SEARCH AND RESCUE MAGAZINE

FALL 1975

OFFICIAL PUBLICATION OF THE NATIONAL ASSOCIATION OF SAR COORDINATORS

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FEATURES:

DEPARTMENTS:

SEARCH AND RESCUE MAGAZINE is published four times each year by Dennis E. Kelley, P. O. Box 153, Montrose, California 91020, USA. Telephone (213) 248-3057

Subscription price is $4.00 per year and $7.00 for 2 years. The individual price is $1.25 each.

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To All Members and Friends of the
National Association of Search and Rescue Coordinators

Our annual conference dates, December 4-7, 1975 are fast approaching. We are asking that you pre-register with us as soon as you can. The Regency Inn advises that rising costs place them in a position where we must provide meal guarantees and they also advise that prices are subject to change without notice. For these reasons, we would appreciate pre-registration.

The conference site is the Regency Inn, I-25 at 38th Avenue, Denver, Colorado. The Inn has a courtesy limousine to and from Stapleton International Airport on a regular shuttle basis or upon request.

Room Rates are firm; $15.00 Queen Single, $18.00 King Single, $27.00 Double (one bed-two persons), $37.00 Twin Double. These rates are only for our conference. If you make your reservation by phone (303) 458-5511, you must tell them it is for Search and Rescue to get these rates. Otherwise, use the reservation card enclosed and send direct to the Regency Inn.

Registration fees are $35.00 for friends, members and associate members. This fee will cover the cost of a luncheon, a reception, a dinner, coffee breaks and conference handouts and material. Make checks out to NASARC, Annual Conference. Send checks and pre-registration forms to:

Blair E. Nilsson
President NASARC
EOC Camp George West
Golden, Colorado 80401
(303) 279-1101

National Association of
Search and Rescue Coordinators

Agenda 1975 Annual Conference
Regency Inn Denver, Colorado
December 4-7, 1975

Dec. 4 - Thursday
09:00 - 12:00 NASARC Committee Meetings
09:30 Check In and Early Registration
13:00 - 17:00 Delegates and SAR Advisory Council
Dinner - No Host - On Your Own

Dec. 5 - Friday
08:00 - 09:30 Check In and Registration
09:30 - 11:00 Conference Call to Order and General Meeting
11:00 - 11:45 Federal Interagency Committee on SAR and IMCO Report
12:00 - 13:30 Luncheon - Welcome by Host State
13:30 - 15:00 Work Shops
15:00 - 15:30 Refreshment Break and Review Exhibits
15:30 - 17:00 Work Shops Continued
Dinner - No Host - On Your Own
Hospitality Room Open

Dec. 6 - Saturday
08:30 - 10:00 General Session
Paper Presentations
10:00 - 10:30 Refreshment Break
10:30 - 11:45 General Session Continued
Paper Presentations
11:45 - 13:00 Lunch - No Host - On Your Own
13:00 - 13:30 Viewing of Exhibits
13:30 - 15:00 Work Shops
15:00 - 15:30 Refreshment Break and Viewing of Exhibits
15:30 - 17:00 Work Shops Continued
17:00 - 18:30 Reception - Cash Bar
18:30 Banquet
Guest Speaker NASA Astronaut
Special Awards

Dec. 7 - Sunday
08:30 - 10:30 General Session
Paper Presentations
10:30 - 12:00 General Session
Work Shops Summary and Reports
12:00 Conference Closing
13:00 - 15:00 Executive Board and SAR Advisory Council Meeting

Pre-Registration Form

Name: _____

Affiliation (organization): _____

Affiliation Address: _____

_____ Annual conference fee ($35.00) enclosed. (Checks should be made payable to NASARC Annual Conference.)

Names and affiliations of other members of my party. Please enclose the fee for each attendee with this form.

_____ _____

_____ _____

_____ _____

Please remember that you must make your own hotel reservations. A card has been enclosed for your convenience.

December 4 meetings are for Delegates and SAR Advisory Council and will be business sessions. All Delegates and SAR Advisory Council are asked to be in attendance.

Conference sessions will commence at 09:30, Friday, December 5, 1975.

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REGENCY INN
RESERVATION REQUEST

Interstate 25 at 38th Avenue • 3900 Elati Street • DENVER, COLORADO 80216
303 - 433-6131

RESERVATION FOR ARRIVAL_____ (DATE) DEPARTURE_____ (DATE)

Deposit enclosed ☐ Hold until 6 P.M. ☐ Company Guaranteed ☐
Payment to be made by Credit Card #_____

NAME: _____
COMPANY: _____
ADDRESS: _____
CITY & STATE: _____ ZIP_____

Accommodations for _____ adults and _____ children.

☐ Single ☐ Studio
☐ Double ☐ Twin
☐ Suite ☐ King Size

A crib ☐ and/or a rollaway ☐ is required.
Reservations are held until 6 P.M. without deposit or company guarantee. Checkout hour is 2 P.M.

HOW TO TEACH YOURSELF TRACKING TECHNIQUES

By Jack Kearney

US Border Patrol, El Cajon Station

The officers of the El Cajon Border Patrol Station have exposed a great number of Search & Rescue people to our system of Step-By-Step Tracking during the last several years. At every seminar we encounter more and more people who are interested in obtaining written material that will teach them to track.

The Step-By-Step method of teaching tracking was developed at El Cajon and we're still shaping it. It isn't perfect yet, and this makes me somewhat reluctant to start writing articles on the system. However, the demand has reached a clamor, and if something isn't put on paper by a skilled tracker who knows damn little about writing, it's going to be done by a skilled writer who knows damn little about tracking.

Despite the fact that we have had some great trackers at El Cajon over the years, very few of them have devoted much time to the teaching of tracking. Ab Taylor and I have shared the brunt of the teaching chores. Larry Harlan has assisted a great deal, as did Joel Hardin before he transferred to Bellingham, Washington, but the two people who have mainly been struggling with the teaching technique have been Ab and me.

As any of you who have heard him speak know, Ab Taylor is a colorful and interesting talker. He is enjoyable to listen to whether he has anything worthwhile to say or not. Therefore, when we are together on a teaching assignment, he handles the lions share of the talking--and I do all the work. Writing, however, is not Ab's cup of tea.

What we at El Cajon are trying to teach people is how to become a tracker. It is no more difficult to learn than playing the piano. However, it is not one iota easier either!

What people seem to want is a fifty page book that, when coupled with ten or twelve hours of practice, will transform them into an expert tracker who can go out on any search and track the victim down in record time.

Such people would not expect a fifty page book to turn a tone-deaf jackass into a concert pianist after one reading and twelve hours of practice, so they had better not expect the impossible from a book on tracking either.

Pablo Casals was still practicing his scales two hours a day when he was ninety years old. Though Casals was famous as a cellist rather than a pianist, the point is just as valid. There is no short-cut way of avoiding the hard work necessary to perfect a skill.

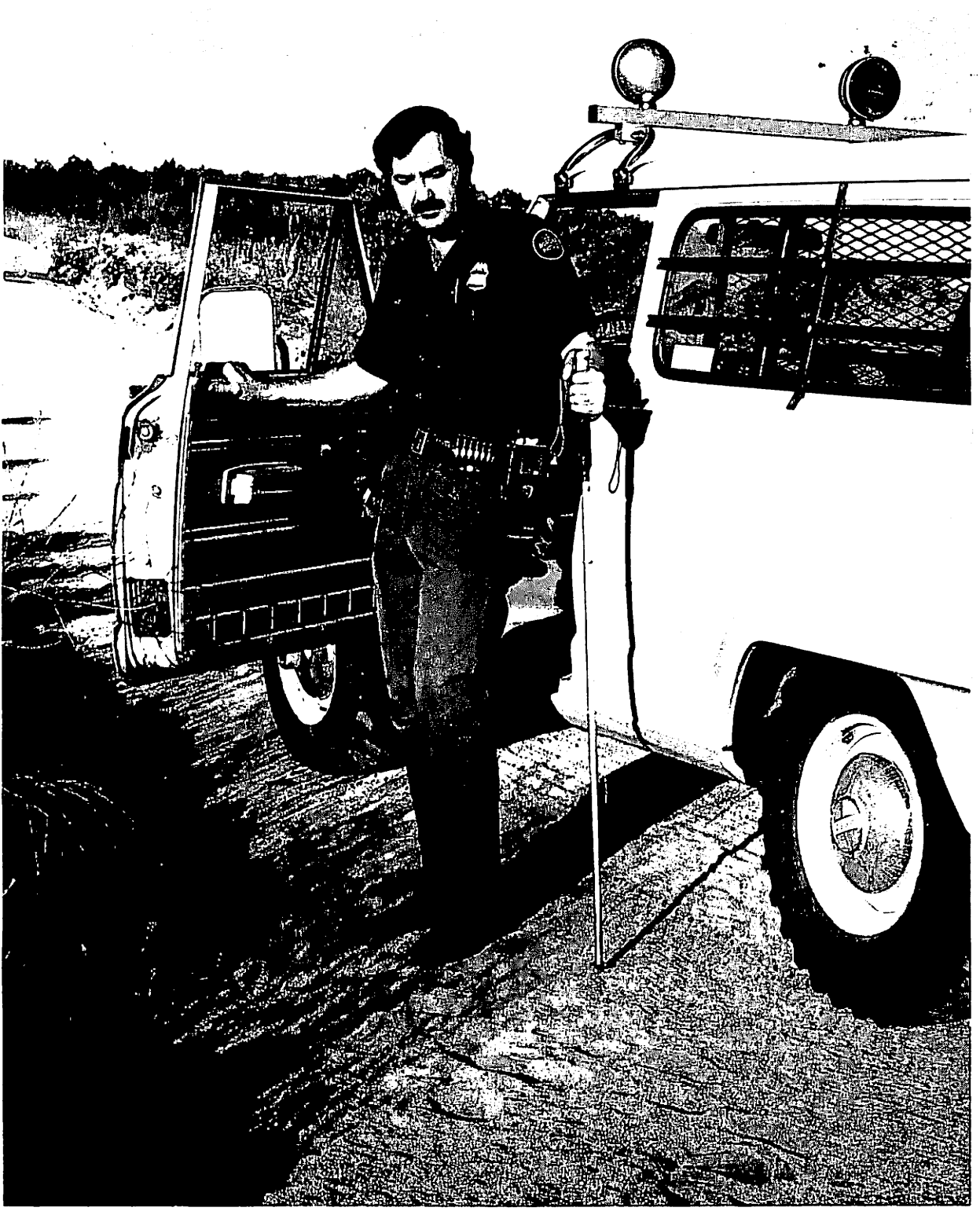
Therefore, we do not attempt to teach people "how" to use their tracking skill. At present we are only interested in teaching them how to acquire it. Once we are sure it has been acquired, we will offer tips, tricks, and short cuts on how to use it. Such strategies and tactics are extremely dangerous in the hands of inexperienced trackers.

Skilled surgeons, when performing delicate operations, occasionally have their patient's heart stop beating. The surgeon may then cut into the chest cavity and take the heart in his hand and massage it back to life. Should we then recommend this clever trick to first aiders who have had a victim's heart stop on them? Hardly. They simply do not have enough knowledge and skill to employ such a tactic intelligently.

Short cuts in the hands of less than expert trackers can have just as disastrous results. A life can be lost!

SELECTING THE PRACTICE AREA

The first thing you must do in learning to track is select a suitable training ground. In the beginning you should have an area that is flat, has a minimum of vegetation, and is firm but still covered with a fine layer of sand or dust.



Photographs by

Mackintosh Photos

Agent Jack Kearney, U.S. Border Patrol officer, works out of the El Cajon Station near San Diego, California. The El Cajon station was established in 1948 with a nucleus of four good trackers. Ever since that time it has been known throughout the Border Patrol for the accomplished tracking skill of its agents.

Jack, in the 15 years that he has been man-tracking at El Cajon, has worked with all the best. Now he is using his own hard-earned tracking capabilities to teach the learning techniques of Step-By-Step tracking to Search & Rescue personnel throughout the western United States.

School playgrounds, little league parks, and construction sites are good places to start looking.

You begin by marking a straight line in the dirt across your path to mark your starting point. Just forward of the line you should make a circle in the dirt about eighteen (18) inches in diameter, scuff the ground until it is loose enough to leave a good track, then place your right foot within the circle. This being your first step, you then walk normally in a straight line for about fifty (50) or seventy-five (75) yards (one hundred yards would be better, but it is usually difficult to find a field that long.)

Just before you run out of your good dirt area, you draw another straight line across your path to mark your finish line.

You should lay out these tracks for yourself either in the early morning or the late afternoon, and the straight path you walk should be directly into the sun.

POSITION OF THE SUN

Beginners should always work a set of tracks toward the position of the sun (even on overcast days) and with the sun at as low an angle as possible so that the slight indentations of the track will cast shadows.

The single most important thing to learn about tracking at the outset is to utilize the sun. Try to always position yourself so that the track you are looking for is between you and the sun. Caution and common sense must be employed, of course. You can certainly not get atop a trail or you will obliterate it with your own tracks.

Run your own experiment. Put down a track in the dust, then walk a complete circle around it, observing it from about five (5) to eight (8) feet away. The difference between the sun at your back and the track directly between you and the sun is dramatic.

Also, run the same experiment within two hours of dawn, at mid-day, and again within two hours of sunset. The way the track disappears with the sun at its height and reappears in the evening will teach you a lesson more graphically than I could ever hope to with words.

After you have marked your finish line you should circle away from the tracks you have laid down, and staying at least thirty (30) feet from, and parallel to,

Jack Kearney is shown marking a track in such a way as to indicate that it is a right foot. Note the early morning shadows giving extra definition to both the footprints and tire tracks on the sandy road. *Photo by Mackintosh*

your original route, you should then walk back to your starting point.

IDENTIFYING THE TRACK

Once at your starting point you should carefully study your encircled track. You should measure the length of the track from rear of heel to tip of toe. Always when measuring tracks, be careful not to let your hands or the measuring tape touch the ground, thus making more "sign". Avoid adding any more confusing marks to those already on the ground.

Measure the width and length of the heel (if there is one) and measure the sole at its widest point.

Note whether the toe is very pointed, moderately pointed, rounded, blunt, etc.

Note any stitching or nail holes. Note

Be careful to keep your hand and tape well above the track itself so as not to make additional "sign" when you are measuring and identifying the print. Avoid adding any more confusing marks to those already on the ground.

any design.

