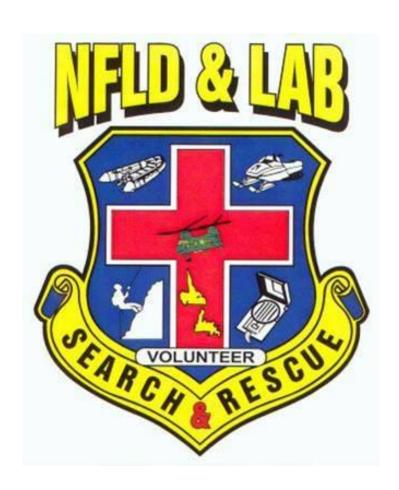
# NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION



SEARCHER I LESSON PLANS

# **SEARCHER I**

# **LESSON PLANS**

# **GENERAL**

This classification shall apply to all new members of a search team with no previous training in GSAR. Searcher I, as well as other searchers, will work under the direction of the Team Captain or senior searcher until such time as they have been more fully trained and are capable of undertaking greater responsibilities. Do not confuse Searcher I and untrained volunteer.

# **PREREQUISITES**

Searcher I qualifications may vary from one GSAR team to another, but basically they usually include:

- Must be at least 18 years of age.
- Must be physically fit as attested to by family physician.
- Must agree to work as a member of a team and follow instructions.
- ➤ Must be willing to obtain proper clothing and equipment as required for safety and accomplishment of task.
- Must agree to follow all safety rules and regulations.
- Must agree not to act without adequate supervision.

# **BASIC TRAINING**

Materials: Note pads, compass, flip chart

| INSTRUCTOR'S NOTES   | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION   |  |  |  |  |
|----------------------|---|--|--|--|--|
|                      | INTRODUCTION  |  |  |  |  |
| Option 1             | Introduce yourself and any other instructors and have an ice-breaker to help participants get acquainted with each other. Make sure it is understood that questions and participation in discussions are encouraged.  |  |  |  |  |
| Option 2             | Let each introduce themselves and talk on their experiences (maximum of two minutes per student).   |  |  |  |  |
| Obj. 1.1             | A SEARCH IS A RAPID-RESPONSE EMERGENCY.   |  |  |  |  |
|                      | You may search for a person who is:  alive deceased child Alzheimer sufferer psychotic unfound search someone not wanting to be found others  |  |  |  |  |
|                      | For every search, you will be expected to respond, if available.  Show up at the search clothed and equipped properly (self-sufficient).  |  |  |  |  |
| Questions            | In the recent past, most SAR teams approached search situations by flooding the area with large numbers of often untrained searchers. These individuals were often lined up shoulder-to-shoulder to comb the areas from the PLS.  This was often unsuccessful. Often the individuals were not found or were found dead, days, weeks, months or years later. |  |  |  |  |
| Question<br>Obj. 1.2 | found dead, days, weeks, months or years later.  Why was this process so unsuccessful?  1. Survival Time  Review historical data of William Syrotuck for Washington State and New York State (BLM 1)  |  |  |  |  |
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| Instructor's Notes | Newfoundland and Labrador Search and Rescue Association   |
|--------------------|---|
| Obj. 1.3           | <ul> <li>Main cause of death – Hypothermia.</li> <li>Of those found dead, 50% died within the first day and an additional 24% died within the second day.</li> <li>A rapid response is critical, especially in our environment.</li> <li>Search Time</li> <li>Many individuals are found too late due to the use of visual grid searches.</li> <li>Visual grid searches require time to gather and organize searchers.</li> <li>It takes a tremendous amount of time to grid an area.</li> <li>Review the Time-Distance-Area chart (BLM 2).</li> <li>Visual grid searches are a last option and should only be used when the subject is believed to be within a very small area.</li> </ul> |
| Obj. 1.3, 1.4      | TODAY'S SEARCHES ARE CLUE-ORIENTATED  |
|                    | A lost subject can travel a considerable distance over a period of time. The longer they have been lost, the further they may travel from the PLS. As we have seen in the Time-Distance-Area Chart, this can result in an enormous theoretical search area and will greatly reduce any possibility of success.  However, if a searcher finds a clue, (ie. tracks), this will greatly reduce the search area.  |
|                    | Many types of clues exist, and most modern GSAR teams seek out clues before the actual search starts, in order to reduce the potential search area and to bring the search to a rapid and successful conclusion.  |
| Obj. 1.3           | TODAY'S SEARCHES ARE RESPONSE-ORIENTATED  |
|                    | In the past, GSAR teams depended on visual searches for locating lost subjects. Today, GSAR teams rely on rapid response so that the subject is still likely to be alive and responsive and they use sound (ie. whistles) to increase the effective search area.  |
|                    | <ul> <li>Sound searches do not rely on seeing the subject but upon the<br/>subject hearing the searchers and responding to them.</li> </ul>   |
|                    | Sound searches are 3-14 times more efficient than visual searches, presuming the subject is alive and responsive.   |
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NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION

In the past, searches were built up rather slowly. However, by looking at the Mortality Chart (BLM 1), it is evident that approximately 75% of the subjects that die do so within the first two days. As a result, if an initial rapid response (ie. hasty team) fails to locate a subject, the search manager must quickly build up the search to try to reduce the possibility of mortality.

# Questions

# Obj. 1.5

#### RESPONSIBILITY FOR GSAR IN CANADA

GSAR is usually the responsibility of the police authority. In Newfoundland and Labrador, it is the responsibility of either the RCMP or the RNC. In many cases, the local police authority will call upon trained civilian volunteers to do most of the field search and search management.

# SAR Responsibility Exceptions

- 1. GSAR in National Parks
  - Most National Parks have SAR jurisdiction within their boundaries. However, they usually work cooperatively with the local police and volunteer SAR teams.
- Air and Marine SAR
  - The Canadian Armed forces Rescue Coordination Centres (R.C.C.'s) have responsibility for aircraft and shipping within Canada and well out to sea. They may also call upon the Civil Air Search and Rescue Association (CASARA) for civilian search aircraft.
  - The Canadian Coast Guard and Canadian Coast Guard Auxiliary shares responsibility for marine rescue in navigable waters.

