# Mountain Rescue Leadership

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The role of volunteer rescue leader is most demanding, requiring great skills, including knowledge of rescue procedures and jurisdictions of responsible agencies. But most important is a knowledge of psychology, the ability to deal with volunteers, and a great sense of tact and diplomacy.

The following material represents rescue procedures and concepts developed over many years by the Mountain Rescue Council. Rather than authorship, this is simply a reduction of word-of-mouth teachings handed down from generation to generation of rescue leaders.

AUTHOR

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MOUNTAIN RESCUE LEADERSHIP

THE OPERATION COORDINATOR

JURISDICTION

The role of the rescue leader who organizes the beginning of the rescue is the most difficult and requires the greatest knowledge. Here the rescue can be effectively started or organizationally demolished. Most rescue calls do not require immediate urgency, and careful attention to details is imperative, since a failure here can cause great problems in the field.

It is imperative that the voluntary rescue leader recognize that the unit has no inherent jurisdiction to rescue, and that the only authority to activate is a derivative one through delegation of authority from the responsible agency. In most states, the basic authority to rescue is vested in the sheriff, through his duty to preserve the peace, and usually it is not specifically spelled out by the law. The sheriff acquires his duties as much from tradition as from law, and his immediate ability to act in the geographic area of his county. National parks are an exception, and form islands of federal authority. Here the park ranger has full authority, and will usually assert it. The military will assert full authority over its equipment, such as a downed military aircraft, and a conflict may arise between the local sheriff and the military or other agencies, over dominant authority. The wise rescue leader will stand clear until the battle is won, and then follow the victor.

State Aeronautics Commission authority is usually airborne only, and authority shifts to the sheriff on the
ground at the time of location of a crash site. State Patrol jurisdiction usually is limited to the highways, and the U. S. Forest Service, as essentially a land husbander, has no jurisdiction, limiting its role to immediate help until the sheriff arrives. Accordingly, it is necessary that you recognize that a call from the State Patrol, the Forest Service, and especially from a private organization or individual, gives you no right to act without clearance from the sheriff. Ordinarily you will be operating under the sheriff's delegated authority, but remember that the sheriff may delegate this authority to someone else, such as a trusted forest ranger. Then you must operate under the latter's direction.

FIRST CALL

When the first call comes, obtain as much information as possible, although it is frequently sparse and occasionally inaccurate. Obtain the names, addresses and ages of all members of the party; the number and names of lost or injured members; the type and extent of injuries; whether the terrain is rock, snow or brush; the weather at the site; the time of the accident; party equipment and experience; and the location of the victim(s). In remote country it is vital that the location of the accident be determined with great accuracy, not only so that the victim can be found, but also so that the operation coordinator can determine which sheriff has legal jurisdiction and responsibility.

Frequently there is a choice of routes for approach, and the best route must be chosen. The uninjured of a weak party may require assistance to safety after long hours of waiting, especially in adverse weather.

If the call is received indirectly, immediately call the
person who has come out for help, to verify and pro-
cure complete information. Be certain that he is in-
structed to stay at a fixed point to assist in guiding the
rescue party to the victim.

At this point in the sequential procedure, it is desir-
able to talk to another rescue leader to formulate a
course of action and to confirm your judgment and
plans. Consideration must be given to other agencies
and organizations involved and their activities, avail-
ability of local men and equipment, advisability of ob-
taining specialized equipment such as snow cats or
cable systems. Items such as rendezvous points and
times must be determined.

Before your unit becomes operational, you must clear
with the responsible agency, usually the sheriff, pro-
viding him with the facts and your tentative plans. Di-
plomacy demands that you ask whether you can help
by doing certain things, not tell him what you are going
to do. Call him back later to provide final details.
Be prepared for a change in the duty; you may find
yourself talking to a sheriff's radio man who is total-
ly unbriefed, despite the fact that the operation has
been going on for hours.

Occasionally a call of immediate urgency, such as a
life-or-death rush to a chopper, will force you to ac-
tion without clearance from the sheriff. In these
cases, remember that the future existence of your
unit depends on your ability to obtain the ex post facto
blessing of the sheriff for your actions. Without calls,
a rescue unit will soon die, and the lives of your com-
rades in need in the mountains in the future will be
needlessly jeopardized.

If your state has Civil Defense accident coverage for
possible injuries sustained by your rescue party, the
sheriff must make certain that the coverage becomes effective, usually through the allotment of a C.D. mission number through the local office of Civil Defense. You must remind him to take this step early in the proceedings.

Now you must do three things almost simultaneously. First, activate your unit by starting the call-out. Second, procure a helicopter in an accident or search case. The military rightly refuses to send helicopters for body evacuations, because of the risk to men and equipment, except when there is great hazard to ground personnel unless a chopper is used. Third, procure a mountain doctor. The order of importance will vary from operation to operation.

Remember that you cannot make more than six to eight important calls in an average hour. You must delegate some of the above jobs to others, if at all possible. Usually the calls in a rush operation can be divided by agreement with the rescue leader with whom you confer. After the above steps have been taken, it is wise to alert neighboring rescue units, since they may be needed for support or to cover for your unit in case of a second emergency, and to notify your local sheriff if you are being called out of your own county.

HELIICOPTERS

Call the best locally available helicopter with the greatest capacity to lift at high elevations. You should already have been apprised of the availability and lift capacities of local choppers. If the Air Force cannot respond, do not overlook Naval Air or Coast Guard, Army, National Guard, or police.
If all of the first-rate choppers at a base are unavailable, don’t let them push some tired old dog off on you that does not have the ability to do the job at the elevation of the accident, especially if a cable lift-off is required. At least, know that what you have procured is the best available from all sources. Remember, the military choppers come for free, and you may easily obligate your unit to pay a large civilian chopper bill.