Take a piece of paper and draw yourself a picture of the track, putting in all designs, and in the cases of lines or bars across the sole; their number, approximate coarseness, and spacing. Use descriptive comparisons like "eighteen (18) lines in the sole, each of about the thickness of a wooden match, spaced about the thickness of a pencil apart." Or--"a flat tennis shoe track with five (5) quarter-sized circles running from toe to instep and following the curve of the sole about one (1) inch in from the outside edge." Carry a small tape measure and make accurate measurements to insure positive identification.

Rubber bands make ideal "markers" for your tracking stick. They are easily adjustable yet stay in place. Adjusting their position to correspond with the foot length and stride length of your current quarry is easily done. The distance from the tip of the stick to the first marker should be the stride.

Footprints are the best clues you can hope to find while searching for a lost person. They are the only certain evidence that a person is going to leave behind. They point the novice in a direction where the victim was once headed, and they lead an expert tracker directly to him.

Being able to describe these clues to another search team, miles away, by radio, in descriptive terms that leave them with the same mental picture you possess cannot be over-emphasized.

Once you have found every idiosyncrasy of your own right shoe, looking particularly for the things that mkae it unique, like cuts or worn spots, you should look forward about eighteen (18) inches and to your left about twelve (12) inches for the back edge of your left heel. In very hard ground, the curved back edge of a heel is the mark you are most apt to see. Once you find it, measure the distance from the rear of your right heel to the rear of your left heel to determine your approximate normal stride.

THE TRACKING STICK

You should avail yourself of a stick at least three (3) feet long, so you can mark the length of your foot and the distance between your two feet so that you know the distance of the entire stride.

MARKING THE TRACK

At this point I should mention that you should always know whether you are looking for a right track or a left one. If you have just found a right track and forget what you are looking for, and swing your market to the right again, thinking a right track is what you are after, you will be at least two (2) feet off course. For that reason, we advocate making a curved mark behind the heel of each track to make its whereabouts obvious, and by putting a tail outside of the arc you can indicate whether it is a left or right track.

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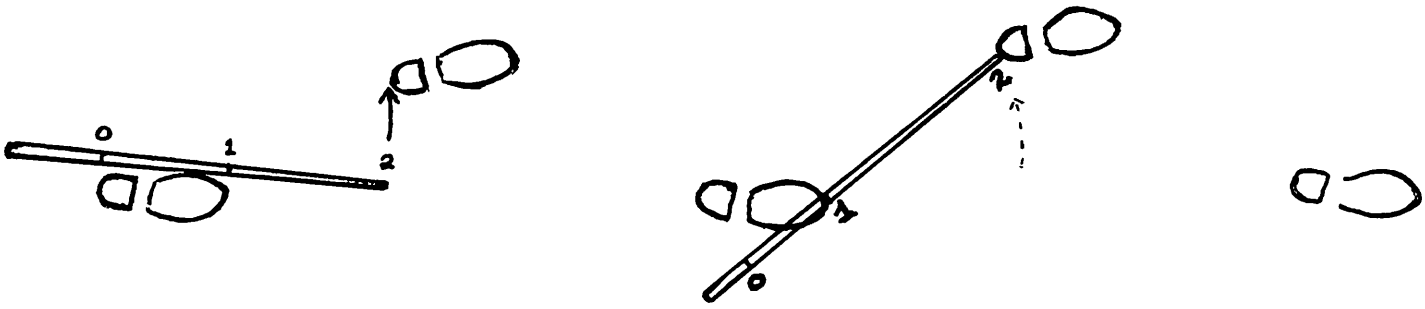

Fig. 1

(0 to 1 is length of foot, 0 to 2 is total stride.)

This "Tracking stick" is invaluable in finding tracks in difficult terrain. By holding your thumb at point number one (1) on the stick while it is directly over the toe of your last track, and swinging it towards the point where the next track should be, you will usually put point number two (2) directly over the rear curved edge of the heel you are seeking.

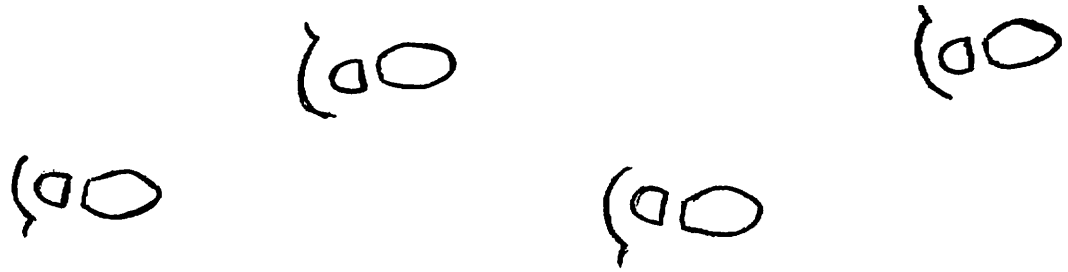

Fig. 2

It is important to always know whether your next track is going to be that of a right or left shoe print. So as not to lose your point of reference, mark each print as you go with a tail on the outside of the track as shown above.

This has become the standard way of marking tracks and all Search personnel who have been exposed to our Step-By-Step Training Course will recognize it.

A point well worth mentioning at this junction is the fact that "whole" foot prints are seen only in very easy terrain. A complete, easily recognizable, easily identifiable footprint only shows up in dust and sand so easy to track through that your grandmother could do it.

Expert trackers go on "sign"; a flat spot, pebbles pushed into the ground, broken twigs, bent grass, etc., etc.

It is impossible to say how far a tracker might have to follow sign before he finds a full footprint that reveals the markings that positively identify his victim. When these full tracks are found, they should be uniquely marked. Most of us at El Cajon draw a circle around the track. Some MRA teams prefer to encircle it with rocks or trail tape. As long as you make it obvious, we can't quibble with it, just mark it well.

Realize that the footprints and "sign" which you are following will not be the only ones in the area.

(continued on next page)

Note how by placing the mark on his tracking stick (point 1) above the toe of the rear track, Kearney causes the tip of the tracking stick (point 2) to find the rear edge of the forward track.

THE PROBLEM OF "TOO MANY" TRACKS

People who have listened to me talk about tracking have heard me say many times that the problem in finding a lost victim is never the absense of sign, it's the maddening plentitude of it.

Many times in searching for lost victims, or tracking aliens or smugglers who have entered the United States illegally, the best of us have had another trail blend into the one we're following, then branch off and we may follow the wrong one for several hundred yards before we get a positive identification and discover it's the wrong track.

We must then go back to our last "certain" track (the one we circled) and start again, being careful not to take the wrong fork a second time.

This is the reason we mark the positive tracks well and the reason we work better in teams of two or three.

When a conflicting trail joins the one we are following, we split and follow each. Whichever one of us that discovers he is on the correct trail then advises the others who abandon their trail and regroup on the correct one. This is apt to be done many times on a trail--particularly if it is in an area which had had a great deal of foot traffic.

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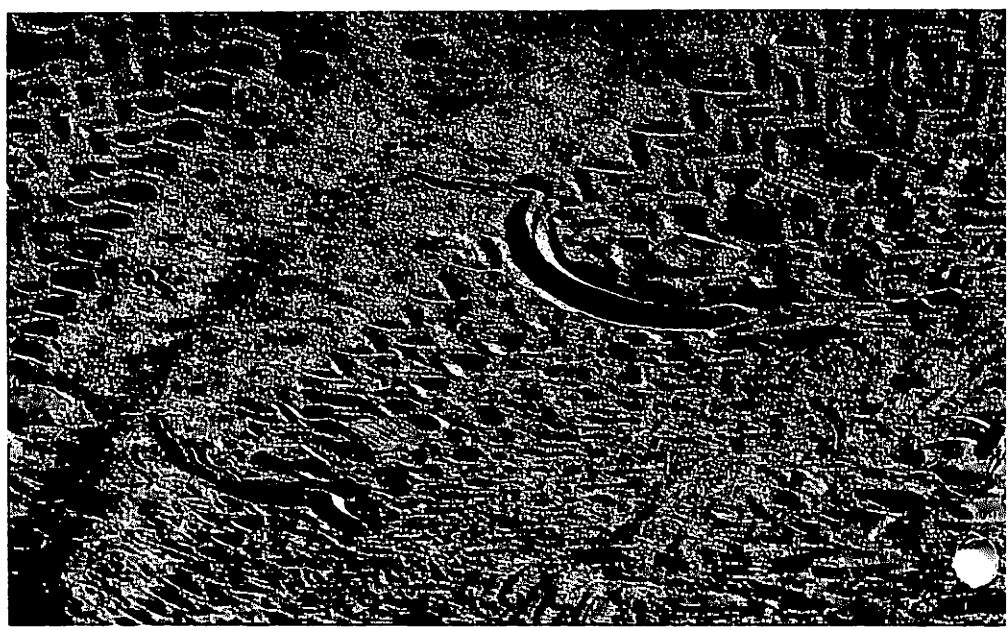
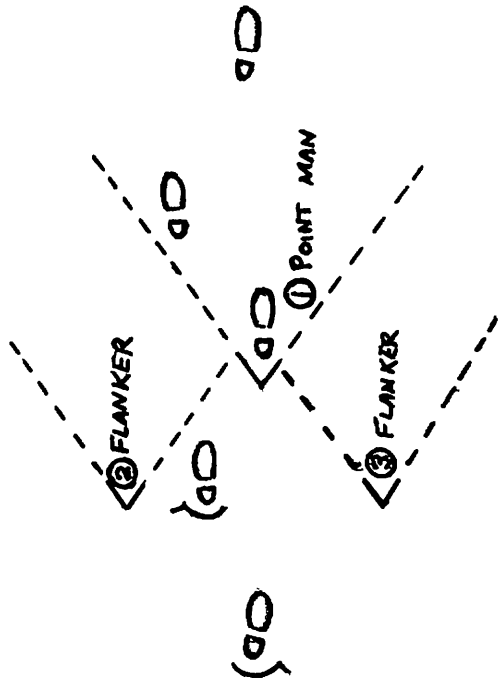


Half circles are drawn behind the tracks with "tails" on the outside of the arc in order to indicate left and right footprint. It is only in loose sandy soil such as this that the entire footprint is so easily seen. Terrain such as this is a good place for the beginner to start. Choose a school playground, little league park, or construction site that is flat, has a minimum of vegetation and is firm but still covered with a fine layer of sand or dust.

THE 3-MAN TRACKING TEAM

In our basic tracking classes we like to group three people on a single set of tracks. The designated leader of the group works as "point man", a position that puts him slightly forward of his two "flankers". It is his responsibility to follow the set of tracks and maintain order by seeing to it that neither flanker gets ahead of him and thereby in a position to obliterate the tracks.

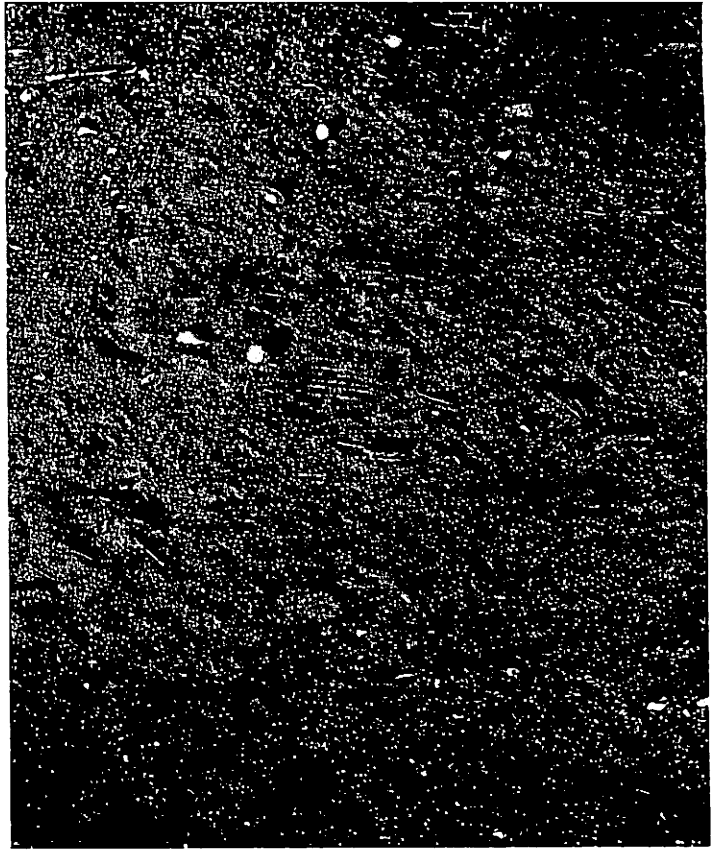
The first responsibility of the flankers is to watch to the side for another incoming trail and to be sure the trail the group is following does not make a sudden turn. Their secondary responsibility is to assist the point man in finding the next track. It is also wise to rotate the flankers up to point man as the "point" is the most fatiguing position.



The major thing accomplished by the three man tracking team for beginners is that it builds confidence, and it lessens the chance of error.

What three men agree upon is more apt to be correct than what one man decides by himself.

Tracking is done most efficiently as a team effort and we try to develop the appreciation of this fact in our training exercise.



Does this look like a picture of "nothing" to you? Expert trackers go on "sign" such as this; a flat spot, pebbles pushed into the ground, broken twigs, small rocks uprooted from their natural beds and scuffed forward in the direction of the victim's travel.

SUMMARY

You have now been told how to lay out a problem, how to identify your victim's track, and how to utilize the tracking stick to find the approximate location of the next track. You have been told why you must mark the tracks either left or right and why you must remember which it is you are looking for.

You have been told very little about what to look for. This, of course, varies greatly, depending on terrain, but since you are supposed to be working on flat ground which is free of vegetation, the things you should look for are the curved rear edge of the heel, the curved point of the toe that a walker generally pushed off with, flat spots, small rocks pushed down into the dirt, and small rocks uprooted from their natural beds and scuffed forward in the direction your victim went.

Of these clues, the most important are flat spots. Think about it. Only hooves and something man made (shoes, tires, etc.) will leave flat spots.

Small animals will scuff and move pebbles, but if there is a flat area as big as a

dime it has to have been made by a hooved animal or a man.

