

NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY

The Queen Ball



LAST YEAR QUEEN,
DEBBIE STEEL
CONGRATULATING DIANA

SHAFTED

NAITSA publication departments (Photo Directorate, Year-bok and Nugget) are in a bird

Because of a few petty grievances by the administration, our darkroom was busted. The alternative solution was as inadequate as the mule upon which Mr. G. Meadus said he was to ride in pursuit of an alternative facility. The facility that was found by Mr. Meadus (the Materials Lab) had the following limitations. Use of the darkroom under supervision. Priority to be given to the students of Materials. This seems only just, but then again think of yourself developing a print when the door of the darkroom is opened. No after hours work or weekend work. Seems just, but then again the students that are working for the Yearbook have little time during Institute hours and must rely on the schedule to which they are bound, as well as week-

As can be seen, the present solution should be found, before much of the students' money is spent for the printing and developing of negatives. It seems that the Yearbook is getting the proverbial shaft. We feel that NAITSA should provide the funds for proper darkroom facilities, for the continued operation of the Publication Department. The moneys that are spent on the proper facilities will in the long run save the Student's Association much money for unnecessary use of commercial procesAn exciting, fun filled evening was had by all who attended the Queen Ball last Friday at the Inn. Congratulations to Miss Diana Korbisser, Miss NAITSA for '72-'73. RTA — Photography's Indian theme and a lot of hard work clicked with Diana's good looks and graceful charm. I guess it is a great combination because it is the second year for an RTA sponsored contestant to win.

Miss Congeniality, chosen by the queen contestants as the girl that has contributed the most towards the success of the girls making it through all the trying activities of Queen Week, was Miss Christi Rudko of Drafting.

Ken Nelson, NAITSA Social Convener, deserves a great deal of credit for organizing the whole week of Queen Week Activities as well as the Queen Ball and to Sue Newman, without whom things would have been in rough shape. All the people involved put in a lot of hard work to making the event a success. I must add that it was for the most part well worth while on there part.



MISS CONGENIALITY
MISS CHRISTI RUDKO

There were over two hundred people present at the Queen Ball dancing to the fine sounds of Don MacKenzie and The Band Of Sound in the Crystal Ballroom.

Special congratulations again go out to Miss Diana Marie Korbisser, now NAIT's reigning QUEEN for the coming year!

BY Howard Harlton!

WHAT'S WRONG WITH QUEEN WEEK?

BY BARRY HARDIE

In comparison to last year's Queen week response this year was generally better. For the first time in years, each participating technology managed to have an ice statue. Kidnappings took on a new flare with some of the ransoms being donated to charity. However, as usual, Queen Week failed to accomplish what it was originally set up to do --promote student participation throughout NAIT. The only persons who participated besides the Queen representatives were the organizers of each technology for queen activities. Therefore, the problem remains, "Why is there no mass student involve-

In a recent session with some of the technology organizers, the question of why this is a problem was discussed.

It was suggested that there is insufficient advertising of events. It seems that the odd poster in front of the cafeteria is not enough. Many students were not made aware of events until after the completion of them.

This year there were five queen representatives running. The technologies participating were: B.A.S., MARKETING, ELEC-

TRONICS, DRAFTING, RTA AND PHOTOGRAPHY. This, possibly, expresses the fact that most technologies don't really care about Queen Week.

One argument which could explain this is that most technologies are too small to support both financially and morally support such an event. Attention should be made that this problem can be overcome by combining two technologies together, as was done with RTA and Photography.

Another complaint (off the topic of participation though) is the fact that some of the events such as the Toboggan Race and chair Race were not Queen Week tested.

In the toboggan race, one of the Queens was kicked in the face by her teammate because the rope that was tied around him was too short.

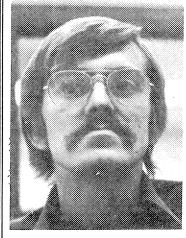
In the chair race it was mandatory for the queen to pull herself on a chair by means of a plunger. It was first anticipated that they race their way from the NAITSA offices to the vending machines. However after 30 sec. of plunging a distance of 10 ft.,

(Continued on page 2)

JARO POLK

everything well?, well almost

everything". I rushed over to



An interesting thing happened he other week at the Oueen Week skit show. A young lady left her seat to talk to a friend. About the same time Mr. George Carter, NAIT President, was looking for a place to sit down. Upon returning, the young lady found that a stately gentleman was sitting in her chair, and said to him, "Hey! I was sitting there." Upon hearing this the gentleman, Mr. George Carter, stood up and continued on his way ---looking for a chair. Norm Mc-Leod, of student placement (Manpower), is sporting a new pair of optical aids. Who would

have thought that wire frames would be the order of the day. The money that is paid to a president of the Student's Association seems to be drawing more candidates than enough. Look for the following people to declare themselves as candidates: Jerry Spevakow, Barry Lazaruk, James Stimson, Fredrick Laudenklos, David Rayner, Barry Hardie, and perhaps Freddy Dull. All in all, a rather impressive slate. Jerry Spevakow was overheard saying the following bit in the halls of NAIT, "That Diana Korbisser is sure cute and cuddly but . . ." Mr. Gary Meadus, Director of Student Services, said that "The student directory will make a great souvenir". If in fact the directory does come out this year it should be known within the next few weeks the time and place of its release. The loss of the dark room has cost the Photo Directorate a considerable sum, since the developing and printing is done outside the Institute. By the end of the year the directorate should be well over their budget. Bernadette says "David Rayner does

the Edmonton Inn from my part time job last Friday to take in the Queen Ball. What I saw was what I expected — Miss Diana Korbisser was crowned Miss NAIT. Not only was it not much of a surprise to me, but as the President of NAIT, Mr. George Carter, made the announcement there was rather a lack of emotion on the face of Diana Korbisser. All in all the affair was very enjoyable. The Queen Ball brought back many former students of NAIT. To mention a few --- the former president of NAITSA, Austin Bradley; Miss Liz Taylor; Mrs. Cathy Grover; and Miss Linda Money. The one thing that did detract from the affair was the kidnapping of the Queen after she was crowned. This kidnapping affair was in bad taste and the people who were involved in the episode should be ashammed of themselves for behaving in such an ignorant manner. As well, the person who said he would pay the ransom demand should do just that --- pay it! The Flik playing at the Odeon

"Sometimes a Great Notion" is just that. The film is rather enjoyable and entertaining even though there is a considerable lack of good acting. The only real attraction is the list of names making up the cast. The K-Wing, says a reliable source, will get a face lifting beginning some time this year. Some of the changes that are planned include: Installation of shuffle boards, a cabaret (Thurs., Fri., Sat.) and split lounge entertainment. Seems two young ladies came to NAIT last week to continue their education. However, they should park their car in the guest parking lot. As they were parking the commissionaire informed them that they could not park there. They then drove around the parking lot and snuck-in to a spot at the other end. They then proceeded to the Institute. The commissionaire, however, was on the job and accosted the girls and informed them once again that they were not allowed to park there, upon which one of the girls said "*%#\$ you" and proceeded on her wav.

