alvin Windley and Harry Martin. They would ride on the litter for periods of 2-3 hours and then change. While on the stretcher, they had to remain completely still, each time they moved, the litter straps would cut into the already-sore muscles of the Litter Luggers. They met the challenge of remaining still, the boredom, the cold, the motion sickness and were of a great asset to the Litter Luggers.

from *Canadian Emergency Services News*, May/June 1979

First Field Ambulance of Calgary during training for World Record.

ADJ. GENERAL WILLIAM WELLER HAS RETIRED

It is reported that Adj. General William Weller has retired and has been replaced by Brigadier Gen. John L. France. The Colorado Advisory Council for SAR will be meeting this week and there will be a full report on activities and future plans at the September meeting of the Board.

from CSRB Newsletter

DEATH BENEFIT PROPOSED FOR RESCUE PERSONNEL

A bill to provide a $50,000 death benefit to survivors of rescue squad members who die from injuries received in the line of duty has been introduced in the U.S. House of Representatives. The bill was first introduced in 1977 by Rep. Steve Neal of North Carolina but died at the end of the 95th Congress. It has been reintroduced by Neal, Rep. Wayne Grisham of California and 27 co-sponsors. The bill is numbered HR 2499.

from July '79 EMS ACTION

NOW HC-130 RADIO TO HELP SAR MISSIONS

—As appeared in *Robins Rev-Up*, Friday, March 16, 1979

The C-130 aircraft faces a high priority modification during the next several months at Robins AFB.

The modification has a humanitarian mission and involves the installation of non-tactical VHF-FM radio on 52 HC-130s. This aircraft is used in search and rescue operations by the Aerospace Rescue and Recovery Services (ARRS).

Presently, the aircraft can talk directly to other aircraft on VHF-AM but not to ground rescue parties or to distressed vessels at sea. Under the new FM operation, this will now be possible.

In the past, various combinations of ultra high, very high and high frequency bands with phone patches and messages have been used. However, it was cumbersome and failed to provide real time information.

This new VHF-FM capability will greatly improve communications in future natural disasters, said base officials. It will pinpoint positions of distressed ships and save much time in getting bilge pumps or other vessel to the rescue area.

Many ships have been lost because crews were unable to fix their positions accurately enough for rescue aircraft to find them. Under the new VHF-FM system, the rescue aircraft will be able to home in on the ship's signal.

ARRS is called on regularly to use the HC-130 as a command post for disaster relief operations and to deliver survival equipment and pararescue technicians.

Civil defense, local enforcement agencies and disaster preparedness agencies communicate in this VHF-FM range.

With this new capability, the mission commander will be able to contact these relief forces directly in conducting and coordinating the rescue operations.

Installation of this radio in the aircraft is a complex job and requires much professional knowhow.

This was provided by the following Maintenance electricians, James (Lockheed) Moore, Charles Ivey, Raymon Douglas and Thomas Trussell.

Its use in Air Force HC-130s should mean an increase in t.. number of survivors picked up in future search and rescue operations. ●●

LETTERS TO THE EDITOR

BIZARRE?

Editor:

In two different issues I've seen the word "Bazaar" which is an oriental-type market, used where the word you want is *Bizarre* — meaning odd or unusual. Just nit-picking — but it looks funny.

Lena F. Reed
Northwest Bloodhounds

PAT-ON-THE BACK

Dear Lois,

Thank you for your letter of 16 April concerning our SAR statistic report for 1978. It was most appreciated.

As you well know, I am a short timer now in Operations, and I would like to take this opportunity to thank you for the fine help you have given us. Your comments and urging have really paid off in improving search and rescue. I thought you would like to know that we recognize that a lot of credit is due to you.

Thanks again for your helpfulness and kindness. If I can be of any assistance in NASAR in the Second Coast Guard District, please don't hesitate to let me know.

Best wishes.

Sincerely,

N. C. VENZKE, Rear Admiral
U.S. Coast Guard

TRACKING

Hallo:

I have the book *Man Tracking* by Roland Robbins. It is mentioned in the book that the Border Patrol assists in training individuals in the art of tracking.

I would be interested in any program offered by the Border Patrol or other professional organization that would be capable of teaching this art.

I have had some experience tracking animals and even some success tracking lost people, however I am far from an expert and would like the opportunity to work with someone who is.

Sincerely,

Cpl. Dave Henley
Fish & Wildlife Protection
E. Detachment
Kodiak

Editor: I have passed your interest on to Ab Taylor.