# Obj 1.6

# **GSAR ORGANIZATIONAL STRUCTURE**

In most situations the organization never gets very big because the subject is found by initial response methods. A few people will do all the jobs. However, as a search grows, so does the requirement for a more complex organizational structure.

The organizational structure used by the NLSARA (BLM 3) is based on the Incident Command System for major disasters in the U.S. and Canada. When an incident grows large and involves several agencies, it is desirable for all to work with the same organizational plan and use identical terminology.

| INSTRUCTOR'S NOTES | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION   |  |  |  |
|--------------------|---|--|--|--|
| Obj. 1.7           | DUTIES AND RESPONSIBILITIES OF THE OVERHEAD TEAM  |  |  |  |
|                    | <ul> <li>INCIDENT COMMANDER</li> <li>The police authority has responsibility for SAR on land and inland waters.</li> <li>The senior police officer involved with the emergency will usually be the incident commander.</li> <li>The police authority has the responsibility for liaison with the media and the subject's family.</li> <li>It is a police decision whether or not to call upon GSAR teams for assistance.</li> </ul>   |  |  |  |
|                    | <ul> <li>SEARCH MANAGER</li> <li>Plans and manages the search efforts and resources.</li> <li>Where a good relationship exists between an experienced SAR group and the police, the search manager effectively runs the search.</li> <li>Major decisions are usually made in consultation with the police.</li> <li>The search manager will call out the SAR team.</li> <li>Once on the scene of an operation, the search manager's place is in the command centre.</li> <li>The search manager will assign organizational tasks to other members of the team.</li> <li>The search manager is NOT an active searcher.</li> </ul>  |  |  |  |
|                    | <ul> <li>LOGISTICS CHIEF</li> <li>Logistics personnel get the equipment and supplies for running the operation and do much of the administrative work.</li> <li>Assemble search equipment for distribution to the teams.</li> <li>Check-in and check-out equipment.</li> <li>Locate specialized equipment.</li> <li>Volunteer registration and assessment.</li> <li>Supplying search personnel with food and drink.</li> <li>Locate and arrange special transport (ie. 4x4, ATV, snowmobiles, boats, air support, etc.)</li> <li>Provide accommodations/shelter for searchers.</li> <li>In the absence of a Finance Chief, must keep track of expenditures, obligations and other costs.</li> </ul> |  |  |  |
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| INSTRUCTOR'S NOTES | Newfoundland and Labrador Search and Rescue Association   |
|--------------------|---|
|                    | <ul> <li>OPERATIONS CHIEF</li> <li>Operations chief handles the search teams, ensuring that they are correctly organized and assigned.</li> <li>Assign teams which are appropriate, efficient and properly equipped.</li> <li>Brief and debrief search team leaders and individual searchers.</li> <li>Pass on team assignments ensuring that each team knows exactly what to do and sends them off to do it.</li> <li>Performs on-the-spot troubleshooting and problem solving.</li> </ul> |
|                    | <ul> <li>PLANNING CHIEF</li> <li>Plans the strategy and tactics to be used for the search.</li> <li>Maintains a detailed search log of all events and decisions relating to the search and the time at which they occurred.</li> <li>Locate and obtain maps of the search area.</li> <li>Create a "Search Status Map" showing the deployment of teams. This map must be kept current at all times.</li> </ul>   |
|                    | <ul> <li>COMMUNICATIONS CHIEF</li> <li>Assign experienced radio operators to handle the base radio and to coordinate all communications.</li> <li>Maintains a detailed radio log of all search communications and the time that they occurred.</li> <li>Distributes portable radios, set-up repeaters, assignment of call-signs and frequencies, and provides maintenance and repair of radio equipment.</li> </ul>   |
|                    | <ul> <li>TEAM LEADERS</li> <li>Responsible for safety and for leading their assigned team into and out of the field to accomplish an assigned task.</li> </ul>  |
|                    | <ul> <li>SEARCHERS</li> <li>Must perform all assigned tasks in a safe and proper manner.</li> <li>Must follow directions of the team leader and the overhead team.</li> <li>May be assigned special tasks and duties.</li> </ul>  |
| Obj. 1.8           | TYPICAL CALL-OUT PROCEDURES   |
|                    | Whenever a GSAR team gets the order to search, the team is activated through the call-out procedure.  |
|                    | <del> </del>  |

NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION

Volunteer operators are given a list of the team members and their contact numbers. It is their job to contact all the people on their list and to ask if they will be able to attend the search and to give directions.

Due to urgency and the large number of people to contact, it is imperative to keep conservation minimal. When the call comes, you will be asked,

"We have a search, can you go?", your response should be either:

- Yes, I'll be there, or
- No, I cannot make it

If you can make the search, you will be given directions and told all necessary information at the briefing.

Avoid the following time wasting questions during the call-out:

- Who is lost?
- How old are they?
- How far is it to the search scene?
- Who is going?

# Obj. 1.9 | SIGN IN AND SIGN OUT PROCEDURES

Upon arriving at a search site, it is very important that you **SIGN IN**, this allows for the following:

- To account for your presence and control.
- So you can be assigned a task.
- To inform of limitations (ie. medical, physical, etc.)
- To ensure you are briefed.

Once you have signed in, please be patient and do not wander around the search site. The operations chief will appropriately assign teams and tasks based on the level of training. This is a good time to ensure that you have all of the necessary equipment and to check that all equipment is operating properly.

