

SEARCH AND RESCUE MAGAZINE

OFFICIAL PUBLICATION OF THE NATIONAL ASSOCIATION OF SAR COORDINATORS

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IN MEMORIAM

HAROLD A. FOSS

August 6, 1922

July 14, 1974

Hal Foss, President of the National Association of Search and Rescue Coordinators and Washington State SAR Coordinator suffered a fatal heart attack while climbing Mt. St. Helens, Washington State, with his son July 14, 1974.

EDITORIAL

by Dennis E. Kelley, Publisher, SAR Magazine.

What is the measure of a man's success in his brief visit to this planet earth? I'm sure you all have definite feelings about this, but I would like to tell you mine as they apply to Mr. Search and Rescue, Hal Foss.

In this world of money and apathy, there are rare moments of creativity that set some men up above others. Hal was one of these men.

In the beginning, this nation's SAR was unilateral, confused and lacking unified purpose. Hal charged into this mass of good intentions and created continuity and quality of purpose. For the victim's sake he created a national respect and appreciation for the SAR public service function.

However, the creative process is a difficult and turbulent activity which puts extraordinary demands of all near it. As for myself, I can assure you that Hal both lectured me and encouraged me. At times he made me mad and others very glad. Most important however, in his mission to provide ever better SAR victim care, Hal got many of us more involved.

The result: every SAR victim in this nation will benefit from Hal's creativity. Lives will be saved. Suffering will be lessened. To perhaps sum it up, Hal has made this world a little bit better place to live. Thank you Hal. ■



HAL FOSS

PHOTO BY GEORGE SAINSBURY

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A TRIBUTE TO HAROLD FOSS BY DYER DOWNING

What manner of man that we bid farewell today?

Each of us has known Hal and worked with him has no doubt observed so many aspects of his life that we could write a book on the kind of man he was; but there is one common denominator upon which we can all agree that is his whole-hearted dedication to the welfare and safety of his fellow man.

He was concerned not only with assisting people in time of distress and crisis, be it on a mountain top in the middle of winter or in the backcountry on a summer hike; but also was concerned with training more people in personal survival so that they might enjoy the grandeur of God's great out-of-doors and still lessen their chances of accident or injury.

Hal loved the out-of-doors probably more than anything else next to his family. He oft times said he felt closer to God while on a mountain than he ever could in church. He pondered the wisdom of the Almighty and viewed the handy work of the Great Architect of the Universe.

Perhaps this is why he was taken doing what he loved most climbing a mountain with his son.

In the time Hal has been with our Dept., (Washington State Department of Emergency Services), his total waking hours, yes, and part of his sleeping hours I am told, were spent in planning better and safer ways to help someone injured or in trouble. His life was an example to those who may follow in the urgency of proper training and in the development of good organization in search and rescue.

The State of Washington has been blessed with a man such as Hal to assert leadership in this lifesaving field.

The Nation, as a whole will feel the loss that we are experiencing today because of his nation-wide efforts in establishing the National Association of Search and Rescue Coordinators for the purpose of coordinating methods and capabilities of saving lives.

The service that Hal has given his fellow man cannot be measured only those who are alive today because of his efforts know the full meaning.

Dedication to a cause, dedication could well have been the cornerstone of Hal's life. His dedication was so intense that at times it would seem he would almost abandon concern for himself as he traveled day and night to attend meetings, conferences, and schools to spread the word or to learn about the subject so dear to him.

He could be found in the early morning at the office, before anyone else arrived, writing up his notes of the late meeting of the night before or preparing an outline for the next conference or school.

Hal lived in a world known only to a few, a world of coordination with military groups, public safety organizations, clubs dedicated to similar causes and the thousands of volunteers who made the force a reality in saving lives.

I know if Hal could speak to you now, he would say, "Thanks and don't stop now".



HAL FOSS DELIVERS THE GRADUATION SPEECH TO THE NATIONAL SAR SCHOOL, NEW YORK, 1974.

Obituary

Harold Alfred Foss was born August 28, 1922, in Homedale, Idaho, and spent his youth in Pocatello, Idaho. He graduated from Pocatello High School in 1940, and received machinist training from Idaho State University and Tacoma Vocational School in 1942 - 1943.

He entered the United States Army Air Force in 1943, where he took basic training and glider school training at Sheppard Field, Texas; and assisted in glider training at Bowman Field, Kentucky, and Laurinberg-Maxton AFB, North Carolina. In 1944, Hal served in the South Pacific, Japan and Korea. He returned to the United States and was discharged in December 1945.

Hal worked 2 seasons for the U.S. Forest Service as a lookout in Idaho during 1949 and 1950. On July 9, 1950, Hal and his wife Shirley were married in Grangeville, Idaho.

Also in 1950, he went to work for the United Pacific Insurance Company as an adjustor in Seattle-Tacoma, Spokane and Yakima Valley areas until August, 1967.

He received his BS in Business Administration from Idaho State University in 1950 and his LLB from LaSalle Extension University in 1960.

In October, 1967, Hal joined the staff of the State of Washington Department of Emergency Services where he has served until now as Assistant Director, Search and Rescue.

He organized and was current President of the National Association of Search and Rescue Coordinators. An association to upgrade and coordinate Search and Rescue and survival education in North America, consisting of state, federal, local and volunteer organizations.

He has been a member of the American Alpine Club, served 6 years as Chairman of Washington Mountain Rescue Council, camping counselor of Ft. Simcoe Area Boy Scouts of America, member of Cascadians, served as Vice President and Board Member of Yakima Valley Sportman's Association, Board Member of North Cascades Conservation Council, member of Scottish Rites Bodies of Yakima, Board Member and 1966 General Chairman of Yakima Sunfair, served on Yakima Traffic Board, Chairman of Recreation and Sports Commission of Yakima Chamber of Commerce, and was Climb Leader of Yakima Community Climb of Mt. Adams. He was member of Governor's Wilderness Task Force, member and chairman of Central Washington Mountain Rescue Unit, original member of Washington Environmental Council and member of Sierra Club, Mountaineers, Friends of the Earth.

He is survived by his wife, Shirley of Olympia, two daughters - Jacqueline Leta, age 23 of Olympia and Pamela Kay, 22, of Seattle; and one son, Lynn, age 18 of Olympia, who was with his father on Mt. St. Helens at the time he was stricken. ■

LAND SEARCH ORGANIZATION

by
Lois McCoy

ACKNOWLEDGEMENT

We are indebted to the many persons and agencies who wrote us with suggestions for improving our original drafts of the Land Search Organization.

We would particularly like to thank Cdr. Carlton F. Meredith, USCG and Maj. Robert J. Mattson, USAF of the National Search and Rescue School, Governors Island, N.Y.; Bob E. Hill, State of California Office of Emergency Services; Hal Foss, State of Washington Office of Emergency Services; the Colorado Search and Rescue Board; Walt Fricke, Rocky Mountain National Park; the China Lake Mountain Rescue Group; the United States Coast Guard Air Station San Diego; and all our great team mates in the San Diego Mountain Rescue Team who evaluate, study, and revised how these plans actually work under field conditions.

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DEDICATION

We would like to dedicate this Land Search Organization to Hal Foss because it would never have reached Draft #3 without his interest and encouragement.

It is ironic that it came off the press on the same day that Hal died. We will all have to work a little harder now to try and collectively fill the gap he leaves.

Lois McCoy
14 July 1974

The following suggestions on land search organization and planning are not meant to necessarily set a definitive pattern, but are offered only as being a few possible steps in an orderly progression toward advancing the state-of-the-art of search.

To begin at the very beginning of our land search operation, a Search Mission Coordinator (SMC) with the overall responsibility for the prosecution of the mission, has decided to activate a search. Usually the SMC is a government official such as a county sheriff or one of the military Rescue Coordination Centers (RCC).

He has called county, state and/or federal personnel with the authority to secure the support for the emergency. He may also have called one or more search and rescue groups. From among these various agencies he designates one as On-Scene Commander (OSC). This is usually the person with the most experience in SAR in the area and on that mission.

Once the OSC has been delegated this authority, everyone else acts accordingly and assists to the best of his ability for the remainder of the search.

In an operation of any size, the OSC will need a staff to fill three main areas of responsibility:

1. Operations (Ground and Air Officers)
2. Communications (Comm Officer)
3. Logistics (Base Camp Operator)

The number of agencies and searchers involved and the complexity of the search will dictate the number of positions that each staff member must effectively fill.

Good organization, whether on a large or a small scale, is absolutely essential.

We hope that the guidelines that follow, although perhaps never in final form, will be general enough to be flexible and accommodate to varying search situations.

PART I - COMMAND

Once the decision has been made to activate the search and the On-Scene Commander has been appointed, he and his staff should get "on scene" as rapidly as possible. He should select an operating location as close to the site as is practical, preferably roomy and warm (or cool as the case may indicate) where briefings may be held. Hopefully power, water, and phones will be available. He should then immediately move his energies toward the following tasks:

1. Point one - he should himself get briefed, by the informants, by the law enforcement agency and by any and all other persons with information pertaining to the operation. We all know that the situation as described in town or on the original call is seldom the situation as found at the scene. The On-Scene Commander must develop that true situation.

If this is a large search, the On-Scene Commander would be wise to delegate part of this information-gathering to a team of interviewers and to have them assist in gathering the information from the law enforcement agencies and other SAR groups present.

There may also be a need to activate some information-gathering sources back in town to check with witnesses who have departed from the site, etc. and this should be done through the Search Mission Coordinator.

2. Secondly, after getting briefed, the Operation leader must discover what search forces are already available to him. He must evaluate the developing situation and request and obtain the additional SAR units and capabilities necessary to handle the mission. The decision on what resources to use is the On-Scene Commander's, but he must have sufficient assistance so as to delegate the procurement of these facilities to someone else, such as his Communications Officer via the Search Mission Coordinator. As you can see, there are too many demands on his time for the OSC personally to involve himself in obtaining personnel, clearances, etc.

3. In land search and rescue the On-Scene Commander must now position his ground forces. Because of the relative slowness with which these forces assemble and move, it may be wise for the most essential of them to be alerted for possible use and to have them moving, while the On-Scene Commander is arriving at the operating location with his staff and is in the previously mentioned evaluation and planning stages.

4. As the situation progresses, it is the OSC's responsibility to supply information to the SMC for joint planning, general information and for press releases. In a large search or disaster the SMC may assign its own Public Information Officer (PI) to relieve the OSC of this sensitive responsibility.

Obviously the operation will proceed most smoothly if the designated On-Scene Commander arrives before other search units so that he and his staff can properly prepare for the manpower to come. Unfortunately however, this is not always possible due to weather, distance, etc. It will therefore be necessary in the case where the On-Scene Commander, designated by the Search Mission Coordinator and the governmental agency in charge, has not yet arrived on scene, for the team leader of the first group to arrive to assume the position of a temporary OSC. He should appoint his own temporary staff and should employ his personnel in evaluating the situation and in setting up the proper climate and organization for a well-conducted search.

This necessitates his using his available manpower in an organizational capacity and probably precludes his group entering the field immediately on anything other than a limited reconnaissance basis. The primary function of the group first on scene is the evaluative report back to the SMC and OSC even before beginning their organizational duties. This reconnaissance is critical to the development of sufficient additional on-scene personnel and support to effectively work the mission.

This temporary OSC and his team may be relieved within the first few hours of the search. Obviously any such changing of authority, while necessary, can pose problems of diplomacy and maturity. The entire aim in attempting to standardize methods of handling all eventualities in land search operations is to remove the personal and the political from these operations and to therefore most efficiently serve the lost individual.

PART II - COMMUNICATIONS

The On-Scene Commander is the heart of these search efforts and its cooperation and coordination. Now if coordination is the heart of search and rescue, then communications is the backbone. This is true for all types of SAR, and it particularly applies to inland SAR since communications can often be spotty due to land surface features. Therefore, the coordination of the search itself becomes more difficult as the operation may suffer from the possible lack of dependable communications. The OSC can control only as far as he can communicate.

Consequently, a first priority task of the On-Scene Commander is to establish a communications net. The OSC must have the capability of talking to every group and organization operating on that particular mission.

Today, with the many frequencies in use, both on highband and low band vhf, for Sheriff Depts., Park Service, Forest Service, Border Patrol, Mountain Rescue, JEEP SAR, Explorer SAR, etc., the On-Scene Commander may have to requisition a radio from each agency or he may have to send a communicator and a radio on a coordinated frequency with each group taking the field. He should delegate this responsibility for establishing the communication net to his Communications Officer. The Comm Officer should also include the air units responding in this net.



SITE OF A RECENT SEARCH FOR FRED MUNDY
IN BAJA CALIFORNIA INVOLVING LOIS MCCOY
AND THE SAN DIEGO MOUNTAIN RESCUE TEAM.
THIS SEARCH GAINED NATIONAL PROMINENCE
BECAUSE OF THE STRANGE CIRCUMSTANCES
AND HOSTIL ENVIRONMENT ENCOUNTERED BY
THE SEARCHERS.

As the search develops and increases in area and personnel, the Comm Officer (and this person is neither operating a radio nor keeping a log) will adjust his relays, frequencies and equipment to maintain communications with both the forces in the field and the Search Mission Coordinator back in town. He will also assist the OSC and Base Camp Operator in contacting resources for SAR personnel and equipment.

