

ARMOUR

BULLETIN

FB GAGETOWN, CANADA

DES BLINDES



VOLUME 11

1979

This Bulletin is published under the authority of BGen D.R. Baker, CD, Commander Combat Training Centre. Views expressed are those of the authors and do not necessarily reflect official policy or opinion unless otherwise stated.

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REDACTEUR - Capitaine E.D. Borylo

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ARMOUR BULLETIN

EDITOR'S COMMENTS

The Armour Bulletin, our Branch professional publication, is produced by the Armour School at the Combat Training Centre.

The Bulletin is truly developing into a Branch magazine as indicated by articles in this issue from throughout the Corps, in particular, two from the Militia. This Militia contribution is welcomed and greatly appreciated and it is hoped that this support will continue.

Looking back over old issues as I was putting the final touches on this one, I noticed that we could use more articles on Leadership and Command. Perhaps someone has some words of wisdom on these particular subjects to pass on to the rest of us.

In conclusion, I would like to express my appreciation to Ms. Louise Smith, who helped me put this issue together and to all authors who supported the Bulletin.

E.D. Borylo
Captain
Editor

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DIRECTOR OF ARMOUR'S FOREWORD

It is my pleasure to provide a foreword for this edition of the ARMOUR BULLETIN. As I did in the last few BULLETINS I want to re-emphasize the importance of this publication. It is our Branch professional journal and as such it deserves our active support by means of participation and contributions. I am pleased to note that this edition is living up to the expectations of a professional publication and I congratulate the authors.


As 1979 draws to a close we can be proud of our achievements this year. Despite financial and resource difficulties our programs are on schedule and progressing well. The RCD and B Sqn 8 CH LEOPARD Cls have been delivered and we have practiced the flyover during the Fall NATO exercise. B Sqn 8 CH deserves specific praise for its excellent technical and tactical work-up to this exercise. The 8 CH completed a very successful Cyprus tour and now, along with 12e RBC prepares to re-equip with COUGAR, arriving in October. The Strathconas are embarking on their second Cyprus tour with lots of enthusiasm and I am sure will perform well. Our Armour School is as busy as ever, as well as evolving along familiar Regimental - Squadron lines.

Our Armour Militia has also shown great progress in 1979. Militia crewmen have continued to provide stalwart service in Canada, Europe and the Middle East, doing the same job as their Regular Force counterpart. Militia units embarked on challenging training plans and performed very well during their concentrations. The two programs mentioned in previous BULLETINS are proceeding

on schedule - Reserve Plan P 26 and the issue of COUGAR. With the implementation of these two plans, we shall see continued progress in training, organizational changes and tasking towards a truly viable Total Force.

As 1979 fades and 1980 looms, we will have new challenges to face. We must integrate our manpower resources with our equipment deliveries, we must convert to COUGAR, we must reinstitute combined arms training, we must cross pollinate our Regular Force and Militia training, etc, etc. I believe you will enjoy the challenge and respond admirably.

Best wishes to all ranks in 1980.


J.K. Dangerfield
Colonel
Director of Armour

The Secretary's Prayer

Give me the memory of an elephant or at least one three years long. By some small miracle, let me be able to do five things at once: answer four phones at the same time and type a letter that "must go today" even though I know it won't be signed until tomorrow. Let me read writing that looks like Japanese with no questions as to what it is supposed to be.

Let me not lose patience when I search files for a paper that is eventually found on the boss's desk. Give me the knowledge of a university professor with my Grade 12 education. Help me to understand and carry out all instructions without being told where the Colonel is, what he is doing and when he'll be back. And when the year ends, grant me the foresight not to destroy, when I am told to, records that will be asked for within a few days.

Above all, keep my ears from dropping off when he swears at his staff and fibs to his wife and banker! I need your help to keep an expressionless face under these trying conditions.



A Message

From

The Colonel Commandant

*Brigadier-General E.A.C. Amy, DSO, OBE, M.C, CD, (Ret'd),
The Colonel Commandant of the Armoured Corps, was the Reviewing Officer
for the Officer Cadet Graduation Parade held at Canadian Forces Base
Cagetown 15 August 1979. His address to the cadets was very inspiring
and is reproduced here for the benefit of the Corps.*

Mr Natynczuk and all members of the Graduating Class, your Honour Lieutenant-Governor Robichaud, General Paradis, the Honourable Bob Howie, General Barrett, General Baker, distinguished guests, and gentlemen. I would like firstly to congratulate you on your parade today; on your bearing, your marching, on your general turnout and on your dress. It was a good parade and you can be proud of yourselves. I think your instructors will be pleased, but of course one can never tell about instructors, can one? I would like also to congratulate those who have received a special award for achievement, you can certainly be proud of your efforts because they do not come easily.

If the remainder on parade will excuse me now, I would like to address my remarks to the graduating class.

It is perhaps a little early for you to realize that in ten to twelve years time, some of you will be commanding our combat battalions and regiments. In sixteen to eighteen years our brigade groups, and I think it is entirely possible by the year 2005 that one of you will be sitting in General Paradis' chair as General Officer Commanding Mobile Command. However, today it is not your responsibility in these senior positions to which I want to focus my remarks, but rather your responsibilities as troop and platoon commanders, and company, squadron and battery commanders. I don't believe that I would find any argument from any on parade today that soldiers are warriors, and warriors must be both trained and equipped and ready to fight.

From this day on, you will share the responsibility of making sure that the Canadian soldier is so trained. The standard of individual training of a fighting soldier is not less than that of the high standards of training required by our Olympic medal winning athletes; and the standard of team work and the effectiveness and team spirit, is not less in our combined arms teams of Armour, Infantry and Artillery, than the team spirit and the team work of the hockey team that wins the Canada Cup.

These are the standards that you must strive for in your training, and you must insist upon achieving them. Anything short of these are not acceptable and they will lead to unnecessary loss of life if we are ever called upon to fight. Hopefully, this will never happen; however, our success rate in maintaining peace in the

first three quarters of this century leaves no room for compliancy in this area. Your task in achieving these standards will not be easy, and your individual responsibility for achieving them is great, and I might add, that your reward once they are achieved, is enormous.

I must warn you now that you will run into some discouragement along the way. This will come mainly from some misguided politicians who do not believe that Canadian soldiers should be either trained or equipped to fight; some prominent public figures, and some members of the media who agree with them. You may be surprised to find that you may even run into opposition from some senior officer who obviously has lost his sense of direction.

Now friendly competition between the arms is both healthy and desirable, and I have no doubt that you chaps will do a great deal to liven it up in this area once you have joined your units. However, I suggest you must never let this friendly competition reach the level where it obstructs the development of the fighting spirit of the combined arms team.

Again to the graduating class, I would like to congratulate you on your choice of profession. In my opinion, you have just joined the greatest fraternity that Canada has to offer, and on behalf of your brother officers, both here and at other stations, I say welcome aboard.

When you march off the square in a few moments, you will become engaged in the greatest battle you will ever have to fight. It is a battle that you cannot afford to lose. It is the battle for the hearts of your men. Good luck to each of you, bon chance.

May the wind be always at your back and may the sun glare intolerably in the eyes of your enemy.

Thank you.

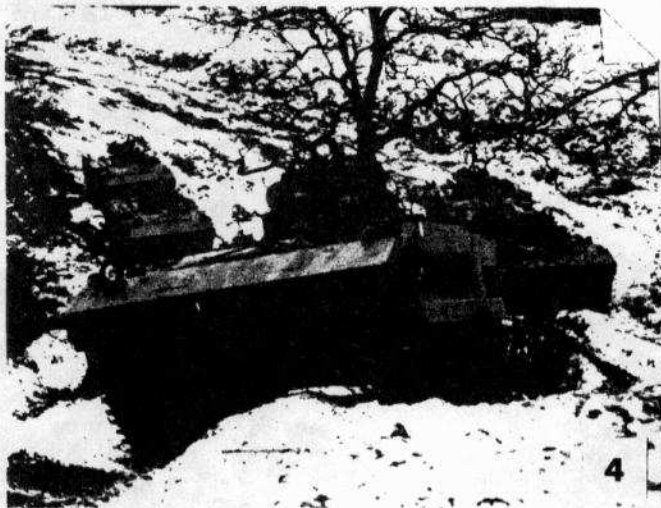
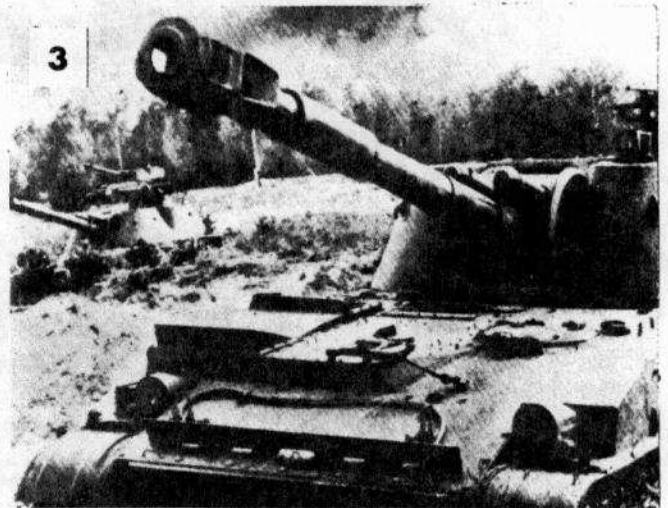
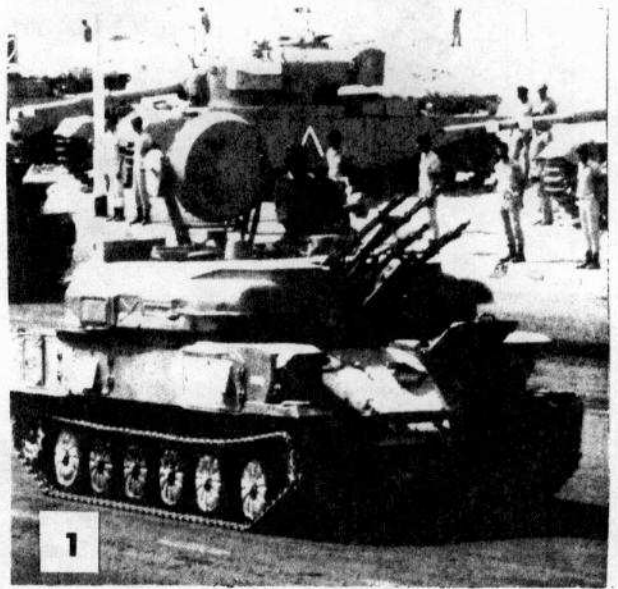
The young soldier knows the rules but the old soldier knows the exceptions.