At the conclusion of a search or at the end of a shift, it is very important that you **SIGN OUT**, this allows for the following:

- It tracks your whereabouts.
- Permits locating a replacement.
- Allows an opportunity for debriefing.

| INSTRUCTOR'S NOTES | Newfoundland and Labrador Search and Rescue Association   |
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| Obj 1.10           | RAPID RESPONSE PREPARATION  |
|                    | Since the chances of survival for a lost person drops by about 50% each day for the first few days of a search, it is imperative that all GSAR members have their personal equipment ready to go at all times. This is usually accomplished through the use of prepacked " <i>Ready Packs</i> ".                    |
|                    | It is imperative that ALL searchers go into any wilderness search prepared to be unsupported for 24 to 48 hours. Searchers should remember the saying, "Go Fast, But Go Prepared".  |
| Obj. 1.11          | IMPORTANCE OF VICTIM INFORMATION  |
|                    | Most regular searchers will not be involved in the initial gathering of information for a lost person; however, a basic knowledge of the kind of information that is useful in a search is beneficial.  |
|                    | <ul> <li>Point Last Seen (PLS)</li> <li>We must know exactly where and when the person was last seen.</li> <li>The expected or observed direction of travel from that point is also very important.</li> </ul>  |
|                    | <ul> <li>Last Known Position (LKP)</li> <li>Sometimes a subject has no PLS but may have driven a vehicle into a general area. If the vehicle is located it provides a LKP.</li> <li>LKP differs from PLS in that the subject was not seen there.</li> <li>LKP's help establish the probable search area.</li> </ul> |
| Obj. 1.12          | <ul> <li>Survivability</li> <li>Used to estimate the relative urgency of a search.</li> <li>Children and the elderly require the fastest possible response as do people with a known injury/illness or those poorly equipped for the environment.</li> </ul>  |
|                    | Search managers use the Relative Urgency Rating Form (BLM 4) as<br>an aid to determining the urgency of response. The form allows the<br>search manager to assign values to the various factors affecting<br>survival, and by totalling these values, arrive at a reasonable estimate<br>of urgency.                |
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# **Missing Person Report**

- Used to gather as much information as possible to help aid searchers in locating a subject.
- The subjects *Clothing* is useful for estimating survivability and determining detectability. Searchers often find items of clothing during a search, especially when a subject is hypothermic. Positive identification of these items is critical.
- Identification of *Footprints* is key to many searchers. Identifying a subject's footprint can greatly reduce search time and bring the search to a quick end. All searchers should be able to describe sole patterns and measurements on a radio to the overhead team
- The Police Lost/Missing Person Report and the Missing Person Report in the Search Manager Software are good examples of the type of information that should be sought after.

#### **Personal Information**

- Is critical for the field searcher. A complete knowledge of the subject's personal equipment and supplies will be essential as such items are often found and become clues.
- Some important types of information include; is the subject a smoker and what is their brand of cigarette? Are they familiar with the area and likely to take logical travel routes? Favourite destinations of the subject.

## Obj. 1.13 WORKING WITH PROBABILITIES

Probabilities are all that search managers and planners have to work with. The following describes the three main types of probabilities that are used:

## 1. Probability of Area (POA)

- Expressed as a percentage, it is the probability that the subject is in a given area or segment.
- Aids in the determination of which areas to search first.
- When an area is searched unsuccessfully, it's percentage goes down and that of other areas go up.
- Can be applied to areas as well as routes.

## 2. Probability of Detection (POD)

- Expressed as a percentage, it is the probability that a search team on a given assignment can spot the subject.
- POD's for various sweep searches have been calculated by experiment. (BLM 5)

|                    | Exhibit P-000 Page 11   |
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| INSTRUCTOR'S NOTES | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION   |
|                    | <ul> <li>Cumulative Probability of Detection (PODcum)</li> <li>With each sweep of a given search area, the POD increases.</li> <li>For example, if the first quick response was done with a sweep spacing yielding a 40% POD and the same area was swept later with a 70% POD, by looking at the Cumulative POD chart (BLM 6), the search manager can determine that the PODcum is 82%. Thus indicating that there is a strong possibility that the subject is not in that area.</li> </ul>   |
| Obj. 1.14          | A TYPICAL SEARCH  |
|                    | Most experienced Search Managers utilize the following typical search procedure:  • Establish the urgency of the incident.  • Alert all resources  • Dispatch initial response teams as early as possible.  • Map the search area, and segment it into sections.  • Assign POAs to the segments.  • Establish the first operational period and determine search objectives.  • Develop a search action plan based on these objectives.  • Assign teams using search methods that yield the highest POAs and PODs.  • Calculate the PODcum for the various segments and do not consider any area well searched until the PODcum is in excess of 80%.  • As a segment is searched unsuccessfully, recalculate the POAs for the other segments and adjust priorities.  • Develop objectives and a search plan for the second operational period.  • Deal with relatives and media.  • Develop an evacuation plan for the subject.  • Plan for relief teams and shift changes.  Team Briefings  • The Search Manager or the Operations Chief will brief team leaders who will in turn brief the teams before they go out. |

# Shifts

Also known as operational periods and may last anywhere from 6 to 12 hours. Rest as much as you can between assignments.

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NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION

# **Active Searching**

 Concentrate on the task at hand and use all your senses to detect clues or the subject.

## Sight

- o Your primary search sense, is best used to find clues.
- There is only one subject but thousands of clues.

## Hearing

 Especially important if the subject is responsive. A person can hear farther than they can see. Listen constantly and check any unexplained sounds.

#### Smell

- o Scent can frequently play a role.
- Be aware of scents such as campfire smoke, cigarettes, fuels, decomposition, etc.

#### **Touch**

- Often used by trackers to detect depressions or surface disturbance.
- Can be used to estimate how old a campfire is or whether discarded clothes has been left long enough to become wet from dew.
- When searching, look for anything that is **not natural**. Look constantly for sign. A person cannot travel without leaving sign behind. Flag and report any sign that is the least suspicious. Try to place yourself in the subject's shoes.
- Regardless of the type of search, all routes must be flagged and properly identified to avoid confusion for later searchers who may sweep the area again.
- If you have carefully searched an area and found nothing, you have not failed! At least you have reduced the search area in which the subject may be.

# Obj. 1.15 | **DEALING WITH MEDIA AND RELATIVES**

Relatives and media are often extremely sensitive. However, dealing with these people is the responsibility of the police authority and not the SAR volunteer. All questions regarding a lost subject should be referred to the police authority.

| INSTRUCTOR'S NOTES | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION |
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Relatives and friends are often near the search site and want to participate in the search. Often, searchers may not know who they are. For this reason, use extreme discretion in what you say and to whom you say it, around the search site. Avoid any sort of black humour.

Media personnel have a job to do and often approach field searchers to try to get a story. All search team members should refer reporters to the police or the designated PR person. Never pass on any information or opinion about a search. Some information may be sensitive long after a search stops.