If the ground is so hard that you're not sure whether the flat spot was caused by man or hooved animal, test the ground to see whether your own weight will flatten it in a similar way. If not, then the flat spot had to have been made by something that exerts a lot more weight per square inch of foot area, hence a hooved animal.

Get your nose to the ground and look for anything!!!!

Do not, under any circumstances skip a track! Just because you can see a big obvious one a little bit ahead, do not jump up to it!

My half-blind, idiot aunt can follow big obvious tracks, and she has never learned a thing from them and neither will you.

The extremely difficult tracks, the subtle ones, the ones you have to hunt for half an hour are the only ones that teach you anything. When you're forced to dig for the most minute hint of a track you are on your way to becoming a tracker.

When we say Step-By-Step, that is exactly what we mean. Find every track, not 106 out of 107. There is no premium on speed in learning to track. The important thing is the self-discipline of making yourself stick with it to find the tough ones.

Keep in mind what it is that you are trying to accomplish. You are not trying to find a lost child in the wilderness. You are trying to learn how to track in order to more quickly find that lost child sometime in the future. It would be foolish in the learning situation to follow only what you have always been able to see and to skip over the magnificent lessons that would teach you what you need to know.

Let me leave you with this one last thought.

Superior eyesight, though helpful, is not a necessity for a person to become a skilled tracker. As in looking at material written in a foreign language, the trick is not in "seeing" it, but in interpreting what you see.

A great deal of "sign" is seen by the rank beginner and disregarded as insignificant because he has not learned to glean its meaning.

So go to it! Work hard at it, and if I feel you are ready for it, maybe three months from now I will move you up a notch with Lesson Number Two. ■

U.S. Border Patrol Agent, Jim Burns, is Kearney's partner at the El Cajon Station. Jack says, "If I could only pick one man from among those with whom I've worked over the last 15 years to accompany me on a search--that choice would be Jim Burns."

THE DILEMMA OF HELICOPTER RESCUE

by PAUL WILLIAMS

The chopper hovers overhead, its bright blades flashing, dusting the half-dozen rescuers with the down-wash. At their feet lies a stretcher with a broken body still containing a spark of life. They have brought him down safely off the steep cliffs with ropes and now stand on an out crop of rock on a steep side hill. They begin to push the stretcher up through the open door of the Huey into the reaching hands of the crewmen. Suddenly, the tip of a blade strikes a rock on the hillside. The blades disintegrate in a hail of shrapnel. The striken Huey falls to the ground and all die in a red ball of fire.

This is the recurring nightmare of every experienced rescue leader, and we are living on borrowed time. The core of the problem is a communication gap between you, the rescue leader on the ground, and the pilot of the aircraft. You, to a great extent, are dependent on his judgment as to where and under what circumstances he can fly his bird. If you are fortunate, you are able to talk by radio supplied temporarily by your men at base to a crewman aboard, but never to the pilot. The pilot, in the alternative, does not know you, does not know your skills nor does he know your ability to move over the surround-

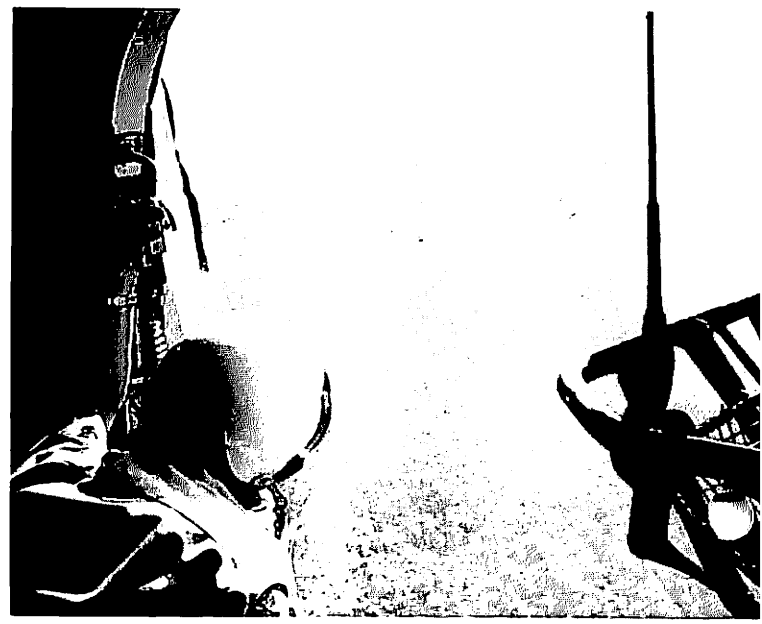
(Continued next page)

Prop wash or wind whip from large helicopters is awesome. Note wind blown small tree in background. Rescurers DAVE HOLLIS and JIM BROWN (L-R) prepare victim (center) for horse-collar evacuation.

ing terrain. For example, travel laterally or downhill in snow may be only 15 to 20 minutes for you. But upward in soft snow a half mile may mean two hours of travel. A walk down in snow downhill of several miles may mean only a few hours. Uphill, it's a different thing. On rock you may be able to traverse a quarter mile of class 2 to 3 rock on ledges quite swiftly. But if there is a class 4 pitch in the middle, then we have a different problem. The basic problem is that the helicopter pilot does not have the experience to judge your abilities and skills, or the terrain, but he does know what his bird will do. The result is that he responds to the known and he may well take unnecessary and perhaps unconscionable risks.

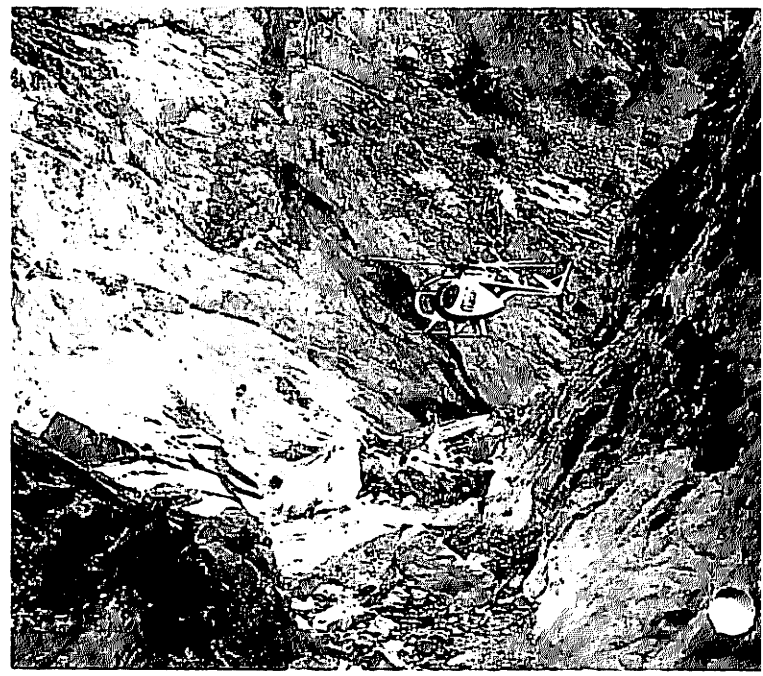
Let me give you a few of my own personal recent experiences. A hot Nam veteran pilot in a Huey discovered the body of the lost girl half-way down the cliff in a gully 40° to 45° rock, the gully descending immediately to a mountain lake, where access had to be by boat or by down climbing from above. He put four of us off by hovering immediately above the lake, where we stepped onto the landing bar and then onto a nubbin of rock jutting forth into the rock, where we perched as the blades swirled above us in close proximity to the cliff. There was no place we could go until he left. Is such a risk justified for a body? The same pilot wanted to tag line the body out with 300 feet of climbing line in a place where he could not get vertically above the body, and it would be necessary that he snatch the body off the cliff, thus starting his tag line with an oscillating force. I refused, We lowered the body to the lake edge and he was able to life the body out with a direct verticle lift with a tag line with approximately 100 feet. I know that only a very experienced pilot can handle a tag line lift-off. If he misses on the oscillations, the swinging gyrations will eventually flip the bird. Incidentally, we went home by chopper only after rowing across the lake in a rubber raft.

The Army recently dropped and killed an injured man in a cable evaculation when the cable broke and accordingly put out the word that the winches were to be used on their birds only in case of life and death. Our victim was comatic, bleeding at the nose and ear (basal skull fracture), and I put out the magic words of life and death and rigged the Stokes for a cable lift-out with a tag line. The pilot on receiving the message called his C.O. and refused to accept my evaluation. He settled on the steep hillside to where we had moved the victim and fortunately, we were able to lift the stretcher high enough up to get it into the bird. I don't know why the rotors didn't touch. They were terrifyingly close. We had been expecting a cable lift-out, and when the bird settled over us, we wound up with the tag line flailing about and hanging out the door. Fortunately, it did not get into the rotor and we all escaped alive.



The helicopter has revolutionized Search and Rescue more than any other factor.

Integrated use of both helicopters and ground personnel is common in modern search strategy. Members of the Riverside Mountain Rescue team prepare for pickup.



Small helicopters are great in tight places, but . . . .

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HELICOPTERS (cont.)

A chopper pilot endeavored to horse collar and cable one of our men into a crashed airplane in dense timber, live victims being aboard. The cable wasn't long enough, and the combination of the horse collar and the rescuer's heavy rucksack cut off the blood supply to one of his arms and he began to fall out of the horse collar. They almost got him back in before he fell nearly 200 feet onto the hillside, miraculously escaping alive with a basal skull fracture. An eighth of a mile away was a snow-covered clear-cut logging area with a road. Another eighth of a mile of road took you to a landing zone which we used extensively in effecting the rescue. The rescuer could have been landed at the L-Z or he could have been cabled in successfully in the immediately adjacent clear-cut.

In the same operation all victims were evacuated in a growing storm with winds of 30 to 40 miles an hour. Because of the storm a Chinook elected to come back in to vacate our crew totalling 38 men. I was informed initially that he was to take 25 men and after they were aboard, the crew chief waved all of us aboard. It was the wildest flight that I have ever had. The bird was overloaded, especially in the tail, and every time he backed off on the power the tail went down. It was like riding a roller coaster. The bottom roller being right over huge power lines just before the final thump-down (not touch-down).

In defense of the pilot, his decision to "horse collar" the rescurer to the crash site was precipitated by the discovery of the two victims alive after 20 hours in the snow in mid January. He further could not, under the press of the emergency, correctly evaluate our ability to travel over unconsolidated snow, and the second lift-off was accomplished only after a terrible weather report of impending snowfall and winds. It probably would have taken us 10 to 12 hours to travel up to where we were in the soft snow, but we could have hiked out in two to three hours. Again, under stress circumstances, with minimal communication ability, he made the decision to take us all out, since he knew that he could not return a second time.

We were bivouacked on Mt. Stuart at 9,000 feet on the False Summit waiting for dawn to evacuate an injured climber. During the night a rock avalanche had injured two of our own men, and approximately 100 rescuers had assembled from all over the State of Washington. At dawn two Hueys appeared. One of the men suffered extremely serious hip injuries. The other proved to be very badly bruised but not in critical condition. We had 1,000 feet of vertical north wall below us with up-coming turbulence, coupled with turbulence coming over from the south side and meeting at the top of the ridge, our only possible L-Z. The first Huey came in after two tries, managed to hover over the north face, where we could hand out our seriously injured rescuer. Our first bird was operated by a superb pilot. With the weather improving slightly the next Huey came in and the pilot really looked scared. He too emulated the first bird and made the lift-out of the second man. In retrospect we had plenty of manpower below that could have been airlifted onto the mountain at 5,000 to 6,000 feet. They could have been up to the second man within two to three hours and we could have lowered him down to a safe lift-out place. I'm not sure our original decision was not a correct one. Nevertheless, the second man was not in critical condition, and I wonder whether the hazard to the crew was worthy of that type of an evacuation.

The following are my conclusions: With the increased use of helicopters, we are being forced to make instantaneous decisions, unlike by-gone days when the slow, tedious on-foot approach allowed us to consider the hazards and formulate a plan carefully and slowly. The odds of error in decisions under pressure are immensely greater. Recognize this problem and take the time to think it out. Secondly, you as a rescue leader must independently evaluate the pilot's decisions and challenge them if you feel they contain an unnecessary element of risk. Initially he will resent your evaluation of his decisions. Ultimately it will become an accepted fact that you participate in the decision-making process. Third, we must make a greater effort to penetrate directly through to the pilot so that you

The U.S. Coast Guard has the only military helicopter with VHF radio communications with civilian agencies

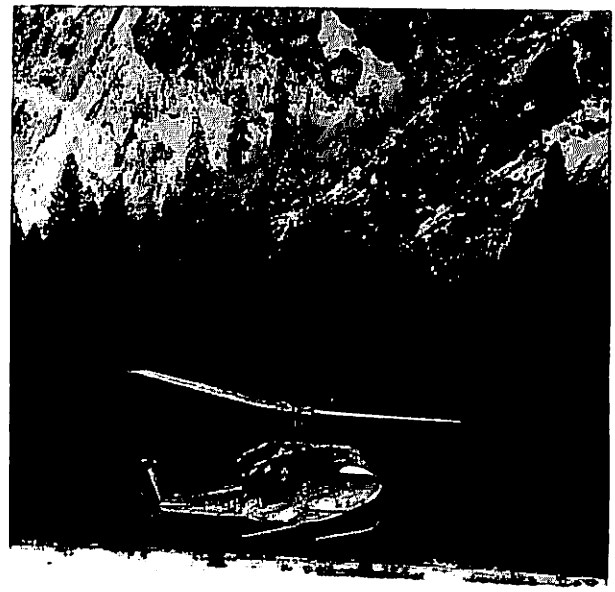
and he may evaluate each other. He wants to know if you recognize the basic capacity of his helicopter and whether he can trust you to operate safely on the ground. You want to be able to evaluate him to make the decision as to whether he is brave and bold (there are no old, bold pilots) or has been at the service so long that he is afraid to take any risks whatsoever. Usually, again, you will be acting under pressure, because everyone wants you to decide immediately the course of action.

Finally, we probably have reached a state in the art where we rescue leaders need to know more about the flying abilities and capacities of our helicopters. Certainly we know the landing area requirements and some of the basic characteristics, but we need to know much more. In short, we need to go to school and really learn about them and perhaps we could evolve from this a distinctive marking for your helmet to help the pilot evaluate your ability as you evaluate him.