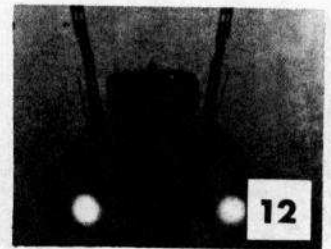
AFV RECOGNITION TEST

answers on page 38

IDENTIFICATION des VEHICULES BLINDES

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War Gaming - A Training Aid

by Captain D.J. Johnstone

The term "war gaming" is used in this article to denote a model exercise between two or more players where the outcome of the game is determined in part by chance. In all probability, most soldiers have played a commercial model. The RSS of the Fort Garry Horse have just finished developing a series of war games as training aids in the officer and senior NCO professional advancement training. The purpose of this article is to present an overview of the program and attempt to show its advantages and disadvantages.

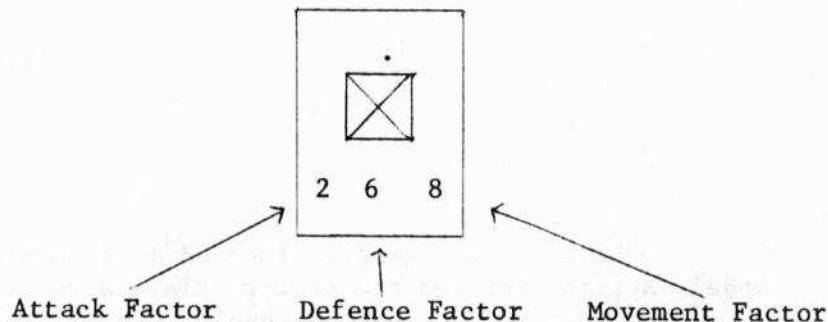
The original problem facing the RSS was the Militia's concentration tasking being the same as the preceding year. Wishing to avoid the repetition of classroom style lectures, it was decided to introduce a series of war games using Canadian units and equipment. In addition, it was felt that the games should develop in a logical fashion from the troop to the regimental level. This would show the militia soldier how and why organizations are formed and allow the RSS a change to develop complexities of the game to suit the level of play. At the individual level, the aim was to:

- a. improve battle appreciations;
- b. improve orders format; and
- c. develop a better understanding of the role of recce in the brigade.

To simplify the visual orientation problem, all games were played on a game board, one meter by two meters. The board was based on an actual map section which was blown up to the scale of one centimeter: 25 meters. For control purposes, it was also broken down into two hundred meter squares. It was found that this arbitrary choice was, in fact, a good size for both player and spectator.

Game #1 consisted of a troop level scenario in which a troop was assigned two observation targets. It was to maintain observation until permission was given to withdraw. The enemy force consisted of an infantry fighting patrol assigned to clear the ground surrounding one of the observation targets. The game was played down to the individual car/soldier. Both players were told to prepare a combat appreciation to be presented before the game began.

The markers used in this game would be familiar to anyone who has played a commercial pattern war game. A typical marker is shown below:



Unlike most war games, the aim of neither player was in fact to enter into combat. Thus, the game was divided into two distinct phases: observation and combat. The first phase required a player's marker to be in observation of the opposing marker as determined by three factors:

- a. distance between markers;
- b. state of the marker, ie. whether it was moving or stationary; and
- c. the roll of the dice.

As can be imagined, this confronted both players with a series of decisions. From the troop leader's point of view, combat should have been avoided. The infantry player was handicapped as his markers were always in the moving mode and therefore the troop could obtain observation first in most cases. Along with a lower mobility factor, the solution to his problem called for sound understanding of his advantages and weapon characteristics.

If the player managed to enter the combat phase, the results were determined by the ratio of the attack and defence factors coupled with a casualty matrix by way of the dice roll. This matrix imposed casualties down to the individual level. Again, this was done to present realistic problems to the players.

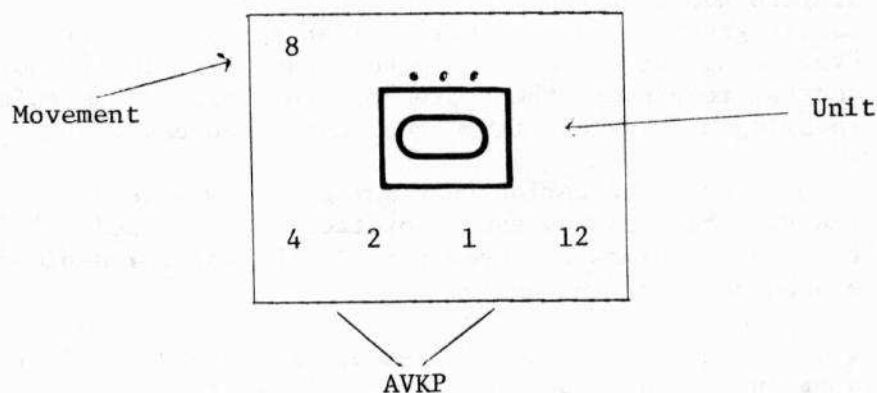
Before commencing the game, the players presented their appreciations and were questioned by the remaining officers and senior NCOs. Unfamiliarity with the technique caused a slow beginning; however, as the games progressed, discussion generated a forum on both the tactics and equipment chosen by the players. This probably holds most of the educative value of the games.

During evaluation of the games, it was felt that the observation phase was both useful and realistic and should continue to be used. However, as the games advanced to the combat team and battle group level, the control offered by the attack/defence ratio was considered too simplistic for a realistic outcome. What was needed was a device which would incorporate range between units, artillery effects and target posture, ie. hasty defence, prepared defence, etc. It was decided to introduce the concept of Armoured Vehicle Kill Potential.

This concept, referred to as AVKP, was adapted from the umpire control methods used in Reforger 77 exercises. To those unfamiliar with the term, AVKP represents the ability of a unit to inflict armoured vehicle and personnel casualties at specific ranges and during specific times. Through a system of charts, it is also possible to modify the score to include the artillery effects and target posture.

For example, a tank troop could have an AVKP of 4, 2, 1, 12. This would mean that the troop could "kill" four armoured vehicles if the range was less than 1000 meters, two if the range was between 1000 meters and 2000 meters; one if the range was between 2000 meters and 3000 meters and inflict twelve personnel casualties regardless of range. An engagement was defined as a one player turn. In conjunction with the movement factor, this represented the control method for the subsequent games.

The markers therefore took on this form:



Artillery was introduced in these games to demonstrate both its capabilities and limitations. The control of fire was managed by designating arty units as direct support and in support. Direct support could have fire on that player's turn while in support had to request the fire a move in advance. Fire on the ground was represented by a clear plastic marker with the probable beaten zone marked. To players who

have been indoctrinated on field exercises that arty fire is always available and in the quantities wanted, working with the concept of priority of call and limited amounts was a forceful lesson. The second lesson was that arty fire was most effective in restricted terrain as mechanized units could and did simply move around fire placed in open terrain. Finally, it was confirmed what all Hussars know, courtesy of Brigadier-General Radley-Walters, that is, smoke is as important as HE for units in the advance.

This control method was assessed during a game which was based on a combat team imposing delay on a numerically superior advance guard. The expanded rules were found to offer an interesting and informative means to teach tactics, especially at the junior officer level. This game again emphasized to all that the proper placement of weapon systems was vital to the successful conduct of any operation. Most importantly, it offered realistic situations which forced all concerned to think and react to a fluid tactical problem.

Another improvement came in the form of the introduction of troop leaders playing units actually assigned to them in the unit. This proved to be an excellent idea in that it gave all a chance to work together in a tactical situation. While this may not be as important in the regular force, in the militia where field time is limited, every opportunity to work together is valuable.