# Obj. 1.16 **DEBRIEFINGS**

Debriefings are a critical to a search and occur at two periods:

# 1. Search Team Debriefing

- Occurs at the completion of a mission
- Determine what clues were found or not found.
- Determine what area was searched
- Determine hazards to searchers and lost subject.
- Determine PODs.
- Determine subsequent strategies and tactics.

# 2. Incident Debriefing

- At the completion of an incident.
- Generally occur within a few days of the search.
- Formal affair involving all cooperating agencies that were involved in the incident.
- Provides an opportunity to identify problems, determine solutions and to assign responsibility for making changes.
- The incident debriefing starts with a discussion of what was done and then progresses to how it can be done better next time.
- Should remain constructive and objective and not confrontational.

# Obj. 1.17 LOCATING AND STABILIZING SUBJECTS

Found subjects can often walk out on their own power, however, in some cases they may be injured and require stabilization and evacuation. This emphasizes the importance of First-Aid training for searchers.

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To remember the four phases of a search operation think of the acronym LAST:

Locate

Access

Stabilize

**T**ransport

An injured subject should never be moved unless they have been given appropriate First-Aid, their condition is stable and their injuries permit movement.

Many casualties have died as a result of the rough transport out of a wilderness setting.

Through the use of good First-Aid or by bringing in medical help, a subject's vital signs will indicate if their condition is improving and if they can be transported safely. If the subject does not show signs of stabilizing, the only way to evacuate this person is by arranging an air medivac.

A subject should only be transported when:

- Their condition is stable,
- Transportation is safe, and
- The transportation will not cause any further pain or other injuries.

# Obj. 1.18 **DEMOBILIZATION**

After a search has ended, a great deal of work remains to be done including;

- Breakdown of base camp.
- Cleanup of base site.
- All equipment must be turned in.
- Equipment must be checked and repairs arranged if required.
- All fabric items must be dried before being stored.
- Dirty equipment must be cleaned.
- Search packs must be checked and missing items must be replaced.
- Flagging tape and string lines should be removed from the search area.
- All equipment that was signed out to searchers must be returned.
- Searchers must *check-in* when they return from the field and must *check-out* when they go home.

| Instructor's Notes | Newfoundland and Labrador Search and Rescue Association   |  |  |  |
|--------------------|---|--|--|--|
| Obj 1.19           | SUSPENDED SEARCH  |  |  |  |
|                    | <ul> <li>It is the responsibility of the policing agency to suspend a search.</li> <li>A search will continue as long as there is a reasonable chance of survival of the subject.</li> <li>In order to deal with emotional reactions, a search is often "scaled down" instead of suspended. This generally involves suspending ground operations and continuing with an air search.</li> <li>The purpose of search and rescue is to save lives and not retrieve bodies.</li> <li>Many SAR teams assist in the location and retrieval of deceased subjects.</li> </ul>   |  |  |  |
| Obj. 1.20          | HANDLING A DECEASED SUBJECT   |  |  |  |
|                    | There is always the possibility that a subject will be found dead in the field. This is one of the least enjoyable parts of SAR work but the discovery and investigation is one of the most important aspects. The investigation of a dead subject is the legal responsibility of public officials such as coroners, medical examiners or the police authority. Searchers may frequently produce or discover evidence and are obliged to assist the investigation team.   |  |  |  |
|                    | The following are basic guideline for SAR members for dealing with a dead subject:  |  |  |  |
|                    | <ul> <li>Do not give any names or identifying features of a subject over a radio, to the media or to any unauthorized individual. If radio contact must be made, please use a predetermined radio code for this situation (ie. Situation Delta).</li> <li>The first responsibility of a SAR member arriving on a scene is to determine if the subject is alive, critically injured or dead. This may require touching or moving the subject. Proper emergency care supersedes investigation.</li> <li>Once a subject is deemed dead, every attempt should be made to preserve the scene and the exact position of the subject.</li> <li>Carefully observe the scene looking for any clues or evidence. Preserve and protect this information and avoid any further</li> </ul> |  |  |  |
|                    | <ul> <li>contamination of the scene.</li> <li>The area immediately around the subject should be roped off with string or flagging tape to ensure that no one can walk into the area causing further contamination of the scene.</li> </ul>  |  |  |  |
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NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION

- Any movement or disturbances within the scene by SAR members should be carefully noted and reported to the investigative team.
- SAR team members on the scene may be required to make a written statement. This must be accurate and detailed as possible and involve only the facts.
- Do not search a deceased subject for identification unless specific instructions to do so have been given.
- SAR members should always try to have a witness to any activity they are involved with around the scene of a death. Protect your interests, have a reason for everything you do or have done and document everything.

The determination of death can only be made by a medical doctor, a coroner or a medical examiner. However, several signs will allow searchers to reasonably suspect death including:

- No response to sight, sound or painful stimuli.
- No pulse detectable at the wrist or neck.
- No breathing detectable by sight, sound or touch.
- The pupils are dilated and do not respond to light.
- Eyes do not blink when touched by a piece of tissue.

Be careful during examination, certain conditions, especially hypothermia, can mimic death. In late stage hypothermia, respiration and heartbeat can be so slow and faint that it may not be detected by normal First-Aid procedures and the body may be cold pale and rigid.

In time three other indisputable signs of death will show:

- 1. The body cool, starting with the extremities, even in a warm place.
- 2. *Rigor Mortis* will set in several hours after death.
- 3. Blood will settle to the lowest parts of the body, especially on the pressure points resulting in a bruised and mottled appearance *Dependent Lividity*.