It is important that the OSC does not become involved (and consequently distracted) in routine radio traffic. These matters should be handled by the ground operations officer and the communicators.

PART III - LOGISTICS

The Base Camp Operator should keep and maintain in an up-to-the-minute fashion, a list of who is on the operation by group and by name of the individuals. He should maintain a daily head-count as personnel from various groups come and go. He should be aware in the morning of the number of persons expected to leave the search that night and have knowledge of how many persons he and the On-Scene Commander have been able to procure to take their place. The actual arrangements for these replacements will probably be his and the Comm Officer's responsibility, delegated to them by the On-Scene Commander.

The Base Camp Operator is also responsible for the managing of the medical and financial matters. He logs and is accountable for all equipment. Food and water must be provided and this area of responsibility should also be delegated to him. Probably all he will have to do is coordinate with the law enforcement agency in charge or SMC. The Base Camp Operator is also responsible for the screening of possible friends and spectators and the security of the search site.

An accurate, large scale map is all important. Providing these maps is a responsibility of the Base Camp Operator. Word should be sent to town and maps should be delivered at the

first possible moment, by air if necessary. If the search area is on the intersection of two or more maps, it may be advisable to have good quality reproductions of the pasted-up sections of the area duplicated in town and delivered to base so that a better overall picture of the search can be maintained. In the case where no adequate map is available, a first priority becomes obtaining of photographic air reconnaissance and its resultant overview of the area. All forces on the operation should have the same map - preferably a USGS 7½ minute topographic map of the area. Possibly up-dated with new roads, etc. from the latest forestry map. There may be additional types of maps in use on the operation such as an air sectional map for the use of aircraft involved; but they too should have for good coordination, the same map that is being used by the ground forces.

PART IV - OPERATIONS

The Ground Operations Officer should maintain an accurate written listing of all teams and personnel in the field by designated group affiliation, individual names, radio calls and search areas assigned. He should maintain an accurate map showing the position of the teams in the field and this map should be continually up-dated as the days' search progresses.

It is well to mention here that, as the operation develops, the planning of the search should remain 24-hours ahead of the actual field activities. In other words, plans should be made in the morning for the following mornings' deployments. Helicopters should be arranged on Monday morning for Tuesday mornings' use, fuel for Wednesday should be arranged and delivered on Tuesday, etc. These plans can, and certainly should, be adjusted or modified according to that nights' debriefings, but the pre-planning for the following day should not be delayed to await the end of the days' field operations. On a large search the On-Scene Commander will be wise to leave the actual deployment and the immediate direction and implementation of the days'

search plans to his Ground Operation Officer. Once the plans and pre-positioning of the search forces have been arrived at, the execution of these plans should be delegated to the Ground OPS Officer. This Ground Operation Officer will remain in Base Camp and will deploy, assign and reassign search units until the areas of the days' planned search have been covered to his satisfaction and to the satisfaction of the On-Scene Commander.

A complete and thorough debriefing of the field forces should be conducted by the Ground Operation Officer himself as the teams return from the field. This debriefing cannot be left until after dinner for example, because personnel come and go. The On-Scene Commander and Base Camp Operator may take part in this debriefing; and a written log or taped record should be kept. This log will assist in the briefing conference later that evening. This daily debriefing is most important as it affects the plans and adjusts the thinking for the immediate prosecution of the search; and of even greater importance, it is also the basis for the pre-planning of the strategy for the next 24-hours.

Air Operations Officer - He is responsible for the coordination of all activities concerning aircraft (including helicopters) by establishing contact with the operations personnel of the units assigned to participate in the effort.

A first priority task is to insure effective communications between all air units, field units and command posts. The Comm Officer will assist. Radio equipment, radio frequencies, and air relays may all be necessarily exchanged where military, charter, and civilian helos and planes are employed on a large search. Air search is the 'eye' of an operation while ground search is the 'arm'. Effective communications is then the 'brain' that joins the two into an efficient rescue tool.

The Air OPS Officer is also responsible for arranging for fuel and maintenance. He will (in conjunction with the OSC)

choose and effect the proper type of air search patterns and methods to be used as the mission evolves. He will insure adequate air units to be available to carry out the plans as made. When at all possible helicopters and planes should be briefed in the air in order to conserve fuel for additional search flight time.

PART V - NEWS RELEASES

The Public Information Officer is responsible for supplying information to SMC for press release and for general information. In a small operation he may be appointed by the OSC. However, in sensitive operations, large disasters, or operations of long duration he should be provided directly from the SMC staff, and should be directly responsible to him. The OSC will provide briefings for the PI Officer's information and it is necessary that the two work most closely and compatibly together. However, the crux of the situation is that the SMC has the overall legal responsibility for the proper prosecution of the mission and that any publicity does materially affect public opinion regarding how that search is

being prosecuted. Therefore, all PI Officers and announcements should preferably come from the SMC or through his specifically delegated authority.

The PI Officer is also responsible for the peace of mind of any of the family who are on scene. He should also see to the needs of the press if and when they are present. These needs may include food, water, lodging and, when possible, phone lines not dedicated to the actual operation.

PART VI - SIZE OF STAFF

The On-Scene Commander is responsible for the delegation of authority to his staff. The size of that staff is determined by how many people he needs to effectively control and coordinate each specific mission. The number of persons

involved will determine how many positions each man must handle. In a small operation the Ground OPS Officer may also be the Air OPS Officer if only one or two aircraft are involved. And the Base Camp Operator may also be the Comm Officer and PIO. However, in large operations the organization should allow for handling the larger number of units that will be involved. There should also be provisions for assistant OSC's at detached operating locations. They might be called Assistant Ground OPS Officers or Assistant Air OPS Officers as required.

PART VII - TECHNIQUES

The On-Scene Commander has some careful techniques to employ in Base Camp which can help him in planning the overall strategy of a land search.

1. Clear orders - Clear instructions are necessary to the people who are going into the field as to the area they're supposed to search. What type of search coverage is expected - a hasty search of a drainage? Or cutting for tracks ahead of a team on hot sign? Let the troops know the situation and what is expected of them. Use clear language. Be sure that you are easily understood. When you say 'cat' does the person understand mountain lion or caterpillar tractor? Consider written instructions of the situation if the situation indicates.

2. Communications - Communication from the field teams insures that the command knows at once when they find anything and can double check on the information. Adequate foresight should be used to insure methods to follow-up on any 'hot' clues. A yellow tube tent, for example, and he had one or he did not. Also the field teams remain informed of the progress of the search and remain motivated to give it their best shot. Also with good communications, navigation can be kept in mind in case you find the subject that day and then you need to start getting everyone picked up. Also any possible logistic problem can be immediately handled with that field team having the problem still remaining functional to complete its assignment.

3. Charting - The charting in Command of the communicated information from the field is a very useful tool. This charting will provide a thorough knowledge of the physical environment of the search. Maps should be up-dated as to new roads - are they passable by four wheel drive or trail bike? Are there gates or barriers? Also all trails should be charted - and are they passable by horse, bike, foot, etc.

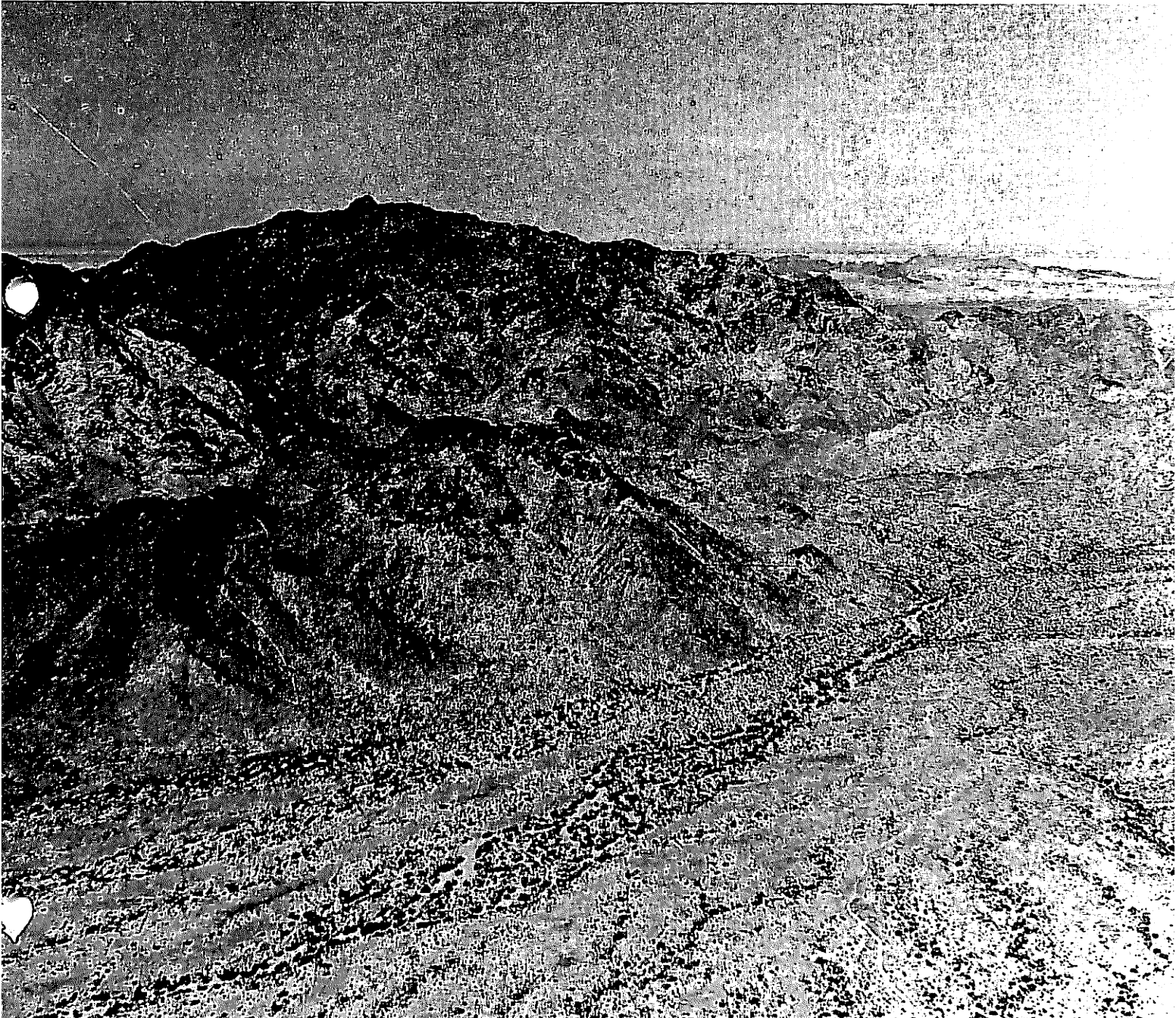
Structures, shelters, ruins, etc. should also be marked. Also high danger areas and attractive hazards such as waterfalls, caves, rapids, etc. In addition, all clues and footprints should be charted, even though only a 'possible' at the time of discovery. If they later appear to have a particular significance they can be 'cranked in' to the strategy because then location, time of discovery, etc., has all been charted. This charting is the Ground OPS Officer's responsibility.

He should know where his teams are, and should mark these areas on the map keeping them continually up to date. This is important to the debriefing. The area covered, the percent of coverage, the probability of detection, etc. None of these aides to planning and strategy can be employed without consistent informed charting.

4. Good debriefing - Debriefing, which is the opposite of the clear orders to begin with. Here is where the bits and pieces of the days' efforts are put together to show the pattern and direction that the search is beginning to take.

5. Conference - A daily conference with the staff and SAR unit leaders will serve to update information, planning and coordination with all the groups involved. The On-Scene Commander should schedule a daily conference at the most convenient time, when he, the Liaison Officer from the responsible agency, his OPS Officers, Base Camp Operator, Comm Officer, PI Officer and a ranking member of each agency represented on the mission can meet to discuss the adjusting of the mornings' pre-planning in the light of the days' just completed operations.

ANOTHER AERIAL VIEW OF THE FRED MUNDY SEARCH AREA. THE ORGANIZATION OF LAND SEARCH IN A FOREIGN COUNTRY LIKE BAJA, MEXICO CAN BE AWESOME. INTENSE HEAT, INFREQUENT ROADS, LANGUAGE DIFFERENCES, SCARCE WATER AND SUPPLIES ALL CONTRIBUTE TO THE NECESSITY OF LAND SEARCH ORGANIZATION PLANNING.



This meeting will serve as a place where the exchange of the ideas of the SAR groups can be heard and as a clearing house for information and facts gathered during the days' search. This information needs to be passed on to all the units involved. The log and charts kept by the OPS Officers at the debriefings of the units will serve as the basis for this update on the search progress. Here, the SAR unit leaders can be briefed on the next mornings' plans so that the search can get off to a daybreak start.