The culmination of the training sequence found the format changed in a few points. The major difference was that, until now, players had used Canadian equipment. It was decided to put a Canadian battle group in the defence against a Soviet motorized rifle regiment. Preceding such a game, a lecture was given on the Soviet Forces in general to prepare the audience. This format was sufficiently interesting to bring in visitors from other units and headquarters.

Over the period that war gaming was used, it became evident to the RSS that unit awareness of tactics increased. In particular, tactical command decisions improved both in the initial deployment and subsequent manoeuvring of the units.

There is no doubt that war games have definite potential as a training tool. Still there are limitations:

- a. it does not introduce the supply problem, although this could be overcome in a more complex game;
- b. it does not offer an assessment of the worth of discipline, training and morale; and
- c. players and spectators risk becoming more interested in the game and not in the lessons being presented.

In comparison to some garrison training methods, it does have some distinct advantages. These are:

- a. it introduces competition and therefore interest in garrison training;
- b. it is an excellent tool in teaching drills and weapon placement as it shows "why" they work;
- c. it offers the commanders at all levels an opportunity to see the "results" of various unit deployments;
- d. it is a cost effective means to hone tactical skills in the junior officers without committing troops and vehicles; and
- e. it is an innovative way of stimulating fresh interest in tactics training.

War gaming can be considered a form of cloth model exercise. Its main advantage over the traditional methods lie in the increased interest generated in the participants. Players learn lessons generated by their actions versus the old sit and learn debrief. As such, it represents a "hands on" means of teaching and should be regarded as an effective and integral part of tactics training.



BATUS and Medicine Man VI 1978

by Captain C.J. Corrigan, 8CH

The Canadian "Black Hat" staff at Suffield have successfully conned me into writing a few words about the British Army Training Unit Suffield (BATUS). In lieu of them I offer my experience at BATUS.



Occasionally I escape life's more unpleasant moments by leaning back in my chair, gazing across the Worthington Parade Square at a Centurion and a Sherman tank, and by reminiscing about my enjoyable and rewarding exchange tour with the Queen's Royal Irish Hussars. Of the many superb training experiences the exchange afforded me, the highlight was accompanying my Squadron from Paderborn, West Germany to Ralston, Alberta for EX MEDICINE MAN VI 02 September - 11 October 1978.

Since June 1972, seven battle groups a year have been training at BATUS. These battle groups consist of two tank squadrons with CHIEFTAINS, one infantry company with FV432 APCs, one field battery with FV433 105mm SP ABBOTT guns, one recce troop with SCIMITARS, one BLOWPIPE troop with SPARTANS, one SWINGFIRE ATGW troop with FV438s, one engineer field troop, one ATGW helicopter flight from an Army Air Corps (AAC) Squadron with SCOUTS, one recce flight from an AAC Squadron with GAZELLES, and a battle group headquarters based upon the headquarters of a mechanized infantry battalion or the headquarters of an armoured regiment. In recent years, a Canadian mechanized company plus a Canadian recce troop has been added to certain battle groups. All vehicles remain in situ; the outgoing battle group handover to the incoming battle group. Our battle group was based upon the headquarters of the Third Battalion, The Royal Regiment of Fusiliers, and consisted of B and C Squadrons Queen's Royal Irish Hussars, C Company 3rd Battalion Royal Regiment of Fusiliers, G Company 2nd Battalion The Royal Canadian Regiment, 170 Imjin Battery 45 Field Regiment Royal Artillery, a recce troop from the Queen's Dragoons Guards, and a recce troop from Lord Strathconas' Horse (Royal Canadians).

Initial knowledge of a unit's participation in BATUS comes a year in advance. C Squadron QRH anticipated our attachment to the 3 RRF Battle Group for over a year. Throughout the year we continued our regimental training, spring FTX and Hohne gun camp in March. In June we commenced our training cycle with 3 RRF. Coordination in training was vital as all participants came from all over BAOR and some from the United Kingdom. The first training event was a two day BATUS study group for all battle group personnel from crew commander and section leader up. This two day session included a BATUS introductory lecture, the characteristics and employment of all battle group weapons, study of all phases of war emphasizing the advance, combat team and battle group attacks, counter attack and counter penetration, night tank ambush, aggressive delay, minefield breaching with GIANT VIPER, assault water crossing, drills, drills, drills, and SOPs, SOPs, SOPs. . . Two weeks later both tank squadrons went to Hohne for a one week pre-BATUS gun camp. Upon completion of the gun camp, all elements of the Battle Group gathered in Soltau for dry battle group training. The training progressed from individual crew

drills, to tank troop drills and movement, and to squadron movement, drills and battle procedure. With the addition of an infantry platoon, a BLOWPIPE section, a SWINGFIRE section, an engineer recce Sergeant, and a FOO party, our combat team training began in earnest. Every variation of combat team attack was squeezed out of the limited Soltau training area. Two days of battle group training/movement finished off our training. Each of the armoured combat teams took turns as firebase and as assault elements in three dry battle group attacks.

Eight VC-10 chalks from RAF Wildenrath and Wunstorf, Germany, on the 2nd, 11th, and 12th of September resulted in all 805 members of the Battle Group being on the ground in Camp Crowfoot, Alberta. Having never been on the prairie before, many things soon became apparent. Range estimation presented a new challenge; what appeared to be 3000 metres away was in reality 6000 or 7000 metres away. The prairie, at least that part in Suffield, is not flat. Entire combat teams can be hidden in the large coulees that weave through the training area. The lack of trees had a disquieting effect upon those at home in the woods. Map reading relies heavily on the ability to read contours.

Four days of hard work in Camp, taking over our sixteen tanks and doing maintenance on them, preceded our deployment to the area for fifteen days of exercising. Previous to us this season, five squadrons had been through these same sixteen tanks. Hundreds of rounds fired had resulted in many barrel changes and the high mileage resulted in numerous major component changes. To support this vehicle takeover phase is the BATUS Workshop. During our time in camp prior to and after the exercise, all battle group personnel were housed in the forty-five GP huts that make up Camp Crowfoot.

Our programme of events from D Day, deployment day was as follows:

<u>Date</u>	<u>D+</u>		<u>Event</u>
15 Sep	D	} Special to Arm Training	Deploy to APDS Range
16	1		Conduct APDs firing
17	2		EX JACKAL - Sqn advance to contact trace using sub-calibre technique
18	3		Maint Day
19	4	} All Arms Training	CT EX DRY WET - Dry CT Attack followed by wet CT attack
20	5		BG EX DRY GULCH - Dry BG Attack followed by wet BG attack

<u>Date</u>	<u>D+</u>		<u>Event</u>
21 Sep	6	Phase 1	EX CHINOOK
22	7		Maint Day
23	8	} Phase 2	EX MALPAQUET
24	9		
25	10		Maint Day
26	11	} Phase 3	EX WATERLOO
27	12		
28	13		
29	14		
30	15		
	16-19		Handover
	19-23		R&R and RTU

BATUS is the only location in the world where the RAC conducts 120mm APDS firing. On the APDS range each tank fires 12 rounds. For a relatively heavy (56 ton) tank the 120mm sabot firing stretched the tank's buffer and recoil system to the limit. The consequences of firing, especially platform rock, were great considering the weight of CHIEFTAIN. It was not unusual for radios to slide out of mounts, for episcopes to fall from mounts, or for gunners to climb out of tanks upon completion of firing with bruised cheeks or even cut noses. The peacetime barrel life, 120 APDS rounds, coupled with the effect at target end were constant reminders of the devastating power of 120mm. On our APDS day three of the twelve Centurion target turrets or hulls were virgin. At the end of the day's firing all members of the Squadron went down range to see where our rounds neatly penetrated the front glacis plates, passed through the driver's compartment, through the turret compartment, through the engine, and out through the rear of the hull. This instilled in each of us the necessity for fast target acquisition and first round hits.

Days D to D+5 were controlled by the Battle Group Commander with guidance from the Commander BATUS and GS02 TACTICS, both members of the BATUS permanent staff. The remaining three phases were controlled by Commander BATUS acting as Brigade Commander. It was during this ten day period that all members of the Battle Group from Battle Group Commander down were exercised and assessed.

EX CHINOOK was a battle group advance and attack exercise which highlighted:

- movement across country and the use of ground
- battle procedure including the issue of battle orders over the radio
- mounting of quick attacks at Combat Team and Battle Group level
- the rapid breaching of a minefield and control of movement through it

EX MALPLAQUET was a forty-three hour exercise over thirty kilometers that practised the mobile defensive battle. It was divided into two parts:

D+8: aggressive delay battle including tank ambush

D+9: withdrawal over and holding an intermediate delay line by day and night

The main lessons practised were:

D+8:- the mechanics of the aggressive delay battle

- tactical movement to hides and the coordinated tank ambush battle
- local counter attack

D+9:- tactical movement from hides and rapid engagement of the enemy

- preparation of range cards, allocation of arcs and procedures for opening fire
- coordination of fire
- making a NVP
- tactical night move across country

Both Days - reserve demolition procedures

- use of reconnaissance
- observation and reporting by all arms
- overall command and control
- use of helarm - anti tank helicopters
- night patrolling
- rapid regrouping
- routine in a defensive position

EX WATERLOO was a four day exercise over sixty-five kilometers that had three phases: Phase 1 - Advance and attack

Phase 2 - Tactical maintenance

Phase 3 - Counter penetration and counter attack

It's aim was to exercise the Battle Group in all arms cooperation over a sustained period. The lessons practised were:

- Phase 1 - coordination of live firing of all battle group weapons
- tactical use of ground within the constraints of safety
 - battle procedure at Combat Team and Battle Group level
 - assault breach of minefield by day using Giant Viper and by night using hand breaching techniques
 - logistic support

- Phase 2 - tactical maintenance when in reserve
- organized rest and resupply

- Phase 3 - battle procedure at all levels
- tactical night move on radio silence
 - use of reconnaissance
 - Combat Team and Battle Group counter attacks
 - rapid night preparation of a counter penetration defensive position

Throughout all the training was the ever watchful BATUS safety staff. Accompanying each tank squadron was a WOII RAC IG and 2 RAC AIG in FERRETS. Safety was not restrictive and limits were stretched to allow the maximum training value.