What's wrong with...

(Continued from page 1)

the finish line was moved to five feet in front of the leading queen.

Of course the technology par-

ticipants did come up with some useful suggestions. They felt that a rescheduling of the event to a different time could be of some

Participation would likely be greater if Queen Week was during the last school week of December instead of mid-January

when mid terms are confronting students. Cancellation of classes by all technologies at certain hours would also help.

If students and staff continue to feel that Oueen week activities are a waste of time, then it should be eliminated.

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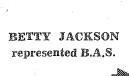
Beware of counterfeit and feeble imitation!!

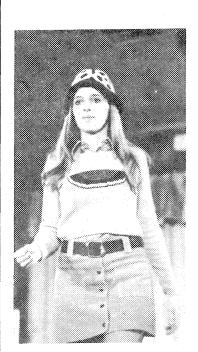
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The Nugget always needs students who would like to work on the paper. (Especially in the News dept.) We encourage you to submit your individual essays and reports, but we do not guarantee publication or return of this material

People coming back in 72 in-Ken Caspell, Joe Schipperheijn, Terry Tannous, Jim Lawson, Chris Slobodian, Dan Fraser, Fay Yakemchuk, Leslie Fostor and where did everybody go?

Heads to be be-headed: Ediclude Jaro Polk, Duane Studer, tor - Barry Hardie, Associate Editor - Jack MacMillian, Associate Editor - Erwin Epp, Sports

- Bruce Steffen, Entertainment
- --- Howard Harlton, Advertising - Charles Braun.

The Nugget is published weekly by the students of NAIT. The editor is responsible to the publication chairman for all material published. Deadline for copy is by Friday. The Nugget is printed by Ukrainain News Publishers Ltd.

NAIT PHONE 479-8471

NUGGET PHONE EXT. 329

ADVERTISING PHONE EXT. 342

NAIT COMMUNIQUE

30,000 ALBERTANS JOBLESS

What's NAIT Doing About It?

You may have read in last week's Journal (January 11th), that according to the latest jobless survey by Statistics Canada, at least 30,000 Albertans are without work. Labour Minister Hohal says that the unemployment rate is 4.5%. The article stated further that the Conservatives created retraining programs to accommodate 4,800 persons and already 3,400 unemployed persons in Alberta have registered. Just where does NAIT fit into this picture, and what is NAIT doing about it?

On November 19, 1971, NAIT, through Mr. John Tewnion, Director of Continuing Education, received a letter from the Director of Technical and Vocational Education outlining the Government of Alberta's Priority Employment Training Program, (PETP) and invited NAIT to participate.

Almost immediately, Mr. Tewnion called priority meetings with various department heads to see just how NAIT could best rise to the Government's challenge. Brainstorming and fantastic cooperation amongst the various technologies led to the development of the following 24 retraining programs:

PROGRAM	DURATION	(Weeks)	STARTING DA
Auto Body Orientation		4	February 14
Automotive Orientation		4	January 4
Automotive Orientation	(Repeat)	6	February 28
Bank Teller Upgrading		16	January 10
Bicycle Repair		4	February 7
Clerk-Typist Training		16	January 10
Diet Aide Typist Progra	m	15	January 17
Drafting Upgrading		16	January 5
Financial Assistant Prog	gram	7	January 17
Medical Receptionist		16	January 10
Office Assistant Progran		9	January 10
Power Engineering 4th		12	January 10
Pre-employment Bakery		15	January 10
Pre-employment Brickla		12	February 28
Pre-employment Lathing		7	January 17
Pre-employment Machir		16	January 4
Pre-employment Paintin	g	10	January 10
& Decorating			
Pre-employment Plaster	ing	17	April 3
Pre-employment Tileset	ting	6	January 4
Pre-employment Woodv	vorking	17	January 4
Pre-Technology Upgrad	ing	16	January 10
Sales Clerk Program	* * * * * * * * * * * * * * * * * * * *	9	January 10
Short Order Cooks	1-	16	January 4
Window Display Techni	ques	4	January 10

The above programs, with some modifications, will be able to accommodate 528 unemployed Albertans and as of January 14th, 514 such Albertans have registered for retraining at NAIT.

The Priority Employment Training Program grew so quickly in the initial stages that Miss Linda Batchelor was hired as the Program Director with Mrs. Hilda Dosdall and Miss Ilona Harke as capable and conscientious assistants. From the Program's inception until now, Miss Batchelor and her two assistants have been busily handling all the administrative details: for example, interviewing prospective applicants, approving them, counselling them, making allowance allocations, mailing acceptance letters, timetabling, and looking after the myriad of details that seem to accompany such a booming crash program.

You want to see what NAIT is doing about retraining Alberta's jobless? Drop into the NAIT Priority Employment Training Program ofice in 101W. Just watch the girls in action in the busiest spot on the campus. And that is what NAIT is doing about Alberta's jobless. Now that's performance!

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DERJONNEL GLIMPSEJ

APPOINTMENTS:

Mr. Claude Belland has joined the Food Service Department as a Chef Instructor effective January 10, 1972. Claude is a graduate of NAIT's two year Commercial Cooking Program as of 1969. Since graduation, he has worked with Versafood Services Ltd. and the Misericordia College. Welcome to NAIT!

Mr. I. H. Gallant has been appointed a Chef Instructor at NAIT effective January 1, 1972. Mr. Gallant is also a graduate of NAIT in May of 1971. Congra-

tulations, and now you will experience NAIT from the other side of the fence.