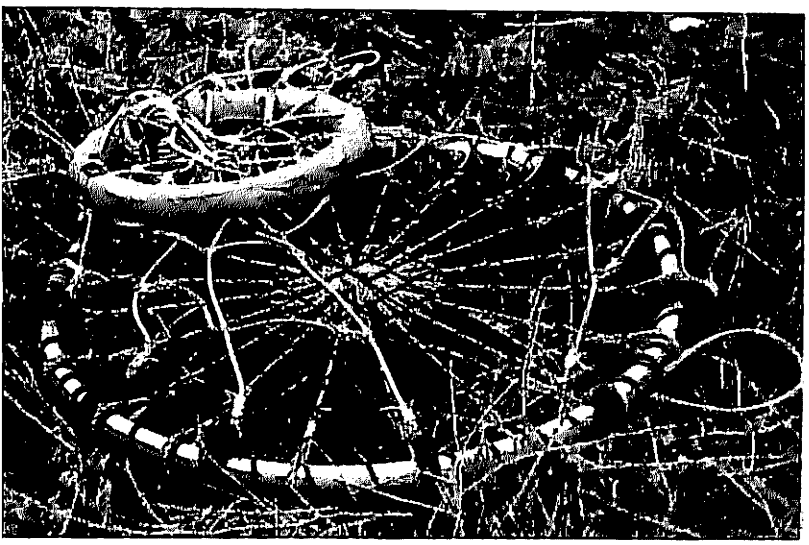
At the very least it is time we began to talk to our helicopter pilot friends to stress the problem so we may become a part of the decision making process as the pilot makes his critical approach to the accident site. The helicopter has become a permanent tool of the rescuer. Let us recognize the problems and their limitations with sophistication. ■

A helicopter ride in the mountains can have its ups and downs as dramatized by NILS NICHOLS.

The military establishment is still the primary source of SAR helicopter support.



Landing a helicopter in fresh snow can be unsettling.



Another form of rescue basket for helicopter use.

Noise levels in large, modern helicopters is fatiquing, and can dull the hearing. BRIAN BURKE demonstrates an alternative.

SNOWMOBILE RESCUE UNITS IN NORTHEAST SUPPORT CD

by VINCENT J. TUSCHER

VINCENT J. TUSCHER
Emergency Information Officer
Region One, Defence Civil
Preparedness Agency

All-season recreational use of public lands, leisure hours, long week-ends and fast, interstate highways in the Northeast tempt outdoors lovers to taste life in the woodlands.

The increasing use of snow machines on back country trails, plus the inexperience and sometimes careless attitudes of city dwellers, pose serious problems for local, county and state search and rescue organizations. The latter's numbers are too few to handle any widespread natural and man-made disaster, therefore the emotional task of rescuing hurt snowmobilers helps to compound the situation.

Enter the volunteer efforts of well-disciplined, trained snowmobile clubs – riding the snow swells with expertise, and geared to handle any calamity on the trails or in the deep woods. Prodded, prompted and urged by state civil defense organizations in Maine, New Hampshire, Vermont, Massachusetts and New York, the volunteer snowmobile rescue units have earned gratitude and respect from a once hostile public.

MAINE – Auburn, a southcentral city of 24,000 persons, quietly boasts of having the first organized volunteer snowmobile rescue effort flying the civil defense banner.

Dating back to the summer of 1968, the Auburn Civil Defense Rescue now involves 40 persons operating out of the basement of the Central Fire Headquarters' Emergency Operations Center.

Prime movers of the unit are Jim Allen, Auburn lumber dealer, and Roy Tassinari, show counter manufacturer.

Titular head of the unit is the assistant city manager, but it's so well organized that the proud spirits of 40 males keep it sharp, equipped, and ready for action.

Important adjunct to snowmobile rescue operations by the Auburn, Me., Civil Defense Rescue is this mass feeding station, operated by wives of the 40 men.

Among the other city departments there is a great understanding as to what the rescue team can do.

"We're constantly testing ourselves," said Roy. "But we have only had one actual operation involving a disaster, and that was a plane crash.

"However, four years ago, during a Christmas storm which left two feet of snow, this area was declared an emergency. The civil defense director couldn't be located so they called me. I didn't have a list of members handy, so I called ten members, right off, and we reported to Norm Vermette, Androscoggin County CD director. Our machines transported about 90 nurses and doctors out to isolated homes where there were sick people," he reminisced.

JIM ALLEN, left, and ROY TASSINARI of Auburn, Me., CD Rescue, with rugged rescue sled built by Jim, and which carries a Stokes litter basket.

The unit has four radios, one inoperable, obtained through the surplus property program of the Defense Civil Preparedness Agency.

The training is not of textbook quality, Roy points out. "We go out at night, after everybody is relaxed. One night there were 25 or 30 of us who showed up – and it was 20 degrees below zero at that.

"We simulated an airplane crash. We told the fellers that a number of people had parachuted out and that some were hung up in trees and others in the fields. The four in the trees had to hang there, freezing, until we found them, got them down and brought them out. We used only our radios and lights to find them."

Pride of the organization is a rescue sled, built mostly of wood under Jim's direction, and which carries a Stokes litter basket for transporting injured persons.

About the airplane crash, three persons died and the snow machines brought the bodies out, plus parts of the plane.

Members of the unit are proud that they have never asked the city for financial help, or even a drop of scarce gasoline. Four squads of seven men each make up the active team, with one squad held in reserve. All have had medical self help and first aid training, obtained through the county CD program.

Other units now being formed in the Pine Tree State are located in Bangor, Waterville and Augusta.

Both veteran snowmobilers had a word of advice for snowmobile groups: Don't attempt to take on a rescue task without coordinating with local government emergency forces.

NEW HAMPSHIRE — Wild, mountainous country, deep woodlands, perilous ravines and winter-time recreation land aura that registers close to 60,000 snowmobiles each year tasks the resources of the New Hampshire Fish and Game Department.

James M. Jones, training officer for Fish and Game, points out that the department is mandated by the Legislature to conduct all search and rescue operations in the inland waters and woodlands — and this includes snowmobiling.

"We have 47 men in the field, each with a snow machine, and the six districts have spare machines for a total of about 60. We are a vital part of Governor Thomson's statewide emergency rescue plan 'Operation Link Up'."

Jones trains the field staff in emergency self help, aided by two men who are specialists in first aid. Some of the men are graduates of the Mountain Rescue School, run by the Forest Service.

The department receives 40 per cent of the State's snowmobile registration fees, but even that is not enough to produce an across-the-board trained volunteer effort.

"We have received no assistance, training, literature, manpower or equipment from state civil defense. I do not interface with the state's civil defense training officer. George Moses, state deputy civil defense director, however, has been most cooperative and has often offered his assistance.

"The problem has been that we want to get on with training the 125 snowmobile clubs in the state in search and rescue skills, but the funds appropriated by the Legislature have been bogged down within the department," Jones said.

He emphasized that his office is working very closely with Mrs. Catherine Dickson of Canterbury, president of the New Hampshire Snowmobile Association, so that training can get underway soon.

Two important, non-state agencies are ready and able to throw their men, equipment and other resources into a beefed-up rescue operation using trained volunteer snowmobilers.

The most northern is the Lakes Region Fire Mutual Aid, where 19 towns in the remote area have fire departments with search and rescue units, equipped with personal snowmobiles.

"No, civil defense is not in the picture here at all," explains Kip Hawkins, coordinator at a well-equipped dispatch center in the basement of the county courthouse in Laconia.

"With more and more people coming up here from the city in the Winter, folks who are unfamiliar with the wilderness, we've got to have trained help so that we can respond to their emergency needs," he said.

In the Winter of 1973, the region started a rescue program under the auspices of Fish and Game, but as yet it has not been pulled together into an active snowmobile rescue unit.

"Prime movers behind this action are the boys at the Center Harbor Fire Department, and they are being trained by the state conservation officer, Andy Cannon. But this effort is only an experiment."

The mutual aid system in the lakes region shares an organizational set up with the Southwest Mutual Fire Aid in Keene. Both are unique in the country in that they receive no state or county aid, yet are the only ones recognized by insurance firms.

Ed Mattson, dispatcher at the Keene Office for 55 fire departments, said that snowmobile rescue work in the area is unorganized, and on a hit-or-miss basis.:

"It's like anything else up here; if somebody is in trouble then the route for aid is through the volunteer firemen. A good share of the volunteers hold the EMT card (Emergency Medical Technician, issued by the Department of Health, Education and Welfare) and which qualifies the person to be an ambulance attendant."

He remarked that when his group approaches local civil defense directors about what they can do in gearing up for snowmobile rescue efforts, they "turn around and go to the volunteer firemen."

Apparently the real need is for someone to tie the local snowmobile clubs together into a functional unit.

"There is a real need for someone to set up a procedure, like a written emergency plan, coupled with training. It should be that we make one phone call and get maybe ten snowmobiles. As it is we go on the radio and ask for help, so there is that quick response that is missing."

Three years ago, the Monadnock Region Ridge Runners set up a 24-hour response program with a rescue squad. It had a telephone fan-out call system, and this listing is the one which Ed uses for emergencies.

"The potential is here in this area for someone to organize them and have the clubs come into our group as a resource. If one town did it — it would snowball."

VERMONT — When the chief executive of a state is an ardent supporter of snowmobiling, and underscores this by completing an 100-mile tour at the helm of a slipping, sliding, charging snow machine, then objectors to the sport dwindle to a minority.

Such is the case in the Green Mountain State, led by Governor Thomas P. Salmon.

In fact, State Police Cpl. Darwin Rogers looked back to a number of years ago when Tom Salmon was first running for that office.

"He talked to a lot of us snowmobilers, especially those who were organized as search and rescue teams in VAST (Vermont Association of Snow Travelers). Back then we had 22,000 members. Guess what his plurality was? Exactly our membership — and we haven't let him forget it, either, in a nice way," he smiled.

Important of all the patches on VAST members' jackets is the Vermont CD one.

(Continued next page)

SNOWMOBILES (cont.)

VAST, of which Darwin is vice president, and his wife, Pat, the director for Windham County, now has about 14,000 active members in 240 clubs throughout the state. All have been trained in the operation of a snow machine under adverse conditions.

The Vermont State Police (Division of Public Safety under which the Civil Defense Division also operates) has jurisdiction over any and all emergencies. Within the State Police are trained snowmobile units, including personnel with mountain rescue skills.

The Vermont State Police, naturally, cannot handle every emergency in snow areas and must rely on the trained volunteers in VAST. The group was formed in 1967 with three objectives: Promote good snowmobiling, good trails for recreation, protection of the environment.

"Just recently," Corporal Rogers pointed out, "we added one more which is as important as the others, and that is, either individually, or as VAST members, we would participate in search and rescue operations under proper authority."

In Bellows Falls, where the Rogers live, the Abenaqui Snowmobile Club was formed in 1969 in the basement of their home. Initially, under Corporal Rogers' direction, first aid courses were held there evenings. It now has 148 adult members, males and females.

Out of this effort came the unit's rescue squad, totalling 22 men, all of whom have had emergency training. The club has proven to be a resource for the city and its civil defense director, Peter LaHaise, who funnels needed equipment their way.

"We couldn't have done this without the help of Earl "Tink" Osgood, operations officer, and Gert (Mrs. Gertrude) M. Hodge, training officer, of the state civil defense staff," he said.

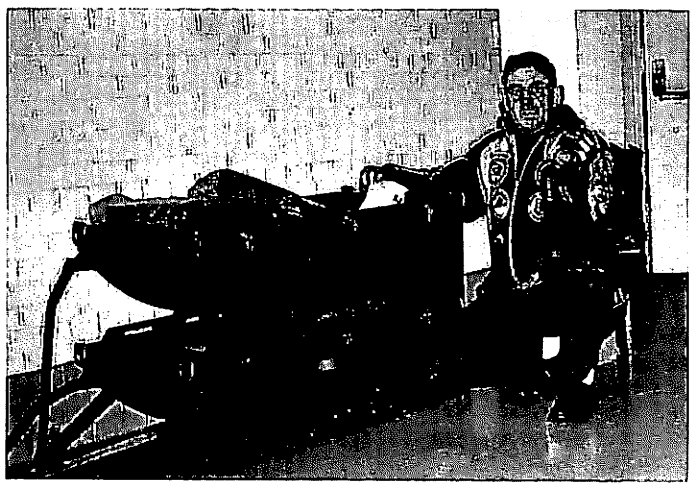
Using the state's Civil Defense Snowmobile Rescue Service bill of particulars as a guide, the Bellows Falls unit has sharpened its skills so that it stands as a model for the rest of the snowbound nation to emulate.

instances wherein the unit has proven its worth include transporting bottled gas to remote isolated homes; rescuing stranded motorists from a snowbound interstate highway, and, in a state where cows outnumber the humans, going to the aid of a dairy farmer during a blackout with a portable 2.5Kw generator so he could milk his worried 100 cows.