Generally, the military will prefer to respond to a helicopter call directly from the responsible agency. Occasionally, they will respond to an authoritative-sounding request, especially if time is short and the matter is urgent. In this case, be sure the sheriff calls later to confirm. Many sheriffs feel that duty requires them to place the call for the chopper themselves, and this frequently requires a follow-up call by you to arrange coordination and ground meetings. It is a severe breach of diplomacy to call the military before the sheriff in such a situation.

Usually you will try to put two experienced rescuers aboard the chopper to guide it to the accident site; one of these should be a doctor or highly experienced first aid specialist. These men should have a thorough knowledge of the mountain area. Frequently they, with the aid of the chopper crew, will be able to effect a rescue alone.

Remember that some choppers have a short range, and that fueling en route may be required. Day-nite flares are essential for bringing in choppers, to show location and wind direction.

Occasionally much time is expended in procuring a chopper, and occasionally you will fail.
THE CALL-OUT

You cannot act on the assumption that the chopper will be able to effect the rescue, and you must simultaneously dispatch the ground party. It is impossible for the Operation Coordinator to organize the town end of the rescue and also lead in the field. The time required for good organization, usually a minimum of three hours, renders it almost impossible for him to do both jobs effectively. In a dire emergency, it may be necessary to abandon the in-town job, but be prepared for much criticism. At least leave a wife or a smart, if inexperienced, member to follow up.

Evaluate your manpower needs. Usually six men are needed to carry a litter over broken ground, and they will carry effectively for only four or five minutes. This requires three or four relay teams. A minimum of three teams is desirable for a one-mile carry over broken terrain, but four teams will do a better job.

Frequently other units can assist you in providing manpower. It is a good practice to call them, since call-outs make the unit more effective, and they will reciprocate when they have need. In addition, it gives the unit leaders a chance to become acquainted and develop a good working relationship.

DEPARTURE

In a large city, it is desirable to break the city into areas to facilitate the call-out, which is usually done by a dedicated and patient wife. This speeds the call-out and allows pooling of men in cars. This is not necessary in a smaller town.

It is usually desirable to have a meeting place and
departure time, so that the operation can be called off if the evacuation is effected by other means. However, the delays and waiting depress your volunteers, so the wait should not exceed half an hour, if possible. Remember that you will have to inform the sheriff of your departure time, estimated time of arrival, and you usually will have to provide him with the names of your men for Civil Defense insurance coverage.

Experience has shown us that it frequently takes several hours from the first call to get the men moving into the field, especially if time is not pressing as in the case of a search or a known death. A little time is well spent here, since careful organization will start a smooth operation.

THE ADVANCE TEAM

Occasionally an urgent call will demand immediate action to save life. First, call the military directly and dispatch the chopper immediately. (Now read "First Call" again;) Arrange to have the chopper meet with two of your men, as set forth above. Simultaneously, dispatch a fast advance ground party of three or four good men, including a first aid specialist or doctor, to reach the victim as fast as possible in order to administer first aid and keep the victim alive. Careful haste is the key word. In all likelihood, immediate confusion will result -- the follow-up party will not know who has gone where, but the urgency of the situation will excuse this initial confusion.

AS SOON AS POSSIBLE; call the sheriff, with diplomacy, to cover your actions in proceeding without his approval. If life is at stake he will understand your haste, but he wants to hear about it from you,
not from the news media.

**NEWS MEDIA**

More friction results from improper handling of publicity than from any other one source. Ordinarily the sheriff (or responsible agency) should make the news releases, and may occasionally fail to give your unit proper credit. However, if your unit by-passes him to the media and he gets what he considers insufficient credit, he may try to effect the subsequent rescues without calling on you. This not only weakens the unit, but jeopardizes the lives of the victims. Remember, as an elected official, he wants to keep his name before the public.

If you do release information to the media, be sure that not only the responsible agency but that all other assisting units receive complete recognition. They also refer calls to your unit.

Ordinarily it is imprudent to call the news media. However, if they call you, you can usually give them careful precise information and make certain they are referred to the responsible agency. Sometimes a thin-skinned responsible agency will prevent the release of any information to the news media. A denial of information will usually turn the reporter to an unreliable source, perhaps one of your own men who has been in the field. Remember that a reporter is looking for a story that is readable or listenable, and he may distort or slant information received to make it more interesting to the public. So talk as little as possible, be very accurate and factual, do not conjecture or give opinions, and be prepared to be misquoted. The reporter loves to project the hero image. The average rescuer is an average climber, perhaps middle-aged and
somewhat out of condition. The reporter will change this image for his public.

CLUB CLIMBS

If the rescue involves a club climb, it is diplomatic to call the club climbing chairman or the club president. This call should be placed early in the proceedings, as the club officials will receive many calls from relatives and friends, and they need to be briefed in order to answer questions intelligently. Remember that climbing club support will bring you funds, either directly or indirectly, as well as future rescue members.

THE FOLLOW UP

The team is dispatched. It is 3:00 a.m., and you have been on the phone for six hours. You are exhausted, physically and mentally. You may be able to retire now, but your job will go on until the last man returns. You must stand by to supply special equipment or additional manpower as requested.

Frequently the Base Operation Leader will neglect to inform you of the progress of the operation, unless he suddenly needs something from town, and then he will want it immediately.

By this time the snafus have appeared, and there are ruffled feathers. You forgot to call the sheriff to keep him informed, or one of your own unit leaders was overlooked in the rush. Perhaps a friendly unit nearby did not get called and they are angry, especially if one of their own men is the injured victim on the mountain. Or you forgot to send a logical
The Operations Coordinator has the most difficult of all the major jobs. He must have a mind for precise details. Most of all, he must have supreme tact!
QUALIFICATIONS

The Base Operation Leader normally is a skilled leader who has participated in the field extensively. He must know field rescue procedures and must be able to anticipate and recognize field problems. In event of communication failures, he must be able to anticipate field needs, and even anticipate responses to emergency procedures. He must know the abilities and limitations of field personnel.

Generally, on most operations, his is a skill comparable to that of the in-town coordinator.