The On-Scene Commander must maintain high morale and a high degree of confidence in his manner of prosecuting the search. This conference, perhaps after dinner, over coffee, serves to keep the participating groups informed and motivated to continue to give the operation their best effort. The On-Scene Commander needs, and should welcome, suggestions from his staff and other unit leaders. However, he should maintain an agenda and see that all participants are aware of the conference agenda ahead of time. The conference serves as a good briefing tool, but shouldn't dissolve into a 'bull session' type of general discussion for this wastes valuable time in the evening and cuts into the necessary sleeping time needed to keep these unit leaders sharp, both physically and mentally. The conference should start early and end early. Then all to bed for a fresh start at daybreak and through good pre-planning, to a day of success.

These five steps are going to give the On-Scene Commander control and are going to insure that the best use is made of the time and manpower that is available to him. They will also help in developing the search strategy. For all of this control is not going to be of much use if something sensible is not being done with that manpower, but at least there is organization. Nothing is easier than to let that organization get out of control. The On-Scene Commander has got to know what's going on, and through his staff, must keep control of what's going on. He will need the assistance of his Ground OPS Officer and much of that responsibility will be delegated to him.

It is very important therefore, that the Ground OPS Officer continue to keep the On-Scene Commander fully informed as the day progresses.

PART VIII - HEALTH AND ENDURANCE

The job of On-Scene Commander is about a 26-hour-a-day job. The extra two hours is when he tries to sleep. Now, nobody can keep his head working under these conditions for very long without back-up support, adequate diet and rest. The maintenance of a proper balance of the body through proper intake of calories, water, salt, sugar, etc., cannot be neglected or the mental acuity of those in command diminishes as the search lengthens. If adequate rest and diet are not possible then command must be relieved and rotated in order to remain functional.

Because of the importance of the On-Scene Commander, he should try to take a break once in a while, a short rest when the activity takes a lull, as his is the job with the most stress. He must remain alert, both physically and mentally, in order to maintain control and cooperation. He's got to have the utmost cooperation from the people whom he has chosen to delegate some of the responsibility. This will enable him to have time to think, to plan the search strategy and to put these plans into action.

The On-Scene Commander should plan to stay for the duration of the search operation or for three days (72-hours) at a stretch. When he must leave, he should fully and completely brief his replacement as should any of his staff who must leave before the operation is completed. A change in command without a full and complete briefing can negate three days of careful operations.

PART IX - OPERATIONAL COMMAND CHART

The enclosed block outline on the opposite page shows how actual on-scene operations can function effectively and one way in which the chain of command can operate. There are other areas that could be added or deleted, but this is one way in which the pre-planning of job can improve the coordination and control of a large operation. (See Addenda I & II)

PART X - CONCLUSIONS

As we review the function of the On-Scene Commander, we can see the enormous responsibility that he carries on his shoulders and it is obvious that much of his success on the operation will depend upon the skill and efficiency with which his OPS Officers, Base Camp Operator and Communications Officer do their assigned tasks.

The function of the On-Scene Commander is the coordination of the results of all those tasks that are being performed by his staff. Notice that the arrow on the Command Chart run both ways from the OPS Leader to his four officers and then back to him.

There has to be one person who knows all the pieces of the puzzle and his four officers should make sure that he does receive all information. They should not decide some clue isn't important and sit on it, for it's the On-Scene Commander's responsibility in the long run. If the OSC is smart, he'll undoubtedly want his staff's evaluation of the clues' importance or its lack of relevancy. But, in any event, pass each piece of information on so that there is one person who knows everything that is happening on the mission.

Notice that the On-Scene Commander has four people to whom he has delegated a great deal of responsibility and that these four people have a lot of specific tasks that can keep them busier than a one-arm paperhanger with the hives. Their responsibility is to report back to the OSC on the results of all their activity.

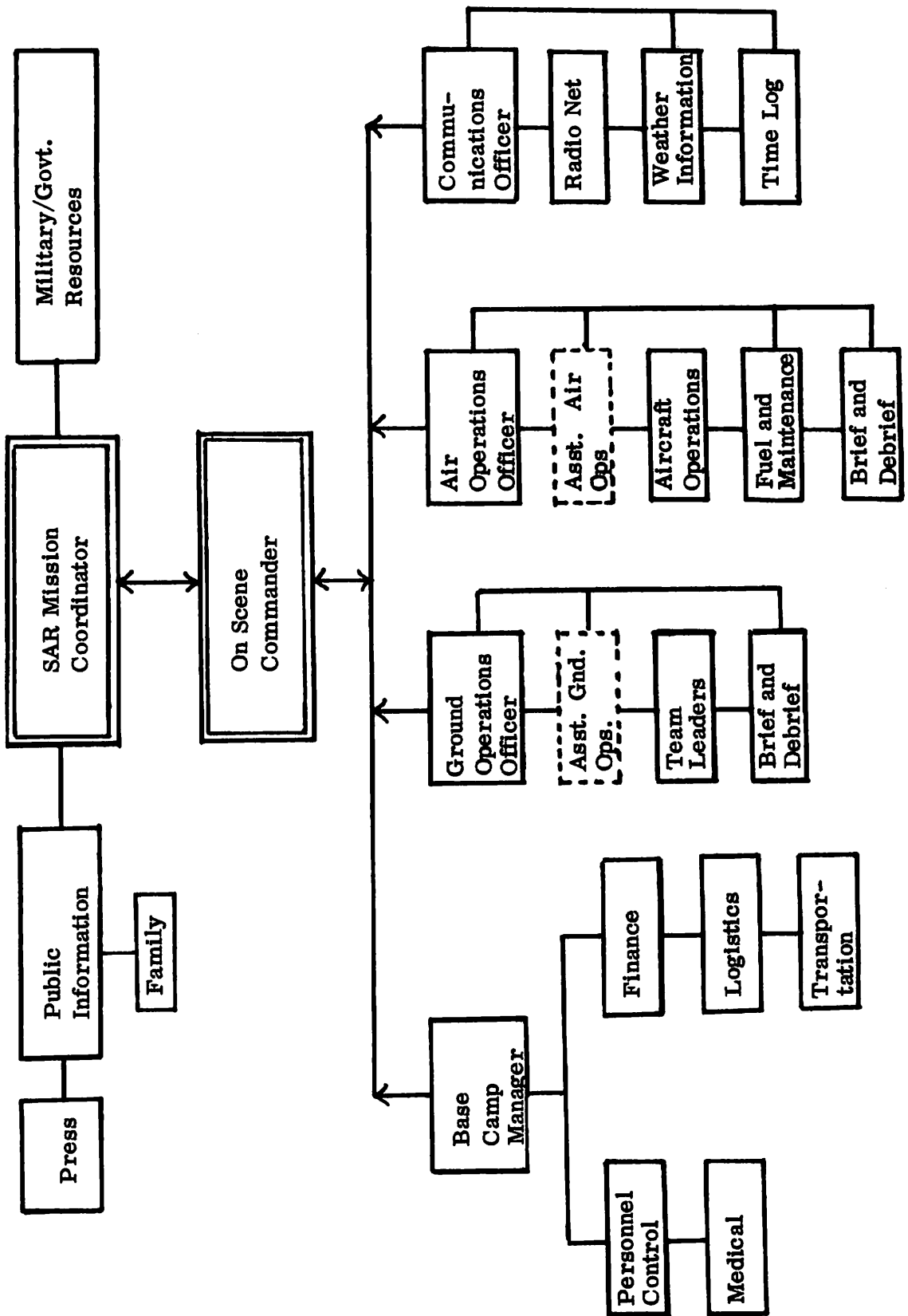
The On-Scene Commander actually functions as a memory bank and in the days of future SAR operations, he may be replaced by a computer. His function is to compile these reports coming in, reports from the Base Camp Operator, from news from the informants, from the OPS Officers, from clues or conditions in the field, from the trackers, from communications, etc. And he's evaluating all this.

The On-Scene Commander should be feeding all these bits and pieces of information into his head, into his 'computer', and he's coming up with some strategy. He's putting the information from the Lost Person Questionnaire together with the information from his Ground OPS Officer who has been working with the Comm Officer and he's using this to sort of build-up a scenario - what the various different options are as to what this person did - which will guide him in his decisions as to the area of the highest probability and as to what he'll do with his search personnel.

It takes a large number of trained people to provide an organizational group with enough depth of personnel to coordinate a large search. We feel that a clearer understanding of Search Planning and its techniques will help all of us in organized Search and Rescue groups to do our assigned tasks more capably.

The heart of the SAR operation is coordination, the backbone is communications, but the arms and legs are all the participating SAR agencies and their individual members.

ADDENDUM I
MISSION BLOCK DIAGRAM



ADDENDA #I

Definition and description of command titles used in "Land Search Organization" and block diagram.

SEARCH MISSION COORDINATOR (SMC)

--person with overall responsibility for the prosecution of the mission. Usually a government official such as the county sheriff or one of the Military Rescue Coordination Centers.

ON-SCENE COMMANDER (OSC)

--person at the scene of the incident who is in control of or coordinates the activities of all units involved in the effort. Usually the person with the most experience in SAR in the area.

BASE CAMP OPERATOR

--person in charge of the housekeeping functions related to any operation. He is responsible for feeding, housing, procuring and transporting the units involved, as well as the managing of the medical and financial matters.

GROUND OPERATIONS OFFICER

--responsible for the briefing and debriefing of all ground units to include both interrogation and search units. Responsible for maintaining a current map of all search operations and assist the OSC in planning searches.

AIR OPERATIONS OFFICER

--responsible for coordinating all activities concerning aircraft (including helos) by establishing contact with the operations personnel of units assigned to participate in the effort. Also responsible for arranging for fuel and maintenance.

COMMUNICATIONS OFFICER

--responsible for establishing an effective comm network and keeping an eye on the weather.

ADDENDA II
TASK SHEET
ON-SCENE COMMANDER

Select the On-Scene Coordination Center and Field Command Post sites as necessary.

I. INITIAL PHASE

- A. Assign Base Camp Operator, Communications Officer, Ground Control and Air Control Officers, Public Information Officer, etc. as needed. Delegate setting up of Base Camp.
- B. Assign team of interviewers to gather information from family and friends or witnesses as to the status of the subject (see Lost Person Questionnaire form, Addenda III).
- C. Interview authorities and other SAR groups as to status of operation. Obtain information from interview team on subject, etc. Review completed Lost Person Questionnaire form. Obtain weather information during subject's activities.

II. PERSONNEL

- A. Obtain count and status of personnel and groups available on-scene from Base Camp Operator and Ground OPS Officer. Obtain an over-view from Ground OPS Officers of present deployment and assignments of personnel in the field (if any).
- B. Request additional SAR units and equipment through SMC to insure proper prosecution of the mission as necessary. Communications Officer may assist in expediting requests.

III. OPERATIONS

- A. With Ground OPS Officer and Air OPS Officer, assign or reassign and brief field personnel to areas of highest probability. Designate manner of search, that is; scratch or hasty search, cutting for tracks, line search, etc. Give clear orders - consider written orders if situation indicates.
- B. Check the radio log and the Master Map. Stay on top of the operation and the organization and progress of the operation. Supply information to SMC for press release. Confer with Search Mission Coordinator as to progress of search, possible suspension of search, or enlargement of operation, additional resources or monies, etc.
- C. Check with your GND OPS Officer as the teams are fully and clearly de-briefed upon their return from the field. Keep a written or taped log of the pertinent information as received from each team as a guide at that evenings' joint conference.
- D. Hold an early morning re-briefing with your OPS Officers to insure the prompt start of the deployment of the field personnel for the day. Delegate this deployment to your Ground and Air OPS Staff.

IV. COORDINATION

- A. Continue to compile all bits and pieces of the puzzle as the operation unfolds. Keep in close communications with your staff, the authorities, the interviewers and informants, and the teams returning from the field. In consultation with your staff, formulate agenda for the joint conference and briefing for the following days' operations.
- B. Hold joint conference daily with liaison officer from SMC, PI Officer, OSC Staff Officers, and SAR Unit Leaders. This meeting will assist in joint planning of future strategy. It will also serve to keep everyone fully up-dated on the operation's progress.
- C. In the event you must be relieved as On-Scene Commander, fully brief your replacement as to general status of search, search plan and strategy, units on scene and on call, problems or sensitive areas, area coverage and POD, etc.
- D. Do not leave operation until your replacement has been assigned and fully briefed.

TASK SHEET
COMMUNICATIONS OFFICER

Choose a good location for antenna systems and the Radio Communication Center within the Base Camp area. Set up antennas.