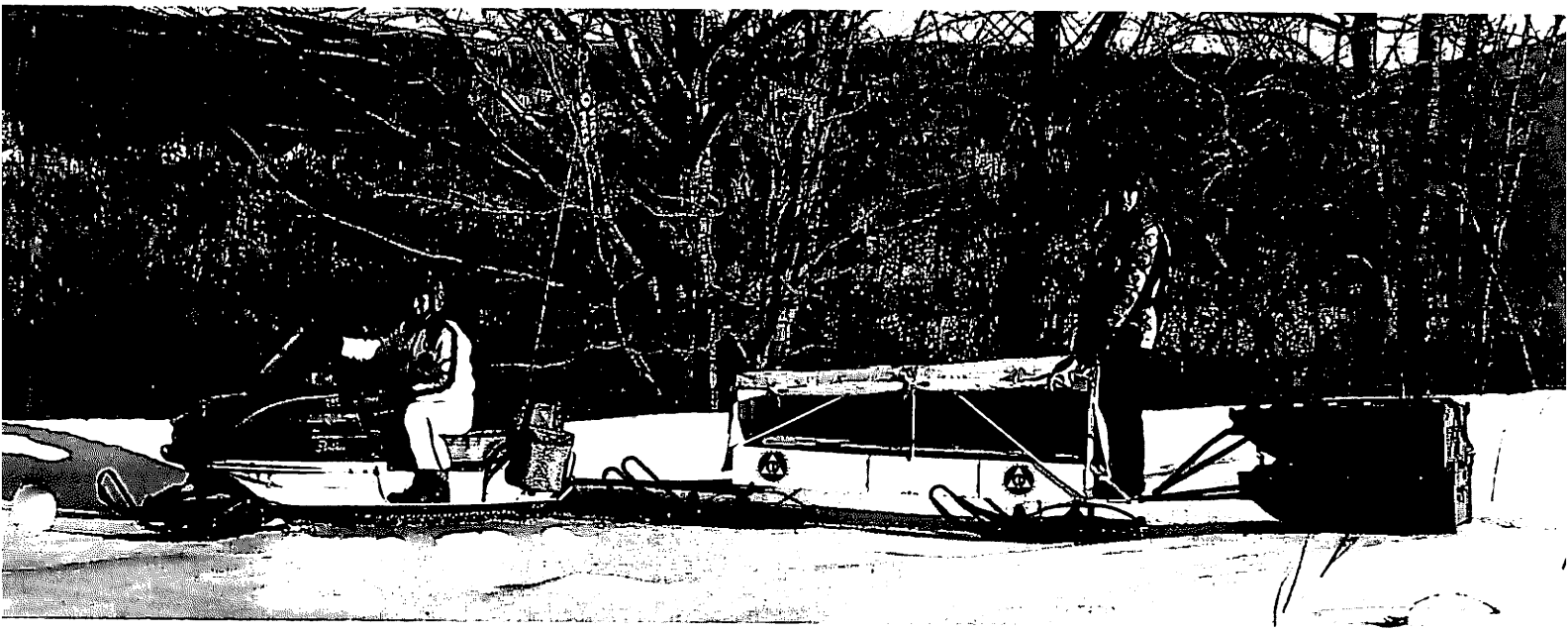
"We've aided the State Police to look for lost hikers, skiiers, and in aircraft crash situations. Very few, if any, snowmobilers look for compensation for their efforts. In fact, they look for a chance to do something with a snowmobile," he said.

This attitude was brought out in an editorial in one of the state's dailies. It stated: "Over the past few years, particularly during heated debate at legislative hearings, Vermont's snowmobilers have been the target of much verbal abuse. There are many stories that could be related concerning voluntary efforts by snowmobilers in emergency situations in Vermont. In short, the organized snowmobile enthusiasts of Vermont are to be commended for responding well above and beyond the call of duty."

The Bellows Falls group as yet has not conducted a formal emergency operations simulation test, due to the lack of an adequate freighter sled to carry their rescue equipment.



Lightweight, covered sleds carry clothing and medical supplies, and are towed in tandem behind snowmobile or rescue sled.



PATRICIA ROGERS on a snowmobile towing rescue sled with DARWIN ROGERS on the rear, and two support sleds.

Prodded by the club members, Jim Carr, an engineer at Rockingham Memorial Hospital, designed and built a unique sled which can be completely covered with canvas so that an injured person could be protected from the elements.

The design includes heavy duty steel runners, and tow bars at either end. The latters' purpose is to allow pulling smaller equipment sleds as a team operation.

"These smaller sleds," Corporal Rogers explained," can be put in the trunks of cars when we get a call, and brought to the scene of an incident where our rescue squad members can take the clothing and put it on over their normal working attire. In this way when our call for help goes out, a few of us load up the sleds at the hospital, and we meet the others at the scene."

Proud designer and builder of rescue sled is JIM CARR, left, with Mrs. PAT ROGERS of Bellows Falls, Vermont, Director of Vermont Association of Snow Travelers.

MASSACHUSETTS – The Bay State has a total of 90 registered snowmobile clubs, 68 of who are incorporated with charters. There are 55,000 registered snow machines in the state.

Douglas Verder of Lunenburg is president of the Snowmobile Club of Massachusetts.

All snowmobiles are registered with the Marine and Recreation Vehicles Division of the Registry of Motor Vehicles. The fee is $5.00 per year.

All the chartered clubs voluntarily work with their respective police departments during emergencies. Many snowmobilers are trained in rescue and first aid, either by the Red Cross or at the state Civil Defense Training Academy in Topsfield. Registry and academy officials have plans to establish courses in these subjects, plus survival training, for all members.

Many of the club members have rescue equipment, such as first aid kits, stretchers, blankets, ropes, tools and repair equipment on their vehicles.

The statewide group has played vital roles in many disaster situations. In the snow storm of February 1968 in the North Shore area, the Northern Lights Club from Hamilton, rescued and evacuated more than 500 persons from automobiles stalled on highways. They transported nurses and doctors, and brought in food and fuel to institutions. They also lent a hand to the public utilities' companies with repairs and equipment.

In Dunstable, the Snow Drifters Snowmobile Club saved the lives of three skydivers who became lost after landing in a heavily wooded area. A call for aid was issued by the police and snowmobilers located the men and brought them out to waiting ambulances on a highway.

In 1972, an auto-train collision created an unusual emergency. The badly mangled car needed to have heavy rescue tools brought in to extricate the victims.

Recently, legislation has given the authority to local governments to assign the use of snowmobiles on highways during times of emergency. The law is of great value in advancing the planning of civil defense in emergencies.

NEW YORK – A 1972 directive from the commissioner of the New York State Department of Environmental Conservation set up search and rescue operations with a detailed policies and procedures manual.

The action was taken because, historically, searches for lost persons in the forest areas of the state had been carried out by volunteers under joint direction of forest rangers and state police or county sheriffs. However, the general knowledge of silderness areas, ability to interpret maps, expertise in wilderness survival and strong field organization have provided the forest ranger with the needed skills to successfully conclude all searches.

Statistics revealed that in the Adirondack and Catskill mountain areas more than 100 persons are reported lost annually. Accidents to inexperienced snowmobilers likewise draw upon the skills of cooperating agencies and volunteer services to insure the safety of the public.

Within EnCon, the Division of Lands and Forests is responsible for developing a search and rescue organization and conducting these operations. Further, S & R teams, consisting of three regionally located Forest Ranger S & R Teams, are organized and have received special training. Each team, a highly-trained unit, consists of 10 selected volunteer rangers and a team leader.

"In the state organization there are blue and red S & R teams, year-round rescue personnel. They are all over the state – and those guys are good," observed Malcolm Douglas, Washington County civil defense director with headquarters in Hudson Falls.

"Yes, and they have fleets of snowmobiles. Let's face it, snowmobiles are a necessity in this area. Mac (Malcolm) and Dick Loeben, county chief of rescue, have laid sound plans to deal with the accident problem," said Mrs. Marie Barbuti, director, Northern District, state Office of Natural Disaster and Civil Defense.

Douglas explained that what he has in mind is a faster response, by county volunteer groups, before the state crews can arrive on the scene.

"What Mac and Dick have developed is a perfect example of local government handling its own disaster situations without immediately calling in state people," Mrs. Barbuti pointed out.

Under Dick Loeben's leadership, a standard operating procedure for snow vehicle emergency services has been developed. The plan has been adopted in the Town of Fort Ann, the largest town in the mountainous county, and with the greatest number of snowmobile trails.

The hope, eventually, of the county CD officials, is to have at least two trained snowmobilers in each town throughout the county.

"Then, maybe by early next Winter, we'll have a county wide exercise, with 17 towns represented. After that, with the entire county on a rescue squad basis, tied in to our EOC here, we'll write a snow disaster simulation exercise and hand it over to the state, and others, for their training," Mac smiled.

The county officials have plans to include the MAST (Military Assistance to Safety and Traffic) operation which exists at nearby Plattsburg Air Force Base.

In Plattsburgh, James P. O'Connor, civil defense director, developed a rescue annex to its emergency plan which includes organization and training of a Rescue Service. The team meets weekly and holds monthly training exercises. Within the group is a snowmobile rescue unit.

Richard M. Byrd, coordinator for Onondaga County, has had a very active snowmobile rescue unit in operation since 1969. The men are trained in medical self help, first aid, and support their activities with fund drives and assistance from firms in the area. ■

THE CHANGING FACE of SAR in BAJA CALIFORNIA

by Lois Clark McCoy

Courtyard of one of the chain of newly opened "Presidente Motels" spaced along the Trans-Peninsula Highway in Baja California, Mexico.

Photographs by Mackintosh Photos

Two years ago the typical Search & Rescue incident in Baja California involved rough roads and difficult communications in a sparsely populated land.

Today, the foremost rescue effort is directed toward the emergency care and transportation of highway accident victims.

The "Future" is here in Baja California. Within the last year giant steps have been made in communications, the mapping of the Peninsula and in emergency care and transportation of highway accident victims.

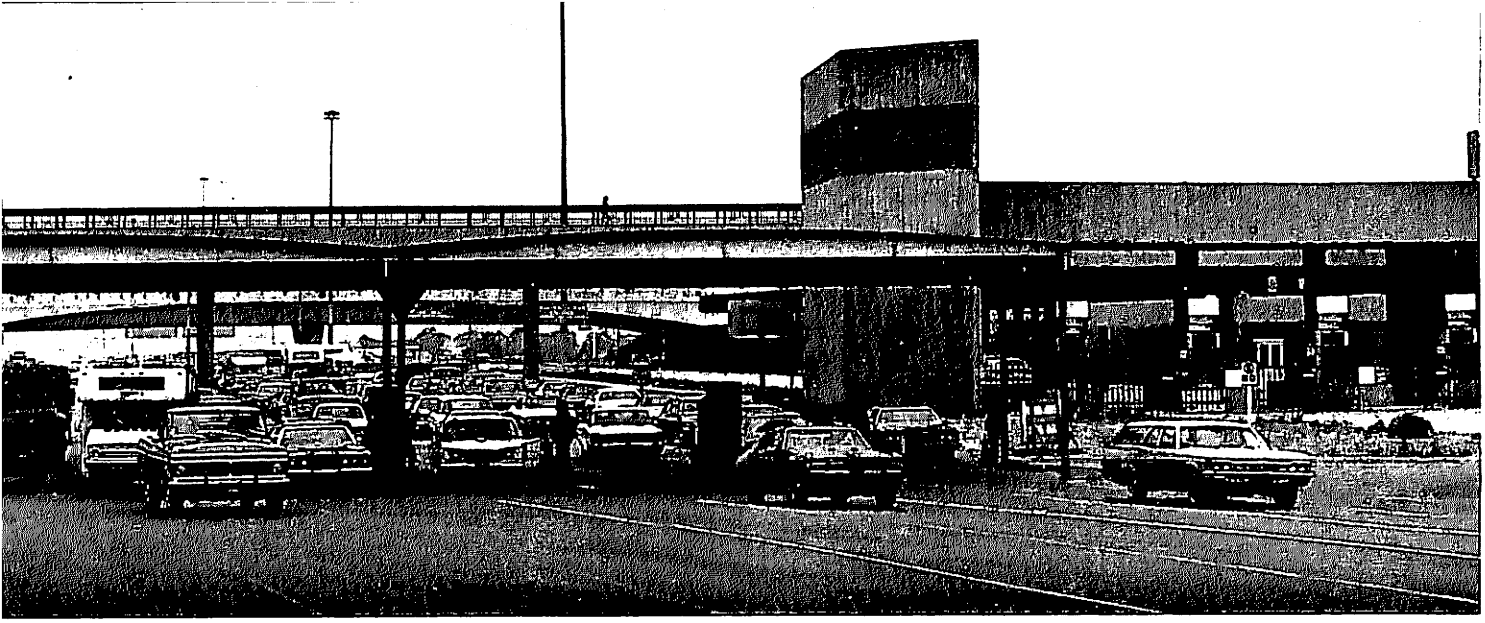
What happened to the yesterday of only 12 months ago when traveling in Baja California was still a mysterious combination of dirt roads, mileage to the exact tenth on the odometer and well-thumbed guidebooks listing the trail heads and confusing wood cutter's roads? Well that is the PAST!

The Road That Changed Everything

Under the present regime of dynamic President Luis Echeverria, the Trans-Peninsula Highway became a reality in November 1974.

Today, the connecting highway from Ensenada through Valle de Trinadad to San Felipe is almost finished. There are rumors of another road already on the drawing boards to cut into the fabled wilderness of the National Parklands of the San Pedro Martir. A highway past Picacho del Diablo? It bogles the mind!

Obviously Baja California has become a fantastic "overnight" success. In 1949 ten Americans, at most, bought gasoline from Anita and Heraclio Espinoza's gas



The Tijuana International Border with a relatively light day of traffic crossing into Baja California.
Mackintosh Photos

pump in El Rosario. In Christmas of 1973, a whole year before the opening of the new highway, 6000 made the trek to La Paz. Is it now possible that 20,000 campers crossed the United States border at Tijuana on just this last Memorial Day weekend alone?

The government of Mexico had realized that the opening of these highways would rapidly accelerate the changes already coming to the two states of Baja California.

President Echeverria had directed that a coordinating commission "CODIBAC" be established to promote the economic development of Baja California Norte and Baja California Sur.

Coping today with the success of that program and its attendant problems is CODIBAC's Director General, Lic. Mario Jose Casco B. Among his Commission's areas of interest are the development of the tourist industry and the development of both the commercial and sport fishing fleets.

Another area of CODIBAC's special attention is the development of Search & Rescue facilities for Baja California. This again ties in with the interests of the thriving tourist industry by helping to make their visit a safe one.

Today in June 1975, the Peninsula's tourist business is booming. The fishing resorts and guest ranches are still a bargain by North American standards and the new "Presidente Motels" stretch the length of the new highway. Mike's

Lic. Mario Jose Casco B., Director General of "CODIBAC", Coordinating Commission for the Economic Development of the Peninsula of Baja California
Photo by Ken Benson, Idyllwild

Sky Ranch swings, Aida Meling's Rancho San Jose relaxes, and the turtles at Bahia de Los Angeles have gone the way of the "mahi-mahi" in Hawaii. That is - up in price and down in number.

The thriving tourist trade has brought economic health to the previously underdeveloped and somewhat barren semi-arid Baja Peninsula. But, as we know, tourists with money are not always tourists with taste.

In Mexico you hear:

> Bad roads, good people.
> Good roads, all kinds of people.*

Luckily most of the new visitors still stay close to the Trans-Peninsula Highway. To date the mountain or desert search for the lost hiker remains the occasional incident. Unluckily, however, more than a few are 'involved' in automobile accidents.

The major rescue problem facing Lic. Casco's CODIBAC agency today is the transportation of persons injured in highway accidents to hospital facilities for emergency treatment.

