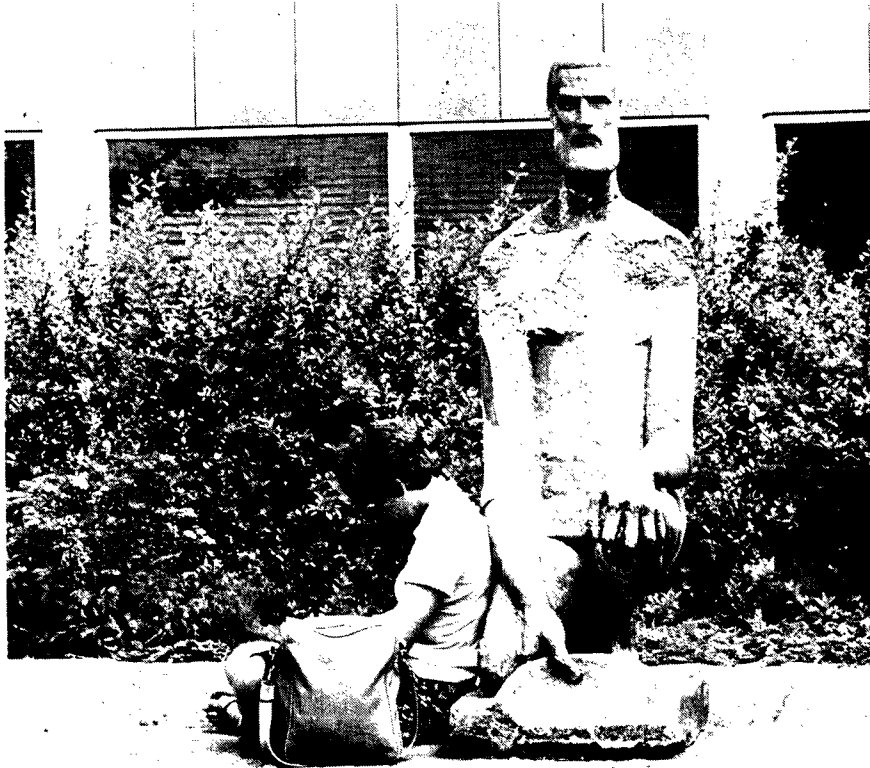


ubc reports

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John Morris photo

One of 200 French-speaking students learning English at UBC this summer, Louise Choquette of Montreal finds a firm friend to read with on the plaza of the Buchanan Building.

Off-campus housing needed for Lower Mainland students

Wanted: 7,000 homes for students. UBC student Dave Johnson, co-ordinator of off-campus housing at UBC and chairman of a joint committee to find housing for students throughout the Lower Mainland, says that about 7,000 rooms, suites or houses are still needed for early September, including some 5,000 for UBC students alone.

The joint committee of representatives from UBC, Simon Fraser University, Vancouver Community College, Douglas College, Capilano College, the B.C. Vocational

School and the B.C. Institute of Technology has been formed in order to share listings and advertising costs.

The biggest demand, Johnson says, is for self-contained quarters with cooking facilities, but there is need for everything from single sleeping rooms to entire houses.

If you have accommodation that might suit a student, call the off-campus housing registry at UBC at 228-2176 or 228-5825. It is manned by four students Monday through Friday from 10 a.m. to 8 p.m.

Language programs popular

More than 200 French-speaking students from Quebec have chosen UBC this summer as the place to learn English. And, oddly enough, about 55 English-speaking Canadian students have also chosen UBC as the place to learn French.

The students are all part of a joint federal-provincial Summer Language Bursary program designed to promote bicultural exchanges throughout Canada. The program pays room, board and tuition for full-time students, either Canadian citizens or landed immigrants, who wish to study English or French as a second language. The program has been offered at a large number of colleges and universities across Canada since 1969.

The students who have chosen to take the program at UBC undergo six hours of intensive language training each day for 6½ weeks, with evening and weekend events planned for them as well. Mornings are taken up with instruction in the structure and use of the language, either English or French. For those students learning English, the afternoons stress using the language in situations off-campus.

This is a new approach to language training, explained David Brown, director of language programs at the Centre for Continuing Education. Visits to various places or organizations are prearranged for the students, who must report their experiences to their instructors. The students visit legal aid clinics, museums, immigration centres, women's centres — any place where they must use their new language on their own.

Most of the students are living at Totem Park Residence during their stay at UBC, although about 15 French-speaking students have chosen to live with English-speaking families off-campus. Evening events allow the students to practise their new language on each other while meeting the other half of Canada.