RENDEZVOUS

The Base Operation Leader usually will assume his duties at the rendezvous point, but on occasion a rush operation will require that he go directly to the base of operations. At the rendezvous he has the duty of checking with the Operation Coordinator for final instructions, and of providing him with a list of the men who are being dispatched to the field. Plans should be made for stragglers, for routing, further check points if advisable, estimated time of arrival at base, and various other matters. Unless he has excellent radio communications (a rare event), the rendezvous must be at a phone, usually a pay phone. Usually the rendezvous is determined long prior to the call-out and provides a place where vehicles can be left in safety.
CONVOYS

We have found convoys to be generally unsatisfactory since their speed is limited to that of the slowest vehicle, and more specifically because they seem to occasion much waiting, which is hard on volunteer morale. They do have an advantage in that in the event the rescue is aborted due to a successful chopper pick-up or a lost party walking out, the whole party can be stopped. It is desirable to distribute portable radios through the convoy, if available, so briefing and some basic planning, such as the designation of team leaders, can then be accomplished en route. Occasionally, in real emergencies where time is vital, police vehicles can be obtained to cut traffic for the convoy.

VEHICLE SPEEDS

Vehicle speeds should be moderate. The time gained through excessive speed is usually more than lost through other delays in planning. Since the vehicles are not emergency vehicles, red lights or sirens should not be used. We have found that yellow lights are very adequate. The police will normally tolerate a small amount of careful speeding. Always make a complete stop for all red lights. Rescue emergency banners prominently displayed on vehicles are sometimes useful in helping to get through heavy traffic and in making contact with other vehicles en route to the same mission.

ROUTE

As you leave the main road and take to the dirt roads, the route must be marked, usually with plastic trail
markers. Remember that others will follow, and they must be able to find the way without a guide.

BASE CAMP ORGANIZATION

The base camp is usually set up at the end of the road, but on long operations or in extremely inclement weather, it may be located in a nearby Forest Service building or similar facility. Do not be bashful about asking and moving in. Perhaps an extremely bad road which can be traveled only with four-wheel drive vehicles will force the base to a considerable distance away. Access to a phone for outside communications is desirable, though available only infrequently. If at all possible, the base camp should be away from easy public access.

On occasion an advance base will have to be established to assist coordination, most frequently if a search is involved. In one recent instance, a search for a downed light plane, the base of operations was established at the end of a road, with an advance base established in a look-out on top of a bluff, through which all search teams were funnelled and assigned to their individual search missions.

The sheriff will usually be at the base camp throughout the duration of the mission, and diplomacy is essential. While the sheriff is legally in charge, the Base Operation Leader, who is in direct charge of the volunteers, usually controls the actions of the teams in the field. However, the sheriff may on occasion direct the Base Operation Leader to do certain things which, in the latter's judgment, are incorrect, such as limiting the number of men to be committed to the field, or dispatching them in the wrong direction. The Base Operation Leader must remember that while he
may win this battle with the responsible agency, he will lose the war when the agency next has need of a rescue team. It is imperative that you consult with the sheriff on all major decisions. The sheriff is legally responsible for conducting the rescue, and you are his agent for successfully carrying out this job.

Usually the sheriff will make the press releases. News should not be suppressed, and careful, accurate information should be released. The statements previously made about media definitely apply at base as well as in town.

Three basic responsibilities are involved in handling the operation at base camp: (1) an Operation Leader charged with planning, making all decisions, as well as handling relationships with the responsible agency and other volunteer groups; (2) a man in charge of equipment, who will also be the truck driver if you are fortunate enough to have such a vehicle; (3) and a radio operator, who must also be a radio technician capable of handling repairs and maintenance on lengthy searches. On short rescues these jobs are frequently vested in two men: the Base Operation Leader with over-all responsibility, and an assistant covering equipment and radio operations, who is frequently in training to become an Operation Leader. In very small operations or in an emergency, the base can be operated by one man, but this is difficult and time-consuming. It is frequently handled by one man if you are working in a support role for a neighboring mountain rescue unit.

DUTIES

Base Operation Leader: Usually, next to the Operation Coordinator, base camp leadership is the most
difficult job in rescue. This man has responsibility for the over-all planning of the rescue, from beginning to end. You must remember that we have no inherent authority and while the sheriff may surrender his authority to you, he will not forget it if he is completely ignored, and may harbor a grudge. Confer frequently with responsible agencies.

It is the job of the Base Operations Leader to brief team leaders on the situation. It may be necessary to convey this information privately, out of the hearing of news media and next of kin. Almost certainly the next of kin will descend on you, and you may not always realize that they are present. The Base Operations Leader must evaluate the progress of the mission and confer with the Field Operations Leader from time to time. Good psychology and tact are the first order of business, especially where multiple agency relationships are involved.

It is important that the Base Operations Leader and Field Operations Leader establish a death code prior to dispatching teams into the field. The next of kin will automatically gravitate to the radio and listen to the news, with distressing results in event of the report of a death. The news media may collect at base camp to listen to the radio, or may simply monitor your transmissions from a distance. News of a death may then be reported to the general public before it is properly transmitted through the sheriff and coroner to the next of kin. If the code is forgotten through the critical moments, we frequently use the name of a deceased climber as though alive and participating.

Assistant Base Operation Leader: In a small operation this job may not be necessary, but in a large operation it may be very valuable. Frequently we fill this job with an Operation Leader trainee.
Normally the prime duty of this man is to select the team leaders and assistants, to form the teams, and to check them out. The teams must be balanced for the jobs: a strong team for a difficult job, a skilled team for a technical job; the slower teams for the carrying in of equipment with the bulk of the rescuers; the weak individuals held in reserve for emergencies. This means that the Base Operation Leader and the Assistant must personally know each man and his strengths and limitations: if a man is weak but reliable; if a man is strong but requires good leadership; if a man is sick or soft; and, most important; if a man is emotionally unreliable.