The Trans-Peninsula Highway is a fine two-lane paved road maintained in good condition.

Interstate 10 it is not! Wide-bodied recreational vehicles in combination with range cattle crossing the highway can create some dangerous obstacle courses. A large sign near the immigration check point at Manadero reads "Trans-Peninsula Highway--Designed to Promote Economic Develop--Not for High Speed Driving." Human nature being what it is, some people ignore this warning.

Highway accidents do occur, but obviously, before there can be any rescue, there has to be a means to discover that such an accident has occurred.

Baja California is still many long stretches of sparsely populated miles of asphalt highway sandwiched between Presidente Motels and the airstrips of the new tourist centers.

Consequently Lic. Casco's first Search & Rescue effort has been the establishment of an emergency radio network linking the Presidente Motels into one information gathering system. This system can report highway accidents, overdue tourists with reservations, overdue aircraft or any other potential difficulty.

(continued on next page)

*"Dona Anita of El Rosario" by Helen Ellsberg, La Siesta.

← *The new and the old* ↑

The new highways are clearly marked with the International Picture designation for curves, speed limits, gasoline, food and washrooms. One sign, that of a long-horned steer, means "Unfenced Range Cattle" and it pays to keep a sharp eye out, especially at night.

Mackintosh Photos

In Baja California most tourists today keep to the Trans-Peninsula Highway, missing such rural charm as shown here. Since they remain close to the paved roads, the lost hiker or jeep remains the occasional SAR incident compared to the highway emergency incident and transportation to medical care.

Mackintosh Photos

Red Cross First Aid Station and ambulance at Punta Colnett, Baja California, Mex.

Mackintosh Photos

Baja California is establishing local Red Cross and 1st Aid Stations at many of the towns bordering the Trans-Peninsula Highway. These Aid Stations are funded by volunteer efforts of the townspeople as are our own American Red Cross program. The Emergency First Aid training is taught according to the new standards of the International Red Cross Assoc.

The pre-planning of this communications net is part of the larger plan for the further development of the tourism industry in Baja California.

Lic. Casco is ensuring the continued good will of Baja's many new visitors by making their vacation not only picturesque and enjoyable, but safe as well.

In addition, through the efforts of the Mexican government and Lic. Casco's CODIBAC agency, the full Peninsula coverage of HF radio stations is now being tied into a network of hospitals with emergency facilities. There are presently 13 stations operating with another 12 scheduled for immediate installation.

Another part of this total effort are the radio equipped cars of Mexico's highway patrols "The Green Angels". These patrols have been established to give temporary first aid as well as mechanical assistance to highway travelers. Via their mobile car radios the Green Angels can also obtain the assistance of the ambulances of the "Cruz Roja" and their trained Red Cross emergency first aid personnel.

In cases where they would be helpful, these links in the present Baja California emergency radio communications net can also be employed for search as well as rescue. Luckily, to date the mountain or desert search for the lost or overdue hiker remains the occasional incident.

Although much progress has been made, there are still areas where medical facilities are limited. One such area lies in the sparsely populated central section of the Peninsula.

Here, the closest medical assistance is to be found at the mainland hospital of Hemosillo, across the Gulf of California. This central area is presently served only by air ambulance from Hemosillo.

The Sea

In Baja California after highway care and transportation, the next largest number of rescues concern maratime SAR operations involving boating accidents and maratime searches.

The tides and violent storms of the Sea of Cortez and the Pacific Ocean present the second most treacherous environment for the recreational visitor to Baja California.

(continued on next page)

Red Cross Ambulance and First Aid Station at Santa Tomas, Baja California, Mexico.

Mackintosh Photos

One of the highway assistance vehicles of the "Green Angels." These radio equipped trucks are directed by the Department of Tourism as a service to motorists in difficulty in Baja California.

The "Green Angels" are only one of the services provided by the Department of Tourism. Regional offices in Mexicali and La Paz under the direction of Senor Robert de la Madrid and Senor Carlos Riva Palacio maintain a watchful eye on the comfort and safety of travelers in Baja California.

The Department's efforts are now being rewarded with enormous increases in tourism throughout the Peninsula.

Mackintosh Photos

In these cases, the first line of maratime SAR resources are the operators of the fishing resorts, charter boat services, and lobster and shrimp fishermen.

The United States Coast Guard will also respond to a request for assistance from the Mexican government.

But again, before you can search for a boat, you have to know that a boat is lost or overdue. Too often the lost boatman has crossed into Mexico with his boat on a trailer, parked at an inviting deserted beach and put to sea.

The first notice that a Mexican official may receive is a call from the American Consulate who has finally received an inquiry from the family some three days to as much as three weeks later.

Obviously emergency communications has had to be the first step in Baja California for their specialized Search & Rescue future. Their on-going planning still is one step ahead of its execution. However, the progress in the last year and a half has been rapid.

Topographic Maps

Another outstanding development is that topographic maps of Baja California are now available for purchase.

The Map Centre in San Diego is now ordering Mexican topographic maps of the Baja Peninsula in a scale of 1:50,000. This scale compares favorably with the 1:62,000 scale of our USGS 15 minutes quadrangles.

Preventive Search & Rescue

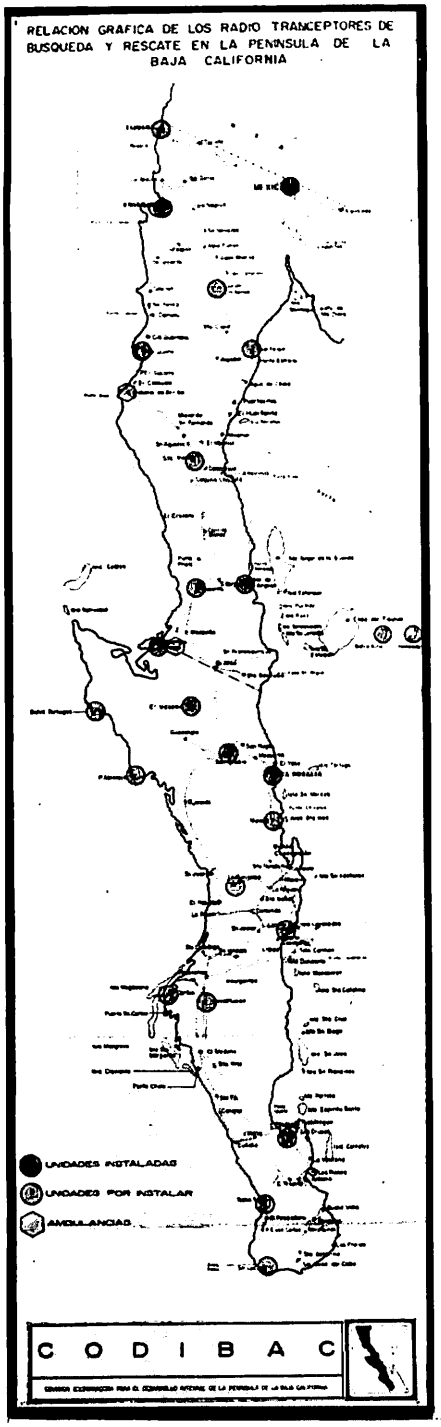
The President of Mexico, the Governors of Baja California and the CODIBAC commission are all deeply involved in the development of a thriving economy for Baja California.

From this point of view, the prevention of SAR incidents is their first approach.

They are pre-planning against the accident, establishing a communications system over the length and width of the Peninsula, providing hospitals, ambulances, doctors and Red Cross first aid personnel.

They are providing good lodging facilities on paved highways. The new highways are marked with the international picture signs, and maps are available to tell you where you are--not only Mexican topo maps, but the Automobile Club of Southern California now has its new road map of Baja California in distribution.

(continued on next page)



EMERGENCY RADIO LOCATIONS

Already Operating

Tijuana
Mexicali
Ensenada
Valle Trinadad
San Felipe
San Quintin
Santa Inez
Bay of Los Angeles
Rosarito
Guerrero Negro
Vizcaino
San Ignacio
Santa Rosalia

To be Immediately Installed

Bahia Tortugas
Abreojos
Mulege
La Purisima
Loreto
Via Constitution
Purta San Carlos
La Paz
Todos Santos
Cabo San Lucas
Bahia Kimo
Hemosillo

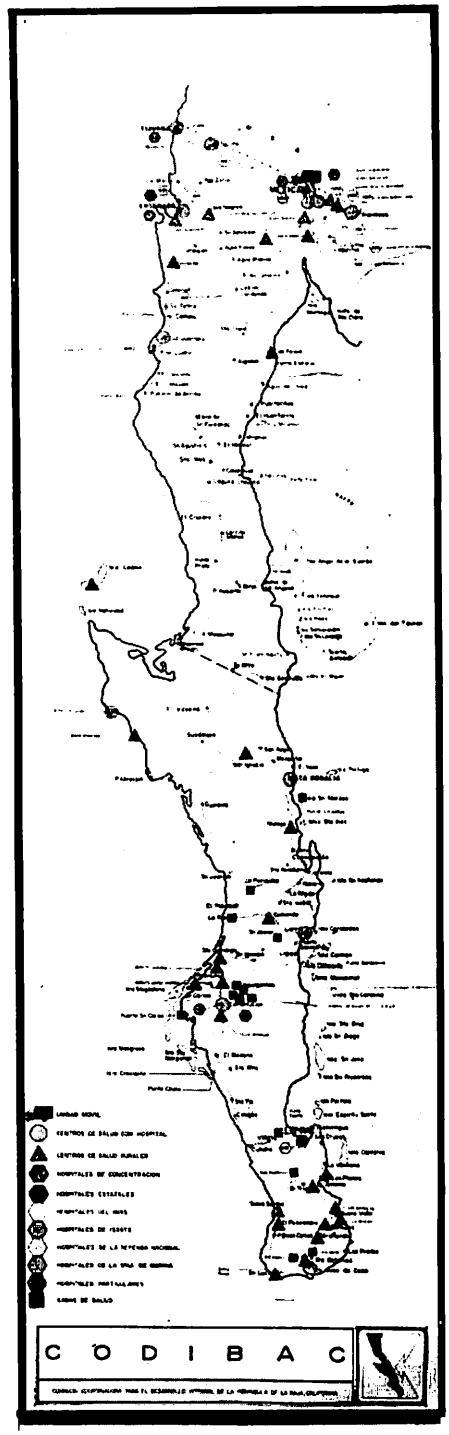


Figure 1

A chart showing the locations of the 25 radios involved in the Search & Rescue net in Baja California. 13 are already active with 12 more to be ready immediately.

Figure 2

Depicts the locations of medical assistance, first aid stations, and hospitals throughout the Peninsula of Baja California.

(Continued on next page)

We've listed just a few points from Lic. Casco's present time table as Baja California makes its step into the future.

In Mexico, they call it "Pre-Planning". In Tacoma, Washington, Gene Fear's Survival Education Association calls it "Preventive Search & Rescue."

To quote Gene Fear, "the best rescue is the one that's never needed."

Certainly whether in Mexico or the United States, dollars go farther in Preventing rather than in Prosecuting Search & Rescue missions.

Lic. Casco and his CODIBAC Commission are focusing their SAR efforts at preventing the cause of the emergency incident, as well as in establishing communication and transportation facilities to handle any emergency, if or when it unfortunately occurs.

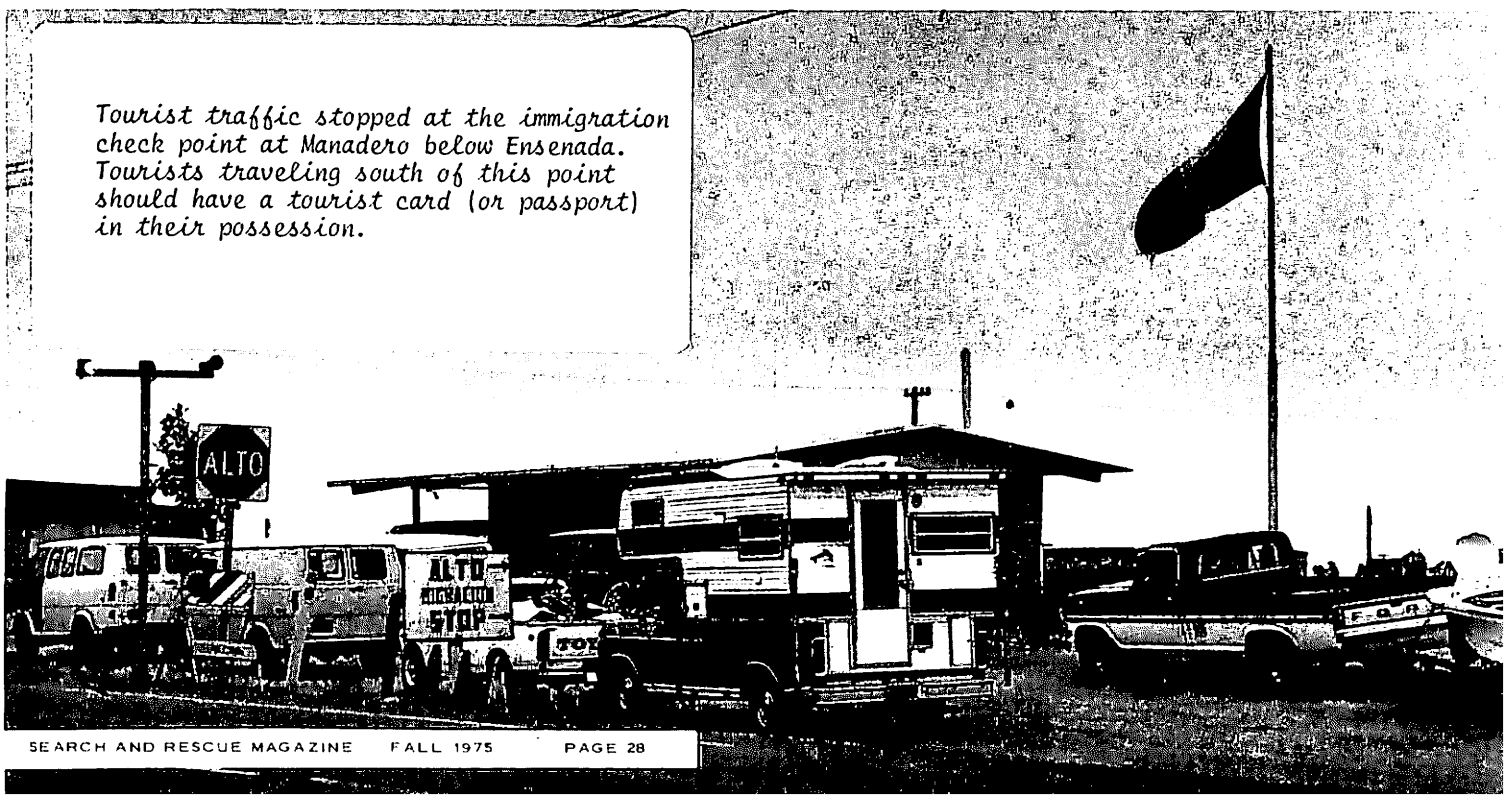
Only two years ago the typical SAR incident involved rough roads, unpopulated areas and difficult communications. Today, the greatest number of SAR missions involve highway emergency care and transportation to medical treatment of accident victims.