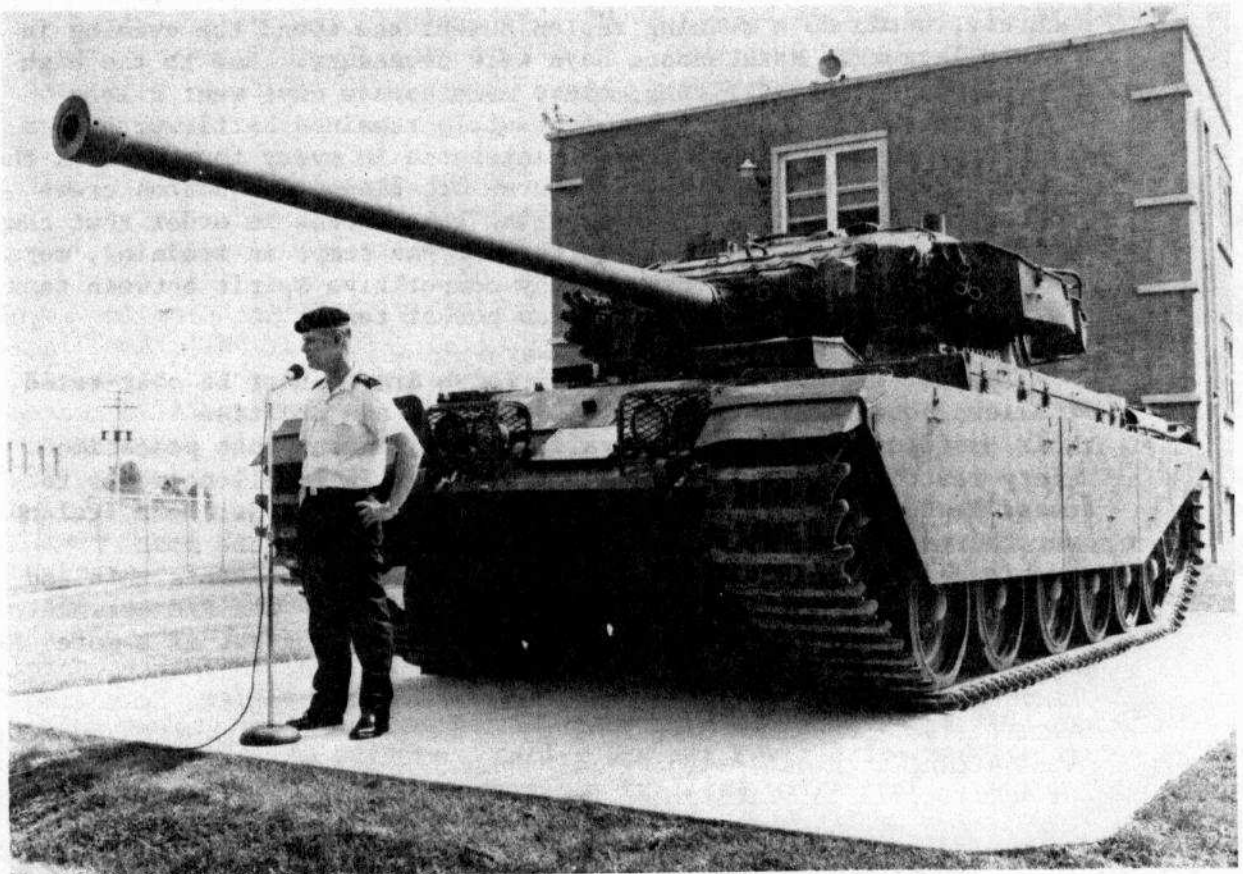
Targets were mainly of the battery powered pop-up radio initiated variety. All dry movement was done "opened up". When the lead tanks made contact they would "go to red" close down and engage the targets. If a quick attack was to take place, all movement prior to the assault would be done opened up. Once in the FUP and in the firebase, all would close down. In the run in onto the objective, a maximum of eight tanks were allowed to fire on the move. Both artillery and tank fire support would lift when the assaulting troops were between four hundred and six hundred metres from the objective. Even with the sophisticated optics of Chieftain, moving closed down, controlling your driver, shouting fire orders and controlling your other assaulting tanks makes for an extremely hairy experience for

the Squadron Leader. Hence we remained opened up until the last moment prior to firing or crossing the start line. The value of having an experienced FOO in your Combat Team could not be over-rated. An occasional 105mm smoke round dropping at a specific grid on the featureless landscape always gave us an indication of where we were. Many times the Chieftain laser sights would allow us to pick up future objectives as far away as eight or nine thousand metres. A quick lase onto a distinct reference point also assisted in navigation. With the exception of the night tank ambush battle and the night approach march, all exercising and live firing was conducted during hours of daylight. Each combat team, at the end of each day, would do a running replenishment and spend the evening in a close leaguer. Maintenance days were necessary. Due to the high mileage and volume of firing, these maintenance days went a long way in ensuring as many tanks as possible remained battleworthy for training. One full day spent in maintenance in every four days is the norm for Chieftain in BATUS. On three occasions, C Squadron crews had to work through the night changing gun barrels in order that they could fire at first light. With the extreme tempo in training, morale was high and fostered a very healthy competitive spirit between tank crews, tank troops, and even between combat teams.

The value of BATUS to the British Army cannot be over-rated. It allows commanders at all levels to train and practise their profession in the most realistic environment that peacetime safety restrictions will allow. It provides an excellent means to assess leaders at all levels. The infantry role in Northern Ireland over the past decade has made the British infantry the most experienced street fighter in the West. BATUS compliments this and provides the same level of training experience for the RAC crewman. We in Canada would do well to emulate this training but at a more modest scale.

. . . . headsets on . . . well
down in the turret . . . I'm
dreaming again. ..
Message ends, Out!

Major-General Neatby Retires



Major-General Neatby was born in Renown, Saskatchewan on 25 May 1928. He graduated from the University of Saskatchewan with a Bachelor of Arts Degree in 1950. He is married and has four children.

Major-General Neatby served in the Canadian Army Militia as a Rifleman with the Regina Rifles from 1942 to 1946. He served with the University of Saskatchewan Contingent, Canadian Officer Training Corps in April 1946 and on completion of training, was granted a commission in the Canadian Army (Regular) as a Lieutenant. In November 1950, he was posted to the Royal Canadian Armoured Corps School for instructional and administrative duties. In January 1953, he was posted to Lord Strathcona's Horse (Royal Canadians) and in May 1953, proceeded to Korea with "A" Squadron. In June 1953, he was on the staff of 25 Canadian Reinforcement Group in Japan, returning to troop command in "A" Squadron in November 1953. On return to Canada June 1954, he served as Battle Captain of "A" Squadron and later as Assistant Adjutant. In November 1955, he was promoted to the rank of Captain and posted as Personnel Selection Officer in the Calgary Personnel depot.

Major-General Neatby attended the Canadian Army Staff College in 1958 and was posted to the Fort Garry Horse, as Adjutant, in December 1958. After commanding "A" Squadron from January to July 1961, he was appointed General Staff Officer Grade 3 (Militia) in Headquarters Eastern Command. In August 1962, he was promoted Major and appointed General Staff Officer Grade 2 (Operations), Army Tactics and Organization Board, for fundamental studies in field organizations. In September 1964, he was appointed Officer Commanding "A" Squadron 8th Canadian Hussars (Princess Louise's) and took this squadron to Egypt for service in the United Nations Emergency Force January 1965 to February 1966.

He was promoted Lieutenant-Colonel and appointed Commanding Officer of Lord Strathcona's Horse (Royal Canadians) in July 1966. During his appointment, the Regiment, equipped with Centurion tanks, won the NATO Tank Gunnery Competition. He was posted to the Canadian Land Forces Command and Staff College as a member of the Directing Staff August 1968. In July 1971 he was appointed Deputy Commander, Militia Area Atlantic in Halifax. He was posted to National Defence Headquarters in August 1973 as Director of Land Plans and Director of Armour.

Major-General Neatby was promoted Brigadier-General and appointed Commander 1 Combat Group and CFB Calgary in September 1974. He returned to Ottawa in August 1976 for French language training.

Major-General Neatby assumed the appointment of Deputy Commander, Mobile Command Headquarters, St Hubert, Quebec, on promotion to his present rank in June 1977.

General Phil officially retired on 7 June 1979 in true Cavalry style. He and Marion will be living in Ottawa where he will, we are convinced, continue to support the Corps. We wish him and Marion well and thank them both for their long and loyal contribution to the Corps.