CLUE AWARENESS

Dear Dennis:

I recently attended the MRA Conference in Colorado and enjoyed your presentation on search theory and the search simulator. As a Law Man I fully support your clue consciousness. The most subtle clues have solved many crimes. I believe that SAR Personnel need to shift into the detective mode and in a practical sense treat a search area like a crime scene, thus not destroying the short-lived evidence which will lead us to our victim.

Please send me a copy of the paperwork related to the search simulator, also a copy of the SAR forms that you use on searches. I'll have finished a research paper, by the end of this month, related to trend analysis of SAR activity in my area. I'll send you a copy. Thank you for your time and consideration.

Sincerely,

Chuck McHugh
SAR Coordinator
Pima Co. Sheriff's Dept.

Hi--

I have some items forthcoming for you that may be of interest...

First — a local ham radio operator has designed a DF system that is really neat. It can be built with $10 worth of parts (easily available parts — Mike got his parts from Radio Shack) is simple to work and build. I will have tests, schematics, circuit board info, etc. We have compared this system is as good as or better than the DF-88, Eltronics, and others. The advantage is simplicity. It has LEDs, signal strength, left and right, etc. Mike wants to make the data available to any who want it and I'll send you some camer-ready stuff.

Second — I have two searches to report on, one rescue through ELT, and all with ham-radio assistance. We've got some ideas that should be of interest to other areas and groups on what hams can do for SAR, etc. Stories with fotos.

Third — the national CAP convention will be in SLC this coming September and I'll try to send you some PR on this for SAR Magazine.

Not much else. I've purchased the Radio Shack computer and have it programmed for SAR and have yet to use it, but it's ready — would you be interested in something simple on the "dumb" user's guide to cheap computers in SAR?

Keep up the good work!! Oh, before I forget, on one search we got some rescuers caught in an avalanche and that makes a good aside reminder that SAR is not fun and games!

Will send soon,
Jerry Wellman
Salt Lake City, Utah

Dear Dennis,

Would like to get in touch with any SAR teams desiring to exchange information, and those using amateur radio, special emergency radio, UFH "CB" radio (Class A CB), and other communications services, and so forth. Please write: Jeff Howell, c/o Search & Rescue Magazine, P.O. Box 153, Montrose, CA 91020.

Continued

Continued

Dear Dennis:

The sheriff is pounding on the door, the postman is suing because he broke a leg on our unshoveled walk, the company mascot is rabid, the sink is backed up, our accountant fled during the night and the off ramp we thought was the Downtown Exit turned out to be the Runaway Truck Lane. . . . now for the bad news. . .

If this were television, we would flash a "technical difficulties" message on the screen, bring up the Muzak and leave you to wonder what modern holocaust so abruptly disrupted your service. This is not television of course and even if it were, it would strike us as rather rude to just *blink* at you and disappear.

But disappear we must. . .at least temporarily.

We are victims of a greenout; the "technical difficulty" encountered here is a shortage of money, a shortage critical enough to force us to cease publishing for the time being.

We have *not* gone out of business, although we are faced with that possibility. What we have done is put the publishing schedule aside in order to concentrate all of our energy (and remaining funds) in a search for new owners or investors. After six years of extraordinary support, spiritual and financial, our publisher George Stranahan finds that he must direct his attention to other projects.

Our purpose now is singular: to keep the Mountain Gazette alive. As erratic, obtuse, imperious and irritating as the Gazette occasionally has been, we believe in this magazine and we believe it has a place in the publishing world.

We also believe we have an obligation to be honest with all of you, with those readers who have tolerated our sometimes capricious editorial philosophy and with those writers who have demonstrated infinite patience with our paranormal payment policies. Your gracious support has maintained the Mountain Gazette for seven years. . . we cannot just *blink* at you and disappear.

We will try to keep you informed of our progress in this search for funds.

Gaylord T. Guenin
Editor

Dear Dennis:

How come I'm always the last to know? Just because I'm not young and gorgeous, and won an Academy Award? It's been at least two weeks since the secretary in the local DES office sent me a Xerox of my article on Bloodhounds in your spring issue, but I still haven't received my copy. Now that I'm griping, according to Murphy's law, rev. ed., with commentary, I'll get them in the mail today. Sometimes it takes a bit of black magic.

I can brag a little about *The Complete Bloodhound*. It won second place in the Dog Writers of America Ass'n. contest for best breed book of the year. Howell Book House is very happy, as the first place book came from their house too. They are additionally happy in the fact that the first printing, which they had expected to last two years, was sold out in about 8 or 9 months, and the second printing is now out.

