SEARCH AND RESCUE MAGAZINE

WINTER 1973

contents

FEATURES

DEPARTMENTS

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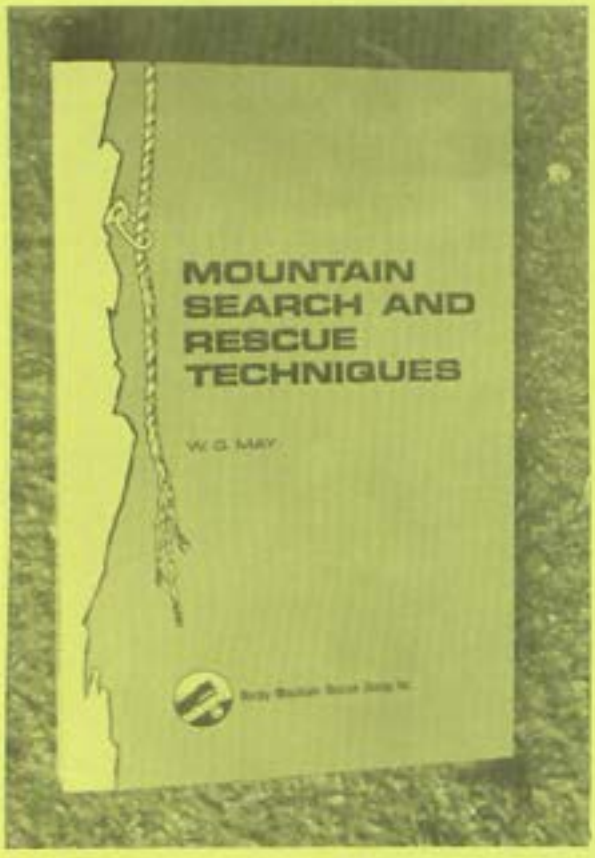
BOOK REVIEW

by D. M. Hensley

MOUNTAIN SEARCH AND RESCUE TECHNIQUES
by W. G. May
Published by the Rocky Mountain Rescue Group, 1973, 301 pages, $4.00.
P.O. Box Y, Boulder, Colorado 80302



There are many aspects to determining just what is to be considered a profession. One of these being the amount of literature that is written especially for and by those in a certain area of concern.

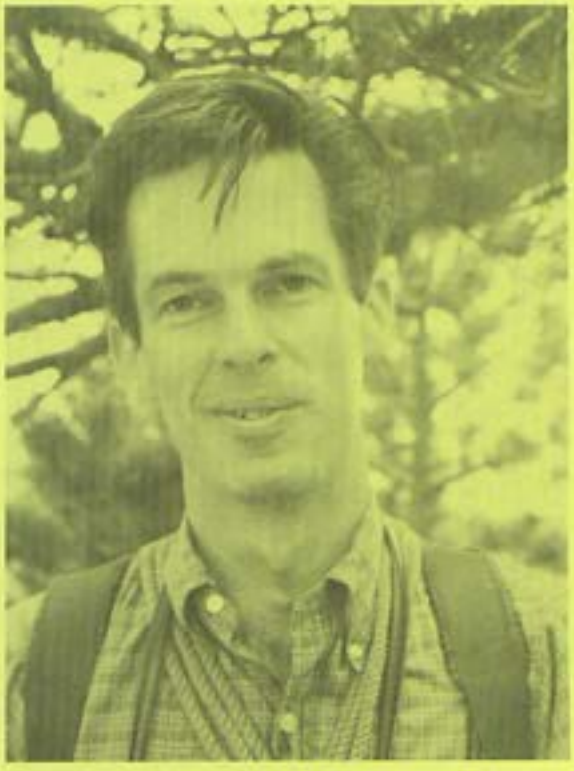
Those dedicated men and women in Search and Rescue (SAR) who consider themselves professionals are painfully aware of the serious lack of literature in their specialized field. There are less than a dozen books dealing exclusively with SAR, though many allude to it; few specialize on the subject.

Early in the 1960's there appeared to be a Renaissance with the likes of L. D. Bridge's MOUNTAIN SEARCH & RESCUE, MOUNTAIN RESCUE TECHNIQUES by W. Mariner, and MOUNTAIN SEARCH & RESCUE OPERATIONS by the Grand Teton National Park Service.

Even though two out of the three books were published out of this country, it was a beginning of interest in the area of SAR. However, after this much over due, but humble start, the students of SAR methodology were faced by the lack of any serious works until 1972. This year issued in such notables as Kelley's MOUNTAIN SEARCH FOR THE LOST VICTIM, which shortly there after was followed by MacInnes', INTERNATIONAL MOUNTAIN RESCUE HANDBOOK. Now from the rocky mountain area we have W. G. May's MOUNTAIN SEARCH & RESCUE TECHNIQUES.

Mr. May's manual has brought rescue techniques to its highest level of attainment to date. He seems to have incorporated the best of two worlds by combining both American and European philosophies into a finely orchestrated point of view.

If your team's topography is similar to



Author, William May, Training Officer for the Rocky Mountain Rescue Group.

BOOK REVIEW (continued)

that near Boulder, Colorado USA, then Mr. May's book should certainly enhance any SAR team's library. On the other hand, those teams whose terrain is similar to that of New Mexico, Arizona and Southern California will find that their country deserves special consideration, which was not accounted for in Mr. May's work. This is a problem that hopefully will be a challenge to others to accept.

There are sections within the book that previously have been overlooked by others: such as legal aspects, steel cable, night vision, and river crossing. Night vision was particularly interesting and well written, bringing into focus that on night operations one should utilize the rods in ones eye by looking out of the side or periphery of the retina in order to have the maximum vision equity.

Those teams that are involved in high angle evacuation will find his dealing with this technique enlightening and possibly provocative with such methods as dual line lowering without the benefit of a safety. The situation normally dictates the methods one is forced to use, but still one should whenever possible utilize a safety and on a seperate anchor from the lowering lines. This gives both the victim and the rescuer the best of possible protection.■

Reviewer, Dannie Hensley, noted survival authority and lecturer.

CALENDAR

1973 Nov. 4 - 10
Steamboat Springs, Colorado
NATIONAL SKI PATROL SYSTEM SAR CONF.
NSPS 115 No. Washington Ave., Fort Collins CO. 80521

1973 Nov. 12 -16
Seattle Center, Seattle Washington - Third National Avalanche School.
Richard H. Spray, NAS Coordinator, USDA - FS, 444 East Bonita Ave. San Dimas, Calif. 91773 (213) 332-6231.

1973 Nov. 16 - 17
Seattle, Washington - Fall Mountain Rescue Association Business Meeting. Vance Yost Executive Secretary, P.O. Box 9, Altadena, Calif. 91001

1973 Nov. 30, Dec. 1 & 2
Carson City, Nevada - Nat. Assoc. of Search and Rescue Coordinators. Hal Foss, 4220 E. Martin Way, Olympia, Washington 98504

1974 Feb. 11 - 15
Governor's Island, New York
NATIONAL SAR SCHOOL FOR SAR COORDINATORS
C. F. Meredith, Commander - National SAR School, Governor's Island, NY, NY 10004

1974 April (Easter Vacation)
Mexico City, Mexico
1st INTERNATIONAL MOUNTAIN RESCUE SEMINAR
Paul Williams - President, MRA P.O. Box 9 Altadena, CA 91001

FRANK GOMEZ AND HIS DOG BESIDE THE FIRE AFTER THE CLIMBING ACCIDENT.

A RESCUE WORTH MENTIONING

FROM R. TO L. DON SCHELLINGER, GEORGE NOVINGER, JACK MUNSON AND ALMOST OUT OF SIGHT CLIFF PARKER STRAP TOGETHER EXTRA LITTER TAKEN TO THE ACCIDENT SCENE.

In rescue work there are frequently events that are worth mentioning to show something positive and as an educational reminder. Last March 4, 1973 a climbing accident was such a situation.

First, after the accident, fellow climbers demonstrated excellent presence of mind to provide good emergency medical care.

Secondly, an extremely rare rescue equipment failure proved the need for the rescue safety philosophy of the belay or redundant safety system.

The accident involved Frank Gomez, age 23 of Los Angeles. Gomez is shown lying by the fire and in the litter. It seems that Gomez had been climbing in The Narrows of

RESCUERS GET HELPFUL PUSH THROUGH CLOSE QUARTERS BEFORE THE VERTICAL LIFT.

Big Tujunga Canyon around 4 PM Sunday. As he made a free traverse around the flooded canyon bottom, he slipped and fell 30 feet into a deep pool after bouncing off a large boulder fracturing his femur.

Fellow climbers quickly rescued Gomez from the frigid water, then stabilized his leg, put dry clothing on him, built a fire to keep him warm, and sought help from the Sheriff's Department.

You may well ask yourself if your outdoor buddies are that well prepared?

In the ensuing rescue by the Montrose Search and Rescue Team, the Altadena Rescue Squad, and the Emergency Services Detail all of the Los Angeles County Sheriff's Department, a rescue truck winch cable broke in the 500 foot lift evacuation. A support rescue vehicle with another winch was immediately pressed into service to complete the evacuation.

The point is that it demonstrates the need for a safety philosophy of redundancy in rescue. What do you think? ■

THE USE OF STRING LINES FOR SUBJECT CONFINEMENT, SEARCH AREA SEGMENTATION, AND GRID SWEEP CONTROL

By Jon Wartes and Bill Rengstorf

Grid (sweep) searching has for many years been a speciality of the Explorer Search and Rescue (ESAR) units within Oregon and Washington. For much of this time, the Oregon units have been using string lines for grid control. Recently, units in both states have begun using string lines for other purposes as well.

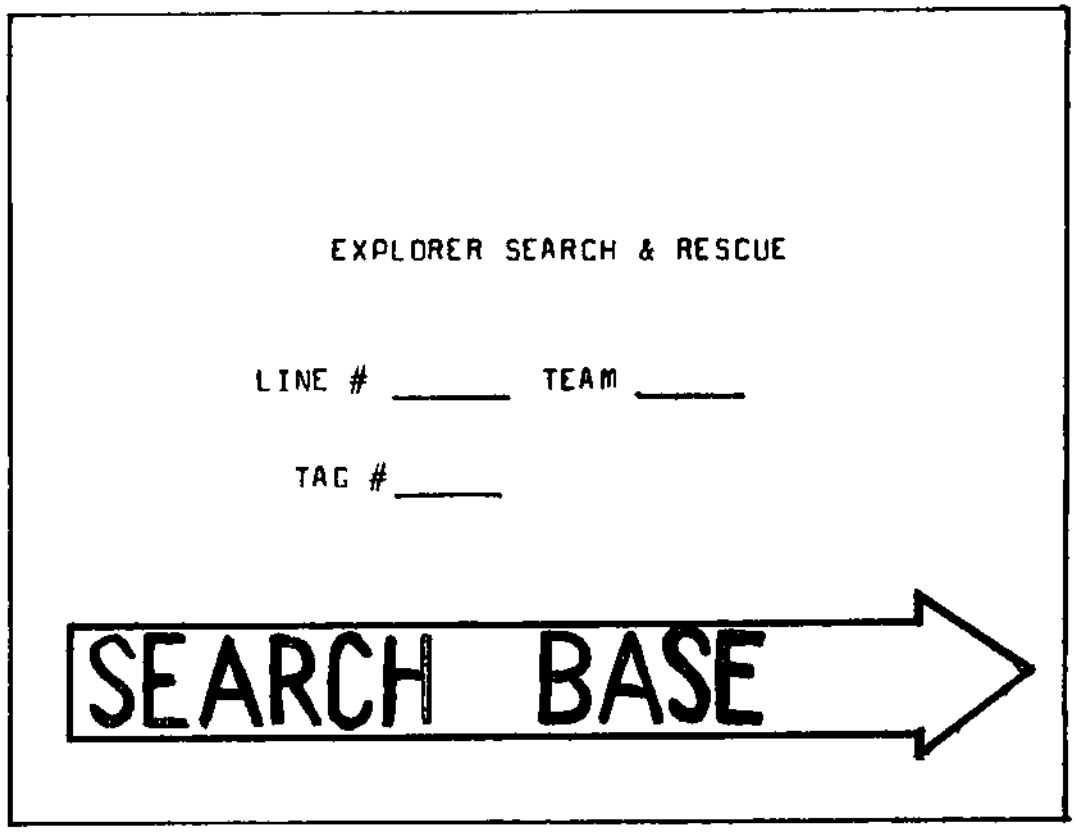
CONFINEMENT. The writer's first search experience was for a lost hunter in Western Washington many years ago. We searched a very large area with no results. Seven years later, the hunter's remains were found many miles to the east. Had he hiked north, west, or south, he would have come to a road. He went in the only direction he could have gone and not walked out!

This experience suggests the need for a rapid and resaonably effective way to confine the subject inside boundaries he is unlikely to cross.

In his section on search tactics, Dennis Kelley[1] describes a 5 mode strategy. They are (1) Preliminary mode, (2) Confinement, (3) Detection, (4) Tracking, and (5) Evacuation. The second mode, confinement, is based upon the principle of trapping the subject inside a known area and then searching the area. Suggested methods of confinement include roadblocks, trail blocks, lookouts, camp-ins, and track traps. However, in the more wooded areas, where visibility is less, there is a need to mark off the boundaries in a fairly definite fashion.