The Assistant Base Operation Leader may sign out radios and other equipment, give instructions on radio contacts, establish check-in times, recall signals, make certain the team leaders check on team and personal equipment such as food and lights, pass the death code on to the team leaders, and see to the establishment of a stand-by team, if advisable and possible. As additional help trickles in, it is necessary to evaluate their abilities and form them into teams. A careful log should be kept of the operation, including a roster of all teams and their leaders. A final important duty is the check-in of personnel and equipment at the end of the mission. There is naturally a great deal of confusion regarding unit and personal equipment at this time, and it is important that efforts be made to keep loss at a minimum.

Base Radio Operator: Your base radio requires a skilled and intelligent operator. One of the most important characteristics that he must have is a recognition of the fact that he does not originate messages, but rather, transmits them. He must not make command decisions; this responsibility belongs to the Base Operation Leader. Working with the other
members of the command team at base camp, he usually notifies the Operation Coordinator in town of arrival at base and the method of communication to base, transmits requests for additional help or to stop unneeded manpower, checks and distributes portable radios to field personnel, keeps a careful log of all radio transmissions, makes certain the death code is utilized, and keeps the Operation Coordinator in town advised of progress, especially completion. One of his most important responsibilities is to anticipate the field limitations of portable radios and advise the Operation Leaders concerning the establishment of relay stations in advance of need. On extended operations, he must be technically capable of handling repairs and maintenance of radios.

THE SUPPORT ROLE

From time to time the unit will be called to give support to some other mountain rescue group which is already in control of the mission. In these instances, it is advisable to provide your own Base Operation Leader, but his responsibilities will necessarily be much restricted. He must clearly understand that his unit is not in command, and though he may be asked for counsel and can suggest and advise, he must do this with great tact. His primary role is to interpret to the Base Operation Leader from the other unit such matters as the manpower and equipment resources of his unit, and to see to the welfare of his men in the field. Our experience has been that it is always wise to provide a Base Operation Leader for our own group, but it is usually not necessary to have other men remain at base camp.
TRANSFER OF RESPONSIBILITIES

On extended searches it frequently becomes necessary for the original Base Operation Leader to return to town after several days. When his replacement arrives, he must be prepared to brief him thoroughly. This briefing should include a complete listing of teams in the field and their locations and specific missions, introductions to representatives of responsible agencies and other rescue units at base camp, a chronological log of what has taken place since the inception of the mission, a review of any critical problems or frictions with other groups or individuals, a review of any problems related to equipment or logistical support, and probably many other matters. The retiring Base Operation Leader will be tired, and he will be understandably anxious to start home as soon as possible, but he must see that all these matters are thoroughly reviewed.

In searches it is especially critical that the Base Operation Leader turn over a clearly marked map to his replacement, indicating which areas have been searched, which teams searched them, and what search methods were used.

CLOSING THE OPERATION

The Base Operation Leader and his team at base camp must account for every man. The Operation Coordinator in town is informed of the close of the mission, and is given an estimated arrival time for the return to town, if this is at all possible. After returning to town, the Base Operation Leader confers with the Operation Coordinator, and they officially close the mission. The Base Operation Leader still has the responsibility of preparing the mission report and
turning it in to the unit's rescue director within a few days, so that he can complete the necessary forms for the sheriff and other agencies. This report should include the Civil Defense Mission Number, the dates of the mission, the names and relevant data on the victims, the man-hours expended, the responsible agency, the roster of other agencies and rescue groups participating, the chronological log of the mission from its inception to its conclusion, and a listing of recommendations concerning such things as suggested methods of avoiding any problems, necessary repairs to equipment, radios or vehicles, letters of thanks to individuals or groups who were helpful, and other similar matters.
THE FIELD OPERATION LEADER

CAPABILITY AND RESPONSIBILITY

Of the three major leadership responsibilities (Operation Coordinator, Base Operation Leader, and Field Operation Leader), the Field Operation Leader's responsibility is by far the simplest and most interesting. Upon this man rests the direct responsibility of running the rescue. He should be reasonably strong, experienced, and with a good knowledge of the strengths and weaknesses of his personnel. Upon his decisions rest the life and death not only of the victim, but possibly of his own men. Normally, however, he is free of the direct pressures of news media, the next of kin, and responsible agency. Each rescue is different, and each must be played by ear.

TEAMS

It is our practice to break our rescue group into teams of six, since the normal stretcher requires three men on each side to carry it through broken terrain. A team of this size also makes a good search unit, easily controlled by one man. More important, it provides a unit small enough to make it possible to effectively handle stragglers, always a danger in a rescue. The straggler may be simply a tired man falling behind, or a rugged individualist who must go his own way. In addition to the team leader, an assistant team leader is frequently designated.

EQUIPMENT

The Field Operation Leader must make certain that
there is adequate rescue equipment: such items as litters, sleeping bags, emergency supplies, first aid equipment. It is the duty of the team leader to make certain that his team is properly equipped, including first aid supplies, ropes, compasses, maps, radios, personal clothing, hard hats, head lights with extra batteries, food, and ice axes. We expect each man to come equipped with food for 24 hours, and it is the duty of the team leader to enforce compliance with this requirement.

THE TEAM LEADER'S ROLE

The team leader must be sure that he is briefed on what is happening, and must pass it along to his personnel. He should check with the Base Operation Leader as he starts into the field, and make scheduled report from field to base. His most important duty is to make sure his team stays intact, and he is responsible for the performance of each man in the team. If he has been given a specific assignment, he has a strict obligation to carry it out if at all possible. On one mission, a team on a search for a downed aircraft failed to travel another 15 minutes to carry out its assigned function, thereby causing the operation to continue for several more days before the plane was located. Occasionally a weak member will get into a team and will decide to return home without checking out: a most embarrassing and potentially dangerous occurrence, depending on the terrain.