I. INITIAL PHASE

- A. Assign Radio operator. Assign Log Keeper. They should ready and sign out radios to field teams as requested by OPS Officers.**
- B. Set up relays as necessary for dependable communications (air relay necessary?)**
- C. Arrange for radio on each frequency being used on the operation to be in Radio Communications Center for monitor as well as transmission.**

II. WEATHER

- A. Obtain and update weather forecasts for search area.**

III. OPERATIONS

- A. Establish effective communication with all Field Units.**
- B. Establish effective communication and maintain schedules with SAR Mission Coordinator.**
- C. Assist On-Scene Commander and Base Camp Operator in obtaining clearances and additional resources as requested.**
- D. Assist interviewers in obtaining assistance and information from town through SAR Mission Coordinator.**
- E. As mission progresses, reset relays as necessary to maintain dependable radio communication with all field units.**
- F. Rotate or relieve Radio Operator and Log Keeper to lessen fatigue and potential boredom.**
- G. Attend (with OSC, BCO and OPS Officers) debriefings of field units as they return from search assignments. Sign log sheets.**

IV. COORDINATION

- A. Attend joint conference with SAR unit leaders for briefing on following day's operations.**
- B. In the event you must be relieved as Communications Officer, fully brief your replacement as to general status of search, frequencies and equipment in use on operation, location of relays and difficult areas of radio communications, etc.**
- C. Do not leave operation until your replacement has been assigned and fully briefed.**

TASK SHEET
BASE CAMP OPERATOR

Set up Base of Operations--preferably warm (or cool) and roomy. Hopefully power, water, and phones will be available. Organize the following functions:

I. PERSONNEL CONTROL

- A. Sign in SAR units by group and by individual name as groups arrive. (Use 4 part form or carbon paper. 1 copy OSC, 1 copy OPS Officers, 1 copy Communications Officer, retain original copy.)
- B. Relay personnel information (via written copies) on SAR units arriving on-scene to OPS Officers and OSC. Coordinate with Field Commander to smoothly and quickly move personnel from check-in to deployment in the field.
- C. Update list of SAR units and personnel leaving search or remaining for tomorrows' operations. Bring Personnel Control Sheets to joint conference showing available personnel for tomorrows' operations.
- D. Assist OSC in obtaining clearances and participation of back-up SAR resources as directed. (Communications Officer will assist if requested.)

II. TRANSPORTATION

- A. Arrange transportation for SAR units to and from search areas.

III. LOGISTICS

- A. Coordinate with authorities on-scene for food and lodging. Request early breakfast (hot cereal, juice and coffee) for early departure into field.
- B. Obtain, distribute and account for fuel.
- C. Obtain and distribute maps of area of operations.
- D. Log and account for all equipment and material. Obtain items in short supply.

IV. FINANCE

- A. Receive, disburse, and account for all funds and transactions.

V. MEDICAL

- A. Arrange for treatment area.
- B. Provide first aid supplies.

VI. COORDINATION

- A. Attend joint conference with SAR unit leaders for briefing for following days' operations.
- B. In the event you must be relieved as Base Camp Operator, fully brief your replacement as to general status of search, equipment in use on operation, SAR units and manpower on scene, logistical stock piles and/or problems, etc.
- C. Do not leave operation until your replacement has been assigned and fully briefed.

TASK SHEET
GROUND OPERATIONS OFFICER

I. INITIAL PHASE

- A. Set up and maintain current map of search operations.
- B. Ascertain last known point of sighting of subject(s). Enter on map.
- C. Assign expert reconnaissance team (trackers, dogs, etc.) in company of witnesses to point of last known location of subject immediately after briefing.

II. OPERATIONS

- A. Brief and assign search areas and/or teams (in conjunction with OSC) to areas of highest probability. Give clear and complete orders.
- B. Continue to up-date map via radio info of clues, prints, team movements and progress. Locate and identify on map.
- C. Keep On-Scene Commander fully and promptly informed as information is obtained from field.
- D. Follow-up on "hot clues" immediately as received.

III. DEBRIEF

- A. Debrief teams as they return from the field. Enter any new information on Master Map and in Log Book.
- B. Evaluate coverage and probability of detection (POD) from these debriefings and knowledge of the capability of the men and/or teams completing the assignment. Enter POD on map or in Log Book.
- C. All team equipment and supply is accounted for at the debriefing and logged in as necessary.

IV. COORDINATION

- A. Attend joint conference for consultation and briefing on operations for the following day. Bring Master Map to joint conference.
- B. In the event you must be relieved as OPS Officer, fully brief your replacement as to general status of search, frequencies and equipment in use on operation, location of relays and difficult areas of radio communication. Explain Master Map and method of charting in detail. Explain previous coverage, POD and present strategy of search.
- C. Do not leave operation until your replacement has been assigned and fully briefed.

TASK SHEET
AIR OPERATIONS OFFICER

Establish contact with the operations personnel of units assigned to the air search effort.

I. LANDING AREAS

- A. Establish and ensure safety of a Landing Zone for helos.**
- B. Establish airstrip for aircraft. Insure safety.**

II. OPERATIONS

- A. Establish radio communications net between all air units and command. Attempt to include all field units in this net as well.**
- B. Brief (in air if possible) and assign search patterns and areas to air units operating on search.**
- C. Debrief and determine POD according to knowledge of weather, height, and capability of personnel flying the mission.**
- D. Insure availability of adequate air units as search progresses in order to effectively implement the overall strategy of the mission.**

III. LOGISTICS

- A. Arrange for fuel and maintenance.**
- B. Keep an eye on the weather in conjunction with Communications Officer.**

IV. COORDINATION

- A. Attend joint conference for consultation and briefing on operations for the following day. Bring Master Map to joint conference.**
- B. In the event you must be relieved as Air Operations Officer, fully brief your replacement as to general status of search, frequencies and equipment in use on operation, previous search areas and strategy employed, tentative plans for the future, etc.**
- C. Do not leave operation until your replacement has been assigned and fully briefed.**

TASK SHEET
FIELD TEAM LEADERS

Immediately upon designation the Team Leader:

I. INITIAL PHASE

- A. Selects his team in relation to the needs of the operation. He must know individual capabilities of his team members. Assumes command of his team.
- B. Readies team for assignment. Obtains radio, map, team first aid kit and any special gear necessary.
- C. Assures that individual team members are properly equipped for weather and terrain of operation.

II. OPERATIONS

- A. Gets fully and completely briefed by Ground OPS Officer on search area, assignment and objective.
- B. Immediately after briefing, moves team quickly and smoothly out of camp - transportation to assigned area can be arranged through Base Camp Operator if necessary. (POD - probability of detection.)
- C. Once on scene for his assignment, he sees to it that his team thoroughly covers their area and maintains a running evaluation of their percent of coverage and effectiveness.
- D. He directs search, rescue and recovery operations of his team.
- E. He alerts Base to all new clues and evidences of subject as found in the area.

III. RESPONSIBILITY

- A. He keeps his team together and is responsible for the well-being and safety of the men in his team.
- B. He is responsible for the care and treatment of the subject.
- C. He is responsible for the accurate relay of all information and clues to the Ground Operation Officer.

IV. DEBRIEF

- A. He reports to Ground OPS Officer at Command Post for debriefing immediately upon arrival in Base Camp.
- B. He evaluates probability of detection on search assignment according to weather, terrain, personnel, etc.

ADDENDA III

Search and Rescue Mission Coordinator's Handbook
(Reprinted with permission from the Colorado Search & Rescue Board)

LOST PERSONS QUESTIONNAIRE/CHECK LIST

Date _____

Mission No. _____ S.O. O/R No. _____ Officer _____

Data Taken by _____ by: Phone _____, in person _____.

S.O. _____

Name of missing person _____

Local address _____ Local Phone _____

Home address _____ Home Phone _____

Nicknames _____ Aliases _____

Age _____

A. Physical Description: Height _____ Weight _____ Build _____

Hair-color _____ Length _____ Sideburns _____

Beard _____ Balding? _____

Eye color _____

Facial features/shape _____ Complexion _____

Any distinguishing marks/scars, etc.?

Race _____

General Appearance _____

Complete and detailed answers to questions needed to identify clues as found. Put "none", "NA (not applicable)", or "unsure" in blanks as appropriate.

B. Clothing: Shirt/sweater style _____ Color _____

Pants style _____ color _____

Jacket style _____ color _____

Raingear style _____ color _____

Shoes style _____ size _____

sole type _____

Is a sample of sole type available? _____

Where _____

Hand gear style _____ color _____

Gloves style _____ color _____

Glasses regular/sun _____ style _____

Any extra clothes/shoes? _____

Scent articles available ? _____ Where _____

Search and Rescue Mission Coordinator's Handbook

C. Equipment: Pack style _____ brand _____ color _____
Tent style _____ brand _____ color _____
Sleeping bag style _____ brand _____ color _____
Food - what _____ brands _____ amount? _____
Water - canteen style _____ amount _____
Flashlight _____ matches _____ knife _____
Map _____ compass _____
Ice axe _____ brand _____ covers? _____
Snow shoes type _____ brand _____ binding type _____
Tour skis brand _____ length _____ color _____
binding type _____ binding brand _____
Ski wax type _____ brands _____ colors _____
Ski poles type _____ length _____ color _____
brand _____
If rental equipment, rental markings? _____
Ropes/hardware _____
Fishing equipment _____ brands _____
Camera _____ brand _____
Money _____ amount _____ credit cards _____
Firearms - type _____ brand _____ ammo _____

D. Trip Plans: Going to _____ via _____
Purpose _____
How long _____ How many in group? _____
Group affiliation _____ transportation _____
Started at _____ when _____
Car located at _____ type _____
license _____ verified _____
Alternate car at _____ type _____
license _____ verified _____
Pickup/return time _____ where _____

All in Group Name _____ Address _____
Phone _____ Car License _____
Name _____ Address _____
Phone _____ Car License _____

Any alternate plans/routes/objectives discussed?

E. Last Seen Details:

When _____
Where _____
By whom _____ Present? _____
if not, location _____ Phone _____
Weather _____
Going which way _____ How long ago _____
Special reason for leaving? _____
Unusual comments upon leaving? _____

F. Experience:

Familiar with area _____ How recently _____
If not local - what other areas of experiences

Taken mountaineering classes _____ where _____
when _____
Taken First Aid training _____ where _____
when _____
Been in Scouts _____ where _____ when _____
Military service? _____
How much overnight experience? _____
Ever been lost before? _____ actions _____
Ever go out alone? _____
Stay on trails or go cross country? _____
How many long trips before _____
If not regular hiker - general athletic interests and
ability _____

G. Contacts Person Would Make Upon Reaching Civilization:

Home address _____
Phone _____ Anyone home? _____
Local contact? _____ Phone _____
Friends _____ Phone _____

H. Health - General Condition:

Any physical handicaps _____
Any known medical problem _____
Knowledgeable Doctor _____
Phone _____
Any known psychological problems _____
Knowledgeable person _____ Phone _____

Search and Rescue Mission Coordinator's Handbook

H. (cont'd) Taking prescription medication _____
Doctor _____
Consequences of loss _____
Amount carried _____
Eye sight without glasses _____ spares? _____

I. Actions Taken So Far:

by: friends/family - when _____ results _____
Sheriff when _____ results _____
Forest/Park Svcs. when _____ results _____

Missing persons report filed - when _____
where _____

All points bulletin issued - when _____
Authority _____

J. Personality Habits:

Smoke _____ How often? _____ what _____
brand _____

Drink _____ brand _____

Drugs _____

Hobbies/interests - fishing, flowers, climbing,
photography _____

Does person work for spare money _____

Outgoing or quiet; likes group, or alone? _____

Evidence of leadership _____

Ever been in trouble with law? _____ Now? _____

Hitchhike often _____ accept rides _____

Feelings toward grownups _____ hippies _____

Any current family/girl friend problems? _____

Religion _____ serious? _____

What does person believe in? _____

What does person value most? _____

Who is person closest to: in family _____
in general _____

Where born and raised? _____

Any history of depression, running away? _____

Status in school _____ draft _____

Who last talked at length to person? _____
where? _____ subject? _____

J. (cont'd) Any recent letter? _____
Give up easily or keep going? _____
Will person hole up and wait or keep moving? _____

K. For Children:
Afraid of dogs? _____ Horses? _____
Afraid of dark? _____
What training regarding what to do when lost? _____
What are actions when hurt? Cry? Carry on? _____
Talk to strangers; accept rides? _____
Active type or lethargic? _____

L. For Groups Overdue:
Any personality clashes in group? _____
Any strong leader types not actually the leader? _____
What is competitive spirit of group? _____
What would be actions if separated? _____
Any persons especially close friends? _____
What is experience of leader and rest of group? _____

M. Family - To prevent press problems:
Father's occupation _____
Parents separated or similar problem _____
Family's desire to employ special assistance _____
Name, address, phone of father/mother/husband/wife/son/daughter
to notify if found in good condition: (give most appropriate
kin for information or contact when found)
Name _____ Address _____
Phone _____ Relationship _____
Person to notify if found in very poor condition or dead:
(should be friend, relative, or minister of next-of-kin)
Name _____ Address _____
Phone _____ Relationship _____

ADDENDA IV

CHECK LIST

ON-SCENE COMMANDER

MOVE HIMSELF AND AIDES TO SCENE OF OPERATIONS

I. INITIAL PHASE

- Gather information and evaluate.
- Assume Command and assign permanent staff.
- Assign interviewers as required.
- Establish true picture.

II. OPERATIONS

- Develop search strategy with staff. Brief Officers.
- Insure adequate SAR forces and material.
- Maintain control of search organization and progress.
- Confer with SMC.

III. COORDINATION

- Be available to staff. Maintain high morale.
- De-brief staff.
- Hold joint strategy conference. Brief Officers.
- Brief replacement.

COMMUNICATIONS OFFICER

SET UP COMMUNICATIONS NET

I. COMMUNICATIONS

- Assign Radio Operators and Log Keepers as necessary.
- Check all radio equipment and radios.
- Establish effective communication with both SMC and field.

II. WEATHER

- Update weather daily.