# Obj. 1.21 | CRITICAL INCIDENT STRESS DEBRIEFING (CISD)

Critical Incident Stress Debriefing is a "First-Aid" mental health procedure. Team commanders should consider offering CISD to searchers whenever the incident involved significant stress generators such as death or serious injury to the subject or the searchers.

| INSTRUCTOR'S NOTES                                      | Newfoundland and Labrador Search and Rescue Association   |
|---|---|
|   | CISD in the province is provided to search teams by trained professionals with the local policing agencies.   |
| Obj. 1.22<br>Obtain Human Rights<br>Act and Regulations | <ol> <li>The CISD process is comprised of three components;</li> <li>Venting of feelings and assessment by a facilitator.</li> <li>Discussion of the signs and symptoms of stress response (which are normal responses to abnormal situations).</li> <li>Closure, including resource identification, plan of action and referrals.</li> </ol>   |
|   | HUMAN RIGHTS AND ETHICAL CONDUCT  |
|   | Racial or any other forms of discrimination or harassment of any kind will not be tolerated by the Newfoundland and Labrador Search and Rescue Association or any of it's member teams.   |
|   | According to the Human Rights Act and Regulations:  |
|   | <ul> <li>Race means nationality or racial background</li> <li>Creed means church or religious beliefs or concepts.</li> <li>Colour means the colour of one's skin.</li> <li>Gender means male and/or female.</li> <li>Sexual Orientation means sexual preference.</li> </ul>  |
|   | The Newfoundland & Labrador Search and Rescue Association is considered a volunteer public service and we must refer any cases of discrimination/harassment to the Human Rights Commission.   |
|   | HUMAN RIGHTS ACT ON RACE AND COLOUR   |
| Question  | What is racial discrimination?  |
|   | <ul> <li>Racial discrimination occurs when negative judgement or decisions are made about an individual because of their race or colour, rather than their individual merits. This is called <i>RACISM</i>. Examples include: <ul> <li>Being denied a job because you are a person of colour.</li> <li>Being refused entry into a restaurant because of your colour or race.</li> <li>Being treated unfairly on the job or while in public service because of race or colour.</li> <li>Any condition different from co-workers applied to you because of race or colour.</li> </ul> </li> </ul> |
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| INSTRUCTOR'S NOTES | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION   |  |  |  |  |
|--------------------|---|--|--|--|--|
| Question           | What is racial harassment?  |  |  |  |  |
|                    | Racial harassment is any unwelcome comment or action based on race, colour, nationality, ethnic or aboriginal origin, is racial harassment. Examples of racial harassment include:  Racial slurs or derogatory remarks based on race, colour, or origin. Racist pictures, graffiti, or any other material. Sabotage or physical assault. Racial jokes, innuendos, teasing or threats.                       |  |  |  |  |
|                    | HUMAN RIGHTS ACT ON GENDER  |  |  |  |  |
|                    | The Newfoundland & Labrador Human Rights Act protects individuals from discrimination because of their gender. This includes both sexes. The Act prohibits such discrimination in the areas of:   |  |  |  |  |
|                    | <ul> <li>Provision of or access to services or facilities.</li> <li>Accommodations.</li> <li>Purchase or sale of property.</li> </ul>   |  |  |  |  |
|                    | <ul> <li>Employment.</li> <li>Volunteer public service.</li> <li>Publications, broadcasts or advertisements.</li> <li>Membership in a professional, business or trade association, employer or employee organization.</li> </ul>  |  |  |  |  |
|                    | SEXUAL HARASSMENT   |  |  |  |  |
|                    | <ul> <li>Sexual harassment includes but is not limited to the following:</li> <li>Displaying pictures or objects of a sexual nature.</li> <li>Staring, leering.</li> <li>Gestures.</li> <li>Unsolicited invitations or requests of a sexual nature.</li> <li>Physical touching, patting, or pinching.</li> <li>Unwelcome remarks, jokes, innuendos, or sexually-laden comments about appearance.</li> </ul> |  |  |  |  |
|                    | Any unanswered questions regarding any of the issues pertaining to human rights, discrimination or harassment should be directed to:  |  |  |  |  |
|                    | NEWFOUNDLAND & LABRADOR HUMAN RIGHTS<br>COMMISSION  |  |  |  |  |
| SEARCHER I         | LESSON PLANS PAGE 18  |  |  |  |  |

| INSTRUCTOR'S NOTES | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION   |
|--------------------|---|
| Obj. 1.23          | LEGAL RIGHTS AND OBLIGATIONS FOR SEARCHERS  |
|                    | <ul> <li>General Principles</li> <li>Searchers are responsible for the things they do which kill someone, injure someone else or which make their injuries worse.</li> <li>Searchers are responsible for the things which they do not do but should have done which kill someone, injure someone else or which make their injuries worse.</li> <li>Searchers are responsible for following all statutes, legislation, regulations and team rules and if they violate them and someone is killed, injured or their injuries are made worse, then liability may be virtually automatic.</li> <li>Searchers are responsible for acting in a reasonable and prudent manner at all times.</li> </ul> |
|                    | <ul> <li>Searchers are responsible for being trained to the level required for the type of search activity that they are performing.</li> <li>Searchers are responsible for being trained to the minimum level as set forth by the NLSARA.</li> <li>If a searcher is asked by the overhead team to do something for which they are not trained, it is their duty to inform them that they do not have the training to do the job.</li> </ul>  |
|                    | <ul> <li>Equipment</li> <li>Searchers are responsible for having all the equipment required for the type of search activity that they are performing.</li> <li>Searchers are responsible for having all the equipment, as required by their team, with them while searching in the field.</li> <li>Any searcher who does not have all of the necessary equipment to perform an assigned search job, is responsible to inform the overhead team of the fact and either get the equipment required or to let the overhead team determine whether they should be searching.</li> </ul>   |
|                    | <ul> <li>Fitness</li> <li>Searchers are responsible for having a level of fitness required for the type of search activity that they are performing.</li> <li>Many support positions can be successfully performed by searchers who are disabled or who have a reduced level of fitness.</li> <li>Searchers who do not have the physical capability necessary to perform the job to which they have been assigned are responsible to</li> </ul>   |

NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION

inform the overhead team that they cannot do the job and **NOT** perform a job that they cannot do.

# **Following Orders**

- Ground searching is a team effort.
- Searchers are responsible for carrying out orders given to them by team leaders or the overhead team.
- Searchers are responsible for searching the area assigned to them thoroughly and making required reports during debriefing.
- Searchers are NOT responsible for search methods to be used or areas assigned if they were a part of their orders.
- Searchers are responsible if they disobey the orders or disregard the orders that were given and the lost subject is injured, injuries are made worse, or the subject dies because they decided to violate the orders.