PROMOTIONS:

Mr. Dennis McFarlane has been promoted to the position of Section Head, Academic Studies. Dennis joined NAIT staff in August of 1966. He is a graduate of the University of Saskatchewan with a B.A. and B. Comm., as well as a Teaching Diploma. Thanks for a good job, and our congratulations on your promotion!

Miss Jean Nykolaishen pro-

moted to Senior Instructor in Academic Studies. Jean joined NAIT staff on August 1, 1965, and is a graduate of the University of Saskatchewan. Congratulations and best wishes!

Mrs. Judy Anonson, the gal with many talents, has joined the Instructional Staff of P.E.T.P. for the next four months. Judy was formerly Secretary to Mr. Starritt, the Vice-President, Administration. Hope the butterflies have disappeared and best of luck, Judy!

NAIT STAFFER DIES

He was one of the originals here at NAIT, he's no longer with us, and as is so often the case, you don't really realize what a unique individual he was until after he's gone.

Vic Campbell was born in Morse, Saskatchewan in 1916, one of twelve children in the Campbell family. Like so many others, he was caught up in the chaos of world war two, and joined the Canadian Army. It's typical of Vic that he always spoke kindly of people he's known and experiences he'd had, and his army career was no exception. Camping in the Okanagan with family and friends, he'd often reminisce about his life in the army, and some of the most vivid memories he leaves revolve around his days in the army. He was discharged at the end of the war with the rank of Sergeant Major.

Vic had apprenticed as a Welder in Regina before the war, and returned to the craft following his discharge. In Calgary, he instructed through the Canadian

Vocational Training program, and when an apprenticeship program was introduced at SAIT Vic moved over there to work for a six month period before coming north to the NAIT to establish the welding program here. He joined NAIT effectively July the first, 1962, and that makes him one of the first people taken on staff. Vic held some strong opinions on the subject of welding, and he would be the first to agree with that statement, but nobody ever suggested that he didn't have the interests of the welding trade in this area as his first and only real concern. The only thing he ever allowed to interfere with his interest in welding was his annual camping trip and his winter's curling.

Vic joined NAIT as the Section Head of the Welding program, and he was instrumental in setting up the shops and curriculum that we work with today. Bureaucracy and red tape were not his favorite consideration, and he acknowledged the existence of rules and regulations, but his first consideration was



V. J. CAMPBELL 1916 - 1972

always, "Let's get the job done" and he was always looking for a way to really help someone, and there aren't all that many people like that around these days.

Vic came from a family of twelve, and although he and his wife, Louise had no children of their own, there were always nieces and nephews that needed a hand, and the good that the Campbell's have done for other people will never really be known.

Vic died on Sunday, January 9th, and we'll miss him. How much we'll miss him will only come home to us in the months ahead. He cared a lot about other people, and his passing means a loss to his students, to his colleagues, and to NAIT.



STUDIO NAIT Monday, January 24

Admission: 50c
Show times:
4:45 p.m.; 7:00 p.m. & 9:00 p.m.
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Canada Spend More Per Capital on Military

In Ottawa's Elgin Street, about five minutes walk from the Parliament Buldings, is a graystone cubic building. It's set inconspicuously in the capital's tourist centre, near theatres, art galleries, convention centres, and the Chateau Laurier.

Over the main entrance to the five-storey building, in small lettering, is the inscription: Department of National Defence.

ment of National Defence.

The Canadian Department of National Defence, to those Canadians aware of its existence, is always assiciated with peace-keeping — Cyprus, the Middle East, Germany and here at home.

But under the smoke screen of an international image as peace-keeper, Canada's defense experts (most international international

of whom have backgrounds in and still maintain

connections with, large corporations and Canadian universities) have built a booming war industry.

Incredible? During the past 12 years Canada has jumped to the Number Five position in the world as an international arms exporter. And today Canada spends more on defense projects, on a per capita basis

than the United States does.

With no war to draw attention to it, very few Canadians are aware of their country's war machinery. Almost none of our academic community knew that the Defence Research Borad (ever heard of it?) is sponsoring research in every Canadian university with an enrolment over 2,500 students.

To defense analysts, the line between defensive and offensive weaponry and warfare research is a very tenuous delineation. Universities and industries incorporated under Canadian law) are currently studying, designing and testing weaponry that runs the gamut from chemical and bacteriological to atomic.

THE DEFENCE RESEARCH BOARD

This military effort in the name of peace is directed

and organized by the Defence Research Board. Research remains under the borad's jurisdiction until a finished product is finally marketable. Saleable products in the past have included commodities of war ranging from chemical defoliants to green berets to

After the defense research people have done their work, the Department of National Defence, operating under defence-sharing plans with NATO countries and special agreements with the U.S. steps in and pushes the products to nations with more immediate military

It's a lucrative business and an invisible one. The Canadian war machine is, in essence, a closed Corporation with interlocking directors who link the major universities to large corporations and then link both these groups to the Defence Research Board.

The administrative interlockings among industry, government and the universities is a basic element in the structure of our society. And institutions with complimentary functions and integrated administration are built to enable the most efficient operation of the

capitalist political-economic system.

Industry, government and the universities are operated in the interests of the same class, so there are no contradictions — from their viewpoint — in the close functional co-operation that springs up in areas such as defence research,

Defense reasearch and contracting, (done both in universities and industries) is always shrouded in secrecy. Tight security is a necessity and thousands of dollars are spent on public relations as each separate part of the war machine tries to keep its public image

What is the Defence Research Board? Back in 1916 the National Research Council was created by the Canadian government because of a necessity for wartime technology and scientific research. For the next three decades it maintained a high precentage of military research at the expense of industrial research

in the civilian sector of the economy.

UNIVERSITIES GET A BUNDLE

After the Second World War ended, the National Research Council began a trend towards basic scientific research and its applications in an industrial peace-time economy. At this time other research agencies began to spin off from the parent body.

Research in the universities is a chancier operation

Research in the universities is a chancier operation for DRB. Scientific research is always a risk investment (defence research is not value-free science — it is science serving corporate and military needs). But the defence experts, with their corporate allies, have done well: for every dollar they have spent on research, they are netting about \$25 in arms sales.