Le Major-général Neatby est né à Renown, Saskatchewan, le 25 mai 1928. Il a obtenu le diplôme de Bachelor of Arts de l'Université de la Saskatchewan en 1950. Il est marié et père de quatre enfants.

Le Major-général Neatby a fait partie de la milice à titre de fusilier avec le Regina Rifles de 1942 à 1946. Il a servi avec le contingent de l'Université de la Saskatchewan, du Canadian Officers' Training Corps, en avril 1946. A la fin de sa période de formation, en novembre 1950, il a obtenu le brevet de Lieutenant de l'armée canadienne (régulière) et a été affecté à l'école du Corps royal blindé canadien où on lui confia des tâches d'administration et d'enseignement. En janvier 1953, il a été muté au régiment Lord Strathcona's Horse (Royal Canadians) et, en mai 1953, il s'est rendu en Corée avec l'escadron "A". En juin 1953 il a été affecté au 25ième Canadian Reinforcement Group au Japon, qu'il quitta en novembre 1953 pour retourner au commandement d'une troupe de l'escadron "A". A son retour au Canada, en juin 1954, il a servi à titre d'officier des opérations de l'escadron "A" et, plus tard, à titre d'adjoint au capitaine-adjutant. En novembre 1955, il a été promu au grade de capitaine et affecté au poste d'officier des services du personnel au dépôt du personnel de Calgary.

Le Major-général Neatby a fréquenté le Collège d'état-major de l'armée canadienne en 1958 et a été affecté au Fort Garry Horse à titre de capitaine-adjutant, en décembre 1958. Après avoir commandé l'escadron "A" de janvier à juillet 1961, il a été nommé officier d'état-major catégorie 3 (Milice) au Quartier général de commandement de l'Est. En août 1962, il a été promu Major et nommé officier d'état-major catégorie 2 (Opérations) à la Commission de tactique et d'organisation de l'armée, pour effectuer des études fondamentales sur les organisations de campagnes. En septembre 1964, il a été nommé commandant de l'escadron "A" du 8th Canadian Hussars (Princess Louise's) et a commandé cet escadron dans la Force d'urgence des Nations Unies en Egypte de janvier 1965 à février 1966.

Il a été promu Lieutenant-colonel et nommé Commandant du Lord Strathcona's Horse (Royal Canadians) en juillet 1966. Durant son mandat, le régiment, équipé de chars Centurion, a remporté le concours de tir blindés - OTAN. Il a été affecté au Collège de commandement et d'état-major des forces terrestres canadiennes à titre de membre du personnel de la direction, en août 1968. En juillet 1971, il a été nommé Commandant adjoint du secteur de Milice de l'Atlantique, à Halifax. En août 1973, il a été muté au Quartier général de la Défense nationale à titre de Directeur - Plans terrestres et de Directeur - Blindés.

Le Major-général Neatby a été nommé Brigadier-général et Commandant du 1er Groupement de combat à la BFC Calgary et septembre 1974. Il est retourné à Ottawa en août 1976 pour suivre en cours de français.

Le Major-général Neatby a assumé le poste de Commandant adjoint de la Force mobile, à St Hubert (Québec) lors de sa promotion à son grade actuel, en juin 1977.

Le général Phil prit officiellement sa retraite le 7 juin 1979 avec un panache authentique de cavalerie. Le général et sa charmante dame, Marion, demeurent maintenant à Ottawa où ils fourniront sans doute leur soutien continu au corps. Recevez, Général Phil et Marion, l'expression de nos vœux les meilleurs et de nos remerciements les plus sincères pour votre longue et loyale contribution au Corps.



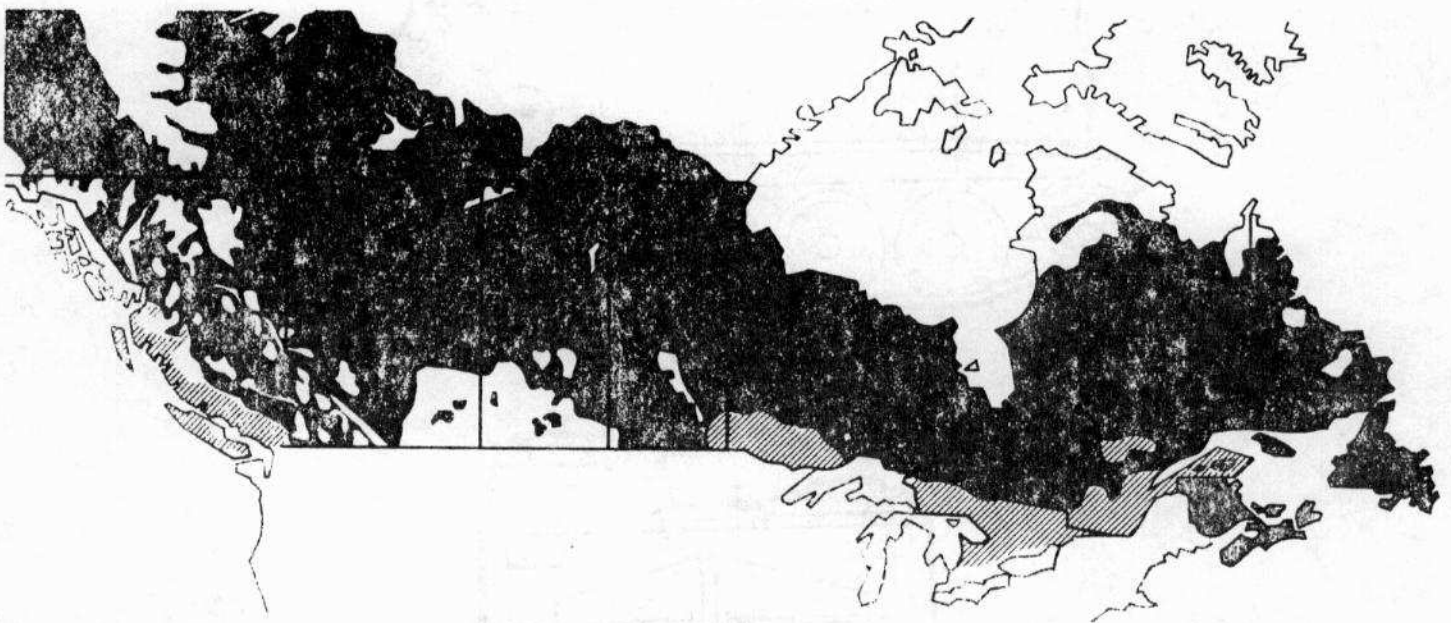
Swedish Reconnaissance Operations :

What Can We Learn ?

by Captain F.R. Thomas, CD
with advice from
Captain P.I. Olsson,
Swedish Armoured Corps

INTRODUCTION

Operations of the reconnaissance platoons of the Swedish armoured battalions should be of particular interest to Canadian armoured officers. The natural vegetation of Sweden is either deciduous temperate forest or boreal forest and a glance at Fig. 1 shows that a similar growth covers our main training areas (excluding Suffield). Moreover we are training to meet the same threat although it is recognized that our forces must be multi-purpose. Therefore a study of Swedish recce ops should provide many suggestions applicable to Canadian reconnaissance training.



The forest regions of Canada

Boreal Region
Principal species: Balsam fir, White birch, Poplar, Jack pine, Spruce.

West Coast Region
Principal species: Douglas fir, Cedar, Hemlock, Sitka spruce.

Subalpine, Columbia and Montane Regions
Principal species: Engelmann spruce, Lodgepole pine, Ponderosa pine, Cedar, Hemlock, Douglas fir, Larch Spruce.

Great Lakes - St. Lawrence Region
Principal species: Pine, Spruce, Yellow birch, Maple.

Acadian Region
Principal species: Spruce, Balsam fir, Yellow birch, Maple, Pine.

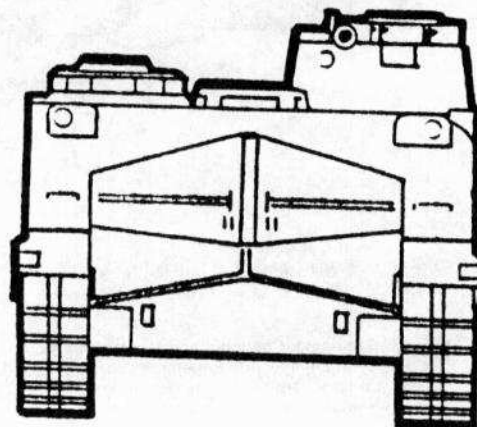
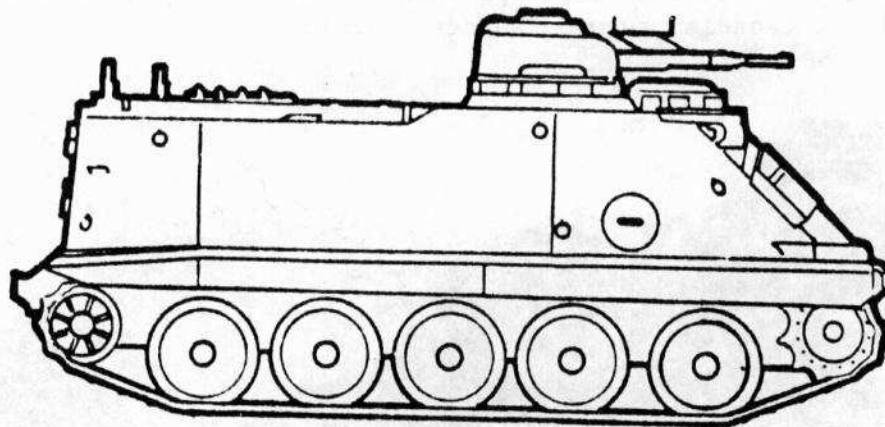
ORGANIZATION OF SWEDISH ARMoured RECCE UNITS

The Swedish armoured battalion has three organic reconnaissance platoons as opposed to the one reconnaissance troop left to the RCD once the brigade commander takes control of recce sqn. Each platoon consists of 17 men mounted in three volvos and two motorcycles. The Swedish armoured brigade equivalent has a reconnaissance company in addition to the nine platoons found in the three armoured battalions in the formation. This company has four platoons; two of which are on the model of those in the battalions and two of which have three pbv 302's (Fig. 2) in lieu of the volvos. The reconnaissance company also has an anti-tank platoon with four 90mm recoilless rifles mounted on jeep-like vehicles.