# **Trespassing**

- Do not enter the land of another, including public land to which access is controlled, without permission of the person owning or occupying the land.
- Do not enter an occupied building or other building of another, without permission of the person owning or occupying the building.

# **Shared Liability**

- Searchers and the overhead team SHARE LIABILITY for all manner of things, training, equipment, fitness, etc. If they knowingly send you in the field without the required training, equipment, etc., both parties may be liable for the results.
- Searchers that do not inform the overhead team that they are not trained to do something, are not properly equipped to do something or are not presently physically capable of doing something, then their liability goes up and the liability of the overhead team goes down.

# **To Prevent Liability**;

- Get trained.
- Ensure that you have all the necessary equipment.
- Be properly fit to do the job.
- Perform all assigned tasks to the best of your ability.
- Use common sense and don't do things that you know you should not do.

| INSTRUCTOR'S NOTES           | Newfoundland and Labrador Search and Rescue Association   |
|------------------------------|---|
| Obj. 1.24<br>Obtain WHSC Act | SAR VOLUNTEERS AND THE WORKERS COMPENSATION ACT   |
|                              | Any SAR volunteer who becomes injured, disabled or is accidentally killed while carrying out any SAR-related activities as put forth by the <i>Emergency Measures Act</i> will be completely covered by the <i>Workplace Health</i> , <i>Safety and Compensation Act</i> and will be afforded all provisions under this act and associated regulations.       |
| Obj. 2.1                     | CLOTHING  |
|                              | As a SAR volunteer, the first and often most important item of personal equipment is your clothing. You must prepare for various weather conditions and types of physical activities. Comfort and function in the wilderness is directly related to the ability to wisely choose clothing and footwear, and the ability to adjust clothing and energy output. |
|                              | Clothing is shelter close to the body, intended to maintain internal body temperature balance. Clothing also protects the body from other environmental hazards such as harsh vegetation and insects.   |
|                              | The Human Body loses heat in five ways:   |
|                              | <ul> <li>1. Conduction</li> <li>The primary cause of heat loss.</li> <li>Any time your body comes into contact with a colder object, heat is transferred to that object.</li> </ul>   |
|                              | <ul><li>2. Radiation</li><li>Direct loss of heat to the environment from exposed parts of your body.</li></ul>  |
|                              | <ul><li>3. Convection</li><li>Radiated heat is removed away from your body by air currents faster than your body can produce it.</li></ul>  |
|                              | <ul> <li>4. Evaporation</li> <li>Your body loses heat through perspiring. A good thing in a warm weather but not when it is cold. Perspiration will dampen your clothing and will increase heat loss through</li> </ul>   |

conduction.

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# 5. Respiration

 The body loses heat by breathing out warm air. This can be significant in extremely cold weather.

# **DRESSING IN LAYERS**

Clothing must protect the body from environmental conditions and allow for a change in energy output in a variety of conditions. As a result, a flexible clothing system is key.

The Layering System consists of the following:

# Inner or Wicking Layer

- Provides some insulation and controls the moisture against the skin by transferring perspiration from the skin to the outer layers.
- Use polypropylene or other synthetic materials rather than cotton.

## Middle Insulation Layer

- Consists of multiple layers of clothing, pile or wool, that trap dead air.
- o Ideal materials include wool, polypropylene fleece and pile.

# Outer Barrier or Shell Layer

- Should protect from rain, snow or wind, yet allow for the release of internally generated moisture.
- A two way zipper with an over-flap and a good neck/hood system are key in a barrier jacket.
- o Gore-Tex type material is preferred.

Utilizing the Layering system, body temperature can be regulated through the use of easy-on/easy-off layers of clothing rather than one large garment. If you feel hot, shed clothing layers. If you feel cold, add clothing layers. Layering enables regulation during both periods of rest and physical activity. Trapped air between layers also enhances insulation. Adjust your layers relative to your activity.

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#### TIPS ON CLOTHING

- Boots should be heavy rubber, leather or Gore-Tex, and reach 6" above the ankle.
- All boots should be tried in a non-mission situation. "Backyard breaking-in" allows for evaluation, adjustment or substitution.
- Insoles of felt protect, insulate and cushion feet for extended use over difficult terrain.
- Socks provide warmth and protection if heavy work type.
- Underclothes should be two piece and fleece or thermal.
- Pants should be heavy, but comfortable, 100% wool and have numerous pockets. DO NOT WEAR BLUE JEANS.
- Shirts should be long sleeve, cotton, flannel or wool.
- Coats should be large enough to allow for additional clothing and ripproof with a hood.
- Hats are essential. A hard hat should be worn where appropriate.
- Gloves should provide protection and warmth; mitts are better in cold weather
- Eye protection is highly recommended, especially on night searches goggles if not wearing safety eye glasses.
- Remember to dress comfortably do not over or under dress.
- Dress in layers.
- Brightly coloured clothing is preferred.
- Dress for the season not the day.
- Wear darker clothing in the winter to absorb sun heat energy.
- Lighter coloured clothing in the summer will reflect heat and help maintain temperature balance.

# Obj. 2.2 FIELD EQUIPMENT

Every experienced searcher has their own style and method of carrying personal equipment into the woods. In addition, they each carry slightly different types, kinds, amounts, and forms of equipment. What is common to them all is the fact that they are self-sufficient and prepared for an overnight stay in the woods. Never rely on another for essential food, supplies, or equipment.