The universities are, for the most part, unaware of the end result of the research they do for DRB. Almost all research done in Canadian universities is basic scientific research. The applied research is

scientific researc generally done in one of DRB's seven private research institutions which are spread across Canada or by private companies.

Since the board was formed in 1947, it has spent

\$40 million on research in Canadian universities. About another \$10 million has been spent on university contracting during that period.

Where has the money been spent? All across the country — from Memorial University in Newfoundland to the University of Victoria. The lion's share has gone to the bigger universities, especially McGill, University of Toronto and the University of British Columbia

36 do work for DRB Other major recipients of defence research monies are the universities of Alberta, Calgary, Manitoba, McMaster, Saskatchewan, Waterloo and the Royal Military College. In 1970, there were 36 Canadian universities who did work for the DRB. What does DRB spend money on? Consider the following fields of study (some of which appear to be civilian studies but are not — anything DRB studies is directly connected to military strategy in which

they are doing research this winter:

Chemistry. The main trends of research in this field are toward fluorine compounds, nitrogen compounds, radiation chemistry and the effects of shock waves on various chemicals. Radiation chemistry is being studied at Memorial University, University of Alberta and University of Waterloo. Other chemical studies are scattered around the country.

Entomology. Another area of intrigue: what DRB seems to be looking for here is a better pesticide. New poisons are being developed and their effects on "insects of military importance" are being studied. Insects are more valuable as carriers of viruses than as guinea pigs for the same viruses. New pesticides are being studied at University of Alberta; control of cluster flies (like mosquitoes or black flies which operate in clusters and can be studied in groups) is under study at Western Ontario and McGill.

8 Bacteriology. We're still in the horrific area of chemical and biological research. Research projects include a study of bacteria under physical stress (being carried out at McGill) and indentification studies of virus agents (University of Ottawa).

Human resources. This is an area of fairly general human studies, phsychological and sociological.

Among the more interesting projects are studies per-

Among the more interesting projects are studies pertaining to the leadership process (Royal Military College), punishment capability (McMaster) and the

effects of rewards on performance, (Carleton).

Medicine. DRB does extensive medical research in many universities, the most notable being York and the U of T which is a major recipient of defense money. The key areas of study are toxicology, radiation. tion effects. Arctic medicine, underwater medicine

and aviation medicine.

Sengineering (structures and materials). This sphere of research is one of the few areas of applied military research. Studies are being carried out on ship hulls, airplane metal fatigue and various stresses and corrosions of materials.

Engineering (mechanichal and electrical). Under this heading comes the more dramatic research—bombs and rockets. The defense experts never refer to bombs and rockets, of course, prefering to use more delicate and precise scientific jargon. Among the projects: detonation in explosives (Calgary), slurried explosives (Queen's), response of thin dometype shells to dynamic loading (Calgary) and electromagnetic detonation research (Carleton).

Political Science. Why would a military research agency be involved in studying political science? It's a necesity the experts argue, for any nation involved in warfare and weaponry research to study local and international attitudes and factors involved in distinctional attitudes and factors involved in distinctions.

international attitudes and factors involved in disarmament policies (Queen's); to study the possibility of continental defence (Laval). One researcher is even studying people and institutions who do research on research (British Columbia).

Special Studies. The two big fields of special study in Canadian defence are lasers (DRB is internationally recognized as a leader in laser research) and the interrelations of plasma and fluid dynamics (this has application to space research among other

things. The military possibilities fully explored in these areas, b that they are on the verge of ma

CANADIAN UNIVERSITY PRESS

warfare research.

This list (which is not complete projects to list them all) is a good policies within the Department Chemical and biological warfare is as is atomic warfare. New area submarine and Arctic research.

The single biggest field of stuc nology and aviation. This field, pays the biggest dividends: the that Canada earns through arms

aircraft industry.

DRB is so interested in airplanthey started an institute of aero University of Toronto back in 199 totalling \$2,300,000 until 1968 where direct support. The Aerospace according to a DRB spokesman, to join space research with the gram.

Another such institute — Institute of Aviation Medicine R supported (and still is) to the tu

There are other university in in the aerospace field, that has Research Board grants during rethem is the nuclear reactor at sity. DRB gave \$50,000 a year until purple or studies program. It was nuclear studies program. It was during the 1960's when Canada's it was suicide not to have personn

of nuclear energy.

Another is the Institute of Studies at the University of Saska done by DRB there (direct support out in 1968) revolved around ion air that often garbles radio trans people were interested in the rable to jam lines of electronic co

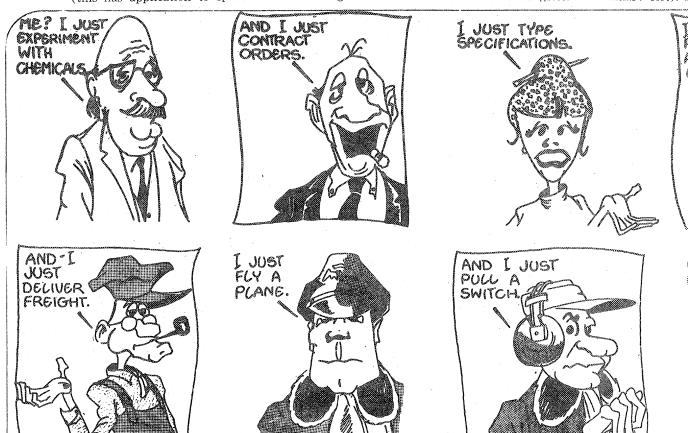
The final two institutes do i general and basic nature. The Lad at McGill study microelectronics de Montreal has an Institute fo search. Both institutes have had c support from DRB.

All these technical institutes, continue to recieve annual DRB a large number of specific resea tracts from the defense research c up-and-coming defense personnel the trade. UNTAPPED AREAS

Despite this massive industry up around Canada's booming countries' wars, there are a few

defence scientists would like t them:

Sociology. The Department is proud of what it calls "discipli it was called in to help with (troops were mobilized during strike, during the Quebec crisis la the Kingston Penitentiary riot).