III. OPERATIONS

- Set relays as necessary.
- On request, obtain additional SAR resources through SMC.
- Sign logs.

IV. COORDINATION

- Attend all conferences.
- Brief replacements.

CHECK LIST
BASE CAMP OPERATOR

PROVIDE MAPS OF SEARCH AREA TO STAFF. SET UP BASE.

I. PERSONNEL CONTROL

- Sign in SAR units.
- Provide personnel information to staff.
- Update list of personnel daily.
- Arrange for medical treatment as necessary.

II. TRANSPORTATION

- Arrange all transportation

III. LOGISTICS

- Obtain, log and account for all material.
- Arrange food and lodging as necessary.
- Account for any funds and transactions.

IV. COORDINATION

- Attend all conferences.
- Brief replacement.

GROUND OPERATIONS OFFICER

GET BRIEFED BY OSC

I. INITIAL PHASE

- Set up map.
- Assist in developing search strategy.

II. OPERATIONS

- Brief and assign teams. Implement search strategy.
- Update map.
- Keep OSC informed. Follow up "hot clues".
- De-brief teams and evaluate.

III. COORDINATION

- Attend all conferences.
- Brief replacement.

CHECK LIST
AIR OPERATIONS OFFICER

GET BRIEFED BY OSC

I. INITIAL PHASE

- Assist in developing Search strategy.
- Insure communications between air and ground.
- Establish landing zones.

II. OPERATIONS

- Brief air units. Implement search strategy.
- Insure adequate air units and support for mission.
- Keep OSC informed.
- Debrief and evaluate.
- Update weather daily.

III. LOGISTICS

- Arrange for fuel & maintenance.

IV. COORDINATION

- Attend all conferences.
- Brief replacement.

FIELD TEAM LEADERS

GET BRIEFED BY GROUND OPS OFFICER

I. PREPARATION

- Select team members.
- Obtain equipment, radios.
- Assure team readiness.

II. OPERATIONS

- Assume responsibility for assignment.
- Brief team.
- Keep Ground OPS Officer informed.
- Direct effective completion of assignment.

III. COORDINATION

- Debrief team and evaluate with Ground OPS Officer.
- Log in equipment, radios. ■

HOW STATE CONFERENCES BEGAN

by
Lena Reed

The Fall 1973 issue of SEARCH AND RESCUE MAGAZINE contained a report of the fifth annual Washington State SAR Conference at Fort Worden, near Port Townsend. This is a report of the origin of these SAR conferences.

The first State SAR Conference was held in 1969 at Tacoma, Washington, and owed its birth to Sgt. Wilbur "Bud" Edmunds of the Pierce County Sheriff's Department. For approximately five years, as he gained experience in the varied phases of Search and Rescue work, Sgt. Edmunds had considered the value of a statewide conference. A meeting ground was needed where his department could pass on to other counties the knowledge they had gained, and in return, benefit from the experience of others. He had attended several Mountain Rescue conferences. While their education and projects were excellent, they were adapted primarily to mountain rescue. In analyzing his own department's searches, Sgt. Edmunds realized that the majority of them were not in truly high country. Likewise, the majority of the members working the searches were not Mountain Rescue trained.

Sgt. Edmunds considered at length the benefits of such a conference to his county and the others. It would require communication with other SAR units throughout the state, and planning a time that would not conflict with other conferences. He found an assistant in Grant Smith, head of Pierce County Explorer Search and Rescue. With the help of Mimi Stieler, secretary of Pierce County Department of Emergency Services, they made the preliminary plans for a state conference.

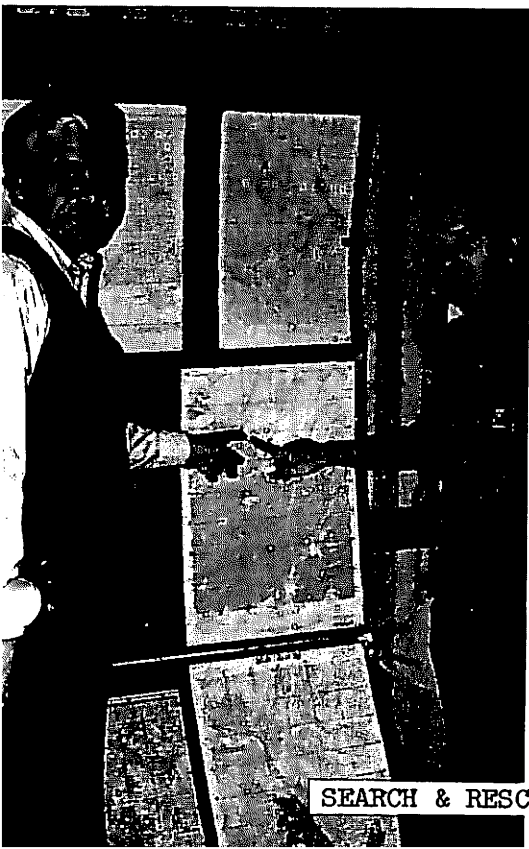
The next step was coordination with the State Department of Emergency Services in Olympia, Washington. This further assistance provided a mailing list. They completed their plans, and notices were mailed.

The conference was held at the Tacoma Motor Inn. The principal speaker was Mr. John Rutter, Director of the Western National Parks.



ABOVE: GRANT SMITH, KEY FIGURE IN WASHINGTON STATE EXPLORER SCOUT SEARCH AND RESCUE.

BELOW: BUD EDMUNDS AND GRANT SMITH. BUD HAS SINCE RETIRED FROM PIERCE COUNTY SHERIFF'S DEPARTMENT SAR ACTIVITIES.



The affair was attended by varied SAR units from all parts of the state, and it was well received. Talk soon turned to making the affair an annual event.

In 1970, Pierce County again hosted the convention, which was held at Camp Murray. Again, Sgt. Edmunds and Grant Smith worked together on its preparation, with assistance from other members of the SAR Council and from Hal Foss, of the State Department of Emergency Services. This year the main speaker was a Tacoman, CPO Chuck Law, a survival specialist. He had been a member of the crew of the U.S.S. Pueblo when it was captured by the North Koreans. This man had recently returned from prison camp, and the planners were enthusiastic about having him as their guest speaker. His report of how the crew members managed to survive while they were in prison was testimony to a fine course in survival training.

At the conclusion of the second conference, the Pierce County men announced that now that the baby was born and on its feet, some other Rescue Council or Sheriff's Department might like to host it and carry on the program in succeeding years. The three conferences since then have proved that Bud Edmunds' brain child is alive and healthy.

A story of the origin of statewide SAR conferences will naturally lead readers in less-organized areas to seek information on the process by which SAR developed on a local level.

The great-granddaddy of Search and Rescue, the mounted posse of the old-time Western sheriffs, needed updating and expanding as the country grew and became motorized. The SAR Council of Pierce County, Washington, was formed in 1966, second to King County by a few months. The Sheriff's Department had worked with volunteer groups before that, but this date marked the formation of a formal council. Many other counties have since followed suit, although several sparsely-settled counties are still without. Through these councils, and through the State Conference, much has been done in educating volunteer and professional alike.

The state-wide organization under Civil Defense came into being in late 1968, when the late Hal Foss was appointed SAR coordinator. A SAR plan had been started during Governor Rosellini's administration, indicating assignment of responsibilities, but there was no SAR coordinator as there is now. Ron Pretti, then from the State CD and later Director of State Department of Aeronautics, did much to get the state involved, and contributed greatly to the ground work. Later the Legislature made SAR Coordinator a full-time job.

When a search takes place in a county which does not have an organized SAR group, the State SAR Coordinator really makes the job. The sheriffs in these "have not" counties call the State Office and ask for assistance. They may request not only manpower, but search dogs and general information as to procedure in conducting a full search. This state even receives calls for help from other states which lack the organization we have here. For example, one of the local Search Dog men and his bloodhound were called back to Iowa last winter. He found that though 600 people had been searching for two days, there was no direction. The sheriff did not know how to handle the case, and people wandered around in disorganized groups, duplicating efforts, or skipping other areas.

This used to be the case in Washington. There were many sheriffs who would call Mountain Rescue, for example, and say, "Hey, we've got a search; how about taking care of it?" When Sheriff Jack Berry came into office in Pierce County in 1964, he decided that the Department should form a Search and Rescue Group. He gave the assignment to Bud Edmunds. Sgt. Edmunds made the most of departmental manpower, but it was obvious that it was too limited to conduct a full search. He began analyzing the different private groups in the area, looking for people whose interests could somehow be connected with Search and Rescue.

Mountain Rescue was the leader of all SAR groups in this area, and remains an important member. Another group which Sgt. Edmunds felt had the potential for help was the Webfooter Jeep Club. They were the third Jeep club organized in the United States, formed soon after World War II, and preceded in this state only by the Yakima Ridge Runners. Edmunds talked to the members, and they agreed enthusiastically to join in the SAR work.

CAPT. STAADT OF FT. LEWIS, WASHINGTON WITH GENE FEAR AND THE LATE AND GREAT HAL FOSS. CAPT. STAADT CONDUCTS THE FIRST SURVIVAL SYMPOSIUM AT FT. LEWIS.



Other groups soon joined, until there are now about a dozen member clubs. A third early volunteer group was the Scubaneers. There is a six-member team of divers on the sheriff's staff, but in cases of extended searches, or searches for more than one victim, the Scubaneers are a welcome addition.

ESAR (Explorer Scout SAR) had been in operation in King County for several years before it was organized in Pierce County. It owes much of its success to Grant Smith, who studied the program and worked hard to get backing for it. In 1966 it was added to the Pierce County SAR forces. In the beginning, their resources were Spartan, but they are now widely recognized and are financially backed by the Tacoma Realty Board.

A more recent development has been the Washington State SAR Council, which meets quarterly in different areas of the state. It contains representatives of each type of search group, and is a forum for discussion of problems encountered in different areas. It provides the SAR Coordinator with knowledge of current search and rescue conditions and needs. Future State SAR Conferences will be conducted under the supervision of this group.

The program through which SAR has contributed possibly the greatest benefit to the people of the state, however, has been the Council for Survival Education. This Council, with its program of educating the public in how to avoid potential danger, and how to survive if lost, has saved lives, added to the enjoyment of the outdoors, and done much to reduce the number of search calls.

Reviewing his years of Search and Rescue work, Sgt. Edmunds considered what might be a dramatic example of a difficult search in which success resulted from the coordination and best use of the forces available. It was well illustrated in the search of July 27th and 28th, 1969, for Andrew Smith and Richard Whitehall, who were missing on Castle Mountain in the Cascades. They were originally discovered by ESAR, but could not be reached from the ground. They had fallen to a ledge on the mountainside, and were there

for thirty-four hours before they were removed by helicopter. They were suffering badly from exposure, and Whitehall was injured by his fall to the ledge. Another night there would have been fatal. The weather had been warm during the day, and extremely cold at night. There was fog; and it was almost pitch dark when the helicopters made their rescue efforts. The ledge was undercut on the mountain. Helicopter pilot Bob Young was ferrying Mountain Rescue men to the scene, when an air change dripped his craft without warning, resulting in a non-fatal crash. A Marine copter then attempted the approach, but could not reach the ledge. Finally, a different type of Coast Guard copter from Astoria made the rescue.

Other states wishing to form SAR councils might benefit from the experience of Washington State. First of all, they must have a desire to present a program to the people FOR the people. They must include representation from the groups that will go into the field, and consider their needs. They must have representation from law enforcement and other government agencies. It must be conducted in such a way that the people can enjoy it, and can realize that all are working together for the sole purpose of finding the victim. It is not a competition for glory; each unit is placed where its skills best suit it. There is a wide variety of terrain in most counties, and it is the luck of the draw which unit happens to be in the area where the victim is found.

The SAR Council helps these varied groups know each other and learn from each other. This teaching program is advanced when county Councils meet at the State-wide SAR Conference. ■

INTERNATIONAL MOUNTAIN RESCUE CONFERENCE

by Judy Bechler

Paul Williams, national Mountain Rescue Association President, organized this highly successful expedition to our neighbors south of us. Seventeen of us descended on Western Airlines at SeaTac early Saturday morning, March 30th. To the wondering eyes of the employees appeared heaps and stacks of suitcases, packs, ice axes, duffel bags, and even a litter. Seemingly taking all in stride, everything was soon being weighed, sorted, and piled, not to be seen again until we arrived in Mexico City. Ome Daiber's pack frame broke upon arriving at the airport; his daughter scurried back to Seattle, retrieving his older, more dependable pack, to be sent on a later flight.

As our plane climbed to its flight altitude of 35,000 feet, our Mountain Rescue Team was welcomed aboard via the loudspeaker system in the cabin. Soon we were descending for arrival at Los Angeles. After a couple of hours there, we were winging south over Baja then turned southeast to Mexico City, arriving there at 4:00 P.M.