I was glad to see the article about Bloodhounds, written by James Beck. (One of our club members who lives back in the boondocks where the mailman rides a burro got his copy and brought it to the meeting.) There are many police units on the East *Coast* who have been maintaining their own Bloodhound kennels for years, and using them with great success. He speaks with authority.

Best wishes,
Lena F. Reed

Editor: Please let me know if you don't get your copy. It is my responsibility to get it to you.

INTERAGENCY COMMITTEE ON SAR USAF REP.

Dear Mr. Kelley:

Before departing the Department of the Air Force Office of the Assistant Secretary, I would like to take this somewhat impersonal opportunity to express my sincere appreciation for the assistance you have provided to me within the past 3 years. I have had an opportunity to meet and work with some of the finest professionals of my experience. As such you have made my job both within Defense and on the Interagency level extremely fruitful and personally rewarding. Your efforts have resulted in shaping the Air Force and in some cases the Department of Defense position to successfully meet the political and fiscal realities inherent to these chaotic times.

I thank you for your support, your friendship and I feel confident that your relationship with my successor, Lieutenant Colonel Gil Sentimore, will be equally fulfilling and gratifying.

Thank you again.

Lt. Col. Ray Hufnagel USAF

MORE ON MISSION REPORT

Dear Dennis,

Thank you for publishing the article on the new Mission Report Form in the summer issue of *Search and Rescue Magazine*. The response has been very good with a number of large organizations (including the state of Alaska, the Colorado Search and Rescue Board and the Mountain Rescue Association) adopting the form for reporting of an SAR missions.

We have received some inquiries about the special purpose of the information gathered and how it will be used. From the questionnaire mentioned in the article we were able to identify f, major areas of interest for days gathering within the SAR community:

1. **Magnitude of the SAR problem.** This is data which would provide information for budgeting, funding, legislative program assistance and grants. It could help define "the shadow of the elephant" and be tremendously useful in soliciting support whether it is from the local county commissioners or all the way to the state and national levels. It's difficult to convince someone to give you help without first convincing him that you have a problem. Specifically we need answers to such questions as: How many SAR incidents are there annually? How much time is involved (manhours)? How much money is being spent and on what items? How many resources are being used (manpower and equipment)? If we can get a better handle on these unknown quantities we will have a better grasp of Search and Rescue across the nation.

2. **Preventative Education (PSAR).** The PSAR people are working hard to try and put the rest of Search and Rescue out of business. We can save ourselves and, more importantly, the "potential" victim a lot of trouble if we can prevent the SAR situation from happening in the first place. But just *who* is this "potential" victim? Is it the 14 year old boy or the 54 year old hunter? Why are they getting into trouble? How can we prevent it? A lot of excellent work is being done in this field but we could contribute to this effort tremendously if we knew more specifically where we should direct our PSAR efforts and what those efforts should consist of.

3. **Victim Behavior.** If, in spite of our PSAR efforts, the victim does get lost *what* does he do? Which way does he go? How fast does he travel? How far does he go? In short, **where can we find him?** Until his death, Bill Syrotuk led the way in demonstrating the value of using historical victim behavior as a tool in search planning. Through statistical analysis of actual case historie worked towards defining high probability areas for the location of the victim. His work is being continued by others who urgently need more reports from various parts of the country in order to obtain a broader data base. By accurately and faithfully recording

the necessary information we have an opportunity to contribute to what might potentially be the best crystal ball the mission coordinator will ever have.

4. **Preplanning.** This is one of the most essential aspects of any well organized Search and Rescue team. A preplan can improve the effectiveness of a team by making certain critical decisions in advance of the actual mission thus conserving time, effort and resources toward a more efficient operation. Where are the problems occuring? This means on a state and national level as well as within our own county or area of operation. It could help us recognize and possibly reduce certain objective hazards. It could also help us determine what types of resources we need and where they should be located or be able to quickly respond to with the right equipment. We can find out if our alerting procedure is effective as well as how long it takes us to be notified and respond after the incident occurs. What types of missions are we having and could special training in these areas increase our effectiveness? Do we need to direct our medical training toward any specific injuries or problems that seem to be more prevalent? Do we need to obtain certain items of equipment or develop specific skills? What we want to know is: How we can do our jobs better?