These rapid changes in the focus of Search & Rescue operations in Baja California serve to spotlight the growth of the economy throughout the entire Peninsula.

Baja California's Search & Rescue program is successfully keeping pace with its own accelerating economic development. We would like to congratulate Lic. Mario Casco and his CODIBAC commission on the success of their operations. ■

Lic. Mario Casco, Director General of CODIBAC, indicating the rapidly expanding locations of emergency communication sites to Dr. Arthur W. Feldman, former Principal Officer, U.S. Consulate, Mexicali, Baja California.

Photograph, Ken Benson



Tourist traffic stopped at the immigration check point at Manadero below Ensenada. Tourists traveling south of this point should have a tourist card (or passport) in their possession.

NORTHERN CALIFORNIA SEARCH AND RESCUE SEMINAR

Story and Pictures
by JIM PRESENTATI

The first annual Search and Rescue Seminar for Northern California was held from July 6 to 12 at Donner Mine Camp near the summit of Donner Pass in the Sierra-Nevada Mountains of Nevada County, California. The seminar had co-sponsors; one being the California Community College system with three units of college credit available through either Butte College in Oroville or Yuba College in Yuba City, the other sponsor being the Office of Emergency Services under the auspices of the Governor's Office of California.

The seminar began with registration at 9:00 a.m. on Sunday, July 6 and ended with a camp fire and graduation ceremony as a grand finale on Saturday night, July 12. Donner Mine Camp is a facility owned by the Boy Scouts of America (Buttes Area Council) which was originally a gold mining camp with history dating back to the days of the forty-niners. The terrain surrounding the campsite is ideally suited for a search and rescue seminar. The elevation is approximately 5,000 feet and fairly heavily timbered with white pine, red fir and aspen. There is thick ground cover including manzanita, buck brush, scrub oak and brambles. The Bear River flows through the valley and was invaluable in teaching techniques of river crossing. There are also numerous ravines, washes, canyons and gullies, and additionally, the facility having been a former mining camp, there were numerous mine shafts, air holes and several acres of slag closely simulating desert terrain as well as the steep, dirt and decomposing granite cliffs found along many rivers.

Dean Sanderson, camp manager, as well as Scout Executives Bob Nicholson and Ken Anderson should receive special thanks for providing access to the facility as well as for the active role they played in the week's activities.

Since search and rescue technique should be predicated upon sound theory, the week's program entailed morning "lectures" followed by practical application of what was learned during field exercises which took place both day and night. The course included the following:

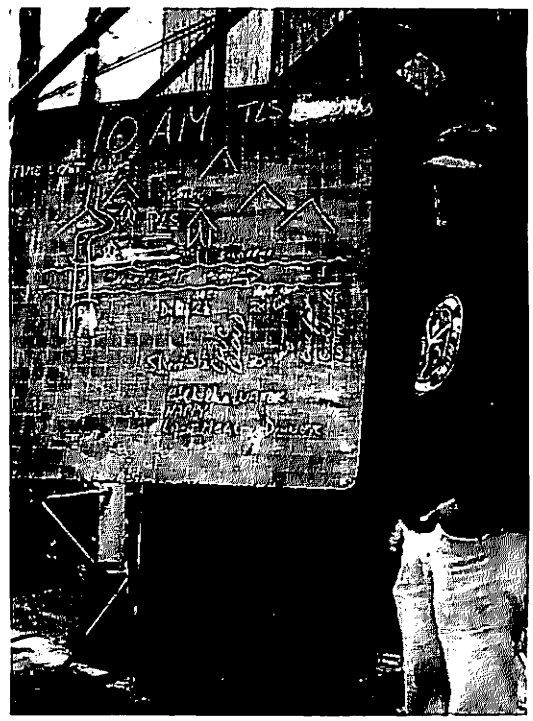
1. Search and rescue organization (the basic concepts of officer and field personnel structure).
2. Grid pattern search technique (field and lecture practice in varied terrain application of modern day and night searching).
3. Litter and rough terrain evacuation methods.
4. Mountain safety techniques for search teams.
5. Wilderness survival techniques (basic and advanced methods of search team survival).
6. Cardiopulmonary Resuscitation (CPR) training.

The above were or course only main topics discussed; the week saw a continual sharing and exchange of ideas, knowledge and experience among staff and "students" that was a constant learning experience for all involved.

Dennis Manchester, a member of the Gold Country Search and Rescue Team in Nevada County, summed up the importance of training when he said, "It's extremely important for people involved in search and rescue to be well trained, otherwise they are a danger to themselves, their team and the person they are trying to rescue." Further, with so many groups, teams and agencies becoming involved in SAR activities it is increasingly important for there to be a standardization of SAR procedure and technique. Hence, training seminars and sessions will be needed all the more in the future.

Informal meeting of Search Director WILLIE MONROE and team leaders (BOB WRIGHT, DENNIS MANCHESTER, JOHN GALLAGHER, JOHN BRUILLARD). In the background is scout executive KEN ANDERSON.

Class picture of those participating in the 1st Annual Northern California Search and Rescue Seminar



WILLIE MONROE discussing search procedure during morning lecture.

WILLIE MONROE (center, in cap) discussing the week's activities with staff members and visiting lecturers.

Another shot of morning "theory" learning.

Field exercise involving finding small clues through use of "gridding."

"Students" practicing proper technique of litter carry preparatory to field exercise.

If one man can be credited with responsibility for the success of the seminar, that man would be Willie Monroe. He conceptualized, planned and carried out the program as Search Director. Willie's experience in outdoor education and search and rescue goes on ad infinitum, and includes being wilderness education instructor at both Yuba and Butte College, author of the *Wilderness Education Series* of Textbooks, and training officers for the Glenn County Sheriff's Search and Rescue Team. Assisting Mr. Monroe was a highly qualified staff with expertise in search and rescue, wilderness survival and rock climbing. They were John Owsley, acting as assistant search director, Keith Somers and Gary McCoubrey, instructors, Janet Collum and Pam Hisken, technical assistants.

Out of the sixty-five enrolled in the seminar, surprising was the experience and knowledgability of the "students." The cross-sectional make-up included primarily those individuals that would be involved in search and rescue activities with representatives from county sheriff's departments, county fire departments, forest service personnel, college instructors in the area of wilderness survival and SAR, CB'ers, and last (but very definitely not least) members of scouting explorer posts with SAR specialties.

Typical of those chosen as team leaders from among the "students" were: John Gallagher, college instructor of outdoor education at Feather River College in Quincy, California, and an acknowledged expert in the area of wilderness survival; Dennis Manchester, member of the Gold Country SAR team; Bill Tefertiller and Bob Wright, both explorer post leaders from units with SAR specialties; John Bruillard, P.,G. and E. manager with a broad background in outdoor education and rockclimbing.

Also taking the course were Ray Darwin and Jill Dempsey, co-founders of the Stone Valley Workshops, which provides outdoor educational experiences for children with perceptual motor and emotional problems. Suffice to say everyone in the program had something to offer, and the camaraderie, group spirit and unselfishness was typical of most teams involved in SAR activities.

(Continued next page)

Technical preparation for the practice of "river crossing."

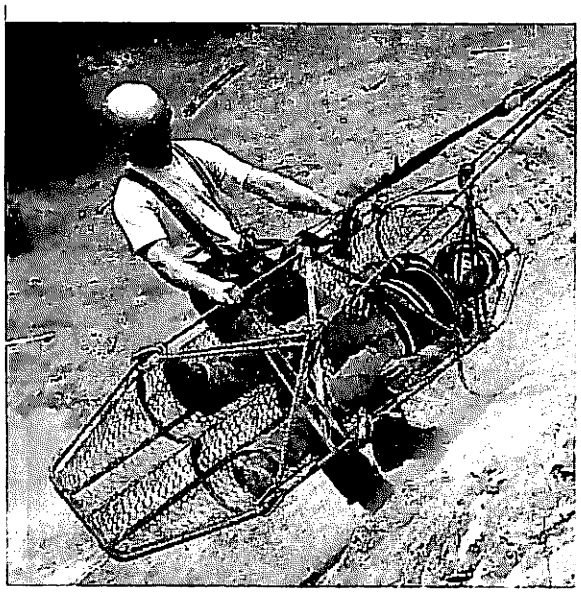
SEMINAR (cont.)

The seminar was honored with the visitation of several distinguished guests who not only observed but provided valuable technical assistance. Fred Allen, Director of the Social Justice Department at Butte College and Bob Thorn, law enforcement coordinator at Butte College were both in attendance for one of the field exercises. Bob is sometimes known as Mr. Search and Rescue for Butte County since he was the originator of the volunteer SAR team in that county in 1962. Jim Langford, Chief Park Ranger at Pinnacles National Monument and a person with as much mountain search and rescue experience as anyone in the country, took a day of his own time to attend the seminar on the day of mountain rescue technique and offered professional assistance, especially pertaining to the use of the Stokes' litter for victim rescue. Bob Hill, Coordinator for the Office Of Emergency Services, also visited the seminar and addressed the assembly with a lecture on the role of OES in SAR activities.

All persons enrolled in the seminar and completing the program requirements were awarded a certificate of completion from the Office of Emergency Services. They were among the first in the state of California to receive such an award.

The week at Donner Mine Camp saw knowledge learned, experiences shared and minds stimulated. Hopefully, those attending the program will return to their respective team, club or unit and in turn share and disseminate what they have learned. And, basically, that's what the first annual Northern California SAR Seminar was all about.

Two emergency medical technicians, Rosie Wright and Jeanne Hom, were in attendance during the seminar, but fortunately, with the exception of a few abrasions, blisters, bee stings and a bloody nose, the week's casualties were minimal and their assistance was only needed as first aid personnel in the "treatment" of victims during field training. When both the terrain and the nature of the field exercises are taken into consideration, this is a striking example of the stress safety was given, as well as the preparation and cooperation of both staff and students. ■



Staff member GARY McCOUBREY demonstrating litter life of victim up sheer cliff.

"Students" moving victim in litter over rough terrain during practice drill.

EDITORIAL IN MINATURE by Dennis E. Kelley, SAR Magazine Publisher.

A repeat of history and a making of history should always be hailed. The repeat was Bill Wade's (shown in photo) National Park Service week long course, "Managing the Search Function". A year ago last Spring, in 1974, Bill presented his first course making history by addressing only the inland ground search of wilderness search and rescue. Being in attendance I can assure you that this was a very creative effort on Bill's part.

At his last course at Grand Teton National Park, a different history was made when Lee Lucas, Bill Syrotuck and I put together a mathematical model of search tactics proving the dramatic efficiency of sign-cutting over other forms of search tactics such as gridding. "Sign-cutting" is a discipline of man-tracking where the full deductive benefits of clue finding is applied. It is what I have called the "Binary Search" tactic in my Theory of Search presentation. It is a successful and proven tactic of Southern California SAR teams for years. If applicable, it will revolutionize search in other regions of this nation.

As a point of information, this subject will be aired thoroughly at the NASARC Conference December 5-7, 1975 at Denver in the Search Theory and Strategy Workshop. I hope those interested will attend.

AVALANCHE RECOVERY

by BLAIR NILSSON

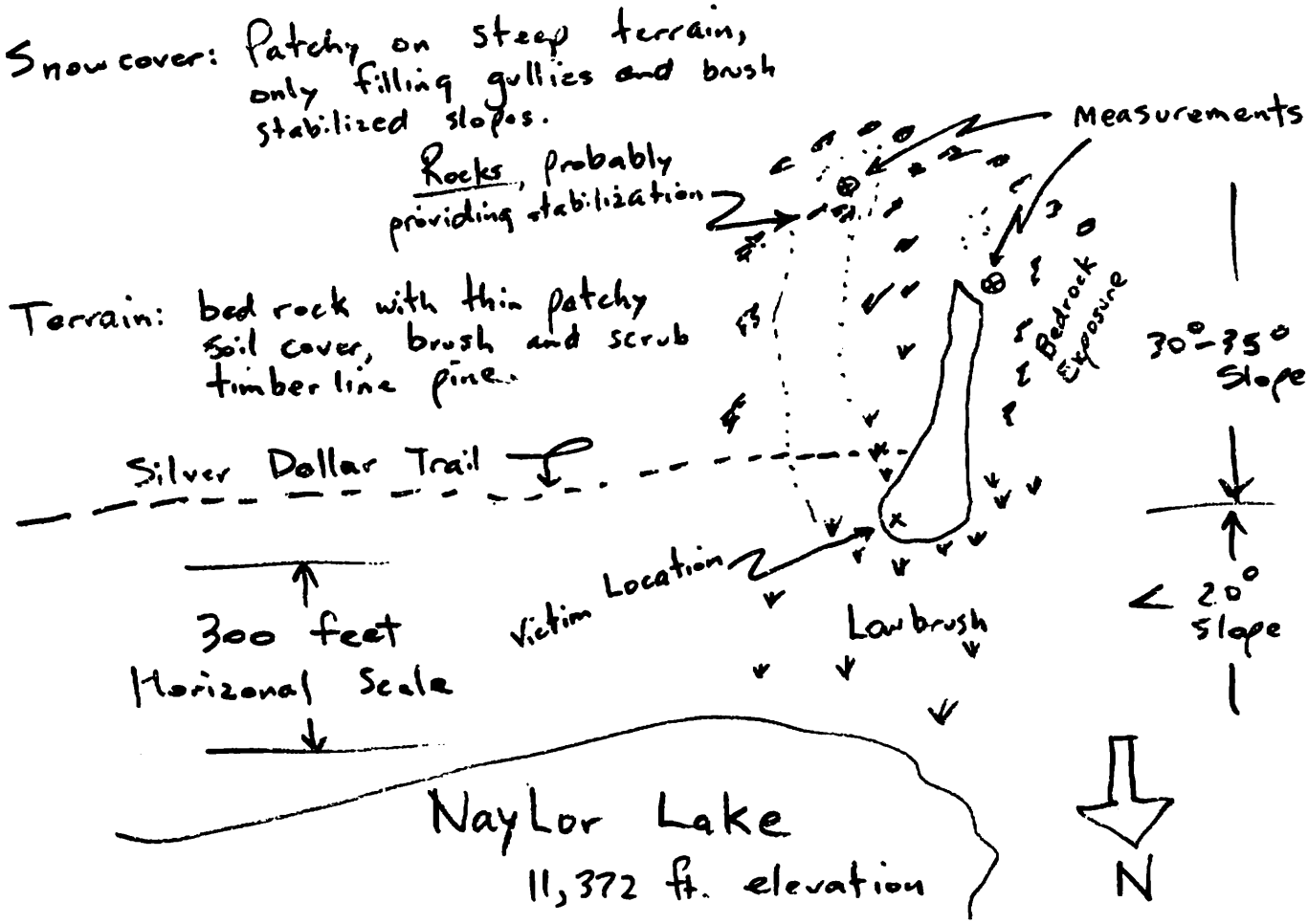
Colorado has been beset with many avalanches in the high country this year. To date, eight deaths have occurred in avalanches triggered by our winter conditions.