If two or more teams are traveling together, often only one team will check in, and the others presume that the base realizes that they are together. However, unless the base is properly informed, one team will be lost to the Base Operation Leader, for he will
not know that they have joined forces. The team leader has the responsibility of keeping the base informed.

LOCATION OF THE VICTIM

Normally trail markers will be used to indicate the route the rescue party has followed to the victim. These markers are usually pieces of light colored plastic. As previously indicated, in case of death use the pre-arranged death code. However, if the victim is in good condition, suffering only from minor shock, it is usual to transmit this welcome information by radio so that the next of kin can hear the good news. If the victim is in severe shock, simply report the nature and extent of injuries, without detailing the danger. The man on the other end of the radio will realize the situation, and will let you know when it is safe to make a full transmission.

Usually the Field Operation Leader will go into the field with the first team, but under some circumstances it may be desirable to dispatch an advance team and for the Field Operation Leader to go in with the main group of rescue personnel. Certainly he has a duty to come out behind the last man, or to make certain that a reliable person is assigned to bring up the rear. However, he should come out with the last team.

THE DEATH CASE

Probably about half the calls will involve death cases. Many times this will be known or suspected before you leave the end of the road. At other times, you will arrive too late. At the death scene a new set of
duties begins: those of the coroner. Normally you cannot move the body without the authorization of the coroner. To deal with this contingency, we have arranged for our operation leaders to be deputized as coroners.

It is important that you determine the exact circumstances of the accident and cause of death as closely as possible. Whenever possible, photographs should be made at the scene of the accident. Non-accidental death is always a possibility, and should be kept in mind as you view the circumstances.

Prepare an inventory of the personal effects of the victim before a witness. Describe the physical appearance of the items, without identifying the material. For example, you would describe a "yellow metal ring," not a "gold ring." The personal effects and inventory should be placed in a bag and turned over to the coroner upon the delivery of the corpse. We use cadaver bags, which zip completely closed, to contain the victim. If you do not remove the personal effects, make sure you have an independent witness to the fact that you arrived first, and that no one had an opportunity to remove personal effects as the victim was placed in the bag. Make a full report to the coroner. If the next of kin demand the personal effects at the scene or at the base camp, be certain that you obtain a written receipt.

FIRST AID DIRECTOR

The Field Operation Leader has a full-time job organizing and running the rescue, without performing first aid himself. While all of our field personnel are expected to have first aid training, we have evolved the concept of having a skilled advanced first aider along
on every rescue, whom we call a first aid director. Essentially he is engaged not only in first aid, but also is knowledgeable in the techniques of second aid, such as the administration of plasma expander, pain killers including morphine-type drugs, external heat for shock, and heart massage.

There are serious implications in the use of morphine type drugs, varying from state to state. Generally they are to be administered only under a doctor's supervision, and he who uses them otherwise assumes the risk of these consequences. Find out from your unit doctor the limitations. The same applies to heart massage.

The first aid director always goes in with the first team. He will counsel with the Field Operation Leader to determine the nature and extent of injuries and the intelligent course of action. On one occasion we had a victim who was so badly injured and in such deep shock that we were afraid to move him. We were able to clear enough timber to effect a helicopter lift-out, where moving him by stretcher might well have been fatal.

This does not imply that we use a first aid director to the exclusion of a doctor. However, a doctor is not always available or, if one is available, he may lack the physical ability and skill to reach the scene of the accident. Even if a doctor is available, it is desirable to have a first aid director because of his other responsibilities.

The first aid director also keeps an eye out for the safety of the entire party, to make sure that rescuers are not wandering about unroped in exposed locations or endangering other team members with possible rock-fall.
The first aid director does not usually physically assist in the carry-out unless there is a critical shortage of manpower. Instead, he stations himself at the foot of the litter and monitors transportation, seeing that the victim is spared unnecessary discomfort or further injury by controlling the speed of the evacuation by recommendation to the Operation Leader, and in seeing that it is suited to the terrain.

**EVACUATION**

Once the victim has been splinted, bandaged, and placed in a stretcher, the job of evacuation begins. Carrying by hand is a brutal and painful procedure for the victim, at the very best. Padding of the victim should be as extensive as possible, and he should be moved with all the care that the terrain will permit. Remember that your rescuers, in the heat of the emergency, will take risks and exposures that they would not take in normal climbing. Rockfall danger becomes acute. In all places of exposure, hard hats should be mandatory. Normally it takes only a few men to lower a litter directly over a cliff: one on the stretcher and two lowering. It is imperative that a belay rope be used, in addition to the lowering rope, to safeguard against compounding the tragedy. If possible, send the rescuers down first or by a different route, to lessen the exposure to rockfall as the litter is lowered.

When the stretcher is in a position where it can be carried by teams, make certain that the teams function as such. There is a tendency for a few strong men from each team to take over the carrying of the litter, and they will carry until exhausted, leaving the weaker ones to follow. Over broken terrain, six
men can carry a stretcher for only four to five minutes. If the teams operate correctly in the sequence assigned by the leader and with the length of each carry controlled by the leader, team control will continue and the team leaders will be able to keep track of their men. It is possible for a man to overtax himself and drop out of a team and fall behind unless care is taken. Thus it is imperative that the teams remain intact and rotate at frequent intervals.

Of equal concern is the overly strong climber. On each rescue you will have a few men who are physically capable of moving the litter considerably faster than the others. This will cause excessive pain to the victim. It can also result in disruption of the party by forcing the others to travel faster than they are reasonably able to; they will be just hanging on to the stretcher to keep up. These men can destroy your orderly procedure and disrupt the team structure, and you will come off the mountain a rabble, rather than an organized unit.