Research than U.S.

possibilities have not yet been se areas, but DRB is confident verge of major breakthroughs in

not complete: there are too many il) is a good indicator of research epartment of National Defence. al warfare is still a consideration New areas of exploration are research.

field of study is aerospace tech-This field, not surprisingly, also dends: the bulk of the millions ough arms sales comes from the

d in airplanes and aviators that ute of aerospace studies at the back in 1951. They gave grants itil 1968 when they phased out Aerospace Studies Institute is, spokesman, of general interest with the American space pro-

itute — McGill University's Medicine Research — has been s) to the tune of \$50,000 a year

niversity institutes, though not d, that have received Defence is during recent years. One of reactor at McMaster Univera year until 1968 to McMaster's am. It was supported heavily n Canada's defence experts felt ave personnel trained in the use

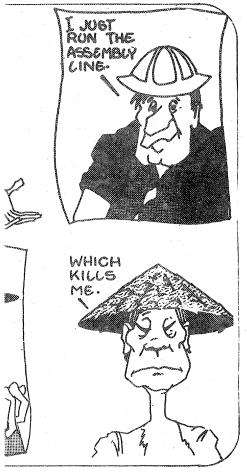
stitute of Upper Atmospheric ity of Saskatchewan. The studies lirect support was again phased around ionized particles in the radio transmission. The defense d in the possibilities of being electronic communication.

itutes do research of a more re. The Lady Eaton Laboratories oelectronics and the Universite Institute for Mathematical Rehave had considerable financial

institutes, whether or not they inual DRB grants, still receive ecific research grants and conresearch coffers. This is where e personnel learn the tricks of

e industry that DRB has built booming business in other are a few other areas that the uld like to explore. Among

epartment of National Defence ills "disciplined mobility" when help with domestic problems ad during the Montreal police sec crisis last winter and during larv riot). DRB is now looking



Excalibar January 6, 1972.

for universities interested in studing crowd control, group decision-making, analysis or organizations and control of dispersed groups.

Systems Analysis. DRB is also interested in initiating universitity studies in the mathematics of combat and in games theory applicable to military

Environment (political and social). The final area of interest to defence experts is historical and geographical analysis of war and war potential. This includes a study of domestic and international hot spots; a study of future international alliance possibilities; a survey of the public's attitude toward the Department of National Defence and studies of riots and insurgency, and maintenance of law and riots and insurgency and maintenance of law and

What happens after the university research project is completed after DRB has filed away their newround information and after the graduate student has published his thesis and spent his research grant?

The basis research now has to be applied. The military and business interests take over at this point; the research investment is about to pay off in dollars and cents. The war machinery swings into full gear; the university has served its purpose, now

But first, the University has served its purpose, now there's money and power to be gained.

But first, the Defence Research Board may want to do further applied research to check that the information that they have paid for is really what they wanted. To do this they have to apply the basic research to the military problems that necessitated the original study.

research to the military problems that necessitated the original study.

Some of the research projects are earmarked for application before they are finished. The file card on each research project is coded with a call number and a lettering that corresponds to one of the seven private research establishments that DRB owns. It is at these establishments that the classified research

gets done.

"After all", said a DRB spokesman, "we could never do classified research at universities. Suppose somebody got blown up by an explosive?"

Suppose, indeed. Have to keep up the public image.

Suppose, indeed. Have to keep up the public image. So the basic information, gleaned from Canadian universities, is shipped to one of the research establishments, far from the attention of the mass media and the people of Canada. Now the research becomes overly military: the singular purpose of these establishments is to convert the basic scientific information into weaponry and warfare — either for use at home or for sale to some warring neighbor

RESEARCH COALESCED

Two of the establishments, one in Dartmouth, N.S. and the other in Esquimalt, B.C., primarily study naval applications of the university research, in addition to doing research of their own. Of paramount

importance to these institutes are surveillance, submarine detection and tracking in undersea warfare.

Two others, in Shirley Bay, Ontario and in Ralston (Suffiled), Alberta, receive little or no public attention. tion. There is as far as the defence people are concerned, a good reason for this quiet invisibility; these two research establishments handle the scariest research in modern day warfare. The scientists there are Canada's foremost experts in chemical, biological and nuclear weaponry.

Why is Canada so involved in chemical and bacterio-

logical weaponry research?

There are two reasons: first, Canada was one of There are two reasons: first, Canada was one or the first countries to explore the military possibilities of this type of warfare and has an international reputation as being a pioneer in the field. Second, nerve gases, chemical defoliants, non-lethal gases and viruses are saleable commodities with an immediate market in the United States' war in Vietnam. While research is done at both Shirley Bay and Politan the actual testing of these weapons is done

Ralston, the actual testing of these weapons is done near Ralston (The research establishment there, codenamed "Suffiled", includes a 1,000 square-mile testing ground). Weapons tested there, including defolians, crop-destruction agents, insecticides and non-lethal

gases, have already been used in Vietnam.

And every time Canada sells weapons, the university research is paying off for DRB. War is good business.

Two of the other three research establishments, at Ottawa and Downsview, study current problems in the Canadian armed forces. Among the projects now being done are studies of human capabilities and limitations, plus other behavioral studies.

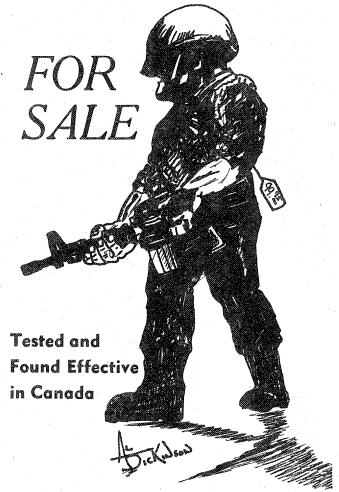
The final establishment, at Valcartier, Quebec, again does marketable research. The scientists there study lasers, armaments, surveillance equipment, explosives and they do weaponry systems analysis.

From these seven defense research establishments come the finished weapons, ready to be mass produced and sold.

DRB employs 2,500

At this point, the 2,500 employees of DRB have performed their functions well: the ultimate decisions involving contracting (for mass produced weapons) and selling, rest with the actual board members of the Defence Research Board.

The actual board is split in two parts: ex officio members (government representatives) and appointed members who represent universities and industries. These men are very powerful: they decide what research should be pursued and which universities and what industries receive defence contracts.



Not surprisingly, there is a substantial amount of patronage toward the institutions these men represent. Board members at present include high administra-tion officials from University of Winnipeg, University of Saskatchewan, Universite de Montreal and Laval

University.