FIG 2 PBV 302 ARMoured PERSONNEL CARRIER

Armament: 1 x 20 mm cannon
Length : 17 ft 6-1/2 in
Width : 9 ft 4-1/2 in
Height : 8 ft 2 in
Speed : 41 mph on the road
: 4.5 mph amphibious
Space : Crew 2 + 10 men

NO NBC SYSTEM



SWEDISH RECONNAISSANCE OPERATIONS

Operations conducted by these recce platoons are shown in Fig. 3. Fig. 3a is the Swedish equivalent of a screen deployed forward of the defence line to obtain information on the enemy force. It would withdraw on contact. The terrain in Sweden would force a mechanized enemy to advance on one or two axis based on roads or tracks hence no OP line as such. In Fig. 3b the reconnaissance platoon is prepared to let the enemy by-pass while providing information on follow-up elements. In Fig. 3c we have the equivalent of Canadian sector reconnaissance and it is generally conducted on foot. Fig. 3d shows an anti-airborne operation while e illustrates OP coverage of a specified area again normally done on foot. The Swedish Reconnaissance platoon is also expected to conduct ambushes (f).

DISCUSSION

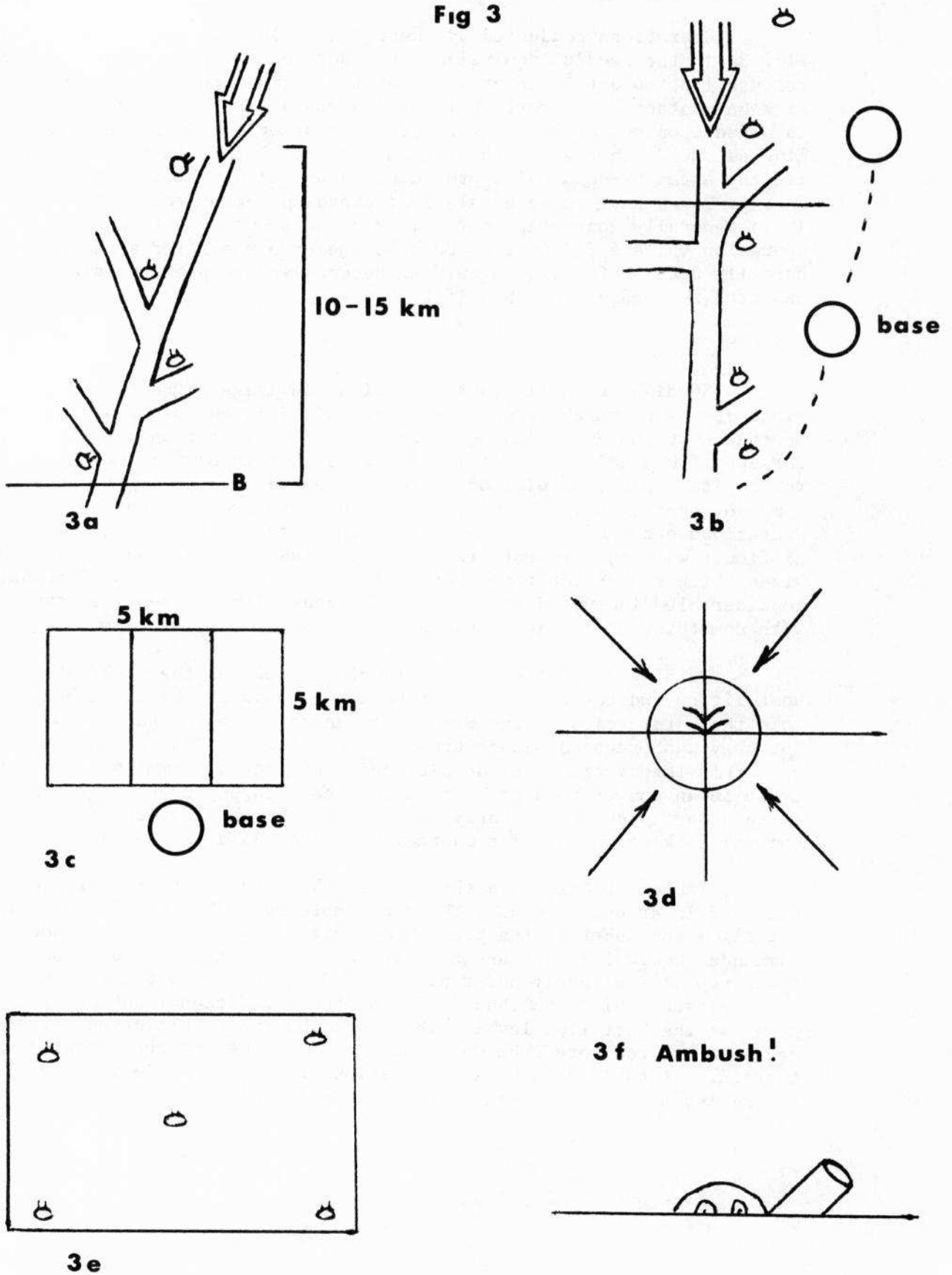
Swedish reconnaissance operations envisage a great deal of dismounted work which is often not emphasized in our own training. It is true that the Swedes have tailored their organizations and tactics for specific conditions. It is also true that in Europe, Canadian reconnaissance troops will be forced to remain mounted by the expected tempo of operations. However, in Canada, many areas dictate dismounted operations such as those conducted by the Swedes. Dismounting is difficult with the present tracked reconnaissance squadron due to crew sizes which render vehicles ineffective if anyone gets out. Fortunately, considerable dismounted training can be done with any vehicle, even with something as simple as the 5/4 ton.

Warning about the massive jamming likely on the outbreak of hostilities and the need to get information back on the first contacts make the motorcycles in the Swedish organization an attractive proposition. Not only must reconnaissance troops obtain information but they must pass this information back despite radio silence or jamming. The motorcycle is an answer to a problem we in Canada rarely come to grips with. As an added bonus, the motorcycle is useful in the inevitable traffic control tasking which falls on reconnaissance units of any size.

Table 1 breaks down the size of the Swedish effort for reconnaissance in armoured units. There are more resources available to the battalion commander in the Swedish organizations while the brigade commander equivalent appears to have resources similar to ours but with fewer vehicles directly under his command. The Swedes then, have more reconnaissance platoons than we do and these additional sub-units are found at the battalion level. This could be the result of perceived requirements for more such units at this level due to the forest covered terrain. It could also be an indication of the high priority given to reconnaissance in the battalions or a combination of both.

Reconnaissance Operations

Fig 3



CONCLUSION

Study of the Swedish reconnaissance organizations in armoured battalions raises the question of whether one troop is enough for our armoured regiment after the reconnaissance squadron disappears on brigade service. It also raises the question of how we could pass back information under conditions of radio silence or jamming.

Study of their operations provides dismounted training applicable to most Canadian training areas.

TABLE 1: SWEDISH RECONNAISSANCE EFFORT

	PLATOONS	PERSONNEL	RECCE VEH	M/C
Battalion Commander	3 each	51	9	6
Brigade Commander	4 (1)	68 (1)	12 (6 tracks)	8
Total in Brigade	13	221 (2)	39	26

NOTES:

- (1) Does not include anti-tank platoon of the reconnaissance company.
- (2) Does not include HQ, Admin, or log personnel due to different Swedish methods of providing support. To compare consider only recce tps with their pers.

A Sophisticated Cloth Model Exercise

Exercise Quick Recoil

by Lt D.S. Thomas, BCR

The aim of this article is to elaborate on the advantages of cloth models as training aids for Militia armoured units. I would like to state at the outset that it is not my intention to build the cloth model into anything it is not; it is nothing more than a training expedient which can supplement, but never replace, field exercises as the prime collective training vehicle for unit training. My thesis is however, that an indoor exercise based upon a good cloth model can provide its participants with much practice in various aspects of their field role, at reasonable cost, before they enter the field. It might be considered preferable that all tactically-oriented training be conducted outdoors, but unfortunately this ideal is beyond the reach of many urban-based militia units which have no near-by DND training area or other suitable publicly owned area.