CHECK IN

Upon returning to base each team leader has the responsibility of checking in his team members and equipment. Rescuers should not be allowed to leave base for town until all personnel are accounted for. In a search, de-briefing is vitally important, and includes a full report on the activities of the team.
Rescue work attracts a strange grab-bag of personalities. Many rescue leaders are square diamonds: people who, because of their experience, background, intelligence and determination, have risen to the leadership of their units. However, they are likely to have strong opinions as to the right and wrong way to proceed, and may be quick to criticize. By the same token, they may be quite unreceptive to criticism. Place two square diamonds together and they will begin to bang corners. This situation is often found in a multi-unit rescue operation, and is especially prevalent in lengthy searches when tempers become frayed over several days. The square diamond may take the form of an experienced deputy, or an old-time military man in a Civil Defense capacity. One of the important jobs of the rescue leader is to evaluate the square diamonds and make certain that they are placed in positions where they do not come in direct conflict. If you are a square diamond (as are most rescue leaders) and someone arrives at base camp with whom you find it most difficult to work, one possible solution is to relinquish your responsibilities to a replacement and go into the field. Diplomacy is an important part of the rescue leader's make-up, and you will have to work with these same people many times in the future.

You will also find, in this rescue grab-bag, the rescue-hero type. He is in it for the glory of wearing the patch and impressing the girls and his friends. Beware of this man! He may be unsuccessful in his private life, and in this public endeavor he tries to create a hero image which is totally false. Frequently this man is psychologically equipped to misrepresent
his abilities and capacities. He may be so unreliable that you will ultimately be forced to eject him from the unit.

There are many well-meaning volunteers who overestimate their abilities. We have one man who comes out jingling with pitons and carabiners, and is only capable of keeping up with his team for four of five miles of good trail. He is reasonably smart, but must be used only on projects within his capacity. He is an excellent support man, will do a fine job of handling a radio relay point, and is dedicated and dependable within his limitations.

You may also have the problem of the "hotshot" who, because of his extreme strength and his technical ability, is a real addition to any team, but who normally wishes to participate only in the technical type rescue with a live victim. When it comes to a body carry-out over average terrain, his attitude is "Don't call me, I'll call you." Your average slightly-out-of-shape, getting-toward-middle-age, dedicated to the core mountain rescuer is going to regard this prima donna with some hostility. Our experience is that every two or three years we are faced with a highly technical problem: i.e., extreme exposure on a high cliff, severe storms, or a critically injured person in a remote place, demanding an advance team with great stamina. When these challenges come, it is nice to have a few "hotshots" on call. Try to get them out on a few non-technical operations, so they will understand how you operate.

These challenges bring forth the best in the operation leader. It is his job to see that, insofar as possible, he knows his rescue members and gives each a job tailored to his abilities and capacities. By the time your unit has existed from six to ten years, the bulk
of the rescuers will be between 30 and 40, partly out of condition, and somewhat overweight. These men will not be there to be heroes, but to do a small job at considerable personal expense, and without thought of personal glory.

Remember these limitations as you run your rescues, and keep a few "hotshots" around for the more dangerous and difficult jobs.
One of the most difficult organizational problems that you will be faced with will be that of organizing a search for missing person or persons in mountainous and wooded terrain, frequently over an area of 25 square miles and, occasionally, over an area of 200 or 300 square miles.

**BASIC SEARCH TECHNIQUES**

Essentially three techniques are involved: (1) the hasty search; (2) the grid search; (3) stream and trail searches.

**Hasty Search:** This is exactly what its name indicates. Immediately upon arriving at the scene, a quick check is made of all places where the victim might be found, including the place where he was last seen. This search is not designed to be systematic, but is rather a quick once-over in the hope of finding him immediately.

**Grid Search:** This technique utilizes the sweep by a large team. Normally twelve to fifteen men is the maximum size of such a sweep. The team leader takes the center position and the men extend out in a straight line with two assistant leaders, one on each wing. The team then proceeds forward slowly, the first team operating on a compass bearing. The men on each wing lay down ribbons showing the path of their sweep. These ribbons are usually made out of plastic, but toilet paper can be used effectively and has the advantage of disappearing after several weeks of rain. The next team will then bear along the ribboned trail, the wing man on the other end leaving a trail of markers. The men are usually
spaced then to fifteen feet apart, depending upon the terrain. Heavy brush will require that they shorten the distance so that they are in visual contact.

Great personal discipline is required of each man in a sweep line. One man will forge ahead, another man will drag behind, and it is extremely difficult for the leader to maintain continuity. In difficult terrain, tempers will frequently flare as the team leader fights to maintain order. Inexperienced grid search teams, even though the members are experienced mountaineers, probably should be limited to eight to ten persons. In our area we have had the good fortune to have an experienced Explorer Search and Rescue unit, and young men of this age perform extremely well. They seem willing to accept instruction from the team leader, which adults are sometimes unwilling to do. The discipline imposed is comparable to that of a military squad in the field. For this reason, inexperienced volunteers, such as friends of the victim, are difficult to use effectively. Such volunteers are fully capable of heading for home without informing the team leader when they tire.

Much care must be taken of small cliffs in wooded terrain. These are frequently covered with leaves and needles, and may be extremely slippery. Grid search is a very difficult art and can be performed effectively only over small areas.

**Trail and Stream Bed Search:** Since grid search is limited to such a small area, it can only be used effectively in highly suspect locations. Presuming that the lost person is uninjured, he can cover a great deal of territory in a short period of time. The victim may panic, or become irrational after several days. On one occasion the victim had to be chased down and captured by searchers before he
could be returned to safety. Therefore, it is well to keep in mind that the person for whom you are looking may even be hiding from you.

Essentially the organization of a search is based on an estimate of probabilities. You determine the most probable location or course of travel of the victim, and concentrate on those areas. You will grid search the most suspect places. Beyond that, you will send teams through to check the next most likely places. This requires teams to sweep all trails and water courses in the area. Mountain roads should be patrolled regularly by four-wheel drive vehicles, particularly those where the victim might come out. Often a club of vehicle owners will be delighted to be of assistance. Do not overlook trail motor bikes, snow cats, etc., for rapidly covering easily traveled trails.