Industrial representatives include or have included directors of de Havilland Aircraft of Canada, ATCO (Calgary), Canadian Westinghouse and RCA Victor

(Calgary), Canadian Westinghouse and RCA Victor Company of Canada. All these corporations are major recipients of defence contracts.

Most corporations receiving Canadian defence contracts are foreign-owned and controlled, with the bulk of them in the U.S. and others scattered around Britain and Western Europe.

Among the major contractors are General Electric, Westinghouse, Hawker-Siddely, Litton Industries, Bendinx, Sperry Rand and General Dynamics (America's biggest defence contractor). All business with these companies is done, of course, through their Canadian subsidiaries. their Canadian subsidiaries.

Most of these corporations do research, design and mass production in the electronics and aerospace industries. The more overt weaponry contracting is done through crown corporations like Atomic Energy of Canada Limited and Canadian Arsenals Limited.

Profits from wars

The research done and the weapons produced, the final step for the Department of National Defence and the rest of the government is to find a country at war who needs a stockpile of arms.

The days of smuggling guns to banana republics is long gone. Today, in the sophistication of powerbloc warfare, there are treaties and alliances and defence-sharing programs that are socially acceptable. The two main markets for Canada's military exports are NATO and the United States.

In 1970, Canada made over \$400 million by selling

arms to other countries.

The Defence Production Sharing Agreement signed by Canada and the U.S. in 1959, while touting mutual defence for the protection of North America, binds Canada to American foreign policy. Canada, is, as Canadian defence analyst William Cobban says, a contracted appendage of the American military

machine.

How this agreement works is quite simple. The U.S. is fighting a war, so they need certain weapons. Under the Defence Production Sharing Agreement, there is very little duplication of work. For example, Canada is a specialist in chemical and bacteriological

If the Pentagon needs a new chemical defoliant, they get in contact with Canadian defense experts who get to work on perfecting the defoliant and then sell it back to the U.S. Or if the Americans have developed a new nerve gas, then they occasionally bring it to Defence Research Establishment, Suffield (Alberta) and have it tested by Canadian scientists on Canadian soil.

So the Pentagon orders weapons, DRB produces them and people die in Vietnam. And this vicious cycle is supported and endorsed, directly and indirectly,

by Canadian universities.

It makes one wonder about the purpose of universities. The ivor-tower concept of value-free science, of research in the name of humanity, is a thing of

Canadian universities serve a military-industrial complex based mainly in the U.S. This complex has two basic aims: to keep down any threat to the established order at home (particularly in Quebec) and to provide any equipment to anybody as long as there are profits to be made.

BY HOWARD HARLTON COLLABORATION, by Shawn Phillips on A & M, No. SP 4324.

After listenning to Shawn Phillips for the first time, I was left wondering "where have I been?". Why haven't I heard more of Shawn before now? He has two albums that were released before this one but I, like many other people likely never heard anything of either of them and I just stumbled across this album almost by accident. The likes of Carol King and Cat Stevens, along with many other people, have been "discovered" and quite rightly so, but along comes Shawn Phillips who is equally as good as the others, yet his first two albums go by almost totally unnoticed.

Shawn Phillips plays an excellent twelve string, sings and composes all his own material. Even though each song or part of each song obviously focuses on something, the subject matter of each song is only a focal point for a much wider range of elements in the music. The effect of the music is rather diffuse and it tends not to concentrate its effects on any one part of of your personality in particular.



The album contains elements of almost every kind of music of the Western Hemisphere as well as a few additional Eastern influences as well. This combined music subtly infuses all your sense with continually flowing and changing images, creating a situation whereby the whole spectrum of emotional and intellectual experiences can hap-

I can't remember hearing more than half a dozen singers that can do with his voice the things that Shawn does. Like Brent Titcome, he is much more than just a singer; his voice seems to be often like an instrument, coloring his songs so that they become a vivid experience, moving the soul on to new things. He is quite similar to Brent Titcombe, but with an Italian influence rather than an Indian influence behind his compositions. (This being most noticeable in his guitar stylings and as well in his vocal interpretations on some songs).

pen together.

With ten back-up musicians and the assistance of Paul Buckmaster and Peter Robinson doing arrangements, the songs come off quite similar to King Crimson. The music and lyrics

Phillips

become totally involving, taking your concentration on a different kind of passage through space. In some spots, though very few, it becomes a bit repetative. Other than that, I found it quite enjoyable. Well, lets just say that I've discovered something that I really like.

BULL ANGUS, by Bull Angus, on Mercury, No. SRM 1 619

I'll be a bit more brief on this one.

Bull Angus appears to be another gut shaking "Heavy" group. They call their music Riff Rock, but I don't find it any better or more exciting than the music of Grand Funk, Led Zeppelin or Black Sabbath. Actually, in many ways, it is Just as good, or just as bad if you want to look at it from both angles.

The groups' musical skill is there, but I find far too much repetition to keep me involved! There are a few high spots but like those other heavy groups, they just can't keep my interest

Movie Review __ THE DEVILS __

Vanessa Redgrave Oliver Reed

A movie of sheer terror, greed, lust, vengence and horror. A coverage of religious facism that tore Europe apart during the 14th and 15th centuries. A showing of an era where men are tortured, mutilated and murdered for what they believe in and for what they do not believe in. A coverage of a time when the Catholic mass oppressed the Protestant minority and the Pope played politics. Heresy was his tool.

Oliver Reed portrays the part of the priest, a man with ideals far ahead of his time and like the rest, ultimately pays for this. He comes on like an egotistical, self centered tyrant yet at other times he is humble and pious. He plays the part of a man obsessed with the desire to unite with God and will use any method to achieve the union. His ability to convey this feeling on to the viewer has been unsurpassed by any other actor to my knowledge.

Vanessa Redgrave plays the role of a nun, cynical and disalusioned by her part in the religious contininum. A woman torn apart by her fantasy of sexual union with God who she sees as the priest, her emotional ties with the religious order and her vanity. Ultimately she is the woman who destroys Oliver Reed, she is used as a tool by other men to achieve their goals. In the end she pays for her part by insanity.

