AVALANCHE NEWS NO. 3

June 1980

EDITORIAL NOTE

Avalanche News is a vehicle of communication between people engaged in avalanche work in Canada and is issued three times per year. The next issue, Number 4, is planned for publication in October, 1980.

Contributions to Avalanche News are made by people concerned with avalanche safety programs. Members of the Canadian Avalanche Committee act as editors and the British Columbia Ministry of Transportation and Highways distributes the News.

There is no subscription fee. Anybody wishing to obtain Avalanche News should request it from the Committee.

AVALANCHE NEWS
Canadian Avalanche Committee, 3904 West 4th Ave., Vancouver, B.C., V6R 1P5
No. 3 JUNE 1980

AVALANCHE INVOLVEMENTS IN CANADA

Winter 1979 - 1980

At the beginning of the winter reporting cards were distributed to organizations engaged in avalanche safety programs. The organizations and individuals were requested to complete a card and mail it to the Avalanche Centre for every avalanche that involved persons or damaged property.

During the winter reports were received of 28 avalanche incidents which can be broken down as follows:

Skiers in a ski area	6 reports
Back country skiers	14 reports
Vehicles on roads	7 reports
Buildings destroyed	1 report

Of these reports, 14 originated on the West Coast and Vancouver Island, 8 in the Columbia Mountains and 6 in the Rocky Mountains.

The incidents can be stratified as follows:

16 persons caught but not buried
4 persons partially buried
3 persons completely buried and recovered unharmed
1 person completely buried and killed
6 vehicles trapped
4 vehicles partially buried
3 buildings destroyed by one avalanche.

Most of the skiers caught in avalanches in ski areas were avalanche control personnel doing slope stabilization. The others were visitors who violated closure signs.

The only fatal accident of the winter occurred on 15 March, 1980 at Mount McKenzie near Revelstoke, B.C. This same slope had claimed the life of a skier in an avalanche a year earlier. The victim was a member of an unguided party that was transported to the mountain by an over-snow vehicle. The skier started the avalanche while skiing the slope alone and was found by a dog 4½ hours later under approximately one metre deep snow.

On 26 December, 1979 an avalanche destroyed a maintenance shop, a compressor building, and a storage building at the portal of Scottie Gold Mine near Stewart, B.C. No persons were at the buildings because the mine crew was on holiday, but lower down the slope the avalanche partially buried a skidozer with operator.

The winter of 1979-1980 was the first winter when information about all avalanche involvements in Canada was collected. This being the first year, it is possible that not everyone was aware of the survey or that some persons were reluctant to publicize their involvement with avalanches. The total number of avalanche accidents was low and the validity of this total

is questionable when one considers the large number of skiers and snowmobiles visiting the back country and the number of vehicles travelling on roads through avalanche areas in Western Canada.

During this past winter fewer natural avalanches were observed in Western Canada than during previous winters. The lower than average avalanche activity was the result of below average total snowfalls and above average temperatures.

Peter Schaerer

AVALANCHE ACCIDENTS IN EUROPE

At the meeting of the Avalanche Sub-committee of the International Committee on Alpine Rescue (IKAR) on 3 November, 1979 at Meran, Italy, statistics of persons who have died in avalanches and the number of avalanche dogs were tabled.

	People Killed in Avalanches		Number of
	Winter 1977-1978	Winter 1978-1979	Avalanche Dogs 1979
Spain	3	11	1
Bulgaria	0	0	12
Poland	3	3	11
Czechoslovakia	0	0	21
German Federal Republic	3	2	44
Italy	35	18	140
France	32	22	101
Lichtenstein	0	0	5
Austria	32	20	200
Norway	6	11	50
Yugoslavia	3	1	20
Switzerland	44	38	261
Total Europe	161	126	866

Statistics for the winter of 1979-1980 are not available yet.

The numbers of fatalities in North America were:

	1977-1978	1978-1979	1979-1980
Canada	1	14	1
U.S.A.	17	9	6

Canada is represented on the International Committee on Alpine Rescue by Peter Fuhrmann and Willi Pfisterer of Parks Canada. They

will continue to report any important European developments in avalanche safety.

AVALANCHE DOGS

Inspector L. L. Pearson, OIC Police Dog Services of the Royal Canadian Mounted Police at Innisfail, Alberta advises on the classification of dog/master teams.

In order to qualify, a dog master must fulfill the following requirements.

Class "C" must be able to:

- Competently handle intermediate skiing terrain.
- Demonstrate physical capability in ski mountaineering.
- Utilize first aid and life saving procedures.
- Effectively handle his dog.
- Utilize the dog's ability under detrimental weather conditions.
- Understand and interpret the dog's behavior patterns.
  In addition must be evaluated every second year to remain a classified team.