In Newfoundland & Labrador, you should have with you at all times in the woods:

- A compass, and the ability to use it
- Waterproof matches
- A strong knife or axe

| INSTRUCTOR'S NOTES | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION  |
|--------------------|--|
|                    | The following is the recommended equipment that searcher should carry with them at all times:  Map of the area and a Compass Flashlight & spare batteries Sunglasses Extra food & water Whistle Waterproofed matches Fire starters Pocket knife First Aid kit Survival kit Toilet paper Signal mirror Signal mirror Flagging tape Rescue blanket Orange garbage bag (survival bag)  This is only a recommended list of equipment to carry. Many searchers will customize their own kits for the barest minimum of supplies. This list should only be considered as <i>emergency equipment</i> . You will still have rescue equipment to carry. |
| Obj. 2.3           | The following is a list of additional equipment that would be beneficial to the searcher:  Walking stick (tracking) Day pack Good boots Hat Gloves (leather) Gaiters Suitable clothing (for the season) Snacks Foam pad to sit on Spare socks Duct tape (fix anything) Pad & Pencil Prepared to spend night Bivy/Sleeping bag  |
| SEARCHER I         | LESSON PLANS PAGE 24   |

| Instructor's Notes | NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION   |  |  |  |  |  |  |
|--------------------|---|--|--|--|--|--|--|
| Obj. 2.4           | IMPORTANCE OF FOOD AND WATER  |  |  |  |  |  |  |
|                    | <ul> <li>Water</li> <li>Water and the prevention of dehydration is essential to the searcher.</li> <li>Carry two litres of water in reliable bottles that resist squashing and leaking in a pack.</li> <li>A "camelback" or "wineskin" system that does not interfere with your pack is also good.</li> <li>In hot conditions, stop often and drink plenty of water to reduce the risk of dehydration and cramping.</li> </ul>  |  |  |  |  |  |  |
|                    | <ul> <li>Carbohydrates (ie. starches, fruits, sugars, breads) are easily digested and provide quick energy. Proteins (ie. meats) are slowly digested but provide long lasting energy. Fats (ie. butter, oils, nuts, chocolate) are also slowly digested but provide the most calories of energy per unit and can be used to generate extra body heat.</li> <li>Food not only provides calories but also provides minibreaks and promotes mental alertness.</li> <li>2000 calories a day will provide sufficient energy for normal SAR field activities. However, during cold weather or under strenuous conditions, your caloric intake should increase to 3500 to 4000 calories per day.</li> <li>Test your foods before going in the field to see which provide the most energy without making you feel bloated and slowing down your progress.</li> <li>All food taken in the field should require no cooking or just heating in a single pot or cup. Army surplus rations have their own heating source and provide about 1300 calories per serving.</li> </ul> |  |  |  |  |  |  |
| Obj. 2.5           | PHYSICAL FITNESS FOR SAR  |  |  |  |  |  |  |
|                    | As a SAR volunteer, you must be able to endure extreme environmental conditions and to function well physically and mentally in order to contribute to the search in a safe and positive manner.  |  |  |  |  |  |  |
|                    | SAR volunteers should have the physical energy, stamina and conditioning to complete their assigned task especially if they take longer than intended.  |  |  |  |  |  |  |

NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION

In order to be physically fit for any search activity, a searcher should consider the following:

- A minimum of six hours sleep a night.
- A balanced diet of approximately 2000 calories per day.
- 30 minutes of aerobic activity twice a week.
- One half a day physical efforts similar to a field assignment twice a month.
- Monitoring resting pulse rate each morning after waking. An increased resting pulse rate may indicate overstraining, not enough rest or the onset of illness.
- Must be able to walk with a backpack, two mile in one hour in typical search terrain.

# MENTAL FITNESS FOR SAR

All SAR volunteers, regardless of their task or position, should maintain a positive mental outlook. This can be accomplished by:

- Addressing non-SAR related personal issues with peers or professionals before they become a problem.
- Reduce daily stressors, where possible.
- Adopt a healthier living approach to relieve daily stress. Exercise regularly, get plenty of rest and sleep, eat healthy, participate in release activities on a regular basis, and take a few minutes of personal time for yourself each day.
- Participate in a Critical Incident Stress Debriefing for any traumatic incident in which you may have been involved.

NEWFOUNDLAND AND LABRADOR SEARCH AND RESCUE ASSOCIATION

# REFERENCES

Merry, Wayne, 1999, <u>Basic Ground Search and Rescue in Canada: A Home</u> Study Guide, Context North.

Smith, Richard; LaValla, Richard; Hood, Rick, Lawson, Norm and Kerr, Guy, 2003, <u>Field Operating Guide to Search and Rescue (FOG SAR) - SAR</u> Skills Handbook, ERI Canada, Alberta, Canada.

Newfoundland and Labrador Search and Rescue Association, 2002, Provincial Training Standard Manual.

Halifax Regional Search and Rescue, 1999, Woodslore Handout.

Whitehorse District Search and Rescue, 2002, What to Bring, www.wdsar.yk.ca/stufftobring.html.

# Percentage found dead ALL SOURCES 11% found dead New York State (dry, cold) 2% found dead Washington State (wet,cold) 22% dead plus 11% critical Canada: Summer = ?? Winter = ??

Dead or Critical:ChildrenAdultElderlyGood Weather4%11%35%Bad Weather67%53%67%

50%

**Dead Within:** 

1 day 2 days 3 days

9%

24%

4 days

9%

<u>5 +</u>

8%

Fig. 1: Mortality

(after Wm. Syrotuck)