Although the story and the acting is superb, there are areas throughout the movie that border upon sensationalism. The nudity in some of the scenes overrides the more important points. The Devils is a highly erotic, sensual and emotional encounter with the misconceptions of the past. The movie is presently playing at the Garneau. A cinema experience that would be a mistake to miss.

KEN CASPELL.

Jalna, the Whiteoaks' country this program is Roy Bonisteel. estate on the shores of Lake On-Sunday, January 23 at 9:00 p.m. Forsythe Saga'' should enjoy "The Whiteoaks of Jalna".

At 10:30 on January 24, MAN chance . . . you may even like it!

CBC TV debuts a new 13-epi- ALIVE presents "A Matter of sode, one-hour series based on Conscience". A South African the novels of Canadian author Christian, Alan Paton, speaks of Mazo de la Roche, about the his opposition to his country's Whiteoaks family. The setting is racial Apartheid policy. Host for

And on Wednesday, January tario. The novels span several 26 at 8:30 CBC presents a Norgenerations from 1854 to the man Campbell production, "Hanearly 1950's. The series starts on sel and Gretal". Yes, it's opera, but opera with a difference. (By with the first episode entitled the way, it IS in English). Judith "The Past". Any fan of "The Forst and Christine Anton star in the title roles, with Maureen Forrester as The Witch. Give it a

As I nonchalantly strolled into the soc-hop during Queen Week I said to myself; self - these people really do dance and not too badly either.

Nah, must be the band that's makin' them do doze things! And it was - The Bitter Suite. Just for that I thought they deserved a mention in the Nugget. They are natives of Alberta with the exception of Larry Fleming who's from Ottawa. Greg Vetsh plays lead guitar with Frank Walls on base, with the odd drum being done by Larry Fleming. Larry also doubles as business man and that's why he rates another line. Besides I liked him. Laura Vinson sings and plays percussion (cow bell, tambourine) and Gordon Radford plays the organ and sings back-up. Gordon has behind him three years of music at the U. of A. and U. of C. I was impressed because he's also accepted at the Berkley School of Music. Bitter Suite has been together for two years and is working towards concerts and eventual recording.

The group became well known from a folk series they did on Music '71 and right now they're playing at the Corona. To contact Bitter Suite phone Studio Leslie Foster.

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OOKPIKS STILL UNDEFEATED

BY BRUCE STEFFEN

The first action in the ACAC hockey league since December 10, the Ookpiks won both games against Red Deer. Friday evening in Red Deer, the NAIT squad defeated the Kings 5-3 after holding period scores of 1-0 and 5-0. The return match was played at the U of A rink Saturday evening with the Ookpiks trouncing the Kings 15-7. The Ookpiks held period leads of 3-2 and 9-4.

Game statistics:

Ookpiks — 5, Kings — 3
First Period

O—Braun (Bradshow, Buchta) 7:18. Penalties: Barnes (K) tripning

Second Period

O — Sturko (Jackowich) 1:33 O — Kleinschroth (Braun, Buchta) 5:33.

O — Kleinschroth (Braun, Buchta) 10:19.

O — Braun (Bradshaw, Buchta) 14:07.

Penalties: Bloom (K) tripping, Sturko (O) game misconduct, Barnes (K) game misconduct, Panylyk (K) highsticking, Phelan (K) tripping, Perron (O) elbow-

Third Period

K — Poboluski (Bloom, Grayston) 3:30.

K — McPhee (Phelan) 6:31

K — Webb (Bloom, McPhee) 10:03.

Penalties: Giacomuzzi (O) crosschecking, Perron (O) elbowing, Panylyk (K) tripping. (No shots on goal available).

Kings — 7, Ookpiks — 15 First Period

O — Buchta (Braun, Kleinschroth) :47.

O — Vastenhout (Sturko, Jackowich) 2:06.

K — Bloom (Grayston) 5:30.

K — Webb (Poboluski) 13:41O — Willson (Perron, Wagner)16:00.

Penalties: Jackowich (O) roughing, Luke (K) roughing, Perron (O) holding, Buchta (O) highsticking (major), Perron (O) crosschecking, Burrows (O) roughing, Bloom (K) roughing, Perron (O) elbowing.

Second Period

O — Willson (Wagner, White-head) 2:25.

O — Braun (Buchta, Kleinschroth) 4:13.

K - Phelan 9:45

K — Bloom (Luke, Webb) 13:47.

O - Willson (Perron) 14:40.

O — Willson 14:45.

O — Bradshaw 17:17.

O — Braun (Buchta, Burrows) 18:17.

Penalties: Braun (O) highsticking, Luke (K) slashing, Jackowich (O) slashing, Bloom (K) slashing.

Third Period

K — Poboluski (Wells) :41

O — Allen (Wagner) 3:39

K — Webb (Phelan, Luke) 5:23.

O — Buchta (Allen, Braun) 6:00.

O — Wagner (Willson) 7:55.
O — Jackowich (Giacomuzzi)

9:37.

O — Vastenhout (Jackowich) 9:53.

K — Bloom (McPhee, Phelan)12:54.O — Jackowich (Giacomuzzi,

O — Jackowich (Giacomuzzi Vastenhout) 14:07.

Penalties: Wells (K) tripping, Burrows (O) interference, Poboluski (K) crosschecking, Poboluski (K) roughing, Perron (O) tripping.

Shots on goal

Kings 9 8 12 29 Ookpiks 17 13 18 48

ACAC League Standings

TEAM	W	L	Τ	Pts	GF	GA	PIM	
NAIT Ookpiks	8	0	0	16	63	33	201	
SAIT Trojans	2	3	0	4	24	33	89	
Red Deer Kings	0	7	0	0	31	52	141	

ACAC Point Standings

ACAC POINT STANDINGS					
(unofficial)	G	PG	Α	PTS	PIM
Jack Braun (N)	8	10	15	25	4
Doug Buchta (N)	8	8	13	21	17
John McPhee (RD)	7	10	8	18	4
John Kleinschroth (N)	8	7	6	13	. 2
Dave Allen (N)	8	4	8		8
Darwin Sturko (N)	8	3	8	11	30
Bob Bradshaw (N)	8	4	6	10	14
Barry Jackowich (N)	6	6	4	10	8
Terry Willson (N)	8	7	2	9	2
Bill Luke (RD)	7	4	5	9	8
Warren Wagner (N)	8	3	6	9	8

EXHIBITION CONTINENTAL HANDBALL GAME TONITE AT NAIT GYM EDMONTON CANUCKS VS

INTERNATIONAL HANDBALL
CLUB OF EDMONTON
(present Canadian Champs)

(present Canadian Champs)
The game will be held between the Men's and Women's games
— Approximately 7:30 p.m.