We were met at the Mexico City International Airport by Socorro Alpino, the Mexican rescue group with a membership of some 300. The reception was quite eventful, with a huge bouquet of red carnations for the ladies, a bus, two of Socorro Alpino's "ambulancias", photographers, and a number of the Socorro Alpinos. All of our equipment and luggage was piled into the bus by whatever means was available, usually the windows. We boarded and were escorted through the city by the two red "ambulancias", red lights flashing and the sirens periodically sounding, and to our hotel, the Maria Isabel, on the Paseo de la Reforma. After checking in and lugging everything up to our rooms, we met in Paul's room for a short meeting with the Mexicans. Since most of the Americans and Mexicans alike didn't speak the other's language, there was a lot of smiling and laughing and sign language and champagne toasting to take the place of spoken communication. Fortunately, one of the Mexican girls, Olga Zea, speaks excellent English; as a result, she was put in the hot box and kept extremely busy translating back and forth.



PART OF THE GROUP AT THE SOCORRO ALPINO HUT AT 13,000 FEET. L-R: JUDY BEEHLER, LYNN BUCHANAN, MATTIE DAIBER, LEE HENKLE, SHERRY ROWLAND, OME DAIBER, JIM MARTIN, AND DAVE ROWLAND.
(PHOTO CREDIT: JUDY BEEHLER)

From Sunday until Wednesday (March 31-April 3rd), our group played the tourist role and saw as much as we could from early in the morning until late at night. One of the most beautiful sights was the Mexican Folklore Ballet at the Palace of Fine Arts. The building has sunk about twelve feet since its completion in 1934. The inside of the building is very ornate and regal; stained glass windows frame the ceiling, and the stage houses a Tiffany glass curtain that is made of yard-square sections of glass in a steel frame weighing more than a ton, and costing more than \$47,000. The glass is a gigantic painting of the Valley of Mexico, dominated by Popocatepetl. Just before curtain time, an illumination display is given by lights that are played upon the screen, depicting the two volcanoes as they might appear from dawn to dusk. The dancers are fantastic; they play music and perform dances from many parts of Mexico, and varying from Aztec sacrificial dances to the very colorful heel-stomping "El Jarabe Tapatio" or Mexican Hat Dance.

Another interesting place was Chapultepec Park; it has over 2,000 acres of grass, trees, and lakes. We visited Chapultepec Castle, where Maximilian and Carlotta, Emperor and Empress of Mexico, lived. The Nation-

al Museum of Anthropology contains many exhibits of Mexico's indigenous past as well as the cultural life of its presentday Indians. A full week could be devoted to this museum. The Children's Zoo contains many animals which only children can pet; not knowing that one must be 12 years or under to enjoy this privilege, we were quickly chased out by a woman in uniform who was "guarding" the llamas. A taxi driver (who had lived in Washington state for ten years and spoke excellent English) asked to take us to a place in the Park that a tourist had shown him a few months previously. We walked past a monument, past a policeman and a lady in a uniform, and through a gate into a grotto. It was circular, had high terraced walls with lots of greenery and trees, and about fifty free-form plastic colored chairs scattered, each about seven feet apart. Classical music was being piped through speakers set in strategic points, and the acoustics were fantastic! Adults and children alike were sprawled in the chairs, listening intently to the music and relaxing. What a different world than that just a few feet outside where the balloon vendors were selling their wares, where people were playing games, where a "normal" noisy world was going on!

Other places we visited were a

glassblowing factory, the Shrine to the Virgin of Guadalupe, flower markets, the San Juan Basket Market (where we had fun bargaining with the venders), and the Central Market. One day we went to the Zocalo, the plaza in the center of Mexico City. The Aztex god had told his people to build their city at the site where they saw an eagle sitting on a cactus holding a serpent. They saw this here; thus the location of the Zocalo. The National Cathedral (which took two hundred years to complete), the National Palace (which houses Diego Rivera's beautiful paintings), among other buildings, are located there. And, of course, we attended the bullfights.

On Tuesday, members of Socorro Alpino transported us in two of their "ambulancias" to the Pyramids of Teotihuacan, one of the most important archaeological sites in the world. They are quite impressive, especially as you stand on top of the Pyramid of the Moon and Pyramid of the Sun trying to catch your breath after charging full bore up both pyramids at an elevation of over 3000 feet. It's enough to make believers out of sea level people! Later in the day, three of the Mexicans took some of us shopping at a huge supermarket for climbing food, which was an

enlightening experience. Sometimes we had to guess at what we were getting but most everything comes in a wide variety of prices and brands. Fresh fruit was plentiful, and we quickly glommed onto more than we could possibly eat. On the way to the supermarket, we viewed a most unusual sight; a chicken was tied to a tree by a leash much like we are used to seeing dogs tied up in the U.S.

About 11:00 P.M. on Tuesday, Paul received a phone call from Socorro Alpino saying that the bus that was to be used to transport us to base camp on Popocatepetl had broken down, but that it would be repaired by 10:30 A.M. on Wednesday, making us only an hour and a half behind schedule. The plan was to hike in to the refuge hut on Ixti on Wednesday, Climb on Thursday, and return to Tlamacas (the very luxurious base camp at 12,000 feet at the foot of Popo) that evening, then climb Popo on Friday. Saturday was to be our combined Mountain Rescue practice with Socorro Alpino at Tlamacas.

Wed-1-1-1, Wednesday arrived, and so did 10:30 A.M. To make a long story short, the mind-boggling enigma that took place shall remain forever a mystery; I think it had something to do with the age-old "manana" theory, but in any event



SCENE OF POPO FROM JUST ABOUT TLAMACA (12,000 FEET) WHERE THE MAIN CLIMBING HUTS ARE LOCATED. CLIMBERS SHOWN ARE PARTICIPATING IN JOINT MEXICO/MOUNTAIN RESCUE ASSOCIATION RESCUE PRACTICE. (PHOTO CREDIT: BILL ROBINSON OF SEATTLE)

it left poor Paul pulling his hair! The bus never did get fixed, and we ended up with our steadfast two "ambulancias" and a Volkswagen bus that was rented from the handy Hertz Rent-a-Car place next to the hotel. Surely by this time the local residents had begun to think of us as permanent inhabitants of the back doorstep of the hotel, as we had been roosting there for some time with all of our climbing gear spread across the sidewalk. But at 3:00 P.M. (will wonders never cease??), we were off and away to the mountains----- at least after a couple of stops to pick up fuel for our mountain stoves, etc.

Once out of Mexico City; we drove on a modern freeway for a while, then turned off toward the village of Amecameca. The scenery is quite pretty, with fields of maguey, burros being ridden by men with the womenfolk walking alongside (guess women's lib hasn't hit Mexico yet!), occasional glimpses of Popo and Ixti, and even one huge tree with pots hanging upside down from every branch that stuck out, presumably for drying out. We came upon a 1½ ton truck that had just turned over proir to our arrival, so everyone jumped out and ran over to help the driver. He didn't seem to have any noticeable injuries but seemed extraordinarily groggy; the mystery was solved when someone smelled his breath! Later, we came upon another truck that had turned over, but the driver had already been taken out.

Just past Amecameca, the road begins to gain in elevation and one enters a pine forest with lupine and Indian Paintbrush growing profusely. The road becomes quite winding, and before long ends at the base camp for Popo ---- Tlamacas, in the Popo-Ixti National Park. Tlamacas is quite an impressive place for those of us who are used to setting up base camp in a tent. Socorro Alpine has its own stone hut with three small sleeping rooms, bathroom complete with shower, a fireplace, plus a small office. The big climbers' hut, within a stone's throw of Socorro Alpino's hut, sleeps one hundred climbers. Both of the huts have bunks made of reinforced concrete with mattresses. The big hut has a huge sitting room with comfortable chairs, picture windows through which one can

look out at both Ixti and Popo, a large copper-topped round fireplace in the center of the room, and beautiful wall hangings, including a sunburst made of glass. The sitting room is sunken below the level of the rest of the building, with steps made of stone inlaid with exquisite tile. The dining room has nineteen round tables with chairs, a concession from which Coco-Cola, fruit juices and other items are sold, and along one side are twelve natural gas burners, which we were allowed to use to cook our meals, At the other end of the long building are the sleeping rooms and bathrooms, and up about one and a half stories is a lovely viewing room which looks out over the countryside. A marvelous piece of architecture!! And there's a permanent resident, too--- a pigeon. He lives in the dining room, sleeps on a wooden beam, waddles along the floor during dinner hour eating bits of food that fall to the floor, and drinks out of the sink.

Because of the late hour in which we arrived at Tlamacas, it was decided to climb Popo the following day (Thursday), since there is not an approach march as there is on Ixti. As we were finishing dinner and preparing our packs and food for the climb, word came that there were four overdue California climbers on Popo. Immediately the Mexican rescue radios went on, and three Socorro Alpinos with us prepared to go out on a search. Later, one of the Mexicans stayed at Tlamacas to relay radio messages between the mountain and Mexico City. Two of our rescue members, Bill Robinson and Rick Piercy, joined the "rescue". All returned about midnight with the missing climbers, who had left Tlamacas at 3:00 that morning, made the summit at 5:00 P.M. and had made a very slow descent, meeting the rescue group on the trail.

On Thursday at 3:00 A.M., the alarm went off; most of us snuggled down in our sleeping bags hoping to catch a few extra minutes of shut-eye. Eventually, everyone was up, however, preparing for the day's activities. By 4:30 A.M., we were on our way; the first fifteen minutes or so were probably the worst of the climb--up yukky deep black volcanic sand----- one step forward, two steps sliding back. We remained for

AT THE CRATER'S EDGE ON POPO.
L-R: JUDY BEEHLER, LYNN BUCHANAN,
GUSTAVO CRUZ LUGO, DAVE FURREY
(PHOTO CREDIT: JUDY BEEHLER)



a while on the main trail toward Las Cruces route which is wide enough for a vehicle; indeed, a jeep was seen later that day on the trail. To reach El Ventorillo route, we turned off the main trail and climbed up another trail to the crest of a ridge. Following the ridge, we reached a refuge hut at about 14,500 feet. Traversing the side of a hill and gaining another thousand feet, the second hut was reached. From there to the summit, crampons were used for the hard snow encountered. Everyone who was to turn back that day had done so by the time the snow climb began. The climbers arrived back at Tlamacas via Las Cruces route at about 6:00 PM. Those who reached the summit that day were: Don Fager, Scott Fager, Bill Robinson, Jim Martin, Rick Piercy, Clint Crocker, Dave Rowland (all from Washington State), and Steve Veals (Arizona).

Plans were made for part of the group to climb Ixtaccihuatl Friday. However, no one remembered to set any alarm clocks, and 7:00 AM came before anyone awoke. As a result, we spent the morning getting better acquainted with our Mexican friends, taking photographs, and setting up pulley systems in preparation for the Saturday rescue practice with Socorro Alpino. In talking with the Mexicans, we found out that the government of Mexico had given them their three "ambulancias" and had also given them six P-T 400 radios for their communications.

There are about 300 members in Socorro Alpino; this includes not only mountain rescue members, but also scuba divers and spelunkers. The mountain rescue members are put into patrols of ten to twenty members, and every week-end there is a patrol on duty in the Socorro Alpino hut at Tlamacas.

About 2:00 PM, four of us who had not made the summit on Thursday decided to wander up to a refuge at about 13,000 feet, spend the night, and climb La Ruta Central on Popo Saturday. One of the Mexicans, Gustavo Lopez, volunteered to climb with us. The hut is about one and a half hours up the mountain; perched on the rocks, it is bright orange and belongs to Socorro Alpino. Sunset that evening was extraordinary, with layers of fluffy clouds filling the northern sky, creating a show as the sun played on them; we sat on the rocks until the last light of the day had finished illuminating the top of Popo, directly above us. Soon after the sun has set, a beautiful full moon arose, and the cameras again came out.

All too soon, it was 2:00 AM, and we dressed to the sound of the mountain stove heating water for our breakfasts of oatmeal and hot jello. At 3:30 AM, we were underway by the light of the full moon; not even headlamps were needed. The first part of the journey was up a rock ridge much like the north ridge of Mt. Adams in Washington State. At dawn, we had reached the snow level at about

14,000 feet. We stopped for our second breakfast and to crampon up. By 11:30 AM we were at the crater's edge. The crater is fantastic; it is approximately six tenths of a mile in diameter and about 1,000 feet deep ---- very impressive when one is standing on the edge looking in at the smoke and steam coming out of the crater bottom. Occasionally the smell of sulfur was quite strong. There is a Shrine to the Virgin of Guadalupe on top, and someone had brought up dried flowers to place on the shrine.

We remained on the summit for an hour, taking pictures and resting, then began our descent via Las Cruces. At the high hut on this route, we stopped to dump the black sand out of our boots, then continued on down to the Socorro Alpino hut. We collected our sleeping bags, stoves, and extra food and finished our descent to Tlamacas, arriving there at 2:00 PM. Those who reached the summit were: Lynn Buchanan, Judy Beehler (Washington State), Dave Furrey (Arizona), and Gustavo Lopez (Mexico).

While we had been climbing Popo, the remainder of our Mountain Rescue group and Socorro Alpinos had spent the day in a practice session on some rocks just back and up from the huts at Tlamacas. The practice included raising and lowering the litter, setting up pulley systems, and rappeling. In the early afternoon, our group was served lunch which had been prepared by Socorro Alpinos.

At about 4:00 PM, the "ambulancias" and VW bus were loaded and we departed Tlamacas for Mexico City. At Amecameca, everyone stopped while a tire was being repaired, and we visited the open-air markets and did a little last minute bargaining.