In a recent study based upon 92 search operations, Bill Syrotuck[2] found that the survival rate of persons lost during bad weather was low (37.5%). He emphasizes the need to react quickly and goes on to define zones of highest probability based upon the point where the subject was last seen. These statistics may provide use-

Sample of tags used to mark string lines
(Printing on both sides)



ful information to help set the outside boundaries of a search as well as to identify the most probable zones within the area.

A practical need, as a consequence of using zones of probability in search planning, is to mark these zones for easy use by searchers.

One solution in wooded or brushy areas is the use of string lines for confinement and area segmentation. When combined with tags (placed every 100 to 300 feet or 30 to 90 meters) which point the direction to search base, string provide a definite line that is easily noticed and easy to follow. Other advantages: (1) They take little time to put in (about 2/3 of walking speed: the string takes no extra time, the tages require some.) (2) String is easy to obtain. (3) It is not too expensive ($1.90 per 6,000 foot or 1829 meter cone.) (4) The string is rather strong. If it jams inside the string can, it will usually bring the searcher to a stop rather than break. 4-ply cotton is used.

Disadvantages include: (1) A subject in a state of shock or panic may go through a string line without recognizing its use to him. (2) Bulk and weight (a 6,000 foot or 1829 meter cone weighs 2 pounds or 91 kilograms). (3) The appropriate materials have to stocked ahead of time - they cannot be thrown together at the last minute. (4) The string may become an eyesore until it rots away (2 to 8 months usually.) In suburban areas, parks, or other areas of high public use, it may be desirable to take in the lines after the search.

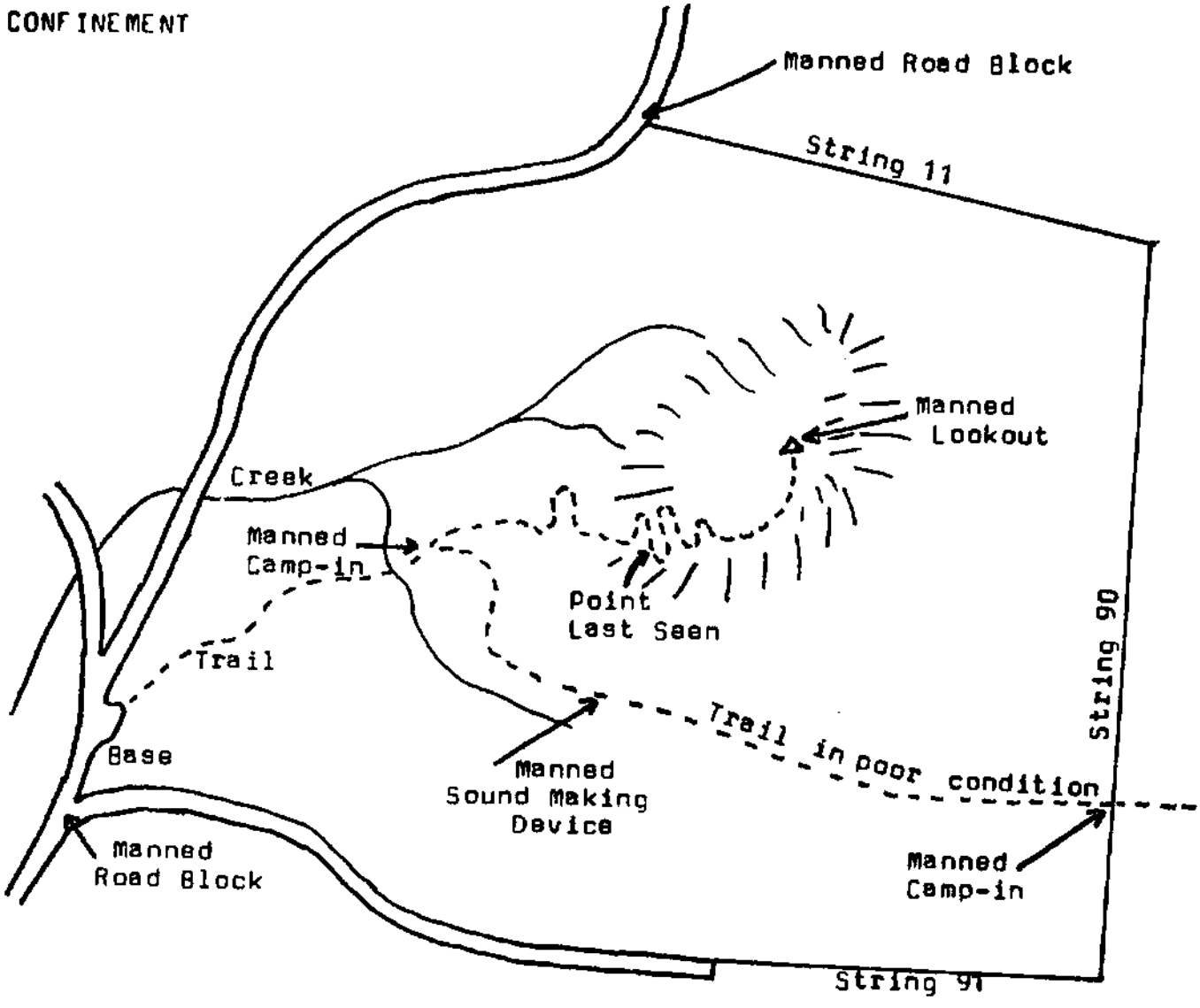
Probably the critical question on using string for confinement is whether or not the subject will recognize and use the line to his benefit. One Oregon ESAR unit did have a lost person follow out a line that they had set for grid control purposes. However, use of string lines for confinement in wooded areas is still

new to us. An evaluation of its effectiveness will have to wait upon additional field experience.

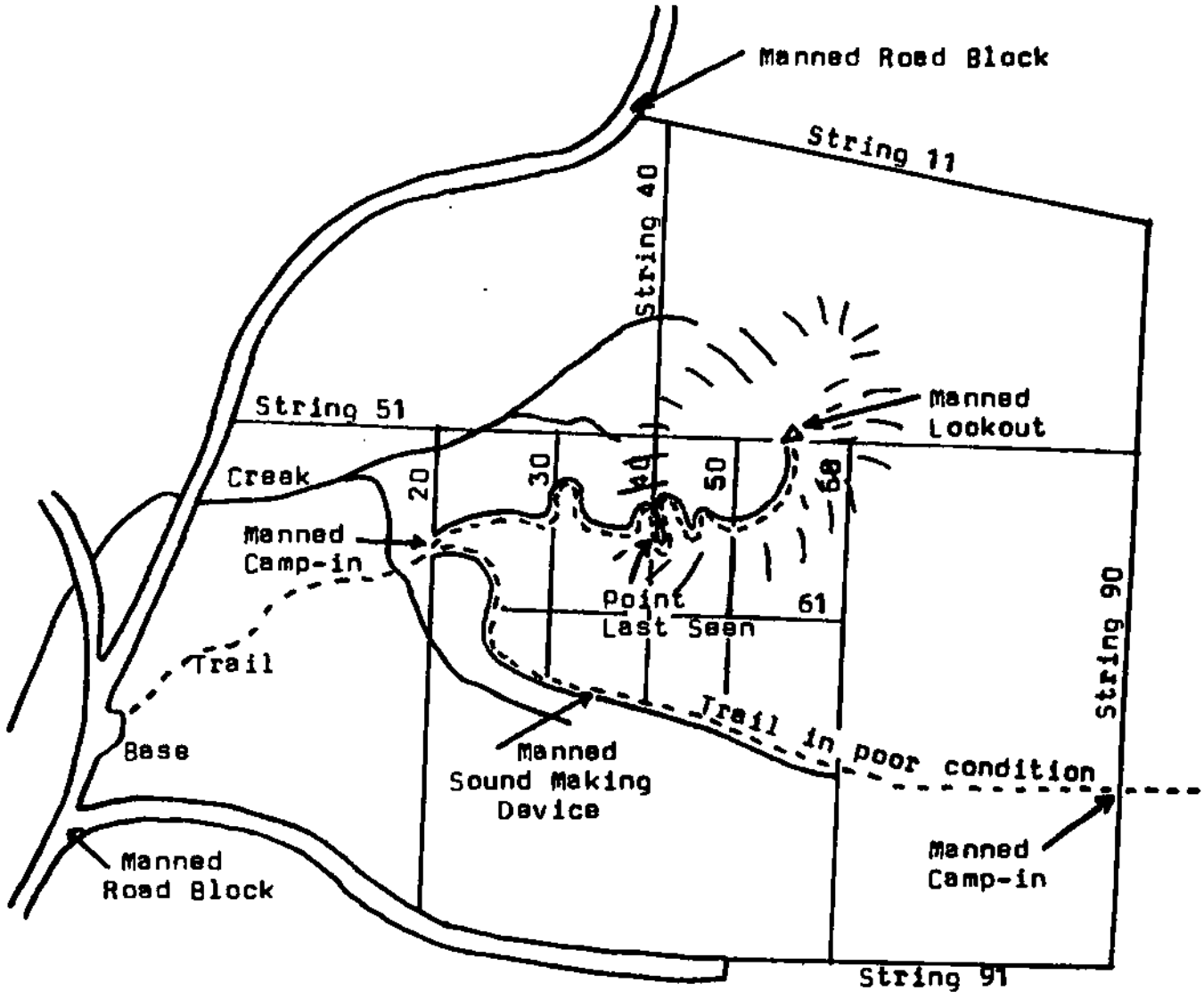
SEARCH AREA SEGMENTATION. Once the subject has been confined to a known area, the process may then become one of dividing up the area into smaller zones. Again tagged string lines may be useful. This segmentation of the area makes possible several things. (1) It will confine the subject inside an even smaller area thereby reducing the time until he wanders into a string line (assuming he is up and wandering.) (2) Teams can then be assigned to distinct manageable areas to search. The most probable areas would be searched first. Because the lines, with reference numbers tagged on each line, make definite boundaries, confusion between base-camp and field teams regarding assignments and locations is minimized. Consequently it is administratively possible to utilize a large number of searchers. ESAR has conducted many operations with up to 200 members. With the segmentation described above, more could be used without undue and and unnecessary confusion.

In this hypothetical example, the lost person was hiking up toward the lookout. A reasonable theory might be that he unintentionally walked off a switchback.

The confinement is accomplished by roads on the west and by string lines on the east. Manned camp-in's and road blocks



DETECTION - EARLY SEGMENTATION



would be set up at appropriate places.

EARLY DETECTION. Search dogs could be brought in for tracking. Teams could hike the trails, check shelters, walk game trails and drainages, etc. The emphasis would be upon the area immediately around and down hill from the point last seen. A manned sound making device might be used to attract the subject to a trail. (ESAR refers to these kinds of efforts as a Type I search. Dennis Kelley labeled it reconnaissance.)

As the early trail checks, etc. prove negative, teams could be assigned to run string lines in the vicinity of the highest probability search areas. Grid teams can then start to sweep those zones. Note that while string is used to mark zones, trails and natural terrain features can be used too. Meanwhile several other lines (#40, 60, & 51 in this example) serve to divide up the whole search area into smaller parts. Should the subject be wandering, it should take less time for him to find a string line.

For reference, each string has been tagged with a number every several hundred feet or meters. In this example, odd numbers are used for east-west lines and even numbers for north-south lines.

As time passes, the failure of the

subject to find and follow out a string line may be due to any of three reasons:

1. He was not inside the original boundaries.
2. He has passed through the boundary.
3. He is down or at least not able to travel far.