One such avalanche was the topic of an unusual and spectacular recovery by our Colorado St. Bernard Rescue Unit. The leader of this unit of 14 St. Bernards is Jack Farmer. He and his wife, Carol, have a hand engraving business in Denver and did the beautiful Hal Foss SAR Service Award Plaque and the State SAR Coordinator plaques for NASARC.

The mission started by the report to the Clear Creek County Sheriff's Office at 12 noon on December 23, 1974 that Larry McKown, 37, of Georgetown, Colorado had failed to return from a solo ski touring trip in the Guanella Pass area of Clear Creek County. Several searches were made of the area by ground teams of Alpine Rescue Team and the St. Bernard Rescue Unit. The Sheriff's department, combined with the other units, located Larry McKown's car parked in the Naylor Lake area. With the find of the car, the Sheriff's department requested air search of the area to see if any likely tracks could be picked up. The Colorado EOC requested air search by CAP and air search was flown on December 24 and 25. This involved CAP ground teams also so that ground to air communications could be maintained and immediate air reconnaissance results followed. Air search also prevented exposure to ground teams of avalanche hazards in this area.

Ground and air searches were without results except for finding McKown's car until December 29th when five Alpine Rescue Team personnel and six St. Bernard Rescue Unit personnel with four dogs made a follow-up check of an avalanche noticed on the 24th while searching the area. Snowstorms in the area since the 21st had obscured all tracks of the victim and the only thing noted was an avalanche. It had been judged that conditions were too unstable on the 24th to check the avalanche safely. Another slide run emptying into the lower part of the triggered slide path appeared to need stablizing before reaching the area could be considered safe. On December 29th, the combined team, after reaching the area and posting an avalanche guard, put the dogs in on the lower northeast edge of the debris slope caused by the avalanche run. Three of the dogs were in their third year training level and one in the second year. Three of the dogs gave a fair indication of interest — sniffing, rooting with nose, scratching and digging all occurred. Two of the dogs were pulled off the spot to search the remainder ofthe avalanche debris and both dogs returned to the same spot. Probing was started in the spot indicated by the dogs. The debris slope ran six to nine feet deep. Depth in this spot, six feet, with random very hard levels which could be worked through with probes. The spot in which the dogs had started digging turned out to be the victim's right leg. The victim was two feet under the surface lying horizontal, frozen and encased in a one to two inch ice shield. This condensation shield was quite hard and formed over the entire head and torso.

AVALANCHE SEARCH SKETCH



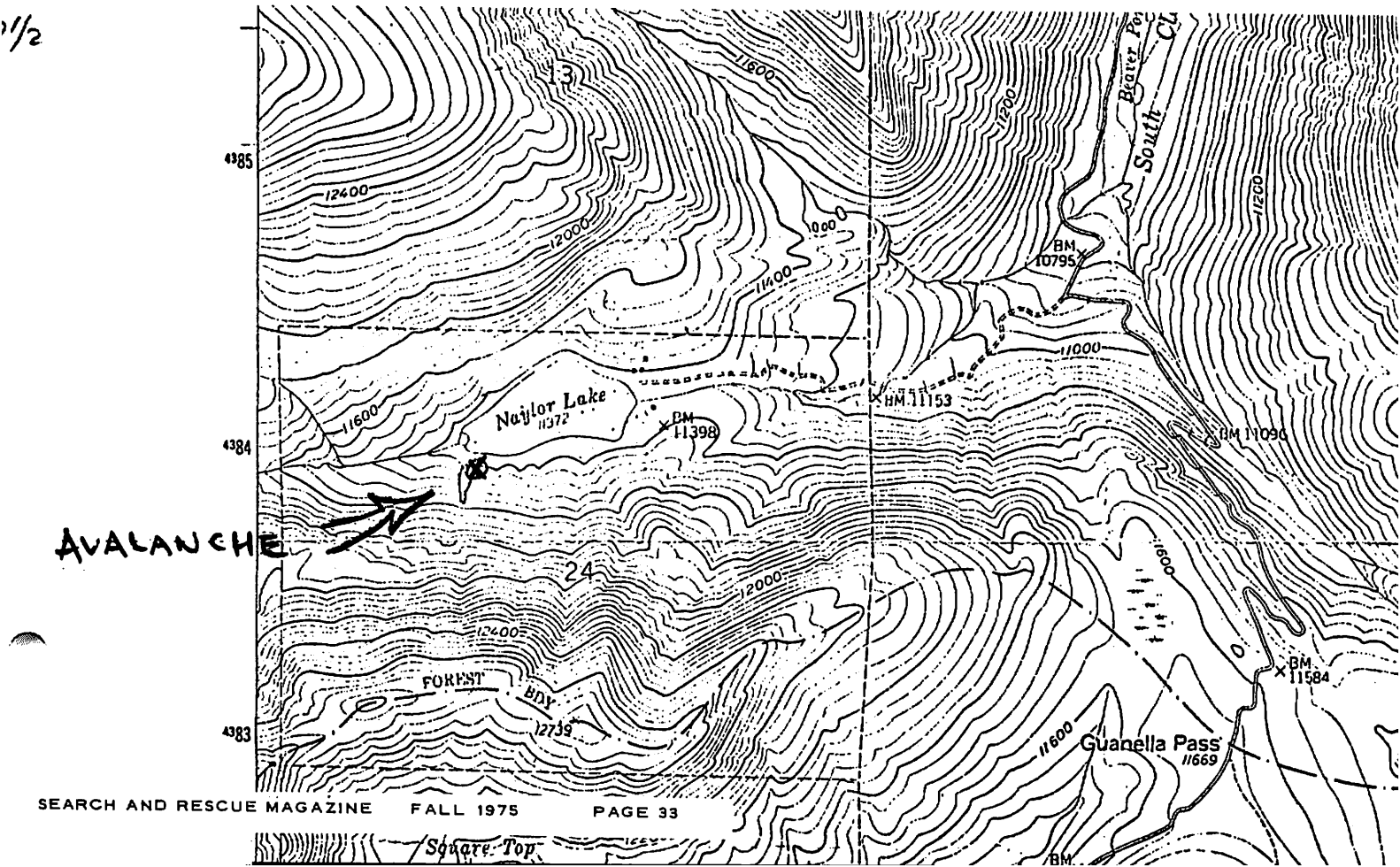
The thing that made this find so outstanding was the conditions involved. The victim had been buried for 7 to 8 days and was encased in an ice shield. Normally the St. Bernard Unit anticipates the dogs' scenting ability to be an average of four days and a low level of scent would be available because of the one to two inch ice shield. The dogs did have certain advantages. The air temperature was 20 degrees. A successful find has been made a -25 degrees — the accepted level is -20 degrees. Wind velocity was 5 - 10 mph. Dogs do not work well in high wind conditions. Snow type — dry. Scent is transmitted better in dry snow than wet. There was an uncontaminated scent in the search area. Dogs have difficulty if search area is contaminated by human scent. The burial depth was two feet — dogs average scenting ability is 6 to 7 feet; however, the record is 21 feet at Davos, Switzerland.

It was assumed that the victim had been traveling on Silver Dollar Lake trail which contours some 100 to 150 feet above the south shore of Naylor Lake. He crossed a potential slide on the east and then triggered the slide he was caught in. Possible scent in the form of rafts (minute dead cells) were transmitted in the snowpack above the body before the body cooled and possible scent in the ice shield, which was frosty, and somewhat porous, basically composed of condensated breath, body sweat and rafts was present for the dogs. Even so, the St. Bernard dog team did a tremendous job considering the disadvantages of long time lapse and a dead body, frozen and encased in an one to two inch ice shield.

Colorado is proud of this team and their efforts. They are available for avalanche work outside of Colorado and can be contacted through Blair E. Nilsson, Colorado SAR Coordinator. ■

The avalanche rescue response crossing Naylor Lake

St. Bernard rescue dog in action.



NEWS AND RUMORS

★ Los Angeles Times 19
Tues., Aug. 26, 1975—Part I

Jurors Award $1.1 Million to Injured Cyclist

A jury has ordered a Monterey Park ambulance company to pay $1.1 million in damages to a motorcyclist who suffered permanent brain damage after an injury during a race three years ago.

Evidence was presented during a 20-day trial in Torrance Superior Court that attendants of the Infield Medical and Transport Service Co. failed to properly resuscitate William Stephen Campbell, now 20, of Canoga Park.

Attorney William Jerome Pollack said his client was allowed to lie unconscious on the Ascot Race Park track in Gardena for approximately 20 to 30 minutes without being administered resuscitation or oxygen by attendants. As a result, he said, Campbell suffered brain damage causing spasticity, lack of coordination, slurring of speech and inability to work.

John Duffy (right), Sheriff of San Diego County, California, congratulates Captain Bill Glazebrook on his retirement as Commander of the Division, San Diego County Sheriff's Search and Rescue Reserve. Thirteen years is a long time to devote uncounted hours to the objective of finding lost or injured persons in some of the most difficult situations imaginable. Bill has been a respected and honored friend in SAR for many years and he will be missed.

MEDAL WINNERS -- Recipients of Air Force medals observe a troop formation after the medal ceremony at Hill Air Force Base, Utah, Thursday, October 9, 1975. Left to right are Colonel Thomas J. Curtis, former North Vietnamese prisoner of war who received Silver Star and Legion of Merit medals and Sergeant Jon D. Harston, a flight mechanic, and Captain Donald R. Backland, an instructor pilot, both of whom received the Air Force Cross for heroism during the Mayaquez rescue operations. (U.S.A.F. photo)

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CPR CITIZEN MOTIVATIONAL FILM AVAILABLE ON FREE LOAN -- "A Life in Your Hands", a 14-minute color, motivational film on why all citizens should learn cardiopulmonary resuscitation (CPR) is now available nationally on free loan, John E. Haas, Executive Director of the ACT Foundation, has announced. To obtain a free loan of this 16 mm film, together with a Leader's Discussion Guide and other collateral materials, write West Glen Films, 565 Fifth Ave., New York, NY. 10017, at least two weeks before the planned viewing date and give two alternate screening dates as well.
"A Life in Your Hands", which is narrated by Burt Lancaster, was produced under ACT's sponsorship by the National Committee for Emergency Coronary Care in cooperation with the American College of Cardiology, American Heart Assn., American Medical Assn., and American Red Cross.

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EMERGENCY MEDICAL RESCUE TEAM IS ORGANIZED -- Bill Grimm, right, search and rescue coordinator for the Jackson County Sheriff's Dept. Washington State, checks a litter carrier and other equipment used by the emergency services team recently activated. Other team members from left are Dan Bulkley, Bill James and Nick Nixon. Trained as emergency medical technicians, the team will respond to situations needing rescue and emergency medical assistance.

CALENDAR

November 10-14, 1975
NATIONAL AVALANCHE SCHOOL
Reno, Nevada
Contact: Dale Gallagher
Deschutes National Forest
211 NE Revere St., Bend, OR. 97701
(503) 382-6922

November 11-13, 1975
NATIONAL SYMPOSIUM ON EMS PATIENT CARE SYSTEMS AND IMPLEMENTATION
Grand Rapids Civic Auditorium, Michigan
Contact: Dr. Earl Kennemer
HEW, Emergency Medical Systems Div.
6525 Belcrest Rd., Suite 320
Hyattsville, Maryland 20872
(301) 436-6296

November 22-23, 1975
MOUNTAIN RESCUE ASSOCIATION FALL MEETING
Granada Royale, Tempe, Arizona
Contact: Douglas J. Black
915 So. Hohokam Dr.
Tempe, AZ. 85281

December 5-7, 1975
NATIONAL ASSOCIATION OF SAR COORDINATORS
7th ANNUAL CONFERENCE
Regency Inn, Denver, Colorado
Contact: Blair Nilsson, NASARC President
Colorado EOC, Camp George West
Golden, CO. 80401
(303) 279-1101

January 19-23, 1976
SAR MANAGEMENT COURSE
Central Washington State College, Ellensburg
Contact: Rick LaValla, Assist. Dir. SAR
Washington State Dept. of Emergency Services
4220 E. Martin Way
Olympia, WA. 98504
(206) 753-5990

February 9-13, 1975
NATIONAL SAR SCHOOL
Governors Island, New York, NY
Contact: Cmdr. Carl Meredith, Off.-in-Charge
National SAR School, USCG Training Center
Governors Island, New York, NY. 10004
(212) 264-3313

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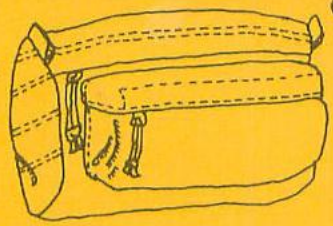

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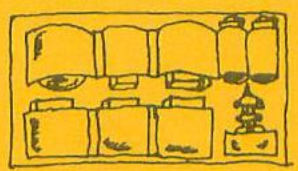

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