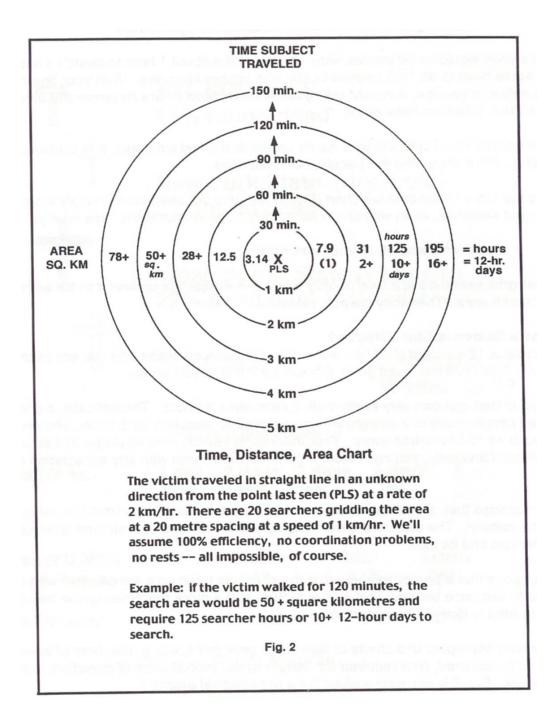
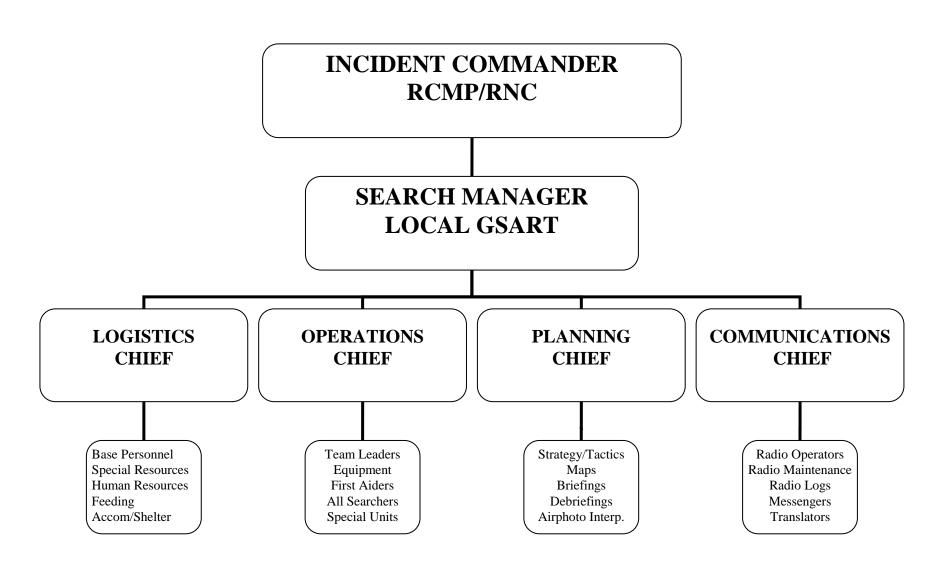


Exhibit P-085 Page 30

# TYPICAL SEARCH ORGANIZATIONAL STRUCTURE



| Subject Profile<br>Factor                     |                |
|---|----------------|
|   | Factor Value   |
| Age   |                |
| Very young                                    | 1              |
| Very old                                      | 1              |
| Other   | 2-3            |
| Medical Condition                             |                |
| Know or suspected injured or ill              | 1              |
| Healthy                                       | 3              |
| Subject a known fatality                      | 4              |
| Number of Subjects                            |                |
| One alone                                     | 1              |
| More than one (unless possibly separate       | d) 2-3         |
| Several subjects                              | 3              |
| Weather Profile                               |                |
| Existing bad weather                          | 0*             |
| Predicted bad weather, 8 hrs. or less         | 1              |
| Good weather predicted                        | 2              |
| Equipment Profile                             |                |
| Inadequate for environment                    | 0*             |
| Questionable for environment                  | 1              |
| Adequate for environment                      | 2              |
| Experience Profile                            |                |
| Not experienced, does not know area           | 0*             |
| Not experienced, knows area                   | 1              |
| Experienced, does not know area               | 2              |
| Experienced, knows area                       | 3              |
| Terrain and Hazards Profile                   | 004            |
| Naive child in hazardous area                 | 00*            |
| Hazardous area                                |                |
| Few or no hazards                             |                |
| History of Incidents in Area                  |                |
| Possibility of Intentional or Negligent Alarm | 1-3            |
| * If there are two 0's, default to an 8-1     | 2 total score! |
| in the color the conjudence to the color      |                |
| TOTAL RATING SCORE.                           |                |

## RECOMMENDED SWEEP SEARCH CONDITIONS

# For Pacific West Coast Dense Coniferous Forest Under Summer Conditions

| Search<br>Type:               | High Probability of Detection |                |                     | Low Probability of Detection |      |                     | Large Area Search<br>Lowest POD |                |                     |
|-------------------------------|-------------------------------|----------------|---------------------|------------------------------|------|---------------------|---------------------------------|----------------|---------------------|
| Sweep<br>Conditions:          | \$POD                         | # of<br>sweeps | Searcher<br>Spacing | %POD                         | # of | Searcher<br>Spacing | %POD                            | # of<br>sweeps | Searcher<br>Spacing |
|                               |                               |                |                     |                              |      |                     |                                 |                |                     |
| st Option -> :<br>Sound Sweep | Sound S                       | weeps:         |                     |                              |      |                     |                                 |                |                     |

| Record | Ontion | -> | Visual | Sweeps: |
|--------|--------|----|--------|---------|

| Standard<br>Sweep:           | 80% | 2 | 41m<br>135ft<br>56 paces | 40% | 1 | 63m<br>207ft<br>86 paces  | 19% | 1 | 200m<br>656ft<br>272 pages |
|------------------------------|-----|---|--------------------------|-----|---|---------------------------|-----|---|----------------------------|
| High<br>Visibility<br>Eweep: | 80% | 1 | 27m<br>89ft<br>37 paces  | 40% | 1 | 76m<br>249ft<br>103 paces | 22% | 1 | 225m<br>738ft<br>306 paces |
| Low<br>Visibility<br>Sweep:  | 80% | 2 | 31m<br>102ft<br>42 paces | 40% | 1 | 52m<br>171ft<br>71 paces  | 198 | 1 | 230m<br>755ft<br>313 paces |
| Body<br>Sweep:               | 70% | 1 | 19m<br>62ft<br>26 paces  | 40% | 1 | 56m<br>194ft<br>76 paces  | 15% | 1 | 207m<br>679ft<br>282 paces |

Typical Summer Search Speed:

0.4 Km/hr (0.25 miles/hr) in rough mountain forest with moderate to heavy bush, «Sound Sweep whistle-blast every 2 minutes.

1.0 Km/Hr (0.62 miles/hr) in fairly level forest with light to moderate bush, \*Sound Sweep whistle-blast every 1 minute.

(Martin Colwell)

SEARCHER I PAGE 32 LESSON PLANS

# POD FOR THIS SEARCH

PREVIOUS POD (OR CUMULATIVE POD) 34 37 41 55 58 45 62 64 66 68 88 90 86 88 90 9.5 75 83 84 85 89 90 89 90 89 90 90 91 92 93 92 93 93 94 94 95 95 96 96 97 96 96 97 97 97 97 98 98 98 98 

**CUMULATIVE POD'S**