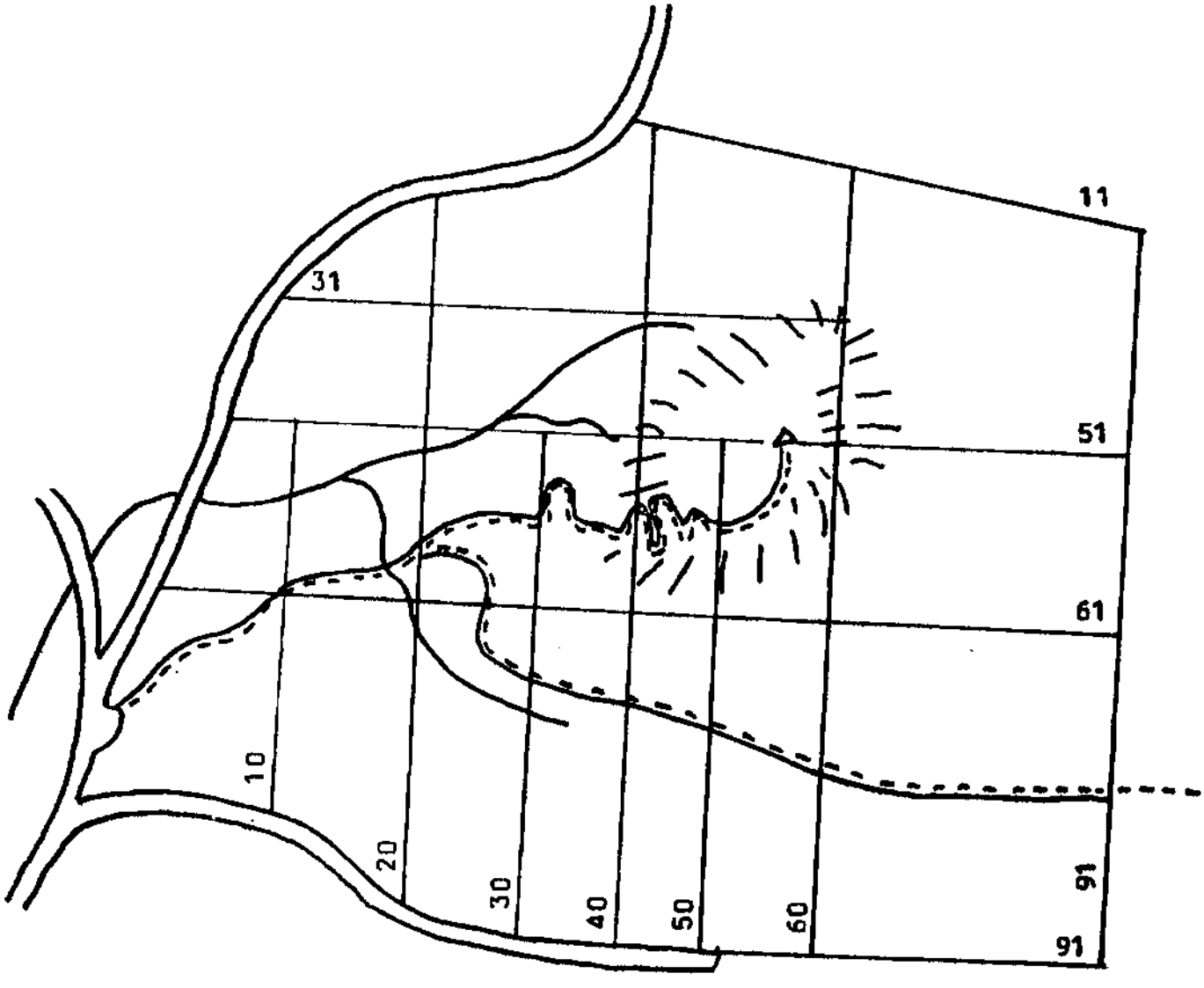
As the highest probability zones are searched, additional lines can be placed to define the next search areas.

As the most likely areas are searched and prove negative, a real problem comes up. The size of the confined area vastly exceeds the capabilities of the available manpower to adequately search. There is no one resolution to this problem. Partial solutions include:

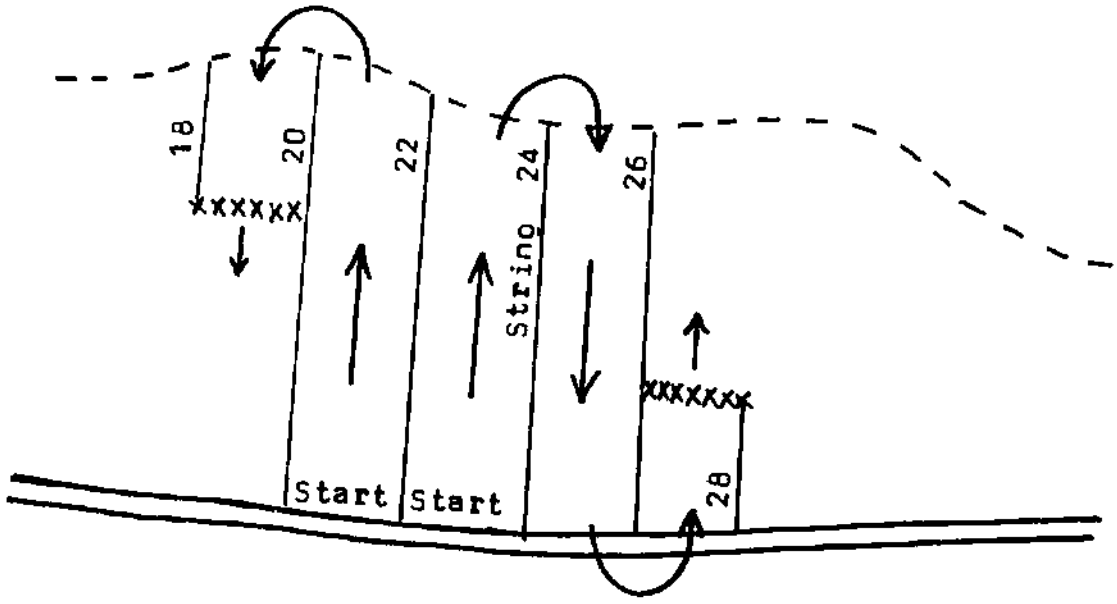
1. Finding and testing better search methods.
2. Refine the ability to identify the most likely search areas.
3. Recruit, train, and use greater manpower resources.
4. Resond to the search early enough so that the outside boundaries are as small as possible.

GRID SWEEP CONTROL. The Oregon ESAR units originated the use of string to mark searched from unsearched areas while gridding. The process is simple,

DETECTION - ADVANCED SEGMENTATION



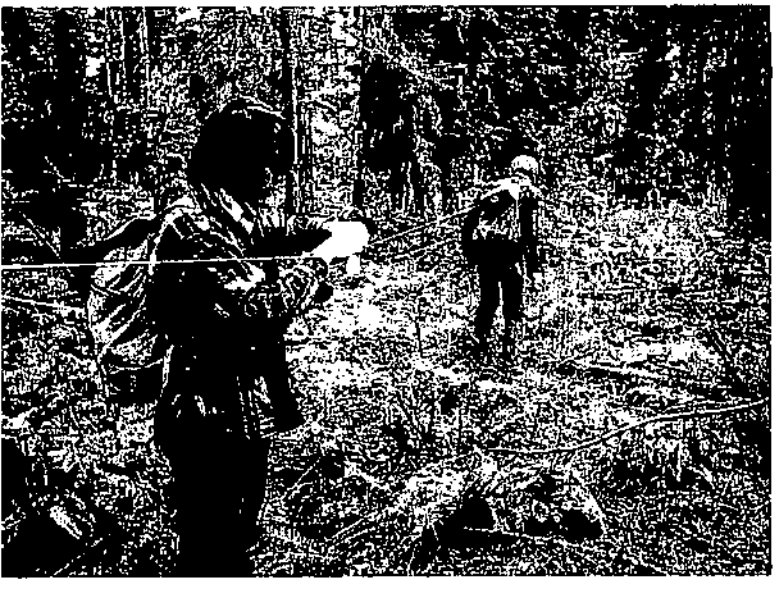
String used for Grid Sweep Control
(Two teams shown)



Tags identifying the line number are placed on the string at the ends and at intervals of several hundred feet.

requires less distraction of the end man than laying ribbons, and provides a boundary that is easily followed by subsequent teams.

About the only disadvantage is that if string lines are used for segmentation as described earlier, the area might become too cluttered with lines if string was also used for sweep control. In such cases, ribbons or compass might substitute for control purposes. As long as the search zones are of managable size this shouldn't be too difficult.



ADDITIONAL ADVANTAGES OF TAGGED STRING LINES. 1. Directing teams to locations - The absence of firm landmarks in heavily wooded areas makes it more difficult for one team to give locations to others.

(a) Each tag becomes a location. Example: "We are at the 1400 foot or 427 meter tag on line #60."

(b) The lines themselves become access routes. Example: "Follow string #20 north until you intersect line #51. Go east on #51 to the 1800 foot or 548 meter mark. Team #3 is 400 feet or 122 meters south of that tag.

2. Directing teams to the subject - When the subject is found and other teams are routed to the location to assist with the evacuation, a single string can be set in by two members of the finding team to mark the route. Directions become quite simple then: "Go up the trail to the string (specify number) and follow the

string to the subject."

THREE IDEAS COMBINED. Three ideas have been put together in a practical arrangement. Dennis Kelley's proposal of confining a lost person within definite boundaries early in the search is supported by the use of tagged string lines as a hopefully practical method of accomplishing this confinement in wooded or brushy areas. Bill Syrotuck's work on identifying search zones of greatest probability is also aided by the use of string lines to mark these zones in an effective manner for use by searchers.

The actual putting-together of these ideas on real operations is perhaps the next step. Beyond that will come an evaluation of the results obtained.

STRING DISPENSER. Several kinds of string dispensers have been developed by various units. The following is a description of one.

Specifications: Height 9½ inches,
24.13 centimeters.
Width 6 inches,
15.24 centimeters.
Weight 2½ pounds,
113.4 kilograms.

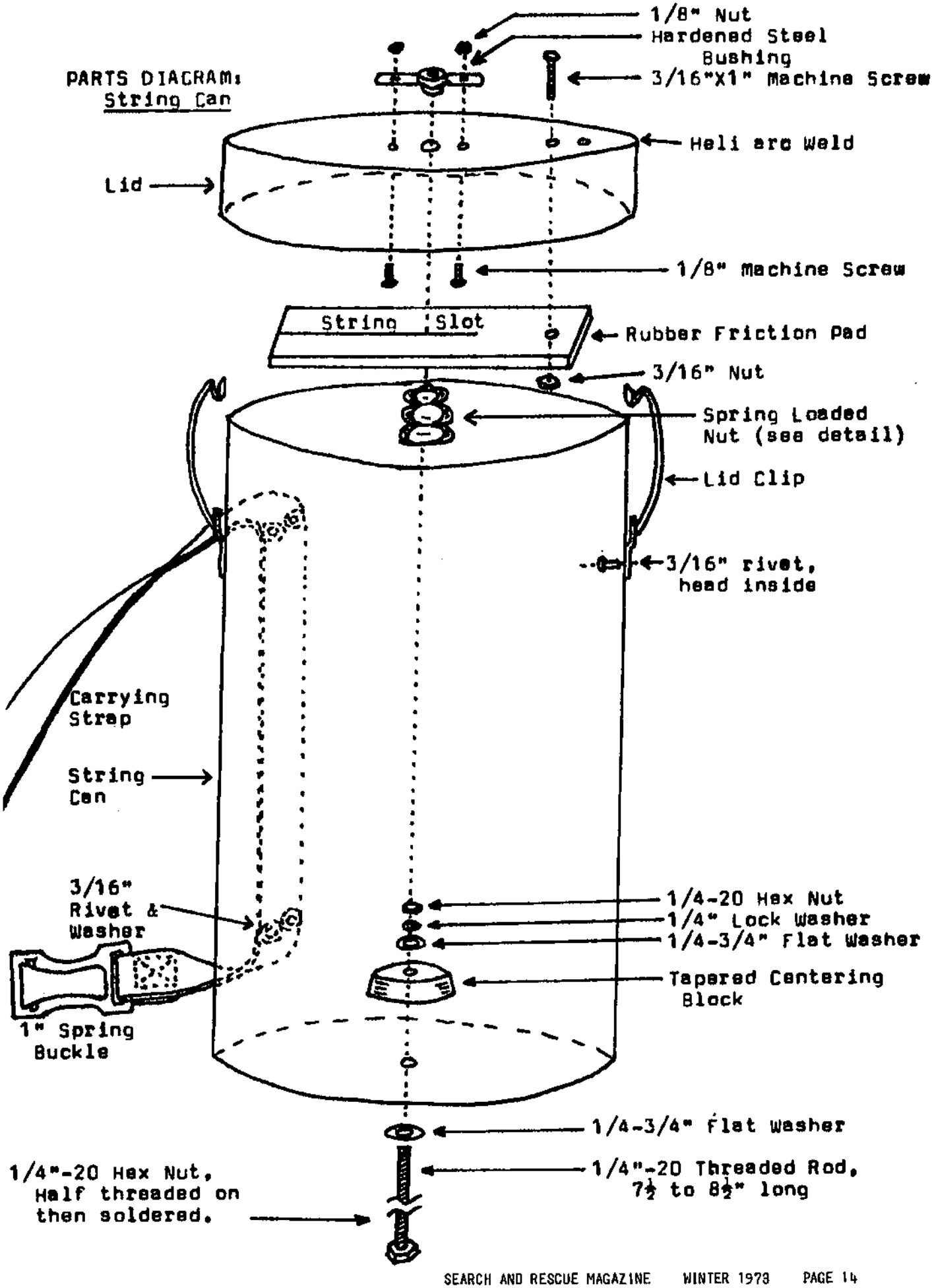
Features: Works well in any position.
Unaffected by sudden changes of movement.
Resists snagging on brush.
Easy to operate, minimum parts, no moving parts.
Durable case, cone protected from weather and physical abuse.
Easy to operate carrying strap.
Easy to repair.

The easy to grasp spring loaded nut was developed to hold the cone in position. Just a few turns against the spring is needed. The spring applies constant pressure to the cone and does not take a strong arm to tighten or loosen. The heat shrink tubing is to prevent the string from snagging on the spring. The loaded nut means only one part to hang on to, other than the lid, while changing cones.

Zinc chromate should be used to prime aluminum before applying desired high-visibility paint.