5. **Historical Record.** After the mission is over and the dust has settled we need to retain some kind of record of the entire operation. It provides a historical prospective for the local group and forms a possible basis of comparison for new SAR methods and techniques. Certain items of information are valuable during a mission critique and for future reference if questions happen to arise. With the increasing emphasis on legal suits it is obvious that no single form can hope to record all the necessary information that should be kept·in the local team's file on each mission, including interrogation notes, team assignments, strategy maps, radio logs, newspaper clippings, etc. The form can, however, provide a clear, accurate and *concise* synopsis of the mission for future reference and review.

Once we had identified the major areas of concern we could ask specific questions which would hopefully yield the required information. The next problem was to set down a list of design requirements for the form itself:

★ **It must satisfy local team needs as well as national.** We all agreed that after a typical mission the last thing anyone wants to do is to sit down and fill out a dozen different forms to supply information to all the interested parties. In actuality, only one form will probably be filled out (if we are lucky) and that is the one the home team completes for its own records. Consequently our best chance of gaining cooperation from the various SAR teams is to design a form that could be adopted by the local team as their "official" mission report. From this single report a copy could be made and sent to a collection point such as NASAR Headquarters from which the other interested parties could get the information they requested. Consequently, the form has to supply all of the information necessary for a national data base plus provide room for the team to record its own information of local interest.

Therefore in addition to the purely statistical data requested, room must be provided on the form for writing in the actual names of the victim, the resources and locations rather than recording them as only quantities. There should also be space provided for a brief narrative description of the mission so that the individuality of each mission can be retained for the records of the local team.

★ **It must be painless.** After a mission everyone is tried and anxious to make up for the time lost in their jobs and personal lives. If the form isn't quick and easy to fill out it probably won't get done at all. We decided to try to design a form that could be filled out in 15-30 minutes maximum and that would require a minimum of mental effort. This led to using a check-the-box format as much as possible, and setting a maximum of two pages on the length. We also felt that we could make the form much easier to fill out if we used the chronological order for a mission in recording the data and group the questions into similar categories such as information about the subject, the response, the results, etc.

★ **It must be useable.** If possible, we should be able to use the same form for a wide variety of missions whether they involve SAR on water, land, air, caves, etc.; or different problems such as search, rescue or recovery. Once again, *"Keep it Simple"* was the guideline because additional forms mean additional problems in trying to get them filled out accurately and faithfully. Another possible advantage would be if the form could actually be used during the mission as a place to gather and record useful data about the subject, the activity, his experience, etc. It might serve as a "memory jogger" for the types of information that should be gathered for the mission.

★ **It must be useful.** In order to get the greatest cooperation and response, the data requested should be meaningful to the person filling out the form. He should be able to understand what you are asking for and why. We should try to overlap the areas of interest so that we avoid duplicating questions in different sections of the form. Finally, and most important, we must demonstrate the usefulness of the data by showing some results. Too often the data gathered for statistical purposes is tucked away in the computer memory banks and the guy in the field (who supplies the raw data) never sees any benefits from it. How long can we solicit someone's help if he doesn't feel like it's worthwhile? Clearly, we must give those who participate some meaningful feedback and useful results for their efforts.

We feel that the present draft of the Mission Report form very adequately satisfies these areas of interest and design requirements. I'm happy to say that we are beginning to see results. Reports are coming in from all over the nation, but this is only the beginning; in order to get truely meaningful and useful data we need hundreds, even thousands of Mission Reports from which to establish a data base.

We very much need the help of every single Search and Rescue team. We ask them to adopt the report form, collect the data and send it to NASAR, Box 2123, La Jolla, CA. 92038. (For more forms write to this same address.) Remember, the person who ultimately benefits the most will be that injured person or lost child.

Thanks for your help and keep those reports coming!

JON GUNSON●●

CALENDAR

The "Calendar" is your medium for staying abreast of National SAR events. The greater lead time you give us the longer will be your event's exposure. Send us your notice now!

SEPTEMBER 29, 1979
Appalachian SAR Conference General Membership Meeting
Christopher Stubbs, Chairman ASRC
P.O. Box 440, Newcomb Station
Charlottesville, VA 22903
804) 295-9703

OCTOBER 1-4, 1979
American College of Emergency Physicians
1979 Scientific Assembly
Georgia World Congress Center, **Atlanta, GA**
Judy Miller, ACEP Headquarters
3900 Capitol City Blvd., Lansing, MI 48906
517) 321-7911

OCTOBER 5-7, 1979
Barstow Desert Rescue Squad Seminar
Barstow, CA
Brian Zane,
34405 Western Drive, Barstow, CA 92311
714) 253-7524