Class "B" as per Class "C" plus being able to:

- Judge simple accident situations.
- Properly utilize the dog under extremely unfavourable weather conditions.
- Recognize signs of fatigue in the dog and utilize the dog's capabilities to a reasonable degree in that situation.
- Lead the dog in both hasty and fine search patterns.
- Extend artificial respiration by resuscitation and mouth to mouth techniques.
- Use map and compass.
  In addition must be evaluated every second year or revert back to Classification "C" until re-evaluated.

Class "A" as per Class "B" plus being able to:

- Train and lead the dog to its maximum potential.
- Control helpers and spectators.
- Properly assess complicated avalanche situations, especially when eyewitness testimony is contradictory.
- Care properly for a number of victims according to the seriousness of their condition.
- Properly judge avalanche hazards on the way to and during a search.

- Quickly locate a number of victims and articles (packsacks, clothing), within a search area of 80 x 150 metres. The depth of buried articles shall be 80 centimetres and the depth of victims shall be two metres.
- Search intensively even if extremely unfavourable conditions such as large blocks of snow or litter and human tracks on the deposit exist. In addition must be evaluated every three years or revert back to "B" Classification until re-evaluated.

Teams of dog and master were evaluated and classified by Willi Pfisterer, Alpine Specialist, Parks Canada; Alf Burstrom, Park Warden, Jasper; and Sgt. Doug Wiebe, Trainer, Police Dog Services, RCMP, as follows:

Park Warden A. (Alf) BURSTROM, Jasper National Park; Dog "Ginger", Jasper, Alberta; "A" Classification.

Cpl. F.D. (Dale) MARINO, RCMP, Police Dog "Kelly", Kamloops, B.C.; "A" Classification.

Cpl. T.M.A. (Terry) BARTER, RCMP, Police Dog "Major", Chilliwack, B.C.; "B" Classification.

Cpl. W.T. (Wayne) MURPHY, RCMP, Police Dog "Katuk", Nelson, B.C.; "B" Classification.

Cst. G.H. (Gord) BURNS, RCMP, Police Dog "Ole", Prince George, B.C.; "B" Classification.

Cpl. W.K. (Bill) HENDERSON, RCMP, Police Dog "Maj", Penticton, B.C.; "C" Classification.

Cpl. R.A. (Rod) NICHOL, RCMP, Police Dog "Lance", Courtenay, B.C.; "C" Classification.

Cpl. G.R. (Gary) GILLETTE, RCMP, Police Dog "Nicki", Vernon, B.C.; "C" Classification.

Cpl. J.G. (Jim) BREWIN, RCMP, Police Dog "Bandit", Whitehorse, Y.T.; "C" Classification.

Cpl. C.J. (Chris) BANHAM, RCMP, Police Dog "Attilla", Cochrane, Alberta; "C" Classification.

Those members shown on previous lists who do not appear above have either not as yet been classified or have lost their "C" Classification due to not having been evaluated for two years or more.

Members who have received training but no longer hold a Classification are:

Cpl. T.H. (Terry) GRIMM, RCMP, Police Dog "Bruno", Terrace, B.C.

Conservation Officer Brian BALDWIN, B.C. Fish & Wildlife, Smithers, B.C., Service Dog "Sage".

The North Vancouver police dog and master unfortunately were not able to attend the "Induction Training" this year and therefore they have no experience in the Avalanche Search and Rescue Profile. Hopefully their training will be accomplished next year.

The editor of Avalanche News wishes to add that Willi Pfisterer has written in greater detail a manual of standards, training, and testing procedures for avalanche search and rescue dog/master teams. Copies may be requested from Mr. Willi Pfisterer, Alpine Specialist, Parks Canada, P. O. Box 10, Jasper, Alberta, T0E 1E0.

The Canada West Ski Area Association intends to organize a course for civilian avalanche dogs in the coming winter. During that course the dog/master teams will be classified according to the same standards as the police dogs.

RESOURCE AGENCIES

An updated list of avalanche resource agencies in Canada will be published in the next issue of Avalanche News. The list will include organizations and individuals that:

(a) maintain a program of continuous snow stability evaluation and can be contacted for information about avalanche hazards--by back country travellers for example;

(b) can be called for avalanche search and rescue;

(c) offer educational programs with respect to avalanche safety;

(d) provide consulting services about avalanches.

Organizations and individuals are requested to send a note to the Avalanche Committee by 30 September with the following information:

(a) Name of the organization and the individual in charge of the avalanche program

(b) Address

(c) Telephone

(d) Service available

The list of the resource agencies will also be distributed to students in avalanche courses.

DO NOT FORGET!!

Send the information NOW or make a note on the calendar.