INDOOR SOCER

EDMONTON
THISTLE vs
NAIT — 9:30 p.m.
of KINSMEN

FIELDHOUSE

BASKETBALL TONIGHT

OLDS vs NAIT Women at 6 p.m. Men at 8:45 p.m.

IOMOTIOW
MHC vs NAIT
Women at I p.m.
Men at 2:45 p.m.

FOURTH PERIOD

BY BRUCE STEFFEN

With four games remaining in their regular schedule, the Ookpiks appear to be the 1971/72 ACAC league championships. To clinch first place, the NAIT squad needs a combination of wins and SAIT losses totalling three points. Of the games remaining, three are against SAIT.

Unfortunately it appears that I missed two exciting games (as far as NAIT fans are concerned) and have only the game sheets to report from. In looking the sheets over, it appears that all players had a great series last weekend as all players had at least one point in the two games. Jack Braun earned eight points on four goals and four assists, Doug Buchta gained eight on four tallies and four assists, Terry Willson scored four and assisted once for five points (all in the 15-7 game) and Barry Jackowich tallied twice and assisted on three for five points.

Unfortunately, according to reliable sources, poor refreeing has cost the Ookpiks the services of Darwin Sturko. It seems Red Deer was not keeping the player's-box gate closed properly and were not receiving penalties for this. During a play, Darwin was slammed into the gate opening and dislocated his shoulder. I hope he has a speedy recovery from this injury.

Sport Calendar

Friday, January 21 Hockey — Ookpiks a

Hockey — Ookpiks at SAIT Basketball — Olds vs Ookpikettes (NAIT Gym) 6:00

Olds vs Ookpiks (NAIT Gym) 8:45

Indoor Soccer — Edmonton
Thistle vs NAIT (Kinsmen
House) 9:30

Saturday, January 22

Hockey — Ookpiks at SAIT
Basketball — MHC vs Ookpikettes (NAIT Gym) 1:00
MHC vs Ookpiks (NAIT Gym)
2:45.

Friday, January 28

Hockey — U of Lethbridge vs Ookpiks (exhibition at Gardens) 9:45

Saturday, January 29

Hockey — U of Lethbridge vs Ookpiks (exhibition at Gardens) 3:00.

OOKPIKS LOSE SECOND

After beating the Red Deer Kings last December, the Kings defeated the Ookpiks 61-55.

NAIT is playing hard as a team, the spirit is excellent, but they just can't seem to get going offensively. For a team that averages 75 points a game, they had to struggle to get 55.

NAIT took 75 shots from the floor, sinking only 18 for a 25% average. Right now, the Ookpiks have the lowest shooting average in the league.

No one wants to blame officiating for the losses but these two refs left little to be desired. With any kind of officiating, NAIT might have had a chance at winning.

We lost the boards to a much smaller team. However if one is permitted to use his hands freely on grabbing and pushing players then I can't blame our players for losing on the boards.

Scorers that the Ookpiks count on failed to produce. Bob Butlin got his first field goal with only eight seconds left in the game. John Jenner was 1 for 11. Roman VonThiesenhausen who usually has a great shot from the outside just wasn't connecting and thus was unable to get in for rebounds.

Statistics

 FGA
 FG
 FTA
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 Michetti
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Ookpikettes Drop Another

NAIT Opponents Half-time score 18 29

Final 26
Top Scorers:

Jeannie Hebert (12)
 Vicky Hatch (4)

3. Bobbi Ryley (3)

Game summary and hi-lites:

NAIT met the Red Deer College Queens on Friday, Jan. 14 and were defeated handily. The first half of the game was hard fought by both teams. At times NAIT outplayed the Red Deer team and it looked like it might turn out to be a close and exciting game. The players went out on the court in the second half with a different attitude than the first half. They showed disinterest in the game. They

only managed to score 8 pts. throughout the second half while Red Deer managed to chalk up 19 pts. Red Deer was superior in controlling the boards and in stealing the ball from NAIT. NAIT only shot 16% of their field goals and a high of 48%, of their free throws. The free throws accounted for half of NAIT's points. Once again Brenda Brown worked hard with little help from most of her team mates. She managed to steal the ball 4 times and prevented a number of scoring opportunities for Red Deer. One good point can be said for NAIT - This was the first time this season that Red Deer was kept under 50 pts. in the ACAC league.

Monte Carlo Events

MONTE CARLO NOVICE AUTO RALLY

Sunday, January 23rd, 1972
 Info at 1st floor of SUB at U of A

MONTE CARLO NIGHT!

Friday, January 28th — 7:00 p.m. — 1:00 a.m. at the JUBILEE AUDITORIUM

9:30 p.m. to 1:00 a.m. for leisure listenings

— Continuous gambling from 7:00 p.m. — 1:00 a.m.

MAIN THEATRE — THE GREAT CANADIAN RIVER RACE
— HEARTACHES RAZZ BAND

LUIS DIMAS
 Two shows at 7:30 p.m. and 10:00 p.m.

GRAND PRIZE FOR TOP GAMBLER: A trip for two to sunny Hawaii for two weeks with United Tours International. Arrangements by World Wide Travel.

TICKETS: \$2.50 Each for reserved seats
— available at MIKE'S, SUB and
at the door.

DRESS: Men are required to wear jackets.

ATTENTION

All leaders and representatives of CLUBS, SOCIETIES and TECHNOLOGIES are reminded that the DEAD-LINE DATE for submitting articles for this year's "Open House" publication is January 31, 1972

NOTE NOTE NOTE NOTE

LATE SUBMITTALS MAY NOT BE ACCEPTED

The Management of the Simpsons-Sears Park Plaza Shopping Centre REQUEST that NAIT students who are leaving their cars parked on Simpsons-Sears property during the day, discontinue hte practice immediately. It will then be unnecessary for Simpsons-Sears to have the offending vehicles removed.

G. W. CARTER, president



Diana Korbisser