About 80 instructors, many of them UBC students, are involved with the English and French programs on both a full- and part-time basis, teaching the students during the day and living in residence with them at Totem Park.

The program finishes Aug. 18.

The Search for Life on Mars

Martians. Ah yes, greenish creatures with large antennae and flat feet.

For decades, people have been speculating about life on other planets — does it exist, what does it look like, when and how will it come to Earth — so that the very word "Martian" calls to mind an image, however outlandish, however much we may not believe in life on Mars.

A few weeks ago the Viking landing craft, designed by space scientists in the United States, reached Mars after a journey of some 11 months and began its experiments to find if life exists or did exist on that planet. Now we can look more objectively at the possibility of extraterrestrial life.

Two UBC scientists, Dr. Harold Kasinsky of Zoology and Dr. Michael Ovenden of Geophysics and Astronomy, talk with *UBC Reports* about the search for life on Mars and the implications of finding, or not finding, life in space.

First, an interview with Dr. Kasinsky who is interested in the field of space biology, or exobiology.

What do they expect to find on Mars?

They don't know what they're going to find. The object of the game is to see if life exists. But the only way you can recognize life is if it's similar to life as we know it. If it's a really novel form consisting of unique arrangements of atoms that we're not familiar with, we're not going to detect it.

Basically they're looking for soil micro-organisms. They didn't land in the middle of a traffic jam. There's no big creatures around. So, if there's life present and alive it's soil micro-organisms — bacteria, fungi, some sort of organism in the soil.

The other possibility is that life was present, but is no longer present. It

looks like there was once a lot of water on Mars, because of big gullies and canyons. We know now that there's nitrogen on the planet. This Viking lander has measured nitrogen in the atmosphere. They assume that there was more of an abundance of nitrogen in the past since nitrogen slowly seeps away from the atmosphere. And so nitrogen and water gives you the basis of the possibility of the formation of life.

The chemical constituents necessary for life on Mars might once have been opportune to form life on Mars.

That is, life as we know it.

Basically they think if we're going to find life, it's going to be built on the chemistry of carbon with water as its solvent. But maybe we're being too provincial about it.

So what is the value of finding life on Mars?

Really what we're doing by looking at Mars is, we're trying to find out if our theories of evolution of life on Earth are right. Now you can't say that on TV because people will say, Well, why go to Mars? We hope that Mars is in some state of evolution of matter from the inanimate to the animate such that we might see what happened way back in the history of the Earth. Maybe Mars evolved up to a certain state, then a catastrophe occurred and it stopped.

What about the Viking lander? What can it accomplish?

It's been there now for several weeks and they think they can get information out of it for several years. Because of the limited supplies it was able to take with it, it can do less than a dozen types of experiments. But there are two landers. The next one is going to land in the middle of September or early October and is an exact duplicate of the first Viking. They'll set it up a little farther north, closer to the pole where there might be more free water.

What types of experiments will the Viking be doing?

One set of experiments is designed to detect complex organic compounds in the soil which would give us a clue as to the possible chemical nature of life as it may have been or as it presently exists. The second type of experiments are a series of metabolic experiments which test whether or not there are biological organisms right now on the planet which are able to metabolize compounds — that is, are they able to show the metabolic processes we associate with life like respiration and photosynthesis. The other thing that they're doing is controls.



Dr. Harold Kasinsky

How much will these experiments really prove?

They can't tell all that much from a dozen or two experiments, and I think what's going to happen in the end is we're going to be more curious than when we started. We're going to answer a whole mess of questions, and raise so many more that it's going to really frustrate these guys who are going to have to wait for the next billion dollars to do the next set of experiments.

The best possible situation they could find right now would be that there is some sort of bacteria in the soil. They could then figure out roughly the nature of the micro-organisms, get some idea of what stage of evolution life might be

at. But it doesn't look like they are going to find that.

Let's assume they don't find any signs of biological activity but they still find organic compounds in the soil. It may be that there was once life on Mars, that there was metabolism taking place, but it took place some time ago.

Let's assume they don't find any organic compounds; they don't find any signs of living organisms; all they find is the basic elements. It may be necessary then for us to re-evaluate our theories of the evolution from the chemical phase to the biological phase on Earth, because we believe that when the ingredients are present that life will spontaneously arise, given enough time. And all the ingredients are there for life on Mars.

But if we can't find life on Mars and we can't find it on Venus and Jupiter or even signs that it was once there, we'll have to re-evaluate the whole thing.

And if we realize there's no other form of life in the universe, it may give us a greater respect for Earth and life on it.