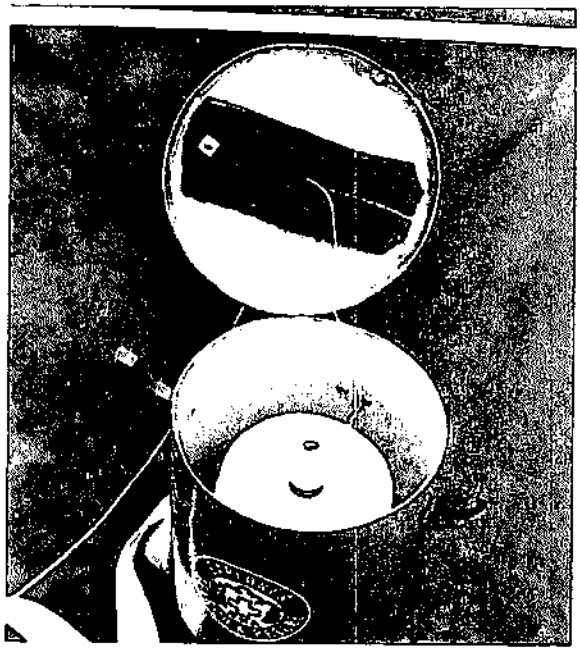
If possible, screws should be cut flush with nuts, filed and peened to reduce chance of string snagging and working loose. The rubber friction pad must be long enough to not snag string as it peels off the cone. The threaded center rod should not be longer than necessary.

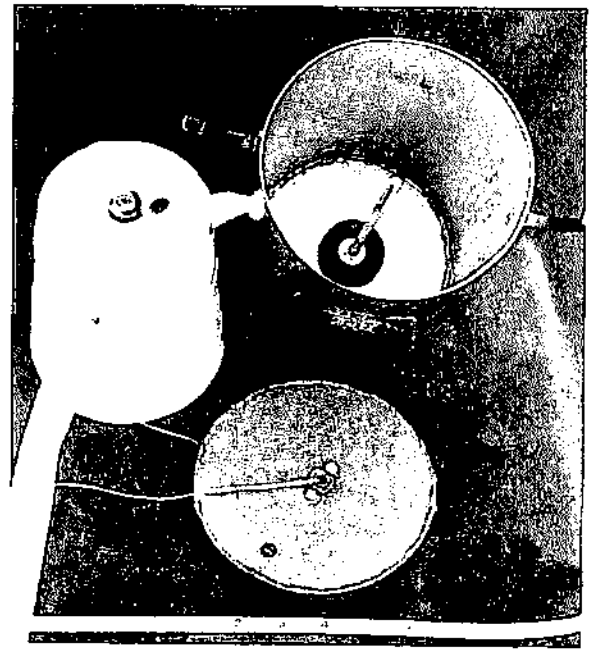
PARTS DIAGRAM:
String Can



PARTS LIST

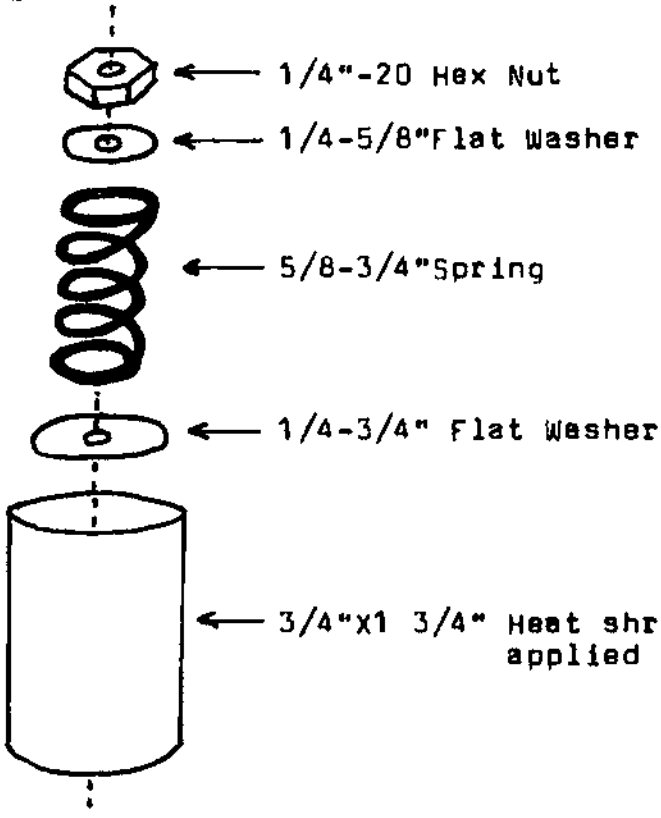
1	1/4"-20 Threaded rod, 7½ to 8½" long
2	1/8 X 1/2" Machine Screws
1	3/16 X 1" Machine Screw
6	3/16 X 3/4" Rivets
3	1/4"-20 Hex Nuts
2	1/8" Machine nuts (match 1/8" screws)
1	3/16 Machine nut (match 3/16" screw)
3	1/4"-3/4" Flat Washers
1	1/4"-5/8" Flat Washer
4	3/16"-1/2" Flat Washer
1	1/4" Lockwasher
1	5/8" X 3/4" Spring
1	3/16" Hardened Steel Bushing (Grill guide bushing)
1	3/4" X 1 3/4" Heat Shrink Tubing
2	Lid Clips, Delco Auto distributor cap clips. Part # 1871838, Spring Part # 1847289, Support The spring must be reversed and filed to work properly then riveted to can.
1	1" Spring buckle, sewn to carrying strap.
1	1/16" X 1" Solid nylon webbing, 36 to 48" long, riveted to can.
1	1/4" X 1 1/2" X 5" 4-ply rubber. This friction pad causes the string to be straighter and ride higher on the brush. Trim pad to fit inside the lid. Keep replacement pads on hand.
1	16 ga. X 5 1/2" Aluminum pipe, 10" long. 1" is cut off and a piece added to form the lid ring. Circular plates are cut and welded to lid ring and one pipe end to form the can.
1	16 ga. X 6" X 12" Aluminum sheet. For circular plates for ends of can.
1	1 3/4" O.D. Exterior Plywood, For centering block.
1	2 lb. Cone of 4-ply cotton string (6,000 ft.)





PARTS DIAGRAM:

Spring Loaded Nut (Detail)

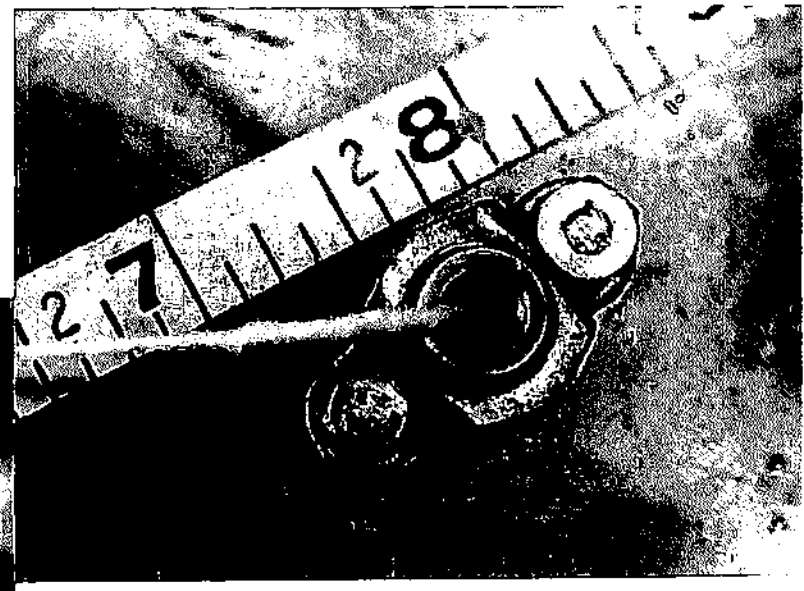


Device was soldered together using soldering gun, tinners acid, and rosin core solder.

REFERENCES.

1 Kelley, Dennis, Mountain Search for the Lost Victim, 1973. $3.95. P.O. Box 153 Montrose, California 91020.

2 Syrotuck, William G., A Statistical Analysis of Lost Persons in Wilderness Areas, Number Two, 1973. $2.50, Arner Publications, Rome, New York.



Good luck! Suggestions and comments will be appreciated. ■

RON'S LAST EXCITING ADVENTURE PROVES FATAL

-by Gene Fear

Rick Ridgeway, Ron Fear, Debi Mayer, Kurt Haffelder, and Walt Churchill were scheduled to float the Urabamba River on balsa wood rafts as the climax to their Peruvian Expedition. Their party had completed some climbing on Chinchey and had done a reconnaisance climb of 20,000' Huantsan in preparation for next year's Peruvian adventure.

After the climbing, the party returned to Lima to regroup and acquire life jackets, food, and supplies for the trip down the Urabamba River. The float trip was to begin at Quillabamba, approximately 50 kilometers north of the famous Inca ruins at Machu Picchu, where the party would take a truck for a one-day ride to the place where the Indians would build a large balsawood raft. The trip down the Urabamba River would take approximately two weeks thru 200 miles of primitive jungle wilderness. The long, balsa raft float down the Urabamba became more important to Ron when a film man from the National Geographic Society joined the party in Lima. He was to take 16mm moving pictures of the trip.

After purchasing the necessary supplies in Lima, Rick discovered he would be delayed a few days. Since part of the party had a desire to visit the Inca ruins at Machu Picchu, it was decided to split the group and meet on the 10th of August and leave for the big river on the 11th. Plans were for Ron and his party to meet the same train Rick was on passing Machu Picchu. But none of Ron's party had a watch, and the train, unfortunately, was ahead of schedule, so Ron missed the train that Rick was on at MachuPicchu.

Trains normally pass thru Machu Picchu once a day, so Ron had a 24-hour delay. Ron's party had the major portion of the river trip's supplies, which included an inflatable 6-man rubber raft that Ron had purchased in Lima as emergency gear for the raft float down the big Urabamba River.

(Comment by Gene Fear: Having spent the past 20 years following my son's spontaneous actions, I fully understand his frustrations at the moment he missed the train. I also can see the gleam in his eye at the possibility of a rare chance to explore another river.)

He had a good inflatable raft - a large one. Not large enough for the whole party and its load of equipment, but large enough for an exciting run down a swift river. It was a river he had scouted last year and again on the train ride up to Machu Picchu. It was only 34 miles down to Quillabamba on the river, and all but approximately 1/4 mile was visible from the train. They felt it would be fast and tricky, but not excessively dangerous. A bit like the ride down the Snake or Colorado River.

Debi reports Ron became excited about running this small river after he and she had walked upriver to a hot springs about a mile upstream. It was so beautiful. Deep green vegetation hung over the banks, with flowers in full bloom, making it a very beautiful day. Amid such surroundings the party became more excited about the long float trip soon to begin.

The frustration of missing their train connection soon gave way to high spirits at the prospect of the afternoon's opportunity for adventure. Walt, Kurt and Ron had a great time pumping up the raft in anticipation of real action. Walt was chosen to go with Ron because he had had extensive canoing experience. Kurt would stay with Debi to help load and transport the equipment to Chaullay, wherethe bus to Quillabamba meets the train.

The river was lower than normal because of the dry season and lack of recent rainfall. Ron made plans for Debi and Kurt to bring the equipment on the next train, while Walt and Ron would float the river. They gathered together some extra clothing, food, and necessary supplies. They improvised life jackets from polyfoam and Ensolite pads, which they tied around their shoulders with nylon rope.

At 1:00 p.m. Ron and Walt pushed off on another adventure. The boys were in high spirits and excited for the river excursion. Debi and Kurt waited for the next train. Later that afternoon a freight train stopped at Machu Picchu, so Debi and Kurt asked permission to ride to Quillabamba so as not to delay the expedition another day. They fully expected Ron and Walt to be at Quillabamba by evening. They arrived at Quillabamba on the evening of August 9th and attempted to find Rick Ridgeway and his party. They found Rick on August 10th and explained what had happened, that Ron and Walt were floating the river.

The group checked the river and decided that the river run may have required some portages or that it was too dangerous and Ron and Walt probably would abandon the trip and take the train at any one of the 5 stations along the river, and arrive on the afternoon train. That afternoon the group became uneasy. August 11th they notified the police and the local radio station to alert the river natives to be on the lookout for two Americans and a rubber raft or other floating equipment.

When Ron and Walt were not on the August 11th afternoon train, Rick, who was in top physical condition from just having completed 30 days of high altitude climbing, made plans for an early start to walk and search the banks of the river. As Rick progressed upriver in his quick search of the banks, he alerted all the natives living on the river to be on the lookout for Ron and Walt or equipment.

About 48-49 kilometers out of Quillabamba he entered that short stretch of river that is not visible from the railroad. Here he found a curving 10' waterfall surrounded by deep eddy pools. He was sure this had to be the place the accident must have occurred. But it was getting dark and the footing was extremely dangerous near the falls and pools, so he walked on up to Machu Picchu where he contacted his friend Jennifer and others. Jennifer speaks fluent Spanish, so Rick sent her to gather all the natives and police she could.

On August 13 Jennifer, Peter, and all expedition members went to Machu Picchu. Rick took the train that day to Cuzco because to get an effective search group in that part of Peru you need the influence of General Bergeot, who is the top man in the area. The general was extremely cooperative and called out many people. In all,

more than 50 people were searching along the river banks for any evidence of the accident. Rick stayed in Cuzco with the General and on August 14 the General received word from Machu Picchu that the raft had been found. So Rick and Debi left Cuzco on the next train. They arrived at Machu Picchu on August 15 (it's a day's journey by train between these towns).