MEETING OF OPERATIONAL AVALANCHE SAFETY PERSONNEL

On 21 and 22 May 1980 a meeting was held in Vancouver for persons who are responsible for the daily evaluation of avalanche hazards, the control of avalanches and the enforcement of safety measures in operations in Canada. Thirty-two representatives from organizations in Canada such as ski areas, highways, heli-skiing, and mines were in attendance. The following is a summary of major topics that were discussed.

A review of the avalanche accident at Mount McKenzie on 15 March 1980 led to the conclusion that there is often uncertainty as to who is in charge of a search operation. It was decided that this question should be discussed with organizations that are involved in search and rescue, such as ski operators, parks personnel, police, and emergency measures agencies.

The majority of those at the meeting favoured continuing use of the present card for reporting avalanche involvements. A recommendation was made, however, that it be supplemented with a form on which characteristics of the avalanche and the circumstances of the accident could be recorded in greater detail when requested.

An Accident Prevention Officer of the Workers' Compensation Board of British Columbia joined the meeting for a discussion of the explosive regulations. The two most important points that were brought to our attention were that:

(a) Operators must submit procedures for explosive use in writing to the Accident Prevention Department of the Workers' Compensation Board for approval. It is recommended that this be done in the summer in order to obtain approval before the winter.

(b) In each avalanche control team a supervisor must have a valid blasters ticket, although it is not necessary for each member to have one. The supervisor is responsible for all safety measures, including those regarding any avalanches that are released.

Those in attendance at the meeting reported that the following number of explosive charges are used for avalanche control in Canada in an average winter:

7000 hand charges

7000 avalauncher charges

750 helicopter bombs

1000 rounds for 105 - howitzer

120 rounds for 106 - recoilless rifle

The definitions of avalanche hazard (low, moderate, high, extreme) presently used by the Avalanche Warning Centre at Seattle were tabled. In the discussion it was found that the system is not clear enough and would not be acceptable in Canada. It was pointed out that it might be preferable to issue statements about the degree of snow stability only, rather than a warning about the hazard to skiers or traffic.

It was recommended that the standards of the operational avalanche courses organized by B.C.I.T./N.R.C. not be lowered for the purpose of accommodating students who are not engaged in the day to day evaluation of avalanche hazards. Several speakers at the meeting pointed out that due to the short duration of the courses, education and testing of the students in terrain evaluation and route finding was not complete enough. It was suggested that some improvement could be made in classroom sessions by using photographs of avalanche terrain.

National Parks staff from Lake Louise reported on successful trials with rescue balloons. Dummies equipped with inflatable jacket-balloons were placed in wet snow avalanches and remained on the surface when the avalanche stopped. The balloon trials at Lake Louise complement similar successful tests in dry snow avalanches in Austria.

Lake Louise staff also reported snow stability tests concerned with collapse strength of thick temperature gradient layers.

The meeting revealed several common problems in areas such as explosives control, standards and legal consequences of warnings, qualifications of avalanche dogs, and standards of avalanche training which could be solved by a body such as was assembled on 21/22 May. In order to do this and to obtain greater recognition, those persons in attendance at the meeting voted unanimously that efforts should be made to form an association of avalanche safety operators. Questions such as objectives, membership and legal aspects still need to be investigated.

Peter Schaerer

AVALANCHE WORKSHOP 1980

The second brochure regarding the workshop of November 3-5, 1980 in Vancouver, British Columbia will be available by mid June. It will be mailed to all those who have sent in the pre-registration form or requested information about the workshop. By the end of May about 120 persons have indicated that they plan to attend, but a greater number of participants is expected at the workshop. Because the space of the meeting room is limited, registration by mailing the form contained in the second brochure is strongly recommended. Late-comers who intend to register at the door may have to be turned away.

The sessions will cover the following topics:

Public Warning Programs

Training courses

Avalanche hazard forecasting

Weather information for avalanche hazard forecasting

Snowpack information for avalanche hazard forecasting

Observations and avalanche size classification

Safety and rescue

A lead speaker will introduce each topic by summarizing the state of the art. He will be followed by speakers who will make short presentations of their work and supplemented by discussions from the audience. Presently the organizing committee is contacting the speakers and preparing the program.

All those who have registered will receive the detailed program prior to the workshop.

Information about the workshop can be obtained by writing to:

Avalanche Workshop
3904 West 4th Avenue
Vancouver, British Columbia
V6R 1P5

or by calling telephone number:
(604) 732-6619

AVALANCHE FILM

Plans for the production of an avalanche safety film were mentioned in Avalanche News No. 1. The Avalanche Committee, having received the request to supervise and arrange financing of such a film, has discussed the objectives, content, and cost in several meetings. The Committee decided in the meeting of 22 May 1980 that it is unable to proceed. In considering the experiences of others who have produced such avalanche films, the Committee resolved that it would have to maintain full control over the script and the editing in order to produce a valuable film. Presently none of the members of the Committee could devote sufficient time and effort to this task.