*

Dr. Michael Ovenden is known in astronomy circles as the discoverer in 1972 of the lost planet, Aztex, among other things. This planet, which seems to have existed between Mars and Jupiter, has now disappeared, leaving only a trace of itself in the form of thousands of asteroids. The void it left perhaps caused Mars to be pulled farther from the sun, thereby reducing the temperature on that planet by about 15 per cent, freezing any water on its surface and destroying any life that might have been. This theory explains the remains of old river beds on the surface of Mars, and could lead to the hope that Viking will discover evidence of life on Mars in the past.

But Dr. Ovenden prefers to speculate on the implications of there never having been life on Mars.

If we assume that life will spontaneously arise given the right conditions, ingredients and enough time, and we don't find life on Mars, will that seriously change our views about life?

We make the assumption that life will occur as a natural process where conditions are suitable for it or where conditions were suitable for it. And I think it will be an assumption which will be very seriously in question if we don't find life on Mars.

All arguments that one can put forward for supposing that life, in a very general sort of way, is a natural property of the universe — it doesn't require some kind of special creation

— would be very difficult to reconcile with there not being life, or there not having been life, on Mars.

It may be that life is very, very unusual, that it depends on a very curious circumstance that happened in the early stages of the Earth's history.

You mean it may be that we're an aberration?

Yes. It may very well be that life is a very unusual thing in the universe, because its occurrence depends upon a very peculiar concatenation of circumstances that happens very rarely, but of which we simply do not know.

That is why, in a very curious way, it will be far more dramatic and important if we do not find life on Mars than if we do. If we do not find life on Mars, then we have to begin to take the view that, in some sense, life must be rather special.



Dr. Michael Ovenden

If we don't find life on Mars, couldn't that mean that we just didn't look in the right place?

Well, yes, but I'm jumping ahead a bit. What I'm saying is, if we decide there isn't life on Mars. Now we haven't decided that yet. It's conceivable we haven't looked in the right place; it's conceivable our instruments aren't working correctly.

But if this Viking doesn't find life and the next one doesn't find life and the next one doesn't find life, at some point you have to substantially say, Mars hasn't got life on it. At some point you have to stop spending billions of dollars just to improve the precision of your statement a little.

I think there was a greater danger in this Viking business. Because Martians didn't come and peer in through the window, it's going to be very much more difficult to get money for further space exploration. Now I think it's really a much more fundamental discovery to find that life isn't on Mars, but you try and sell that to the general public.

Notices:

Library cards

A reminder to faculty and staff that library cards expire at the end of this month and need to be renewed for the coming academic year.

To renew your card, take it to either the loan desk in the Main Library or the circulation desk in Woodward Library. Or, if you prefer, mail your card to the Circulation Division, Main Library. It will be renewed and returned to you by mail.

NRC grant changes

The National Research Council has recently made several changes in its grant programs which will affect both this year's grants and applications for next year's.

The deadline date for submission of operating grant applications has been changed from Nov. 15 to Nov. 1. Applicants must submit all applications in four copies.

Beginning in 1977-78, travel grants will contribute to the payment of travel expenses for the recipient only. These grants could formerly have been applied against travel expenses for the recipient's family as well.

The Negotiated Grant program is still suspended, but the suspension on applications for Major Installation Grants (more than \$200,000) has recently been lifted. The deadline date for these grants is Oct. 1.

Current NRC grant holders should note that maximum stipends to graduate students paid from operating grants, which have been \$375 a month since April, 1975, will increase to \$420 a month, starting Sept. 1, 1976.

Marconi fellowship

Nominations for the Third Marconi International Fellowship are now open and are being received by the Marconi Council in Boulder, Colo.

The fellowship is awarded annually to a person in science or engineering whose career demonstrates interest in the humanistic use of the products of science and invention and who has given creative thought to the means of using electronics and communications. A fund of \$25,000 will be available for further work by the recipient, or can be used to commission an original study by a colleague chosen by the recipient.

Nominations close Nov. 15, 1976. Richard Spratley in Research Administration, local 3652, has more information on the fellowship.

NEXT WEEK AT UBC

Notices must reach Information Services, Main Mall North Admin. Bldg., by mail, by 5 p.m. Thursday of week preceding publication of notice.

Next week's edition of *UBC Reports* will be the last until Sept. 8. Be sure to send notices of events which will happen between now and Sept. 11 to Information Services immediately for publication in next week's edition. Remember, the deadline for notices is tomorrow (Thursday) at 5 p.m.

8:00 p.m. **STAGE CAMPUS '76** presents *The Birds* by Aristophanes. Dorothy Somerset Studio. Tickets, \$3; students, \$2. Continues nightly until Aug. 14. For reservations, call 228-2678.