Rick went downriver and examined the raft and the polyfoam/Ensolite pads used as life preservers which had been found below the falls. He talked with the local people regarding the water actions around the falls and was given a log demonstration of the water actions. Unfortunately the action was the type that goes deep and churns before continuing downstream. Rick's evaluation was that it would be impossible to survive such pressure for very long, and it was decided that Ron and Walt had perished in this spot.

Rick and Debi decided to return to Cuzco and notify the relatives while the search would be continued by competent natives and police officials. The U.S. Consul at Cuzco was notified and Rick talked again with the General to assure a continued search. On August 16 Rick made contact via telephone to Toledo, Ohio, and Tacoma and reported the news. In conference it was determined that the survivors should be returned home. The search for the bodies will be continued with all evidence going to the General in Cuzco and after evaluation will be sent on to the U.S. Embassy in Lima.

Rick Ridgeway arrived in Los Angeles and Debi Mayer and Kurt Haffelder arrived in Miami at approximately the same time in the late evening of August 18.

Expedition members:

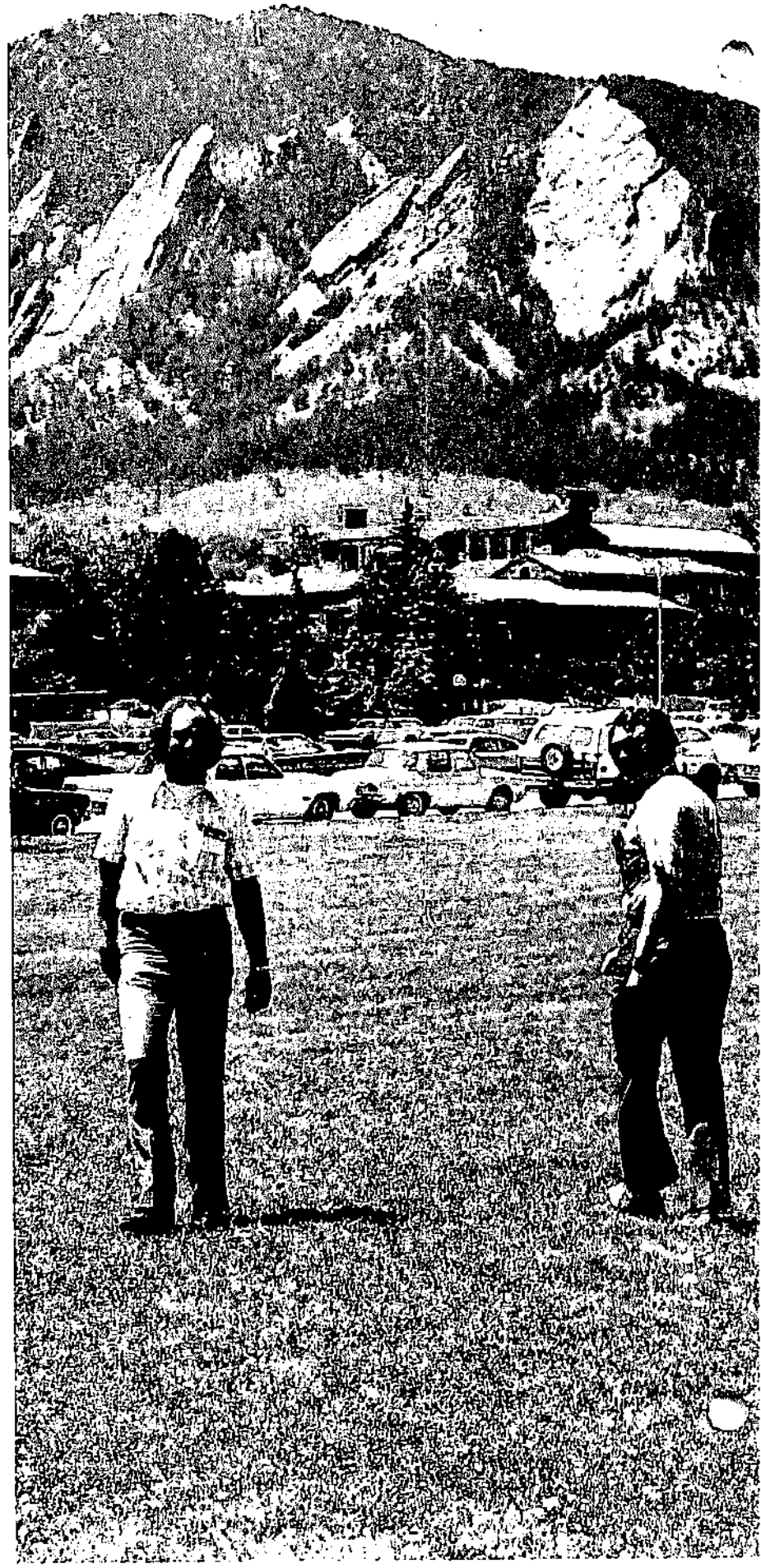
Ron Fear - 29 -	9035 Golden Given, Tacoma, Wa., 98445
Rick Ridgeway - 24	2122 Eblancward, Anaheim, Ca., 92806
Debi Mayer - 22	811 - 9th St., Boulder Colo., 80302
Kurt Haffelder - 17	3616 Maple Way, Toledo, Ohio, 43614
Walt Churchill III - 20	(419-382 9295) Toledo, Ohio
Peter Pilafian	2428 Beverly Ave., Santa Monica, Ca., 90405 (213-396 0305)

was to join the expedition at Quillabamba to photograph the river float, and is still in Peru.■

NEXT ISSUE!
Details on the heated - O_2 hypothermia treatment.

MOUNTAIN RESCUE ASSOCIATION

SPRING 1973 BUSINESS MEETING



The Mountain Rescue Association holds a business meeting twice a year, Spring and Fall. At these meetings the business activities of the association are conducted to maintain its solvency. This Spring the meeting place was the University of Colorado at Boulder. The host for this meeting was the Rocky Mountain Rescue Council.

The three day meeting, that included a cable conference and the 25 th anniversary of the Rocky Mountain Rescue Group (RMRG) was exceptional in every way under Harold Walton's direction. The people of Boulder and the hosts were hospitable beyond belief. The weather was magnificient with the clearest of blue skies mixed with a few clouds each afternoon. Temperatures were in the 70 - 80 degree range.

The meeting agenda in summary follows:

Friday, 22 June 1973. Cable conference at U.C. engineering building and a steak fry in the evening.

Saturday, 23 June. MRA business meeting at the U.C. conference center and a dinner banquet that evening at the Harvestor Hotel.

Sunday, 24 June. Cable rescue demostration in Sunset Canyon.

It should be mentioned that a paramedic conference was also conducted Friday in concurrence with the cable conference but this reporter was unable to attend. The cable conference on Friday was highlighted by A. Lewis Dahm of RMRG who gave an excellent presentation on portable power hydraulic winches. A person cannot but be overwhelmed by Lewis' expertise in this infant field. Other units which had their cable equipment at the conference were Seattle Mountain Rescue, Alpine Mountain Rescue, University of Colorado, and Central Arizona Sheriff's SAR. John Simac of Tacoma, Washington and his recent design were dearly missed at the no standing room conference. It is interesting that both Dahm and Simac are pursuing the hydraulic system as the practical solution to the portable power winch rescue problem.

The steak fry that evening was delicious and two kegs of beer were quickly

MRA President Paul Williams addresses Spring 1973 business meeting audience.

Some attendees: Chuck Demarest, Doug Black, George Barnes, and Dave Moore.

Ron Schrumpf introduces Alaska Rescue Team.

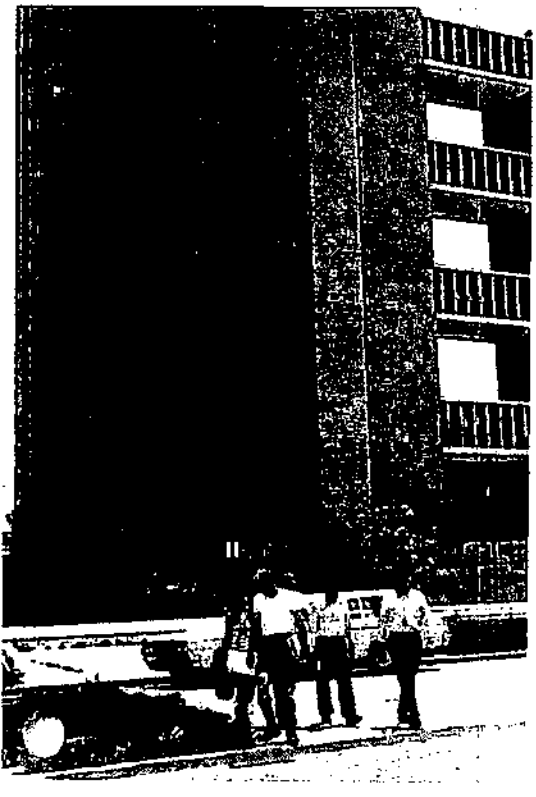
consumed. With the sunset of Colorado proportions, the picnickers retired to Lee and Linda Erb's house for home-made ice cream and popcorn. The Erbs were host and hostess to several out-of-state attendees for the whole conference. Their thoughtfulness and generosity made for a great weekend and trip.

The MRA business meeting Saturday saw the associate membership and dues increase bylaws change. The MRA also entertained the new membership of three units from Anchorage, Alaska, San Dimas and Inyo-Sierra, California. A resolution was also passed by the MRA on the jurisdiction of SAR in Los Angeles, California, by recommending that SAR responsibility be transfered to the Los Angeles County Fire Department.

An election was held Saturday afternoon with the re-election of Paul Williams, President and Minor Harkness, Vice-Pres. Paul is from Seattle, Washington and Minor is from the Los Angeles, California area. Ralph Zundel of Idaho was elected Secretary-Treasurer. John Wehbring of San Diego, California was especially noted by President Williams for his two terms of service as past Secretary-Treasurer.

Norman Walton reminising about RMRG.

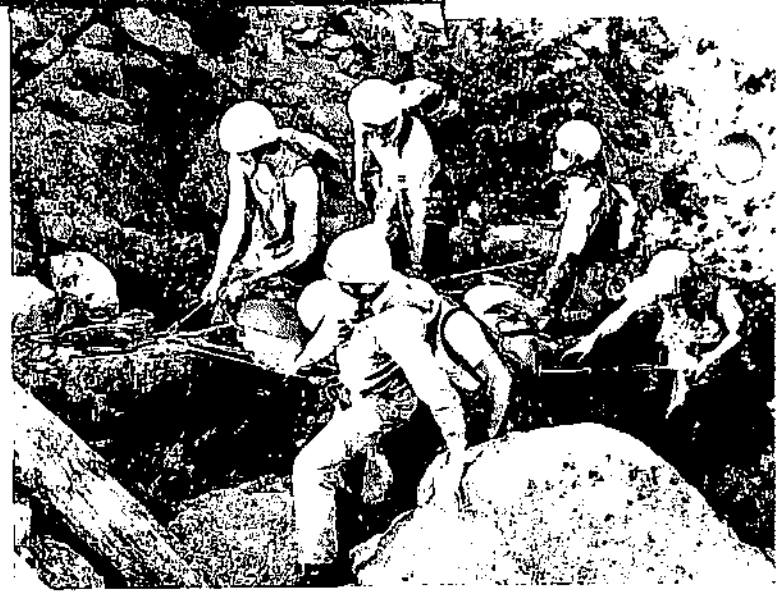
George Barnes got to the meeting the hard way.



Lunch break on campus.

Steak fry discussions.

Spectators watch a simulated evacuation in the portable power winch demonstration.



The banquet Saturday nite was a great success in celebrating the 25 th anniversary of RMRG and the impromptu installation of the MRA officers by Vance Yost, the MRA Executive Secretary. Professor Norman Walton added another dimension to the banquet by reminising about the origin of RMRG and its 25 years of public service. Bill May and his new book, Mountain Search and Rescue Techniques, were honored by his teammates and guests at the banquet.

Door prizes were presented with much fun and expectation. Many fine gifts were taken back to all corners of the country. After the banquet, Chuck Demarest and his pretty wife hosted a party where unfortunately Chuck and Minor Harkness composed a new RMRG song. Perhaps it was the music that prompted Marilyn Black to organize the university building rappelling team. The last time anyone saw George Barnes he was still looking for a way to get his VW back to San Francisco, and Ron Schrumpf was trying to find viewers for his Alaska slide show.

The next day, Sunday, was spent at the cable evacuation demonstration in Sunset Canyon. Many different systems were successfully used, including mechanical, hydraulic and manual. The team work and thought that has gone into these manual and power portable winch systems is very impressive. Over the years of use for these systems, many lives should be saved.

All in all, the demonstrations and conferences added a pleasant perspective to the MRA business meeting for Spring 1973.■

FT. JACKSON SEARCH & RESCUE SQUAD

by PFC Larry Strawther. U.S. Army photographs by SP-4 Ken McBride.

MEMBERS OF THE FORT JACKSON SAR SQUAD LOAD ONTO A HELICOPTER PILOTED BY MEMBERS OF THE 498 TH MEDEVAC UNIT AT COLUMBIA METRO-POLITAN AIRPORT. THE COPTERS TRANSPORTED THE SAR SQUAD MEMBERS TO AND FROM THE SEARCH AREA AND ALSO EVACUATED THE "VICTIMS" DURING A SIMULATED PRACTICAL EXERCISE NEAR FORT JACKSON'S WESTON POND AREA.