Back in Mexico City during rush hour, we stopped at a red light. During this interval, a little boy ran up (must have spotted us as "turistas") and started soaping the front windshield. About this time, the light turned green, cars started honking, and chaos enveloped. Finally, someone tossed the boy a peso and he rinsed off the soap so Paul could see to drive. At the hotel, about twenty dirty, grimey Americanos in climbing clothes and with packs on their backs made their way into the lobby of one of the finest hotels in Mexico City packed with people dressed

in evening clothes and finery. Surely the hot water supply in the hotel must have run short within the next hour as many gallons of hot water mixed with Popo sand ran down the drains.

On Sunday, five of our group left with two of the Socorro for Orizaba, which they climbed Monday. Those making the summit were: Don Fager, Clint Crocker, Jim Martin, Rick Piercy, and Bill Robinson. Paul and Pat Williams left for the sunny beach of Puerto Vallarta. The rest of us hired a taxi and spent part of the morning at Chapultepec Park. At noon we left for the airport and flew to Seattle via Los Angeles.

All in all, our trip was successful. We accomplished our goals ---- that of establishing positive relations with the Mexican rescue group, and that of doing a little climbing in Mexico. We were all very impressed with the Socorro Alpinos, and indeed, with almost all of the people we met in Mexico. They are a warm, friendly, helpful people who will go out of their way to help their neighbors to the north in any way they can.

The Socorro Alpinos took time off from work in order to take us to the Pyramids, shopping, and climbed Popo and Ixti with us. Some of them may be visiting the United States this summer, and we hope we can reciprocate the generosity and friendliness they showed us as their guests. Those attending the conference from Washington State were: Paul and Pat Williams, Dr. and Mrs. Don Fager, Maureen Fager, Scott Fager, Craig Fager, Lynn Buchanan, Judy Beehler, Dave and Sherry Rowland, Lee Henkle, Clint Crocker, Ome and Mattie Daiber, Bill Robinson, Jim Martin, John Wynne, and Rick Piercy. Coming from Arizona were Dave Furrey and Steve Veals. ■

LETTERS TO THE EDITOR

ON THE ARTICLE "THE RESCUE PEOPLE"

The story on "The Rescue People" by George Sibley will undoubtedly stir up some smoke. I realize it is satire but some of it is in poor taste and he wrote about twice as many words as necessary to make his point. It is my sincere belief that a person who needs to use profanity has an inadequate vocabulary and is simply trying to cover it up.

(name withheld)

**

George Sibley's article (story?) was outstanding and certainly exposes the mentality of some types. There are few enough good writers like Mr. Sibley, keep him.

John Wehbring
SAN DIEGO MOUNTAIN RESCUE TEAM

**

Rumor has it that some people were unhappy with the fiction article in the last SAR Magazine. My wife (Wendy) and I really enjoyed it - as did most of the other ESAR leaders I've talked to.

Jon Wartes
WESTERN REGION EXPLORER SAR

(The majority of SAR people I've talked to tremendously enjoyed "The Rescue People" by George Sibley. ED.)

ON DESERT SEARCH.

In response to your request of things possibly learned from this (Fred Mundy) search (in Baja California). 1. Language problem. Our experience, not only from this search, but many others in Baja, shows that it is mandatory to have a minimum of one team member who is fluent, I stress fluent, in Spanish. On the Mundy search we covered an 80-mile stretch of road through ranching country and we

(the De Anza Rescue Unit of So. Calif.) were able to properly question and alert approximately seventy-five ranchers and individuals along the way. We had three members who spoke fluent Spanish, plus a Mexican Bombero (Fireman) with us. It is usually standard procedure for us to operate with the Mexican Bomberos when in Baja. In the past, as well as on the Mundy search, we have worked in the field with non-Spanish speaking members teamed with Mexicans who spoke no English. Problems of communications for this team were resolved on the Mundy search by keeping a bilingual radio operator available in communication with the team. Example; Two Mexicans who spoke no English and myself, severely limited in Spanish, were tracking together and when our limited communications posed a problem we merely communicated through the radio operator who was bilingual. It worked beautifully and the operation ran smoothly with no communications problems the entire day.

Problem 2, temperature. Excessive temperature problems are something our Unit has had to cope with since its inception in 1969, being located in an area (Imperial Valley) where 110°F plus temperatures are normal for a period of three to four months each year. In June 1974, there were only three days with temperatures under 100°F and sometimes reaching as high as 115°F. On the Fred Mundy search the weather was not excessive, the highest temperature being approximately 105°F. Because of the remoteness of the area the main problem was potable water, plus rescue personnel who came into the area unprepared for the complete lack of local resupply of water, food and fuel. Those who did come fully prepared were forced to share, with the end result of everyone being short on supplies. On a desert operation I feel that the first requirement would be a minimum of five gallons of water per day per man, plus food and enough fuel to get into the area and out again, as well as sufficient supply to utilize the vehicles on the search. Note; some vehicles showed up at the search site with barely enough fuel

to return, let alone to be utilized on the search. My suggestion on water requirements are based not on the amount needed to survive, but the amount necessary to work and maintain a decent margin of safety. One heatstroke victim could use up many gallons of water in an attempt to control body temperature. In this type of terrain and temperature I also feel there should be no more personnel in the field than can be quickly evacuated in available surface vehicles. Note; we have seen temperatures as high as 125°F when no one can work safely. These high temperatures also exclude the use of aircraft. Our second requirement is a good backup. For the teams in the field the first backup is base camp. There must be a quick resupply of water, food and fuel available. I mention fuel because due to the distances in our area, as well as the heat, 4WD vehicles are often our only transportation and are used extensively in our searches where time is of the essence. Second backup, in our case, is our Control back in town, with whom we have always maintained contact, even on the Mundy search. Even though we may not be in charge of an operation we maintain contact with our Control who can supply us with anything necessary. On this particular search, Control upon request, was able to arrange for resupply, part of which was done by airdrop (vehicle, helicopter, etc. parts). This type of a backup we feel is very necessary for searches in remote areas such as the Mundy search. There is often a risk in our desert when transporting searchers by air into a search area with the same method of pickup planned. Adverse weather conditions, wind, heat, etc. strike suddenly and often make air travel impossible. These things must be taken into consideration when operating in the desert.

Ed Goodell, President
DE ANZA RESCUE UNIT

(Thanks so much for the enlightening insight for desert search. ED.)

CALENDAR

1974 September 13-14
NATIONAL BOARD MEETING
NATIONAL JEEP SAR ASSOCIATION
Tonopah, Nevada
D.M. Dickson, Commander
1225 - 35th St.
Ogden, Utah
(801)621-6713

1974 September 20-21
CIVIL AIR PATROL NATIONAL BOARD MEETING
AND CONVENTION.
Hotel St. Francis, San Francisco, Calif.
HQ CAP-USAF/AC,
Maxwell AFB, Ala.36112

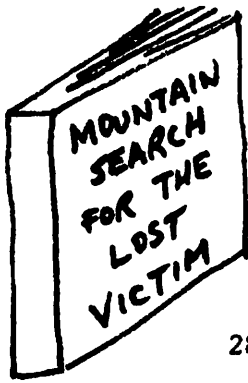
1974 September 28-29
UTAH SAR SEMINAR
Zion National Park
Paul Koenig, P.O. Box 8100,
Salt Lake City, Utah 84108
(801)328-5271

1974 September 30 - October 3
SAR MISSION COORDINATOR'S SCHOOLS
Fairchild AFB & McCord AFB, Wash.
Rick LaValla, Washington State DES
4220 Martin Way, Olympia, WA.98504
(206)753-5255

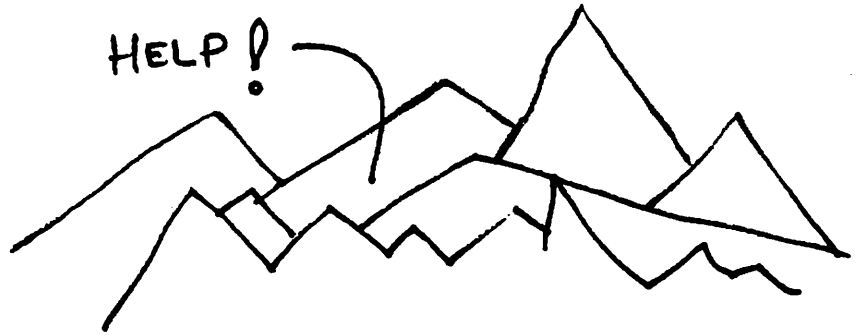
1974 October 26-27
AMBULANCE SOCIETY OF AMERICA,
ANNUAL CONFERENCE.
Radisson South Hotel, Minneapolis, Minn.
ASA President, 230 E. 5th St.,
Saint Paul, MN.55101
(612)227-7067

1974 November 23-24
MOUNTAIN RESCUE ASSOCIATION,
FALL NATIONAL CONVENTION.
Sacramento, California
Vance Yost, MRA Executive Secretary
P.O. Box 428
Mountain Center, Calif. 92361
(714)659-2795

1974 December 6-8
NATIONAL ASSOCIATION OF SEARCH AND RESCUE
COORDINATORS CONVENTION.
Sheraton Motor Inn, Portland, Oregon.
John H. Olson, Room 8, Capital Building,
Salem, Oregon. (503)378-4124.



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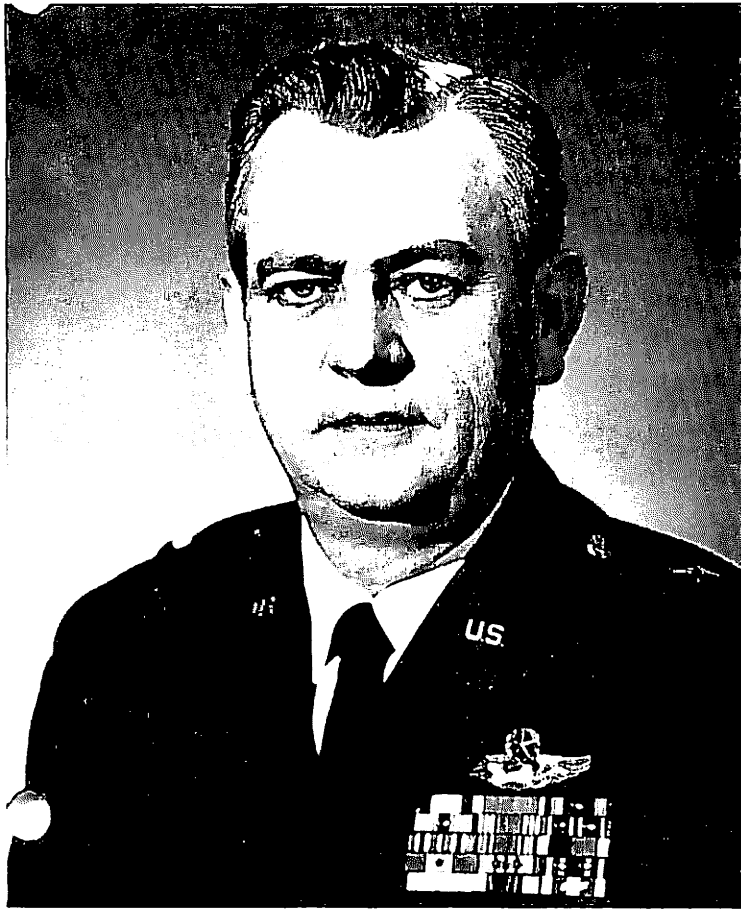
1. Introduction
 2. The victim
 3. Responsible agency
 4. Strategy
 5. Tactics
 6. Base camp
 7. Searcher
 8. Training
 9. Contingency analysis
- Appendix (includes extensive bibliography and an index)

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NEWS AND RUMORS



Brigadier General Glenn R. Sullivan, left above, commander of the life-saving Aerospace Rescue and Recovery Service (ARRS), retired July 31, 1974. General Sullivan, who brought about several important advancements and refinements in search and rescue (SAR) operations during his nearly year and a half tenure, will be replaced by Major General Ralph S. Saunders, shown right above, recent vice commander of MAC's 22nd Air Force at Travis Air Force Base, California.



JON AND WENDY WARTES OF WESTERN REGION EXPLORING SEARCH AND RESCUE ARE SEEN ANSWERING QUESTIONS AT A RECENT MEETING IN LOS ANGELES, CALIFORNIA IN BEHALF OF ESAR. THE WARTES, FROM WASHINGTON STATE, HAVE BEEN ON A PILGRIMAGE OF THE WESTERN STATES HELPING PROMOTE AND ESTABLISH ESAR POSTS.

**

Thurs., June 13, 1974

Los Angeles Times

Helicopter Flies 1,600 Miles to Aid Fishermen

SAN DIEGO—Two severely injured fishermen were flown here early Wednesday in a 13-hour, 1,600-mile rescue flight, believed to be one of the longest helicopter rescue missions ever flown off the United States.

An Air Force H-3 Jolly Green Giant helicopter was refueled five times by slow flying tanker planes en route to the tuna clipper Proud Heritage and on the return trip with Tony Rodrigues, 46, and Tony Silva, 33.