It is necessary that you act on the presumption that the victim will follow water courses downhill to trails and roads. This is not an infallible guide, however. On one occasion a lost Boy Scout contoured a hill for some four miles before he was found, and we suspect that he repeatedly traversed the top of the hill hiding from searchers. Throughout the duration of such searches, the teams call or blow whistles to attract the attention of the victim.

Whenever possible, teams should search downhill, since they can travel a much greater distance in this manner. Trails or roads to high points should be utilized, for a team can travel four times as far over broken terrain going downhill than it can going uphill.

Helicopters provide by far the best method of air search, because of their slow speeds and ability to hover. However, it is almost impossible to use them for locating a man lost in heavily wooded terrain. We
have also used them to fly our search teams to the tops of mountains so that they can search downhill, thus extending their range.

**Special Search Techniques:** It is not our purpose to describe the methods used in avalanche search, the use of search dogs, or similar matters in this manual. However, you should remember that dogs are always available and the responsible agency will usually have its own sources of this special resource. Frequently dogs will have been used before your unit is activated. In sparsely populated counties the sheriff may not be aware of the availability of dogs, and in Washington he should be referred to the state Office of Civil Defense, if their use seems advisable. If dogs are to be used, it is vital that searchers and the public be prevented from entering the prime areas until they have been given an opportunity to track and run a perimeter search. Scent items should be obtained and preserved until the dogs arrive, and must not be touched or fouled in any way.

**SPECIAL ORGANIZATIONAL PROBLEMS**

A large search extending over a prolonged period of time is quite comparable to a battle plan, and military organization procedures are most adaptable. In addition to rescue headquarters, you will need a series of advance base operations.

**THE STAFF CONCEPT**

In a large search there are a number of jobs which must be done. Since there may be many chiefs from several rescue units, a chain of authority should be established. This is important not only for your own
men, but also for the responsible agency. The multiplicity of chiefs, particularly with the turn-over which occurs after a few days, can be quite confusing. Some suggested job captions are:

Base Operations Leader - THE MAN IN CHARGE
Assistant Base Operations Leader
Communications Officer
Transportation Officer
Advanced Base Operations Leaders

The following are some of the problems that will have to be solved.

Housing: You will need a dry place for your searchers to sleep as they come and go into the field. We have used grange halls, church basements, fire halls, logging camps, and Forest Service fire control bunkhouses. These facilities are usually available without charge, simply through a polite request.

Food: We expect our men to be self-sustaining for 48 hours as they go into the field. After that, we must be prepared to feed them. This means that you must have a large cooking facility to provide hot meals for the volunteers as they come and go into the field, as well as to feed your base camp personnel. Often a small town or church will collectively and spontaneously undertake this activity. Perhaps the sheriff will be willing to produce the money for the food and the local women will cook and feed the men. On some occasions the Red Cross or Salvation Army will provide such services. Whatever the source, you must see that these meals are available as part of the base procedure.

Transportation: The constant turnover of personnel makes this a critical problem. Teams will
have to be dispatched over bad roads, and collected and returned to base camp. Men will be going home after a few days, and replacements will be arriving. This means that some form of public transportation must be provided, normally using trucks or buses, frequently with four-wheel drive. Additionally, cars will be moving hundreds of miles at all hours of the night in remote portions of the country. You will have to see that a gasoline supply is available for private cars. On one occasion, we prevailed on a logging company to donate a 50 gallon drum of gasoline. Sometimes military vehicles are available simply for the asking.

Communications: In a large operation you will have five or six different channels in operation in the field. These may include State Patrol, sheriff, Forest Service, National Park Service, Civil Defense, citizen's band, and various military channels. None of these will be able to talk directly to each other, and the complexities of communicating will require you to have knowledgeable communications officers to solve these problems. Teams will often be out of contact with base because of their locations in the wilderness, and the solution to this might be to send an aircraft aloft, with a portable radio, to communicate with them at periodic intervals. As the search continues and radio equipment begins to break down, you must obtain a technician capable of making field repairs and a supply of the most frequently used components.

Be sure to keep the outside informed of the progress of the search, and of your anticipated manpower, equipment and food needs.

Public Information: The constant turnover of personnel requires you to have a knowledgeable
person to keep the searchers, and especially the new arrivals, informed of what is being done and what has been accomplished. He must also de-brief the teams as they come out of the field. If this duty is ignored, each new searcher will go immediately to the base seeking information, and base has a full-time job to dispatch and retrieve teams and plan the overall effort, without being flooded with non-essential personnel. On one search for a military aircraft, a guard was posted at the door to keep the volunteer searchers out of headquarters, resulting in a great deal of ill will. An effective public information man would have avoided this problem. The public information man can sometimes also serve as a press release officer, remembering that he is functioning for a responsible agency and can make releases only under, through, and with its permission.

**Operation Leader Problems:** Most large searches have many rescue units participating and, therefore, many leaders. These men can be usefully employed in various staff responsibilities. Some one person, however, has to be in overall control of the rescue staff. Frequently, after three to five days, a rescue leader will return home, to be replaced. It is imperative that his replacement be completely briefed by the departing rescue leader before he leaves.

**Maps:** It is absolutely essential that maps be posted regularly with detailed information showing exactly which areas have been gridded, which streams and trails have been swept, and other similar information. Notes should be kept indicating which teams handled which jobs, any leads that they might have turned up, and other similar information. Sometimes a search will be temporarily called off because of inclement weather, then reactivated a few days or weeks later. Without detailed information of the
above nature, much meaningful intelligence is lost. A replacement operation leader should become thoroughly familiar with these maps and their related data.