Cloth models vary in their scale and sophistication. When a student at the Armour School rehearses troop drills on his bed with Corgi toys and improvised obstacles, he is employing an improvised cloth model. Artillery puff tables are an elaborate relative of the cloth model. My unit used a sheet of painted hessian, to which bits of "terrain" could be added for instructional purposes; but, this was found to be inadequate for a large scale exercise, and we decided to find something better.

This year the BCR held three cloth model exercises and we feel we have some interesting refinements to pass on to other interested parties. For a number of years we have been visited annually by the LDSH(RC) "Flying Circus" which brings us the very latest in Corps tactics and doctrine plus a cloth model exercise. We decided, after last year, to add some elements of sophistication of our own to the cloth model exercise.

After persuading the Commanding Officer, LCol Conradi, that the idea had merit (an easy task) and to authorize the expenditure of monies from the Unit Fund (not such an easy task - "it won't cost much," Sir . . .) the Training Officer, Capt R.D. McRae and WO Stach, RCD (RSS Training WO) set to work. First WO Stach press-ganged, cajoled and otherwise persuaded troopers to construct the model under the supervision of himself and Sgts Livingstone and Lee. The model depicts the Northern Okanagan Valley of the British Columbia interior on a scale of one kilometre per foot, and is mounted on fourteen separate adjoining sheets of plywood. Styrofoam was moulded to form contours accurate to within 20 metres and hessian was glued down and painted with all the details of a 1/50,000 scale map. The model can be disassembled into its component sheets for storage and be used piecemeal for troop lectures. The total cost of construction, including mandays, was about six hundred dollars. If treated with respect, the model will last indefinitely. We plan to mount the fourteen separate parts onto one large sheet and affix it to the Drill Hall wall. It will be lowered and raised by pulleys and have wheels to push it about the Drill Hall floor. (Yes - Drill Hall - we were once a Rifle Regiment).

The baptismal exercise for our mock battlefield occurred on the weekend of 21-22 April 1979, Ex Quick Recoil, under the direction of the Training Officer. The Drill Hall proved so suitable a home for it that it could almost have been built for the purpose. Exercise preparation proved extensive, but not more so than for a field exercise. Tables, chairs and radios were arranged for the crew commanders on the balconies and drivers around the model; the kitchen was established in one corner for the provision of fresh rations; field telephones and AN/PRC 25s (the latter having been issued to us the week before!) were set up and tested. All was ready when Major Jack Drake, the Squadron OC, received his first orders at 210700 Apr 79 from the CO.

The first task was Advance to Contact. Major Drake issued his orders at 0800, and in the next 2½ hours, every step of battle procedure was faithfully observed. By H-hour everyone knew what he had to do. The crew commanders studied the model with binoculars, sent SITREPSS via 25 set and commanded their drivers to move mock vehicles via field telephone. Vigilant monitors insured that ambitious patrol commanders did not inaugurate supersonic recce. Troop leaders, sealed in offices, had only their radios and maps to keep them in touch with the progress of their patrols. The Squadron CP directed the battle in a similar fashion. Progress was at first hesitant, but the trace was completed in good time for lunch.

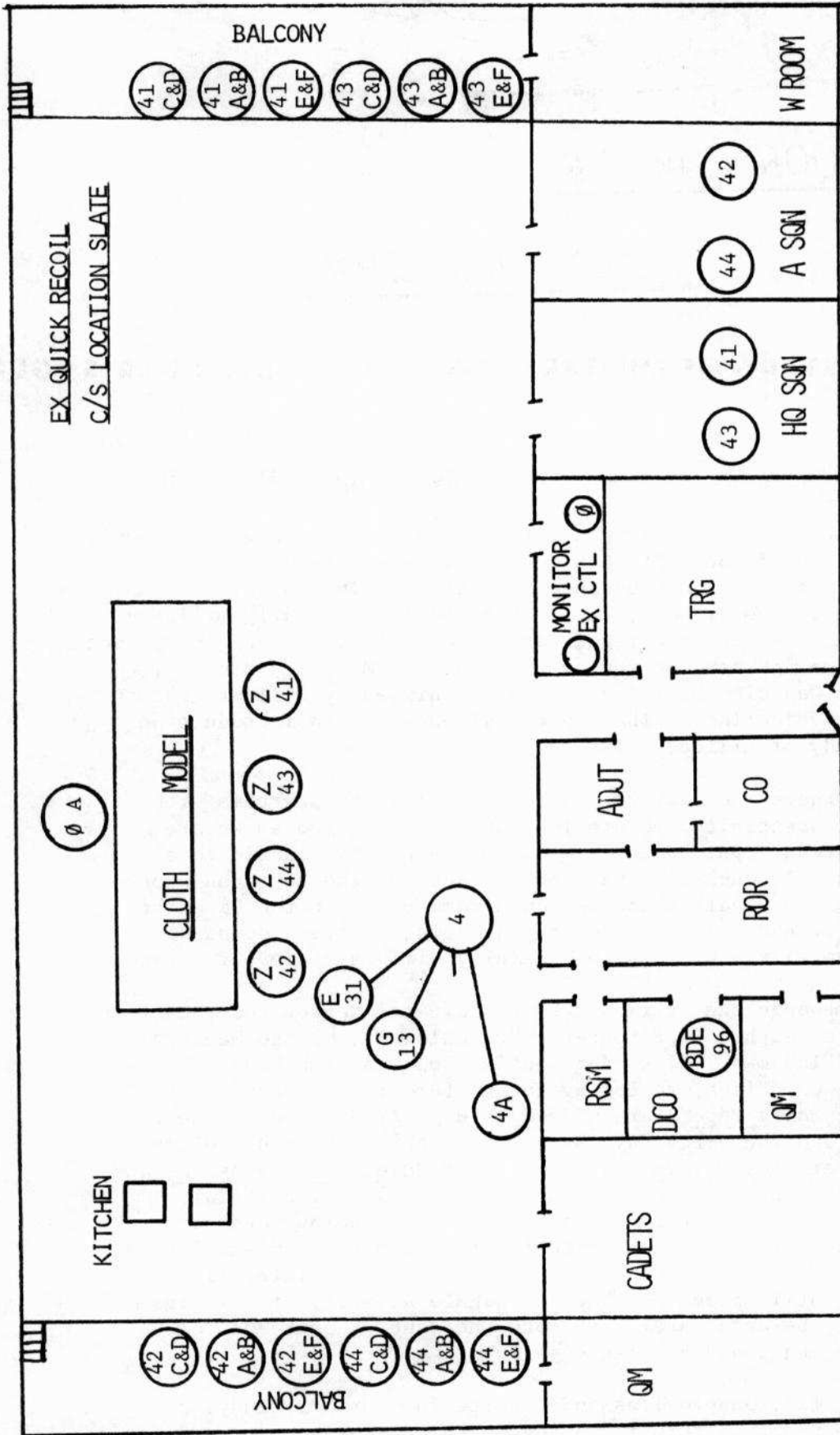
From the resumption of activity at 1330 to the cease-fire at 0700 the next day, the squadron rehearsed almost every task it could be called upon to perform. Orders were given verbally and by radio; key personnel were DS killed without prior warning to their subordinates. WO Stach, the chief enemy controller, inserted contacts which were intended not to challenge the survival of the squadron, but to give junior call-signs practice in passing back information. Meanwhile RQMS WO Chris Johnson conducted an internal stores verification and chief cook Sgt Roy Hirtle filled the building with the aroma of the next meal. The CO and Capt Dobson, LDSH(RSS) acted as umpires. Two Staff Officers from Area and District were interested participants as was a signals detachment.

By the end of the exercise, no one needed to be convinced that the new cloth model had proven its worth. It had shown itself to be flexible, realistic, very cost effective (no vehicle accidents!) and the ideal base of a controlled indoor exercise. It did not acquaint anyone with field living conditions or provide any practice in the crew commander's appreciation. It did however, practice everyone's experience in battle procedure (including issue and receipt of verbal and radio orders), voice procedure (including contacts and reports and returns), target grid procedure, map using and tactical principles. The exercise involved all ranks at their own level plus it had the advantage of permitting frequent critiques and explanations so that even the most inexperienced soldier had the total picture explained on the model.

Once the tactical principles and the skills mentioned have been practised indoors, field exercises are more meaningful and proceed more smoothly. In these days of financial restraint (once the model is built maintenance costs are peanuts and remembering that its cost could be shared by other units), cloth model exercises have much to offer.