The vessel was more than 800 miles southwest of here Sunday when the two crewmen were injured in a cable winch accident. Rodrigues lost the lower part of a leg and Silva a part of a hand.

They were in satisfactory condition Wednesday at Villa View Hospital.

Efforts to aid the two fishermen began Sunday shortly after word of the accident reached the Air Force's Rescue Coordination Center at McClellan Air Force Base, near Sacramento.

An HC-130 cargo-rescue plane, with a two-man pararescue team aboard, was sent from March Air Force Base, near Riverside.

It was growing dark when two reservist members of the 303rd Aero Space Rescue and Recovery Squadron, M. Sgt. Robert Williamson and S. Sgt. Michael French, parachuted into the ocean near the Proud Heritage.

As the plane circled, Capt. Phil Aldrich, a flight surgeon with the 22nd Bomb Wing, radioed medical advice to the two paramedics, and equipment and blood was dropped.

When Williamson and French determined that the injured men needed further treatment as soon as possible, the Air Force mounted other efforts.

Two HC-130 tankers from March AFB and a helicopter were ordered to North Island. The copter took off at about 2:30 p.m. Tuesday and picked up the fishermen at 6:20 p.m., returning here at 1 a.m. today.

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**

SCOTT RESCUE CENTER NOW SERVES THE NATION. The responsibility for search and rescue efforts throughout the contiguous 48 states has been assumed by the new Air Force Rescue Coordination Center at Scott AFB. The center, located in the building which houses the Headquarters Aerospace Rescue and Recovery Service, was to be dedicated in July of 1974. The centralization of SAR control started last May 10 when the RCC for the mid-western states was shifted from Richard-Gebaur Air Force Base, Mo., to Scott. The second phase came on May 30 when the Eastern states' responsibility was shifted from Eglin AFB, Florida, to Scott. Finally, control of SAR in the eight most Western states was shifted from McCellan AFB, California, to Scott RCC on June 14.

SOURCE OF BUZZING 'RATTLES' MOTORIST

TAMPA (AP)—Lloyd Allison felt a bump against his leg as he drove home from work. He thought it was just something loose on the floor.

He heard a buzzing sound also but ignored that too, figuring it was engine noise.

When he reached his garage and reached for the car keys, he found the source of the bumping and buzzing — a rattlesnake coiled between his feet.

"I damned near dropped dead," he recalled. "Most of the snake's body was

under the front seat, with its head and neck protruding out between my feet. I didn't know what to do. I was simply petrified."

Allison, 54, sat perfectly still for about five to seven minutes. With steady, careful movements he picked up the microphone of his two-way radio and called for help. But he dropped the mike and then, out of desperation, he opened the car door.

As he debated whether he should leap, the snake slithered out the door.

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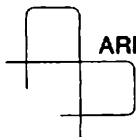
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ADDRESS _____
CITY _____ STATE _____ ZIP _____

STATE SAR COORDINATORS

The known State SAR Coordinators, or contacts, for NASARC member states, and other western states, is provided below. For those states not listed, we suggest you contact your State Department of Emergency Services or Civil Defense, for SAR information.

ALASKA* Alaska Disaster Office, 1306 East Fourth Ave., Anchorage, AL. 99501.

ARIZONA Division of Emergency Services, State Capitol Bldg., Phoenix,
Leonard E. Fitzgerald Arizona 85007. (206)271-4671.

CALIFORNIA Office of Emergency Services, 2800 Meadow View Road, Sacramento,
Bob E. Hill California 95832. (916)421-4990.

COLORADO Division of Emergency Services, EOC, Camp George West, Golden,
Blair E. Nilsson Colorado 80401. (303)279-1101.

DELAWARE* Emergency Planning & Operations, P.O. Box C, Delaware City, DE. 19706.

IDAHO Idaho Bureau of Disaster Relief & Civil Defense, Len B. Jordan Office
Merlin Tebbs Building, Boise, Idaho 83720. (208)384-3460.

MONTANA* Jack Wilson, Montana Aeronautics Commission, Helena, Montana 59601.
(406)449-2506. (Air Searches)

Gil Gilbertson, Montana Civil Defense Division, P.O. Box 1157, Helena,
Montana 59601. (405)449-3034. (General Information)

NEVADA Civil Defense & Disaster Agency, State Capitol Building, Carson City,
Lou Murphy Nevada 89701. (702)882-7473.

NEW MEXICO New Mexico State Police, 2501 Carlisle Blvd. N.E., Albuquerque,
Sgt. Whitehouse New Mexico 87110. (505)842-3082.

NORTH DAKOTA North Dakota Civil Defense, Box 1817, Bismarck, ND. 58501.
J. F. Monroe (701)224-2111/2113.

OREGON Department of Emergency Services, Room 8, Capitol Building, Salem,
John Olson Oregon 97310. (503)378-4124.

SOUTH DAKOTA Civil Defense Division, Dept. of Military Affairs, State Capitol
Richard Trankle Building, Pierre, SD. 57501. (605)224-8256.

UTAH Office of Emergency Services, P.O. Box 8100, Salt Lake City, Utah
Paul H. Koenig 84108 (801)328-5271.

VIRGINIA Office of Emergency Services, 7700 Midlothian Turnpike, Richmond,
George L. Jones Virginia 23235. (804)272-1441.

WASHINGTON Department of Emergency Services, 4220 East Martin Way, Olympia,
Rick LaValla Washington 98504. (206)753-5255.

WYOMING* Marvin Stevenson, State Aeronautics Commission, 200 Eighth Ave.,
Cheyenne, Wyoming 82001. (307)777-7481. (Air Searches)

Jacob Herzog, Disaster & Civil Defense Agency, 5500 Bishop Blvd.,
Cheyenne, Wyoming 82001. (307)777-7566. (General Information)

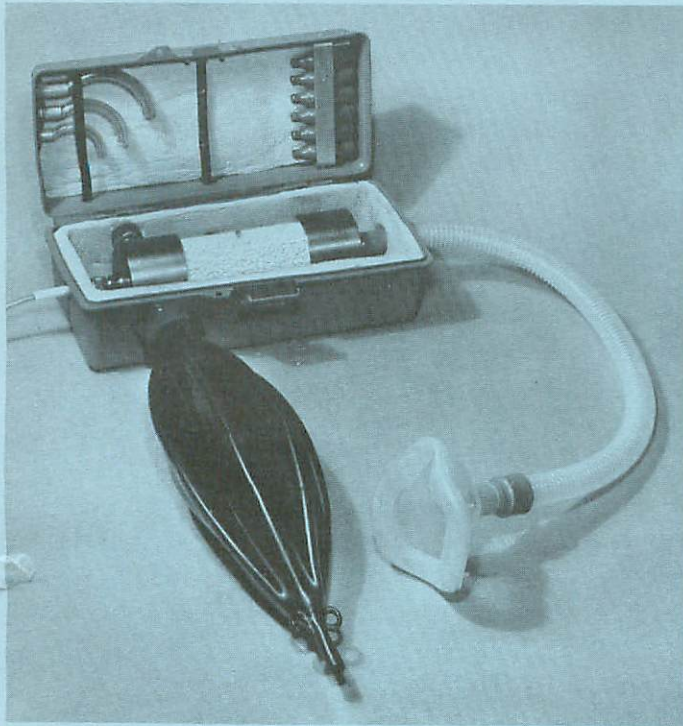
PUERTO RICO Office of Civil Preparedness and Defense, Box 5127, San Juan,
Jose A. M. Nolly Puerto Rico 00906.

BRITISH COLUMBIA Provincial Emergency Programme, Parliament Buildings, Victoria,
Bjarne Thorshaug British Columbia, Canada. (604)387-6613.

* No designated SAR Coordinator.

EMS O₂ THERMO-GEN*

AN EFFECTIVE AND SAFE SYSTEM TO REWARM THE CENTRAL CARDIO-PULMONARY CORE IN THE TREATMENT OF HYPOTHERMIA



SPECIFICATIONS:

Soda-Lime Volume	500 Grams
Maximum CO ₂ -Soda-Lime Reaction Temperature	60°C
Useable Soda-Lime Reaction Time	6 Hours
CO ₂ Cartridge Volume	5 Liters
O ₂ Reserve Bag Volume	5 Liters

Fittings:

O ₂ Inlet	Standard DISS 9/16 x 18
O ₂ Outlet	7/8" (22 mm) O.D.
O ₂ Reserve Bag	7/8" (22 mm) O.D.

Accessories Supplied:

O ₂ Outlet Hose .. 36" Insulated, Double Lumen, Pressure Compensating	
O ₂ Reserve Bag	5 Liter, Rubber
CO ₂ Cartridges	6 ea., 5 Liter, Medical Grade

Dimensions:

Model HK-1 (excluding fittings)	3" DIA x 9" L
Insulated Case	3 3/4" H x 6 1/2" D x 13" L

Total Weight (including all accessories)

PRICE: \$170.00 F.O.B. MONTROSE, CA.

FEATURES:

- PROVIDES HEATED O₂ FOR INSPIRATION
- ELIMINATES RESPIRATORY HEAT LOSS
- FAST, EFFECTIVE HEAT PRODUCTION
- SAFE, MAXIMUM REACTION TEMPERATURE
- COMPACT AND LIGHT WEIGHT
- SIMPLE TO OPERATE
- LOW COST — RELIABLE DESIGN

DESCRIPTION:

The EMS Model HK-1 O₂ Thermo-Gen* provides heated, inspiratory oxygen for rewarming the central, cardio-pulmonary core of the hypothermic patient. This heated, inspired O₂ offers a rapid and important heat gain to the mediastinum and the interior of the heart. The mediastinum is heated by way of the surrounding lung tissue and the interior of the heart receives heated blood from the pulmonary artery. Heated O₂ also has the advantage that it eliminates the critical heat loss due to respiration in the hypothermic patient.

A soda-lime heating element, in reaction with carbon dioxide, is used in the EMS Model HK-1 O₂ Thermo-Gen* to provide a maximum reaction temperature of 60°C to heat the inspired O₂. The temperature of the O₂ at the face mask is typically less than 50°C and this is considered safe and tolerable for the hypothermic patient. The insulated, double lumen O₂ hose that connects the unit to the patient's face mask provides a suitable dead space for the desired CO₂ build-up. Also, since water vapor is produced in the CO₂ soda-lime reaction, the inspired O₂ is richly humidified, further benefitting the hypothermic.

The EMS Model HK-1 O₂ Thermo-Gen* is safe and simple to operate, and non-medical personnel can be instructed in its use in a minimum period of time. The unit is portable, compact and light in weight, making it ideally suited for all rescue services. Also, since the Model HK-1 O₂ Thermo-Gen* is a closed-circuit rebreathing system, there is a maximum conservation of heat and O₂. One hypothermic patient can be supported for up to 16 hours on a standard 360 liter, "D" size O₂ cylinder and multiple patients can be supported for proportionally shorter periods on the same O₂ supply**. The Model HK-1 O₂ Thermo-Gen* may be sterilized by any of the cold sterilization methods (Zephiran Chloride 1:750, Cidex, etc.).

EMERGENCY MEDICAL SYSTEMS CO. P. O. BOX 591 MONTROSE, CA. 91020 (213) 248-3057

NATIONAL ASSOCIATION OF SEARCH and RESCUE COORDINATORS

P. O. BOX 8100 SALT LAKE CITY, UTAH 84108

NASARC President (Acting): Blair Nilsson, Secretary/Treasurer: Paul Koenig.

The National Association of Search and Rescue Coordinators (NASARC) is organized to support, coordinate, develop, inform, promote and implement search or rescue capabilities with the underlying principle of protecting life and property. It provides a medium for the liaison between State, Federal, local and volunteer search and rescue agencies and organizations. In addition, the Association promotes and coordinates survival education programs to better equip the general public for physical and mental compatibility with their environment, both from natural and man-made disasters.

State SAR Coordinators are primary members and delegates to the National Board. Organizations and individuals involved in SAR activities may apply for associate membership. Organization memberships are \$10 per year and individual memberships are \$5. per year. Membership includes a years subscription to Search and Rescue Magazine. To apply for membership, fill out the attached form and forward, with your check, to your State SAR Coordinator, or directly to the NASARC. Organizations please indicate skills included among members.

APPLICATION FOR ASSOCIATE MEMBERSHIP

New ___ Renewal ___ Individual(\$5.) ___ Organization(\$10.) ___ Date ___

NAME _____ ADDRESS _____

CITY _____ COUNTY _____ STATE _____ ZIP _____

SAR AFFILIATIONS _____

ORGANIZATIONAL SPECIALTY _____

SAR SKILL SPECIALTIES: Advance Red Cross ___ EMT ___ Para-Medic ___ Doctor ___

Pilot(Rating) _____ Communications License _____ Nat'l. SAR School Grad. _____

Law Officer ___ Parachutist ___ Scuba Certified ___ Mtn. Rescue Certified ___

4WD Operator ___ Tracker ___ Snowmobile Operator ___ Dog Handler ___ ESAR Qual. ___

Other(Describe) _____

APPLICANT OR ORGANIZATION OFFICER SIGNATURE _____

Approved for membership by _____, _____ State SAR Coordinator.

(Membership includes one year subscription to Search and Rescue Magazine)