The decision to file the project was made with much regret. The Avalanche Committee believes there is a need for a good film about avalanche safety in back country travel and mountaineering, and wishes to encourage producers with the necessary backgroumd to undertake this task.

PUBLICATIONS

Gerald Seligman Snow Structure and Ski Fields 1980 Published by International Glaciological Society, Lensfield Road, Cambridge CB2 1ER, England

The book is the third edition of the classical work for the practical man and the scientific specialist, first published in 1936. This edition, 555 pages long in paper back form, can now be obtained from the International Glaciological Society for a price of £13 or U.S. $30.50 including packing and postage. At the beginning of the coming winter the book will also be available at the Mountain Equipment Co-op stores in Vancouver and Calgary.

Outdoor Recreation Council of B.C. Avalanches; a guide to safety in British Columbia

The eight page brochure contains basic information on avalanche terrain, safety measures, rescue by survivors, and first aid pertinent to all winter travellers. It is one of a series of outdoor recreation safety guides; others available include hiking, cross-country skiing, snow mobiling, horse riding, kayaking.

Individual copies of the pamphlets are free. Send a stamped self-addressed envelope to the Outdoor Recreation Council of B.C., 1200 Hornby Street, Vancouver, B.C. V6Z 2E2. Large quantities are available at a nominal cost.

BATTERIES FOR AVALANCHE RESCUE BEACONS

Recently, recommendations have been made for the use of Alkaline batteries in portable radios, except where certain manufacturers call for other types. This material may be of interest to those purchasing batteries for avalanche rescue beacons. Carbon zinc batteries are not recommended unless no Alkaline batteries are available.

Alkaline batteries are recommended because they have the following characteristics:

(a) Much higher level of stored energy - they will last a lot longer.

(b) Good shelf life - even after four years they still have 80% of their energy left if stored in a cool place.

(c) They do not normally leak or explode.

(d) They can be used at very low temperatures.

(e) They operate well under high current drains - good while radio is transmitting.

G. L. Freer

URGENT: USERS OF SKADI RESCUE TRANSCEIVERS

John G. Lawton, President of Lawtronics Incorporated has issued the following urgent bulletin to users of SKADI Rescue Transceivers.

Over the last two years there have been incidents where the receive function of some SKADI flat packs, manufactured before 1979, has failed spontaneously. In all cases the problem has been due to failure of an integrated circuit manufactured by RCA. The problem appears to be more prevalent in some lots of this integrated circuit than others but the failures are completely unpredictable. When failure of the integrated circuit occurs the receive function on the three highest gain positions of the SKADI fails completely.

We have confronted RCA with this problem but their response was less than satisfactory--they stopped manufacturing this integrated circuit. We therefore have completely redesigned the electronics in the SKADI flat pack with the main objective of creating a unit having the best possible reliability. We now have sufficient experience with the new model to be convinced that its reliability is substantially improved, not a single component failure has been reported to us.

While redesigning the SKADI electronics for greater reliability we improved the receiver sensitivity and the transmitter beep rate. We also installed a new switch with a stronger detent action and a new rugged switchlock.

We are in fact so confident that we are herewith extending the warranty period for new SKADIs to two full years, subject only to having the unit sent in for a check up and battery replacement after one year.

This leaves the problem of what to do about all the old flat packs. We want to get these out of people's hands as quickly as possible. There is no point in taking them as trade-ins because we would not feel right about selling or even giving them away. Even if we tried to scrap them some might find their way back into use again. So what we have decided to do is to offer to rebuild them using the completely new electronics, switch and switchlocks from the present production units, as well as a new battery. All we save from the old unit is the battery charger, case, red door, lanyard, charger jack and the "antenna" coil. We offer this service for $75.00 and will engrave a new serial number and guarantee the rebuilt units the same as new ones.* It does not even matter if the old unit is not working, as long as the above enumerated parts are usuable.

The purpose of the rebuilding program is not to show a profit but rather to remove from use those SKADIs which contain one of the RCA integrated circuits in the reliability of which we have little confidence. I urge you to seriously consider having your older flat pack SKADIs rebuilt.

---

*This offer may be withdrawn at any time, at our sole option.

Address

Lawtronics Incorporated
326 Walton Drive
BUFFALO, New York 14226

Telephone: (716) 839-2739

John G. Lawton

Jim Bay
General Delivery
ROGERS PASS, B.C.
VOA 1NO