On their business card is the caption "Volunteers trained in mountain rescue - wilderness search - first aid." Below that is the phrase "on call 24 hours a day." The name of the organization is the Ft. Jackson Search and Rescue Squad, a group of 22 teenagers organized in November 1972 to be available on a 24-hour basis to search for and rescue people lost or stranded in South Carolina.

"All of our members have received special training in wilderness rescue techniques," stated Staff Sergeant Tom Hair, advisor to the group (the new group advisor is Gary Martin). "We're also trained in first aid, radio communications, map reading, cold weather camping and back pack camping."

The squad was organized at the behest of Moncrief Army Hospital officals who have assisted in training the unit. Along with their initial training, rescue squad members have attended seminars and by August of 1973, some members will be instructor-qualified in radio communications, map reading, back-packing and compass reading. And by October of 1973, at least three members should be certified by the American Red Cross as first aid instructors. All the members live on or near Ft. Jackson.

On Saturday, March 24, the group undertook a day-long simulated search and rescue mission in the Weston Pond area of Ft. Jackson. At 6 a.m., S. Sgt. Hair phoned two squad members and using a geometrical progression (each person phoning two other people), the rest of the group was notified and had assembled within an hour at the helipad near the Food and Beverage Store on post.

"Our objective is to assemble everybody within an hour so we made pretty good time," noted S. Sgt. Hair. A helicopter from the MEDEVAC unit at Columbia Metropolitan Airport was waiting for the group at the helipad and transported them six at a time to the Weston Pond area where three members of the squad were waiting at unknown locations posing as tornado victims. The group quickly organized and combed the area with members spaced at approximately 10-yard intervals. Once the victims were found, they were treated for first aid and evacuated via helicopter.

According to S. Sgt. Hair, the mission was to have been the first practical exercise for the squad, but an actual situation on March 7, 1973 preceded it. Two children, ages 6 and 10, were lost near Alpine Road. The unit was called into action and assisted in finding the children "who were headed for grandma's in Arkansas." Within five hours, the squad had assembled, conducted a search of a two-mile area, and reassembled and headed home.

Other planned events include an exercise in the Santee Swamp later and many entertainment activities.

MOUNTAIN SEARCH FOR THE LOST VICTIM

CHAPTER 2

PART ONE

In the interest of advancing the state-of-the-art, MOUNTAIN SEARCH FOR THE LOST VICTIM is being serialized in SAR magazine. One chapter each issue is presented here for your consideration. It is appreciated that most readers only scan an article, but I ask that all readers study this text for its appropriateness to your situation and activities. Your comments will be appreciated because I wrote the book to be universally applicable to all search situations. However, because my experience has been restricted to only one area of the country, there is some question of the reality of this goal. I am requesting help in this regard.

Copies of this book are available from the author, at $ 3.95,

Dennis E. Kelley
P.O. Box 153
Montrose, California 91020
Phone (213) 248-3057

MOUNTAIN SEARCH FOR THE LOST VICTIM

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CHAPTER II: THE VICTIM

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CHAPTER 2
THE VICTIM

This chapter discusses some of the bases for predicting victim behavior and performance. While the information is drawn from a number of sources, most of the experience offered is based on search and rescue in Southern California. It is hoped that this chapter will encourage you to collect similar data for your region as prescribed in the Contingency Analysis chapter of this book. Based upon more than 300 case histories*, the following profile is typical of lost persons in Southern California.

Our lost victim is male, 14 years of age, and was last seen or heard from at approximately 9:00 a.m. Sunday morning during the month of December. Our victim will be missing for nearly 12 hours before someone will request help from the authorities. A little more than two Hours later our team will arrive at the search area and have searchers in the field. Three hours later, the significant clue will be found and, at approximately 3:00 a.m., the victim will be found. The total time that the victim was missing was over 18 hours. The apparent reason the victim became lost was that he became disoriented. More often than not, the real reason can be traced to poor adult judgement or supervision. Many children are taken into the wilderness by their parents and then become lost.

2.1 VICTIM SITUATION AND REASON

To assist searchers in predicting victim behavior, it is appropriate to study the missing victim and his situations. In this section we have a breakdown of victim situations as well as the primary and secondary reasons for each situation. This division into primary and secondary reasons can help to give a better insight into victim behavior. Figure 2-1 illustrates victim situations by numbers and percentages.

Interestingly, both lost and stranded categories, which are similar, account for more than 60% of the cases. Note, however, that there is one significant difference between the two: victim mobility versus immobility. Also interesting is the fact that there is a 95.9% chance of finding the victim alive. This should encourage worried parents calling for help.

Also included in this section are sums of primary and secondary causal reasons upon which our victim profile is based.

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* See Appendix II.

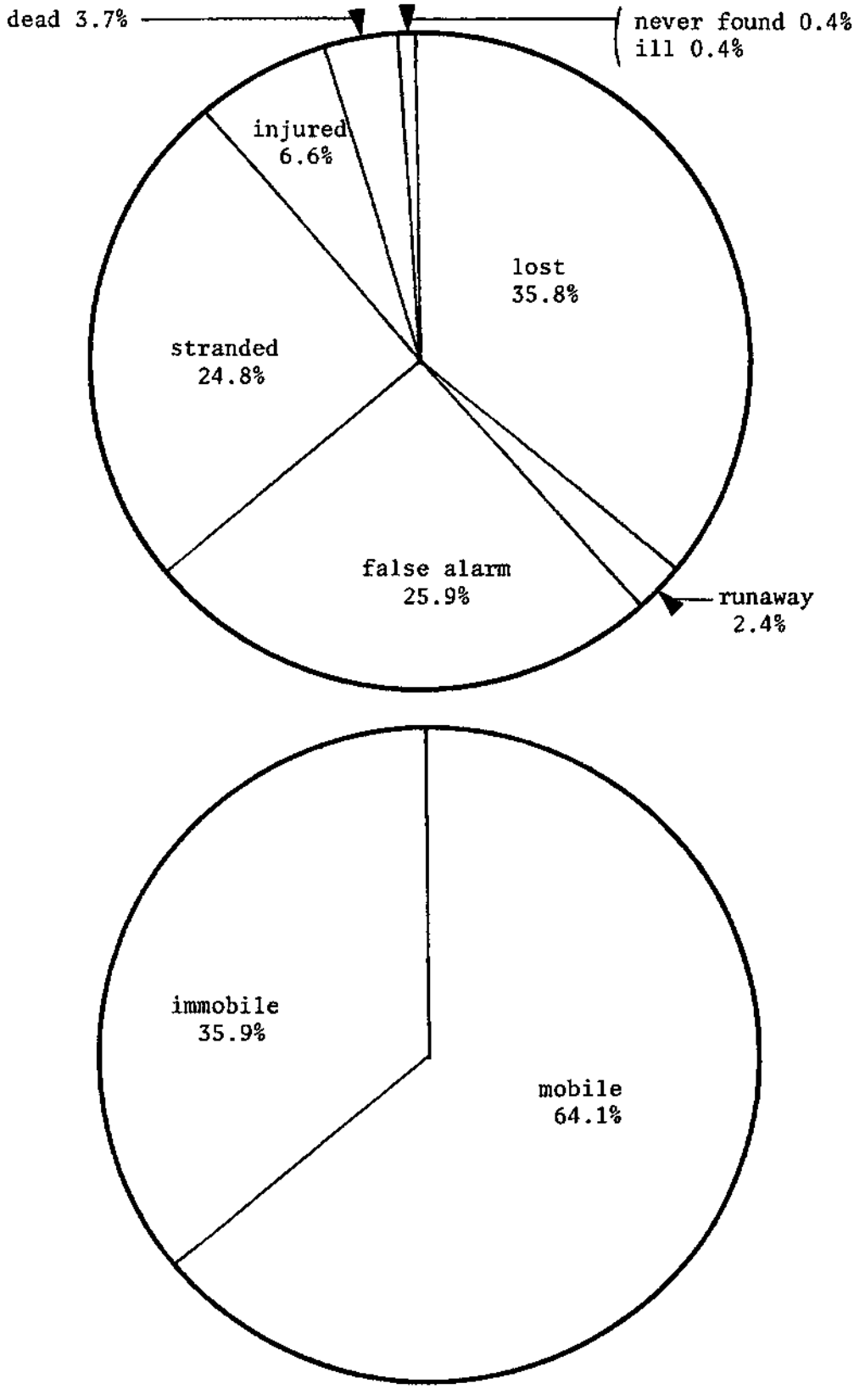


Figure 2-1: Victim Situation Based Upon 380 Case Histories
(See Appendix II)

2.1.1 VICTIM MISSING AND THEN FOUND

Statistically, there is a 25.9% chance that, before the formal search* can be started, the victim will in fact not be really missing. This substantiates the importance of establishing the need for a search as accurately as possible, and immediately initiating a search once the need is definitely established.

There is a 0.4% chance of not finding the victim, dead or alive, at all. This may sound surprising, yet a number of both children and adults disappear without a trace, and are still in police files. Kidnapping and foul play are possibilities, but no one can say for certain.

A sum of false-alarm primary and secondary reasons together follows in Table 2-I. Note that safety checks and the victim extricating himself monopolize the reasons. A safety check is a search for a potential missing victim, as for example is associated with a car-over looking for additional passengers.

Table 2-I: Reasons for False Alarms

Reason	%
Safety check	31.1
Got self out	25.5
Erroneous request for help	8.7
Underestimated distance	8.1
Abandoned vehicle	6.8
Erroneous observation	6.8
Emotionally upset	4.4
Darkness	3.7
Riderless horse	1.2
Bloody cloths	.6
Other	.6

* Here the formal search is defined as the arrival at the search scene of professional search teams.

2.1.2 DEAD

There is a 3.7% chance of finding the victim dead. This fact is unfortunate and hopefully a better break can be given the victim with proper search techniques and procedures developed here.

There are many factors that can contribute to the death of the victim lost in a wilderness. These conditions can be sufficiently generalized so that searchers can predict the time frame for survival; that is, the probable average period of time for finding and rescuing the victim before his death.

Within this time frame for survival, the searcher must apply all required resources to assure a reasonable chance of success.

The time of predicted victim death is an extremely complicated problem defying any kind of simple quantization. However, an attempt at collecting data from case histories to permit prediction follows later in the chapter. The reasons for victim death are broken down in Table 2-II. Note the small percentage of deaths that could be saved at all by improved search and rescue techniques.

Table 2-II: Reasons for Search Deaths

Reason	%
Vehicle off the cliff	26.7
Fall	14.3
Suicide	14.3
Airplane crash	14.3
Exposure	6.1
Poor parental supervision	6.1
Drown	6.1
Flood	6.1
Shot self	6.1

2.1.3 SICK

The definition of sickness is suffering from disease or illness, unwell, ill. There is 0.4% chance that the victim is in fact sick and requires medical attention. Sickness can be further categorized as either physical or emotional sickness.

Where the probability of physical sickness can be determined from medical data, then the degree of emergency treatment likely to be necessary can be predicted. Also, the urgency for finding the victim may be determined since this can affect the time frame for survival.

Emotional sickness is one of the most difficult victim categories for the searcher to deal with. This difficulty arises from the unpredictable nature and abnormal motivation of the emotionally or mentally ill person. The summer of '71 was a memorable example of illusive, retarded, lost children with nearly a half-dozen lost simultaneously all across the nation.

2.1.4 INJURY

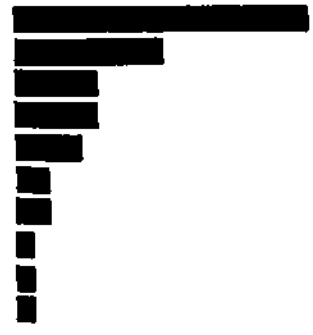
There is a 6.6% chance that the victim has had some kind of nonfatal accident, where an accident is defined as an occurence or mishap usually resulting in physical injury. A medical history of the victim and a knowledge of the search are helpful in predicting the possibility of this situation. The most common causes of accidents are given in Table 2-III.

It should be mentioned that many of these accidents, if unattended, can be fatal in the wilderness. However, quick response by search and rescue teams can prevent most accidents from becoming fatal.

It should be noted that the poor adult judgement and supervision reasons denote the involvement of juveniles. Poor adult judgement means that a parent or adult leader made a decision which jeopardized a child's safety and welfare. Poor adult supervision reflects the lack of adult guidance resulted in a situation jeopardizing a child's safety and welfare. In either case adult responsibility is associated with the child's difficulty.

Table 2-III: Reasons for Injuries

Reason	%
Exposure	35.7
Fall	17.8
Flood	11.1
Poor adult judgement	11.1
Poor adult supervision	8.9
Snow	4.4
Darkness	4.4
Emotionally upset	2.2
Rockfall	2.2
Fatigue	2.2



2.1.5 STRANDED

A person stranded is defined as being one in a helpless position. The chances of the victim becoming stranded are 24.8%. The distinction between a stranded and a mobile victim is important because it affects the selection of search procedures.

By "stranded" we mean the common causes of victim noninjury helplessness; that is, environmental situations requiring that the victim be rescued.