MONDAY, AUG. 16

8:30 p.m. **VANCOUVER EARLY MUSIC FESTIVAL.** A concert of baroque ensemble music by the faculty of the Vancouver Baroque Music Workshop. Bruce Haynes, baroque oboe and recorder; Hugh McLean, organ; Mary Cyr, viola da gamba; Stanley Ritchie, baroque violin; and Elisabeth Wright, harpsichord. Dancers Angene Feves and Charles Perrier will also perform. Tickets: \$3.50; students and senior citizens, \$2.50. Recital Hall, Music Building.

WEDNESDAY, AUG. 18

8:30 p.m. **VANCOUVER EARLY MUSIC FESTIVAL.** Music from the Italian Renaissance by the Hortulani Musicae. Ray Nurse, lute and wind instruments; Ingrid Suderman, soprano; John Sawyer, viola da gamba and rebec; Jon Washburn, viola da gamba; Patrick Wedd, keyboard instruments; Brian Fitzgibbon, lute; and guest dancers Angene Feves and Charles Perrier. Tickets: \$3.50, students and senior citizens, \$2.50. Recital Hall, Music Building.

THURSDAY, AUG. 19

1:30 p.m. **INTERNATIONAL HOUSE ART CLASSES.** Instruction and consultation for serious art students provided by artist Ted Dickson. Students supply own materials. Offered every Thursday until 4:30 p.m. Upper lounge, International House. To register, call 228-5021. Free, all welcome.

FRIDAY, AUG. 20

8:30 p.m. **VANCOUVER EARLY MUSIC FESTIVAL.** A concert of Renaissance and baroque music by the faculties of the Vancouver Baroque Music Workshop and the Vancouver Early Music and Dance Workshop. Music from the 15th to the 18th centuries will be played. Tickets: \$3.50; students and senior citizens, \$2.50. Recital Hall, Music Building.

SATURDAY, AUG. 21

YOUNG ALUMNI CLUB two-day car/camping trip. For information call the Alumni Association at 228-3313.

8:30 p.m. **DISCO DANCING** in The Pit, with music provided by CTR campus radio disk jockeys. Continues every Saturday evening to midnight until Aug. 28. Admission free. Student Union Building.

summer scene

SUMMER HOCKEY SCHOOL

Boys from 7 to 16 years are eligible. Sessions include two hours of on-ice instruction plus 40 minutes of off-ice circuit training daily. Cost is \$30 for a 5-day session, \$50 for a 7-day session and \$65 for a 10-day session. Available until Aug. 27. Call 228-3177.

EMPIRE POOL SWIMMING

Empire Pool is open for swimming. Faculty, staff and students have the lunch hour from 12:15 to 1:45 p.m., Monday through Friday, reserved for their swimming time. Public swimming and lessons are available from 1:45 to 5:00 p.m. Monday through Friday. Swimming passes are available at the pool office or by calling 228-3800.

UBC People

Three members of UBC's Department of Chemistry have been elected fellows of the Chemical Institute of Canada in recognition of their contributions to Canadian chemistry and chemical engineering.

The new fellows are **Profs. Lionel G. Harrison, Gerald B. Porter and David C. Walker.**

★ ★ ★

Charles Connaghan, vice-president of administrative services at UBC, has been elected to the board of trustees of St. Paul's Hospital in Vancouver.

★ ★ ★

Prof. Larry Moore of Commerce and Business Administration was elected president of the Canadian Association of Administrative Sciences

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at meetings of the learned societies in Quebec City earlier this summer.

★ ★ ★

Ken Andrews, a UBC electrician and the member of UBC's Board of Governors representing the employed staff of the University, was elected second vice-president of the B.C. division of the Canadian Union of Public Employees at the union's annual meeting in Vancouver.

★ ★ ★

Hannah Polowy, of UBC's Faculty of Education, was the recipient of the Samuel Laycock Memorial Award of the Canadian Parent-Teacher Federation. The award was in recognition of outstanding service to education by fostering co-operation between parents and teachers and promoting understanding between the home and the school.

★ ★ ★

Two UBC continuing education experts have been appointed to a provincial government committee which will study all aspects of continuing and community education in B.C.

Jindra Kulich, acting director of UBC's Centre for Continuing Education, and **Gordon Selman**, of UBC's Faculty of Education and former director of the continuing education centre, have been named to the committee established by Deputy Minister of Education Walter Hardwick.

Dr. Hardwick said the committee would make recommendations regarding continuing and community education policy related to such matters as programs, finance and administration.