Search Pressures: Normally the Base Operation Leader starts his day at about 4:00 a.m., as he dispatches teams. Problems constantly arise throughout the day and must be met by all leaders, and by evening when the rest of the search personnel in the vicinity have drifted over to the nearest pub, he sits by the radio and sweats in the pick-up of an overdue team which was assigned a larger task than it was able to handle. Often this team will have a weak or sick member. After the missing team has been retrieved, he will consult with other rescue leaders on the objectives and plans for the next day. Theoretically this could have been done during the day, but it never seems to be quite successfully completed, since the concerned personnel are spread to the four winds. By the time the plans have been formulated, it is 1:00 a.m., and the next day begins at 4:00 a.m.

It is not surprising that after four or five days of three or four hours sleep per night, tempers become frayed and unfortunate things are said. The pressure may come in the form of a team that has reached the road, completed its mission, and has had to sit in the rain for two hours while waiting for transportation. The team leader, tired and wet, marches into base operations and tongue-lashes the leader for this delay. He is surprised when his head is blown off, possibly by a tired square-diamond rescue leader. Theoretically, this situation could have been avoided. The important thing is that you, as a rescue leader, recognize the problem and be prepared to cope with it.
MISSING AIRCRAFT SEARCH

Procedures in this type of a search are similar to ground searches for missing persons. It is important to gather all facts, including plane destination, capacity, pilot abilities, weather including wind direction, etc. Also, information must be sought from local people on sighting, flashes, speeds, sounds of explosions, and other pertinent information. Much of this will not be accurate or even pertinent, but eventually a pattern of clues might emerge, assisting you.

The woods and mountains of the United States are sprinkled with the wreckages of missing light planes. We have found only one light plane by ground search in over twenty years. In that instance, we had the unusual good fortune of having several residents of a small town at the foot of the mountain who heard the aircraft stop abruptly during the night. Even then, it was blind good luck that a search team which was a quarter mile off route blundered onto a fragment of the plane.

Essentially, light planes must be found by air search. When they are located from the air, you can then take a team in to the crash site to effect what is usually a body recovery. Frequently, wilderness navigation to the crash site is quite difficult.

I predict that, in the next five to ten years, air crash beacons will become a requirement for all light planes, under federal regulations. Legislation for this is now being offered at state and federal levels. These beacons will simply provide an automatic intermittent radio signal which can be located by aircraft equipped with homing devices. The role of the
ground team will be to then use similar homing devices to go directly to the crash site.

It is our belief that many of these air crash victims survive the initial impact and live for twelve to twenty-four hours. It will be important in the coming years for you to develop a close working relationship with the civil agency which is vested with the responsibility of conducting air search, since an interesting source of rescue missions will flow from these people.

The responsibility for crash site investigations is vested in state and federal agencies, who must determine the cause of the crash, if possible. Therefore, you will frequently be accompanied by a representative of such an agency, and will be responsible for his safety in hazardous terrain. It will be necessary for him to complete his work before your team can move anything. You should be prepared to make a complete photographic record of the wreckage, preferably under his direction.

CIVIL DEFENSE

The role of Civil Defense will vary from state to state, and even from county to county within a state. Generally each county will have a Civil Defense director, who will probably be in a position to provide direct assistance to you in the form of communications equipment, truck, etc. Since Civil Defense does not become operative until a large disaster occurs, the director may have accumulated much equipment with no opportunity to test it out, and he may be quite eager to have you do this for him. In a small county with a minimal budget, the job of director may be consolidated with another, such as the sheriff or coroner. In this case you should look the gift horse
in the mouth, and check before taking it to ascertain that the equipment will really work in the field, and is not tired old war surplus equipment that only looks good on the shelf.

Generally each state will have a State Civil Defense Director, and while it might appear that he is in charge of Civil Defense throughout the state, such is usually not the case. His role is more that of a coordinator of county units; the county units are autonomous, answering to their respective County Commissioners, who hold the purse strings. The State Civil Defense Director will have equipment available to him, possibly including the heavy equipment used by the highway department, and the state Army Reserve equipment and personnel. He may also have an extensive long distance radio communications net.

In Washington, we have the good fortune of having a Rescue Coordinator under the State Civil Defense. His role is to assist the sheriff in coordinating the rescue. He will provide information on availability of various rescue groups, including low land search, water search, etc., as well as both field and support equipment.

CIVIL DEFENSE INJURY COVERAGE

In Washington, all our men have the option of joining Civil Defense. When a rescue takes place, the sheriff makes application to the State Civil Defense, through the local Civil Defense, for a Civil Defense number designating the operation as an official Civil Defense practice. If one of our members is injured on such an operation, he is entitled to benefits similar to workmen's compensation, which include payment of medical expenses, a pittance for time loss, and a disability...
award in event of permanent injury. This great benefit is provided by the state to assist the local Civil Defense in recruiting rescue personnel. However, in order to be eligible, the man must be personally enrolled with Civil Defense, a Civil Defense number must have been issued, and he must be an official part of the operation.

FLEXIBILITY

No two rescues or searches are identical. The rules of procedure in one situation may not work in another. Flexibility of procedures and decisions is an essential element in the good rescue leader. For this reason, procedures and suggestions in this work are not to be followed invariably. You must use your own judgment in each case, keeping these suggestions in mind.
EPILOGUE

A quote from the Tacoma Unit, Mountain Rescue Council, publication, "Rescue Rucksack," is very appropriate:

"Handling people need not be so difficult. All you need is inexhaustible patience, unfailing insight, unshakable nervous stability, an unbreakable will, decisive judgment, infrangible physique, irrepressible spirits and an awful lot of experience."

In closing, let me welcome you to the ranks of the rescue leader. Not everyone who reads this pamphlet will achieve that position, but at least you will have an idea of how your rescue leader is thinking and working. Above all, it will give you an opportunity to observe the great passing parade of humanity operating under stress circumstances.

You will develop a treasure-trove of stories of the strange things that the victim, the rescue leader, and the agency representative will do when subjected to these stress patterns. Indeed, you will be amazed at some of the things you, yourself, do when face to face with emergencies.

We welcome you to the fraternity of those who have had the good fortune to have the opportunity to assist those in distress, without thought of personal gain or prestige.