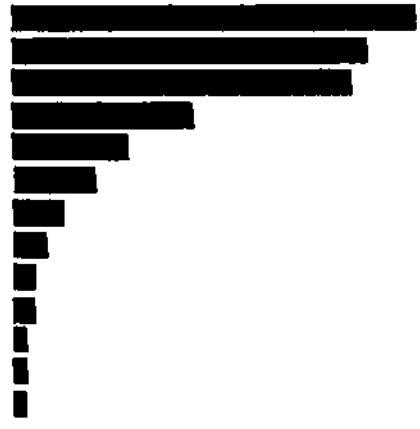
By "mobile" we mean the period of time the victim is mobile before failing and becoming immobile from all causes.

I have encountered victims who were stranded for trivial as well as gravely serious reasons. Several victims including several barefooted hikers, became stranded because they, in fact, simply gave

up. A growing number of people have become stranded while on drugs, although this is difficult to document as there is seldom proof. Some of the reasons why people become stranded are listed on Table 2-IV.

Table 2-IV: Reasons for Being Stranded

Reason	%
Darkness	24.5
Poor adult judgement	22.2
Snow	21.5
Underestimated distance	11.4
Steep terrain	6.6
Mud slide	4.8
Vehicle problem	3.0
Disoriented	1.8
Hunting	1.2
Flood	1.2
Avalanche	.6
Drugs	.6
Fog	.6



2.1.6 RUNAWAY

"Runaway" includes all those who are unwilling to be found and resist detection. The runaway child, for example, can be an illusive quarry. This includes delinquent children, senile adults, and the emotionally ill, and accounts for 2.4% of all missing persons. Emotional disturbance is, of course, a factor where the majority of runaways are concerned.

2.1.7 LOST

There is a 35.8% chance that the victim is simply lost. Considerations of the lost victim are:

- Causes
- Motivation

The reasons a victim becomes lost are many. The purpose of reviewing them here is to establish the environment generally encountered in the field (see Table 2-V).

The motivation of the victim when lost is highly controversial. There is a belief that the lost victim tends to become semiconscious and operate in semihallucinary mode. Many rescued victims relate their experience when lost as clouded with visions, hallucinations and dreams. These hallucinations involve visits by relatives and friends to the victim even during daytime. Visions of grand feasts and meals are also common. Because of this apparent state of semiconsciousness, it is believed that the victim becomes very basic in his needs and motivations.

The lost victim will be active and mobile if he can. Note that this is contrary to most instructions for the lost taught to children and adults. The direction of travel by the lost victim is covered later.

Table 2-V: Reasons for Becoming Lost

Reason	%
Disoriented	35.8
Poor adult judgement	19.9
Poor adult supervision	19.7
Darkness	11.0
Hunting	5.5
Underestimated distance	2.2
Misguided by bypassers	1.6
Fog	1.6
Snow	1.1
Fishing	1.1
Emotionally upset	.5

2.1.8 VICTIMS PER SEARCH AND DATE/TIME LOST*

The three tables that follow are intended to support the victim profile. These tables are:

Victims per search (Table 2-VI)
Month and day lost or last seen (Table 2-VII)
Hour of day lost or last seen (Table 2-VIII)

The interesting thing about the first chart is the number of couples that were missing. It must be much more reassuring that way!

The distribution of victims by date and time corresponds to the regional semitropical Southern California weather and the predominance of missing children. The summer months when school is out (June, July, August, and September) is inactive because the front

* See Appendix II.

country is usually closed due to fire hazard. In December, however, there is a two-week school vacation and the front country is open to the public, search activity increases.

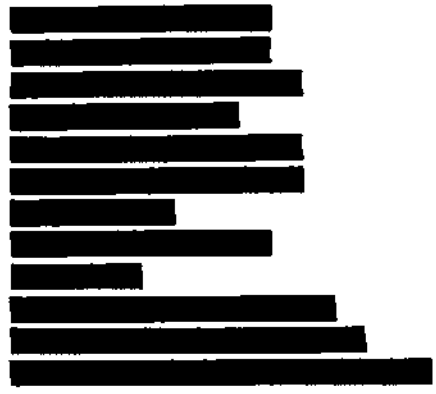
The fact that victims are frequently last seen when they leave home accounts for the early time of day when lost or last seen. The surprise is the number of victims lost or last seen on weekdays, i.e., 27%, not including Friday.

Table 2-VI: Victims per Search

Victims in lost party	%
one	51.0
two	27.3
three	7.3
four	3.0
five	4.8
six	1.8
seven	-
eight	1.2
nine	-
ten	-
eleven	1.2
twelve	-
thirteen	-
fourteen	.6
fifteen	.6
sixteen	-
seventeen	-
eighteen	-
nineteen	-
twenty	-
twenty-one	-
twenty-two	.6
twenty-three	.6

Table 2-VII: Month Lost or Last Seen

	Month	%
1	January	7.8
2	February	7.8
3	March	9.0
4	April	7.2
5	May	9.0
6	June	9.0
7	July	4.8
8	August	7.8
9	September	4.2
10	October	10.1
11	November	10.7
12	December	12.6



Day Lost or Last Seen

Day	%
Monday	5.9
Tuesday	5.4
Wednesday	5.9
Thursday	9.6
Friday	16.8
Saturday	26.4
Sunday	30.0

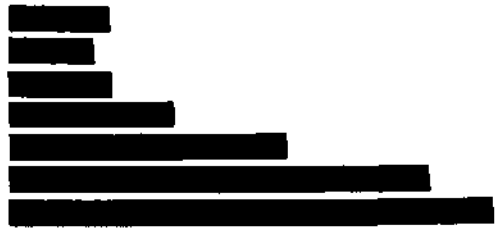
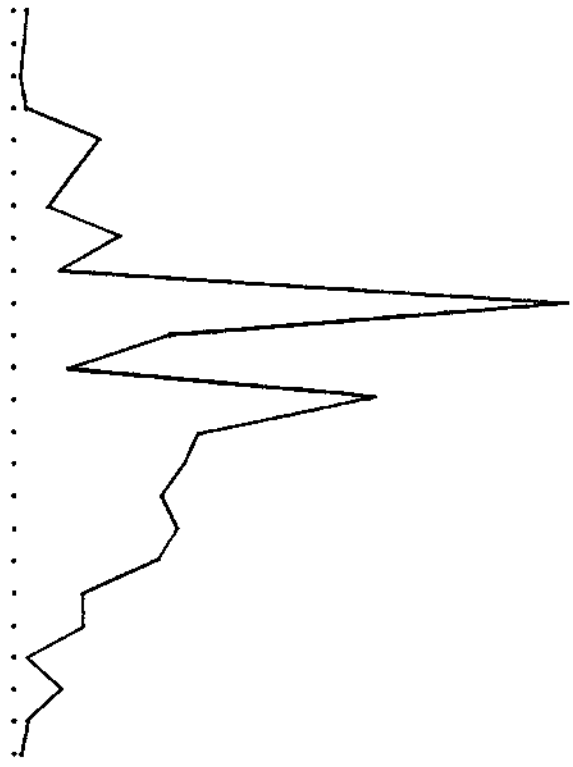


Table 2-VIII: Time Lost or Last Seen

Time (24-hour clock)		%
0000	midnite	.6
0100		-
0200		.3
0300		.6
0400		3.6
0500		-
0600		1.6
0700		4.5
0800		2.0
0900		22.9
1000		5.5
1100		2.3
1200	noon	14.9
1300		7.7
1400		7.1
1500		5.2
1600		5.8
1700		6.1
1800		2.9
1900		2.9
2000		.6
2100		2.0
2200		.6
2300		.3



PART TWO OF CHAPTER TWO NEXT ISSUE.■

NEWS AND RUMORS

Los Angeles Times Page 2, Part 1

THURSDAY, AUGUST 30, 1973

Rescuer Founders but Not in Ship of State

—The Carl Millers, a young New Jersey couple struggling with a capsized sailboat in the rough waters of Lake Michigan off Traverse City, weren't sure they were much better off when the stranger who came out to rescue them tipped over his own boat as he took them to shore. "Don't worry, I'm a good sailor," he assured them. After they righted the rescue vessel and docked, the stranger, Gov. **William G. Milliken,** who captains the ship of state of Michigan, fed them milk and cookies and dried them off at his summer home before sending them on their way in a state police car.

Ab Taylor, U.S. Border Patrol Agent in Charge and tracking expert extraordinary, is now spreading the word on this life saving skill nationally.

★ Los Angeles Times Page 2, Part I

MONDAY, AUGUST 20, 1973

Rescue crews pushed more than half way through a smoke-and debris-filled tunnel to try to reach two men trapped deep below the earth by a cave-in at a copper mine near Casa Grande, Ariz. A hundred men were working in 90-minute shifts to reach the two miners, trapped since Friday at the Hecla Mining Co.'s Lakeshore mine. A spokesman said the rescuers had advanced 750 feet into the horizontal tunnel. The men were believed trapped in a chamber 14 feet wide, 14 feet high and 500 feet long. Air and water were being pumped in to them through a 2-inch pipe.

5 Los Angeles Times ★
Part II—Mon., Sept. 10, 1973

Woman With Broken Leg Saves Mate

A Fullerton woman with a broken leg crawled through 1½ miles of rugged mountain terrain in Riverside County to summon aid for her husband after their plane crashed.

Authorities were unaware of the crash for more than nine hours Saturday until Brenda Dickinson, 25, inched her way over three mountain ridges to the Olive Dell nudist camp three miles south of Loma Linda.

Searchers located the crash shortly afterward and found her husband, Wayne, 35, about 100 yards from the wreckage.

He also suffered a leg fracture and head injuries. Both he and his wife were in serious but satisfactory condition Sunday at Loma Linda University.

The Dickinsons were on a flight from Palm Springs to Fullerton when they crashed about 8 a.m. Saturday in Reche Canyon three miles southof Loma Linda.

From her hospital bed, Mrs. Dickinson said that when she recovered from the initial shock of the crash, she realized she had to get help for her injured husband despite her own leg injuries.

She tried to walk, but then began her tedious crawl, reaching the nudist camp about 5 p.m.

Part II—Wed., Aug. 8, 1973 Los Angeles Times ★

Rescue Teams Lose Plea for Transfer

Supervisors' Vote Keeps Them in Sheriff's Dept.

Dissident Los Angeles County volunteer mountain rescue team members Tuesday lost their bid to be transferred from the jurisdiction of the sheriff.

Supervisor James A. Hayes said that within the month he hoped to hold a meeting between the sheriff and unhappy volunteer mountaineers in a new effort to end the dispute.

In voting 3 to 2 to keep the mountain rescue teams under the sheriff, the supervisors endorsed a proposal by Supervisor Pete Schabarum that there be no requirements for peace officer status and training for the volunteers unless a majority of the membership of the rescue team asks for it.

Mountain rescue volunteers have complained that the Sheriff's Department had attempted to force them to become reserve deputies. Sheriff's spokesmen insist that was not true.

Supervisors Baxter Ward and Kenneth Hahn opposed the decision to keep the volunteer mountain units with the Sheriff's Department instead of transferring them to the jurisdiction of the county forester and fire warden.

Ward said it would cost the county "somewhere in excess of $500,000" to hire replacements for the 77 volunteer mountaineers who have threatened to quit if the rescue teams remain with the Sheriff's Department.

A Special SAR Session of the Systems Safety Society International Symposium was held the night of 17 July 1973 at the Brown Palace Hotel in Denver, Colorado. Mr. Stan G. Bush, President of Arapahoe Rescue Patrol and Director of Emergency Planning Dept., City of Littleton, Colorado, was the session chairman and did an outstanding job putting the program together.

The new posture of the Los Angeles County Sheriff's Dept. Emergency Services Detail, a paid rescue team, is that of a wilderness paramedic service. Henceforth, their role in SAR will be that of the principal emergency medical victim care at all L.A. County SAR missions. This paramedic capability will be with one or two men generally supporting the primary response team at the scene. This concept holds great promise in expanding the emergency care provided victims in L.A. County as well as relieving the tension of direct competition between paid and volunteer SAR teams. On missions to date already under this new concept, the cooperation and teamwork has been excellent with the victim recieving a high standard of emergency care. Incidently, the forgotten heros of L.A. County SAR are the fantastic pilots of the Los Angeles County Sheriff's Dept. Aero Bureau like Adams, MaComas, Pierce and others. ED.

2 Part II—Thurs., Sept. 27, 1973 Los Angeles Times

Rescue Team Rejoins Sheriff's Department

The Altadena Mountain Rescue Squad reaffiliated with the Los Angeles Sheriff's Department Wednesday.

"Philosophical differences have now been resolved," said Wayne Jack, squad president. "Our prime concern is in rescue work and we won't be involved in law enforcement. We will serve as noncompensated volunteers."

The 17 search and rescue team members had resigned in June, complaining that Sheriff Peter J. Pitchess insisted they be available for emergency duties assigned to reserve deputies.

Pitchess later said, "It has never been the policy of the department to utilize mountain rescue teams in a general law enforcement capacity . . . "

Nevertheless, the squad asked the Board of Supervisors to transfer jurisdiction of all county rescue teams to the county Fire Department. The board refused.

Several members of three other squads with the Sheriff's Department —covering the Montrose, Sylmar and Sam Dimas areas—had expressed support for the Altadena group, but had not resigned.