OCTOBER 15-19, 1979
National SAR School, State SAR II
Seattle, Washington
Maj. Merino
National SAR School
212) 668-7421

OCTOBER 16-18, 1979
Stress Management Techniques
New Orleans, Louisiana
Marian Kirchwehm, Harper & Row Media
10 East 53rd Street, New York, NY 10022
212) 593-7425

OCTOBER 16-19, 1979
Regional Emergency Medical Services Workshop
Howard Johnson's Motor Lodge, **Portland, Maine**
Anita Engel, EMS Medical Care Development, Int.
295 Water Street
Augusta, Maine 04430
207) 622-7566

OCTOBER 30 - NOVEMBER 1
Handling Hazardous Materials-Transportation Emergencies
Allentown, Pennsylvania
Roberta Frye, Natl. Fire Protection Assn., Ed. Tech. Unit
470 Atlantic Avenue, Boston, Massachusetts 02210

NOVEMBER 9-10, 1979
American Trauma Society 3rd Symposium on the
Management of Acute Trauma — "Emergency Care 1979"
Red Carpet Inn, **Milwuakee, Wisconsin**
Susan L. Weed, American Trauma Society
875 N. Michigan Ave., Chicago, IL 60611
312) 649-1810

NOVEMBER 10-13, 1979
NASAR SAR Management Course
Littleton Center, **Littleton, Colorado**
NASAR Training Committee,
P.O. Box 2123, La Jolla, CA 92038
213) 268-3266

NOVEMBER 13-15
Handling Hazardous Materials-Transportation Emergencies
St. Louis, Missouri
Roberta Frye, Natl. Fire Protection Assn., Ed. Tech. Unit
470 Atlantic Avenue, Boston, Massachusetts 02210

NOVEMBER 13-16, 1979
Regional Emergency Medical Services Workshop
Regency Hotel, **Denver, Colorado**
Julie Greckel, EMS, CO State Dept. of Health
4210 E. 11th Ave., Denver, CO 80220
303) 320-8476

NOVEMBER 26-28, 1979
Second World Conference on Pre-Hospital Care
Fairmont Hotel, **New Orleans, LA**
Barbara Myer, Medical Symposia,
P.O. Box 5279, Santa Monica, CA 90405
213) 248-0018

DECEMBER 2-6
17th Annual SAFE Symposium
Hotel Sahara, **Las Vegas, Nevada**
Kerin Jaszkowiak
7252 Renmet Avenue, Suite 203
P. O. Box 631, Canoga Park, CA 91303
213) 340-3961

DECEMBER 4-6
Handling Hazardous Materials-Transportation Emergencies
Raleigh, North Carolina
Roberta Frye, Natl. Fire Protection Assn., Ed. Tech. Unit
470 Atlantic Avenue, Boston, Massachusetts 02210

DECEMBER 4-6
Stress Management Techniques
Washington, D.C.
Marian Kirchwehm, Harper and Row Media
10 East 53rd Street, New York, NY 10022
212) 593-7425

DECEMBER 8-9, 1979
Summit County Rescue Group/CO SAR Board
Avalanche Workshop
Colorado Mountain College, **Breckenridge, Colorado**
Jon Gunson, SCRG,
P.O. Box 1490, Breckenridge, CO 80424
303) 453-6657

DECEMBER 10-13, 1979
Regional Emergency Medical Services Workshop
Fairmont Hotel, **New Orleans, LA**
Pam Porter, LA Dept. of Health Human Resources,
Bureau of Emergency Medical Services
200 Lafayette St., 6th Floor,
Baton Rouge, LA 70801
504) 342-2600

DECEMBER 11-14
Training Techniques for Trainers
Tucson, Arizona
Marian Kirchwehm, Harper and Row Media
10 East 53rd Street, New York, NY 10022
212) 593-7425

DECEMBER 16-19
Cardiovascular-Pulmonary Emergency Medicine Course
Atlanta Hilton, **Atlanta, Georgia**
Hdqts. of the American College of Emergency Physicians
3900 Capital City Blvd., Lansing, MI 48906
517) 321-7911

JANUARY 21-23, 1980
5th National Fire Conference
New Orleans, LA
Mary Underwood, National Fire Conference,
U.S. Fire Administration, FEMA,
P.O. Box 19518, Washington DC 20036
202) 634-7654

SEARCH & RESCUE MAGAZINE INDEX

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HOW MANY SEARCHERS TO USE
WHERE TO SEARCH

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9. **Contingency Analysis**
Appendix (includes extensive bibliography and an index)

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