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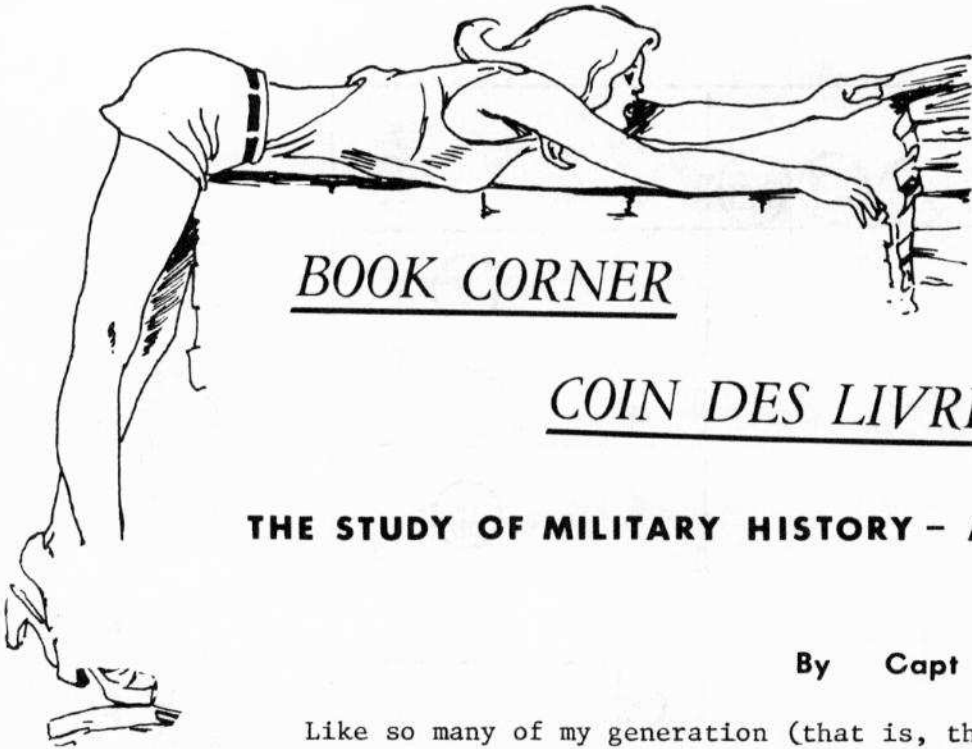
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BOOK CORNER

COIN DES LIVRES

THE STUDY OF MILITARY HISTORY - A BEGINNER'S GUIDE

By Capt JM Snell

Like so many of my generation (that is, those who have only hazy memories of Louis St. Laurent), I was not graced with an education rich with an abundance of history. This paucity of an historical perspective obviously extended into my early military education. However, the light was rather forcibly shone in my face and I became an easy convert to the Study of Military History, especially Canadian Military History. This essay will attempt to offer some guidelines, albeit personal ones, to an introduction to the study of military history.

Perhaps the easiest place for novices to start is with fiction. Essentially, we are introduced to fiction as we are taught to read. Our values are often exemplified in fictional characters (although this has been a facet of the American experience, the "survival" theme is now a common one in the Canadian situation). And finally, fiction is a good starting point as it usually contains a plot which hopefully will maintain our interest.

Although the British seem to have the market reserved for this genre, with C.S. Forester's "Hornblower", George MacDonald Fraser's "Flashman", Alexander Kent's "Bolitho" and Duncan MacNeil's "Ogilvie", Canadians are coming to the fore in this area. Donald Jack's The Bandy Papers are a delightful introduction to the First World War and the early days of armed flight. The four volumes (Three Cheers for Me, That's Me in the Middle, It's Me Again, and Me Among the Ruins); (Don Mills: Paperjacks) will certainly provide the late starter with a great deal of humour and some worthwhile history. A more recent entry into the competition is Charles Denis. Although only two volumes are complete, (This War is Closed Until Spring and The Periwinkle Assault), the series promises to be on a level with both the Bandy Papers and the previously mentioned British novels.

If fiction provides an appetite for further study, a worthwhile place to turn is to Regimental History. The undisputed starting point for the study of Canadian regimental history is Farley Mowat's The Regiment (Toronto: McLellan and Stewart, second

edition, 1973). This work, by far Mowat's best (simply because it avoids the "I" syndrome so common of late) is the standard to which all other works (aspire). In fact, it almost seems that any Regiment undertaking the publication of its history, secretly, (and not so secretly) wishes for another Regiment. The next step is to read one's own Regimental history. Some of these are good, some are mediocre and some are delightfully awful. At all costs, avoid starting with A City Goes to War, the history of Loyal Edmonton Regiment, as it is a war diary with hard covers. But others such as The Fighting Perths (a history of the Perth Regiment) are simple, easy to read and informative.

If one is to progress further in the development of one's military history foundation, a logical sequence is to gain an overview of all or part of our military heritage. Overviews can be generalizations of national military history such as George Stanley's Canada's Soldiers (Toronto 1961) or they can specialize in a particular era. Three worthwhile examples of the latter are J. MacKay Hitsman, The Incredible War of 1812 (U of T Press, 1965), D.J. Goodspeed, The Road Past Vimy: The Canadian Corps 1914-1918 (Toronto 1969) and W.A.B. Douglas and Baereton Greenhouse, Out of the Shadows: Canada In The Second World War (Toronto 1977). A perusal of these three volumes will quickly illustrate the contention that Canada's military past is both vivid and varied. Over the past ten years, numerous other works, which will not be mentioned here, have been added to the library shelves, enriching the subject.

Further study of this general nature will undoubtedly force the new student to probe deeper into the political background of much of our military past. Two works deserving of mention are Des Morton, Ministers and Generals (Toronto 1970) and J.L. Granatstein and J.M. Hitsman, Broken Promises (Toronto 1977). The first is an analysis of the post-confederation period until The Militia Act of 1904. Morton discusses the development of the Canadian Military and its political masters as it was transformed from an all-British to a "Canadian" organization. The latter, as the subtitle implies, is a history of Conscription in Canada. It is a comprehensive, highly literate work that is a significant contribution in both the political and military spheres.

If the direction thus far has been too heavy and academic, two works are suggested as digressions simply because they are interesting and informative. Both are also autobiographical. The first volume of John Masters' autobiography, Bugles and a Tiger, is the story of Masters' days as a cadet at Sandhurst and then as a young officer of the Gurkhas. His adventures as the Adjutant of

his Regiment will do any young officer's heart a world of good. A second account, well worth the time, is Lieutenant-Colonel Anthony B. Herbert's Soldier (New York, Dell 1973). Although a bit of an "I" and "me" work, Herbert has some interesting observations on leadership and the American experience in Vietnam. His opinions on leadership, especially in the upper echelons, are positively interesting professional concerns for today's Canadian junior leaders.

A digression from the fare thus far are two works recommended by Ben Greenhouse, Directorate of History, National Defence Headquarters. However, they deserve a word of caution. These tomes are not for novices in the study of military history. Although they do not require an extensive, indepth knowledge; they do require some background detail. Both are by British authors and both suffer from that distinctly British characteristic - the ability to be both tedious and entertaining at the same time.

The first book, (John Keegan, The Face of Battle, London: Jonathan Cape, 1976) is written by a Senior Lecturer at The Royal Military College, Sandhurst. Keegan works from a simple thesis that very few people, let alone the professional soldiers of today's armies, know what combat is. By analysing in precise detail, three battles - Agincourt, Waterloo and the Somme, Keegan undertakes "a personal attempt to catch a glimpse of the face of battle". By covering such sub-topics as the campaign, the battlefield, the weapons, (these are sorted into three categories of hand weapons, single-missile weapon and multiple missile weapons), the type of combatant (ie. archer, cavalry, infantry), the handling of prisoners and wounded, the conditions of soldiers, etc., the author is able to present a fairly comprehensive idea of what the battle was like. The second volume has the catchy title of On The Psychology of Military Incompetence (London: Jonathan Cape 1976). The author, Norman F. Dixon is a psychologist at University College, London. Dixon draws on a century worth of incompetent military leadership (notably British but interspersed with German, American and other examples) to highlight some of the psychological traits that produce incompetence in generals. The three parts of the book lead easily from one to the other. The first section is a historical survey that starts with the Crimean War and finishes with Singapore and Arnhem. The second portion examines the traits of key players (the incompetents) and the book concludes with a treatment of "the concept of authoritarianism and then of particular commanders - good and bad". The obvious question is what makes one commander "good" and another "bad". As Dixon so succinctly expresses it - "The striking characteristics of highly competent

commanders should be their absence of authoritarian psychopathology, enormous self-confidence and general robustness of the ego". (P 318). If for no other reason, junior officers can study these to ascertain the competence of their superior's or for that matter, their own competence.

And finally, a compulsory subject for all tankers as well as those interested in a good story. Worthy, the biography of Major-General F.F. (Fighting Frank) Worthington, the father of today's Royal Canadian Armoured Corps, is an entertaining military biography as any.

The story of Worthington's early years in Mexico are fascinating almost to the point of being difficult to believe. One has problems comprehending how someone who had spent practically no time in Canada could become such a distinguished Canadian warrior. For the junior officers, Worthy is an excellent example of perseverance as he spent 19 years as a captain before being promoted to Brevet rank only.

The foregoing has not been an attempt to present a definitive approach or an exhaustive list of works. Rather, it is a personal and highly subjective view of some worthwhile, interesting military reading for the novice. The important fact to remember throughout is that reading is an end, sufficient unto itself.

Solutions To Recognition Test

1. ZSU 23/4 - Centurion (Egypt)
2. T-62 (USSR)
3. M-1973 (USSR)
4. AMX-10 (FR)
5. 155-GCT (FR)
6. BMP (USSR)
7. M60-A2 + Kiowa + Cobra (USA)
8. BTR-60P (USSR)
9. HOUND (USSR)
10. T-54/55 (USSR)
11. ABBOT (UK)
12. GEPARD (FRG)
13. HIP (USSR)
14. HIND (USSR)