A uniform map system ruler is available from BSA Explorers SAR for 50¢.
P.O. Box 11322, Tacoma, WA 98411.

NEWS AND RUMORS (continued)

Colorado Governor Love signed a new Disaster Emergency Act of 1973 for Colorado.

Blair Nilsson does a great SAR newsletter.

C-4 — THE STAR-NEWS — Thursday, March 15, 1973

Want to take on this job?

Washing windows on a five-story building isn't a job for just anybody. So. Bay General Hospital in Chula Vista calls for help from the San Diego Mountain Rescue team, led by Vic Armfield. Janet Helfrich (left) sits in a sling and holds onto a rope as she is lowered into position for work. On the job (below, left to right) are Bill Bean, Miss Helfrich and Will Tap. 'It seems a natural solution to have the rescue team do the window washing, said Charles Gerold, hospital administrator. Our windows emerge spotless, and the rescue group earns funds to support its activities.' And who else but a group of mountain folks would really want to hang alongside a five-story building all day long.

photo by Rick W. Sr

The Council for Survival Education board meeting was held Sept. 15, 1973 at Wenatchee, Washington. President - Tim Kneeland, Vice President - Bob Whitmore, and Sec/Treasurer - Rick LaValla.

Sgt. Jim Miller of ESD suggested that if heated O_2 is a good treatment for hypothermia victims as is rumored, then mouth-to-mouth resusitation should also be beneficial if applicable.

PACIFIC NORTHWEST SEARCH & RESCUE CONFERENCE

May 18, 1973 saw 1,000 people gather at the Oregon National Guard facility, Camp Rilea, for the 8th Annual Pacific Northwest Search & Rescue Conference. Camp Rilea is located on the Oregon Coast south of Astoria.

The three day conference was sponsored jointly by the Oregon Emergency Services Division and the Oregon State Sheriffs' Association. Sheriff Carl Bondietti chaired the planning committee and also hosted the conference. Carl is sheriff of Clatsop County, Oregon with offices at Astoria. Major support for the conference came from the Oregon National Guard who provided the facility, communications, vehicles, demonstrations, personnel and helicopters.

Vance Yost, Executive Secretary of the Mountain Rescue Association is moving to the mountains near Idyllwild, California to become managing director of a resort and youth camp there.

Glendale News-Press, August 11, 1973 3-A

Mystery boy search continues

ALBUQUERQUE, N.M. (UPI) — Volunteers in New Mexico and Arizona launch a final search today for a small boy who has been frantically crying for help over radio bands the last four days.

Search coordinators, conceding the case may be a "well-planned hoax," said the search for the mystery boy will end Sunday —"win, lose or draw."

"There is still enough to it that we will continue searching this weekend," said Civil Air Patrol search coordinator Richard Damerow.

The boy, identified only by a first name of Larry, began transmiting his distress calls late Tuesday. A woman in California monitored his initial transmission, and since then citizens band radios from California to Mississippi have heard the boy crying.

Seventeen CAP planes and volunteer searchers have covered hundreds of miles of mountainous terrain in central New Mexico this week without finding a trace of the boy.

The boy has told searchers he is in an overturned pickup truck and is unable to get out. In early transmissions, the boy told searchers his father was dead, but a Phoenix, Ariz,. man who said he talked to the boy Friday quoted the youth as saying his father was injured, but not seriously.

This search was finally terminated after the boy finally radioed that it was all a terrible hoax. This had to be the most bazaar SAR incident of the year. ED.

4-A Glendale News-Press, Thursday, July 5, 1973

Couple found safe 117 days later

LONDON (AP) — Maurice Bailey and his wife Marilyn sold everything they owned, bought a 31-foot sloop and left for New Zealand and a new life.

But their great adventure ended with them clinging to a tiny raft in the Pacific for 117 days after the boat capsized and sank in a storm off Ecuador.

The couple were picked up by a South Korean fishing boat Wednesday after drifting nearly 1,300 miles from the spot where their sloop, the Aurelyn, went down March 4.

The Baileys were reported weak and exhausted after their ordeal and were being given medical treatment aboard the Korean vessel, the Wolmi. They were not expected to touch dry land again until the Wolmi docks sometime next month at Pusan.

Friends in England said Bailey, a strapping 42-year-old sixfooter, sold their home in the Midlands city of Derby four years ago to buy the $17,500 sloop. He and his 32-year-old blonde wife lived aboard the white-hulled boat for three years, getting it ready for the voyage. Meanwhile, he worked as a printer and she as a secretary in a government office.

The longest recorded lone survival on a raft is 133 days by a British seaman whose ship was torpedoed by a German submarine in the Atlantic in 1942.

Philip M. Morse, retired MIT professor and Operations Research pioneer is completing a chapter on the mathematical theory of search for an upcoming handbook on OR. ■

LETTERS TO THE EDITOR

... on the National Search & Rescue Manual ...

As you may know, the National SAR School is a joint endeavor of the U.S. Coast Guard and the U.S. Air Force ARRS, whose mission is to present all aspects of the broad spectrum of Search and Rescue, in order to provide uniform training in the equipment, procedures, and techniques employed in the saving of lives and property. Our regular course students consist mainly of U.S. Coast Guard, U.S. Air Force ARRS, and foreign military and Air Traffic Control personnel. Additionally, we hold annual special courses for the USCG Auxiliary and Civil Air Patrol and for State SAR and Civil Defense Administrators. We have also opened our State SAR Course to representatives of volunteer organizations when space is available. Some of our graduates include Hal Foss, Blair Nilsson, Rick Lavalla, and Vance Yost, to name but a few. In fact, Vance introduced us to your excellent book MOUNTAIN SEARCH FOR THE LOST VICTIM. We are in the process of including much of your information on strategy in our inland search planning curriculum.

We appreciated your review of the current National Search and Rescue Manual, our basic text. It must be borne in mind that the National SAR Manual, in intent and scope, is an operational document for the guidance of Federal SAR forces, Rescue Coordination Center personnel and Federal SAR Mission Coordinators in particular. However, much of the information is applicable to SAR planners at State, local, and private organizational levels.

Section 6.f. (7) of the National SAR Plan (1969) states, in part, that "the Federal Government holds no mandate to compel state,local, or private agencies to conform to a national search and rescue plan...." As far as "inland ground searchers"are concerned, any technical guidance in a national publication would have to include procedures for all of the diverse geographical areas of the U.S. Consequently, the National SAR Manual must be more philosophical than technical in this area.

Federal Inland SAR Regional Coordinators must then rely heavily on the expertise and cooperation of local public and private SAR resources. Sections 6.f (1) and (2) of the NSP state: (1) The Regional SAR Coordinator will encourage the development and maintenance of proficiency in SAR techniques and procedures by participating agencies and will assist therein as appropriate and practical; and (2) The Regional SAR Coordinator will encourage the continued development of state and local SAR facilities as appropriate. The cooperation needed to further these concepts must be sought through liaison and agreement. We believe that any SAR dedicated organization should seek recognition and guidance from the appropriate Federal SAR Coordinator to resolve any questions of relationship or problems that may exist. Perhaps this will narrow the "chasm" which you believe to exist.

The revised National SAR Manual is expected to be distributed on 1 September 1973 or shortly thereafter. It contains a number of new

concepts, as well as expanded information on land search operations and the Rescue stage of SAR planning.

C. F. MEREDITH
Commander
U.S. Coast Guard
Officer In Charge
National SAR School

... on Search and Resoue philosophy ...

I would like to suggest you emphasize some areas of what I believe are the fundamentals of search and rescue regardless of the level of government involved or whether it is land, sea or air.

These are:

(1) First Aid. I believe that no one can seriously consider himself a bonafide SAR member if he doesn't have the capability for treating a person with the equivalent of Advanced First Aid and hypothermia and hyper thermia. With the EMT and other such training courses available no one can be excused from this.

(2) Communications. With the great variety of governmental and volunteer units involved it is imperative that a common coordinating frequency be established. As you know 155.160 MHz is being used in this manner in Washington, Utah, Colorado and perhaps a few other states. It has just scratched the surface but it is the only way to go. MAST in Washington State has it in a limited number

(3) Uniform Map System. We use aeronautical charts, forest service maps, 15' and 7 1/2' grids, highway maps and scores of others. It is impossible for all of these users to talk sensibly to each other without a common system. The grid system as used by the Air Force, Civil Air Patrol, Washington and some other States could be a standard which makes sense to every one. The USGS is coming out with a torrent of 15' and 7 1/2 quads which form a natural base with which to follow a Uniform Map System based on a standard grid. This can be adopted easily anyplace in the U.S.

(4) Survival Education. Every young person should have the opportunity to take a course of instruction (including adequate time in the field) in survival from the natural and manmade dangers he will have to face throughout his life. Most youth today do not have the opportunities of their grandparents to contend with nature and they are poorer because of it. It should be mandatory for everyone to receive such instruction if we are not to lose some of the basic fiber of life.

Almost everything else in SAR fits around this. The technical details can be made or adapted to fit the specific problem, but they are not basic in a conceptual sense.

You asked for comments on the first chapter of your book. On 1.2, where did you obtain the $10 million annual figure? Although I have little to change this I believe it is much too conservative. I estimate the cost in Washington alone as half a million.

H. A. Foss
Assistant to the Director
for Search and Rescue

**DEPARTMENT
OF EMERGENCY
SERVICES**

STATE OF WASHINGTON

... impressions of German Shepherds....

In the past, dogs used in SAR work did not need to meet a "standard" of proficiency before they were committed to a SAR mission. They were drawn from a variety of sources, some highly trained by individual handlers, others were poorly trained. Agencies, and others like Mr. Wartes, were unable to recognize the difference. Furthermore, dogs were dogs. There were generalizations. A poor performance of a dog became an example, and all dogs were degraded. Bloodhounds are traditional in tracking, thus all dogs are expected to track. As can be seen, Mr. Wartes' opinion may well be based on poor examples. And in the case of poor examples, yes, they would not be dependable in performance.

In the fall of 1971, the American Rescue Dog Association (ARDA) was formed. One of the purposes of ARDA was to provide a high standard for dogs, handlers, and units. All dogs, to be ARDA qualified, must pass certain national proficiency tests. Furthermore, handlers must not only pass a written examination, but must demonstrate their abilities to the satisfaction of ARDA judges. Rescue Dog units must also reach a satisfactory level of proficiency before they are accepted as an ARDA unit. This is a national system, and is mainly oriented to the German Shepherds used in SAR work. Agencies, and individuals, when working with ARDA qualified Search and Rescue Dog units, can feel confident that the dogs and handlers are of the highest caliber.

W. Syrotuck, President
American Rescue Dog Association

Bill Syrotuck and his dog Randy

... in respect to the safety of helicopter hoist operations and rappeling...

In the ten years of active military service as a qualified Pararescueman in the Aerospace Rescue and Recovery Service of the U.S. Air Force, I have been qualified on various model helicopters, from the small HH-43 Huskie built by Kaman Corporation to the Sikorsky manufactured HH-53 Super Jolly Green Giant. Each type of helicopter has a hoist system that is somewhat different in design but all have one thing in common--being man rated. The stringent safety standards required by the military of the hardware make the dependability of the hoist system such that 15,000 to 18,000 live pickups for practice and currency is not uncommon each year for the Air Force. The Coast Guard requires each SAR crewmember to perform five live pickups of a litter or ambulatory patient each year. The estimated annual total for the Coast Guard is over 5,000. I should also point out that the number of injuries sustained is extremely low and few are contributed to equipment failure. Most injuries, and once again very few occur, are a result of the trainee hoist operator's

failure to stop the hoist cable as it nears the ground at a speed of 200 feet per minute. If the man riding the hoisting device is lowered at that speed, the possibility of injury exists. I say exists since I have been the man on the forest penetrator seat while students practice hoisting procedures and have been successful at avoiding injury when lowered at that speed. The equipment dependability and, the most important aspect, crew qualification and training make helicopter hoisting a routine operation with a minimum risk to the SAR crewmember and the patient.

Training of a hoist operator is always with safety in mind. So is the training of the crewmember taught to rappel from the hovering helicopter. Close inspection of equipment, continuous training and adherence to established procedures for helicopter rappeling negate the use of a backup system.

For many years I have instructed aircrews in the proper procedures and particularly the safety requirements associated with hoisting duties, and I have yet to visit the safety officer for aid in filling out an accident report.

The hoisting and rappeling procedures are safe without the need for a redundancy in the system provided the individuals maintain proficiency.

R. G. WHEELER
Master Sergeant
U.S. Air Force
National SAR School ■

EDITORIAL IN MINIATURE. Another American paradox? Why is it that our government spends millions of dollars for professional trackers, such as animal bounty hunters, Border Patrolmen, convict guards, the U. S. Army, and other agency personnel, but strangely there is no money available for trackers of lost children?

DENNIS KELLEY, Publisher

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Search and Rescue Magazine is a wilderness emergency publication for search and rescue teams, law enforcement and government agency SAR coordinators, participating youth groups and researchers in SAR.

The purpose of Search and Rescue Magazine is to advance the state-of-the-art, notify readers of significant events, review and enhance SAR philosophy, report on prominent individuals and their ideas, discuss case histories and critiques, announce news and pertinent rumors, broadcast techniques and procedures and generally provide a medium for all SAR participants.

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