A greeting from the President

President Harry Gunning, although relatively new to the position, has already made inroads in the difficult task of showing society the essence of the university.

His primary goal is to have the university become increasingly meaningful to those people whom it serves. "This is obviously a very complex, multi-faceted objective which to fully understand requires a deep knowledge of universities and the many publics with which they can productively interact."

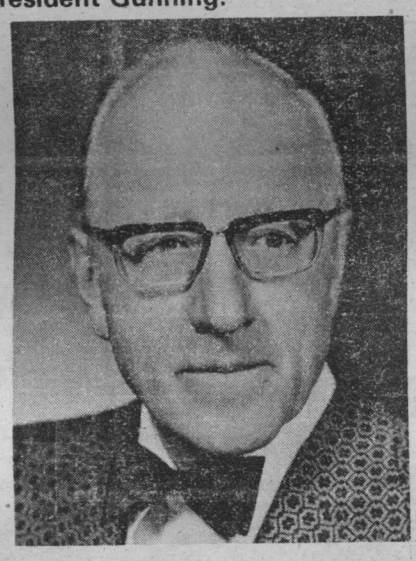
"Perhaps the University of Alberta cannot be all things to all people. But it certainly can be more things to more people."

Among the groups for whom he would like to see the university become increasingly more important, Dr. Gunning lists students and alumni, the academic and non-academic staff, the provincial govenrment which directly supports the university and "the many publics with whom associations would be mutually beneficial."

Dr. Gunning emphasizes that "the public does not understand that the university is not a teaching institution but a learning institution. Our purpose is to stimulate others to learn for themselves.

His own learning encompasses a wide range of subjects and issues. He is a world renowned chemist who attained that status by graduating from the University of Toronto with a doctorate in physical chemistry; attending Harvard University for a year as a post-doctoral fellow; working for the National Research Council in Ottawa for three years; and serving as chairman of the University of Alberta's chemistry department from 1957 to 1974.

President Gunning.

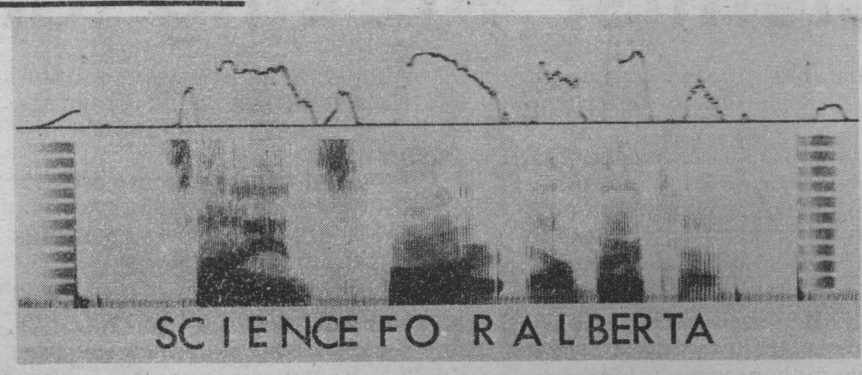


There is no greater joy than the joy of discovery: that lasting satisfaction which comes from being uniquely responsible for contributing to the depth of understanding and the welfare of mankind. This is what Science is all about, and in our OPEN HOUSE we have taken great pains to show you the vast range of methods we use as scientists to penetrate the yet-unknown. We hope that you will catch the fire of our enthusiasm, and join the ranks of those who have been responsible for some of the noblest creations of the human mind.

Our Faculties of Agriculture and Forestry, Engineering and Science represent, in their dedication to the solution of the complex scientific and technological problems which beset our society, that which constitutes a great university.

Give us your undivided attention, and you may find that a new sense of purpose will enrich your life.

HARRY E. GUNNING
PRESIDENT



Science films to show in "V" Theatres

Have you heard about what the hermit crab and sea anemone do deep down sea level? Well, they sort of "live together".

In fact, the pair appear to have worked out a definite and probably beneficial relationship, according to Professor D.M. Ross, dean of the Faculty of Science at the University of Alberta.

Dr. Ross has studied the creatures and found that they are often "strongly attached" to each other.

Sometimes, the sea anemone, a cylinder-shaped animal that looks like a flower, takes the initiative, climbing onto the crab's shell without any help.

On other occasions, the crab coaxes the sea anemone, rubbing and tickling it until it lets go of the shell or stone to which it clings.

Then, in an action possibly equivalent to 'carrying the bride over the threshold', the crab lifts the sea anemone onto its shell, where the sea anemone takes hold and makes its home.

This and other unique relationships between animals of "married species", - that is, animals of different species that live together - is the subject of a film that will be shown in the Physics Amphitheatre, P-126 (building 14 on the centre fold map), on the hour, every hour, between 10 a.m. and 4 p.m.

The 35-minute, 16 mm. color film produced by Dr. Ross has won several international awards, including the Bronze Bucranium at the International Festival of Scientific and Educational Films at Padua University in Italy.

The film has also been shown at the Annual "Conversazione" of the Royal Society of London and to the Emperor of Japan, also a noted marine biologist.

Besides the Ross' production, 19 other films averaging 20 minutes in length will be shown in three amphitheatres, V-120, V-124, and V-128, in the "V" Theatres area (13 on the centre fold map), covering many topics in geology, geography, biology, mathematics and other fields in science.

They will be shown between 10 a.m. and 4 p.m., giving you a chance to sit down for a rest, quick snack and coffee.

In gathering data for the film, Dr. Ross took short leaves in Hawaii and Puerto Rico and a longer, sabbatical leave in Japan, New Caledonia, New Zealand, Italy and England.

He says that his film and laboratory experiments prove that by imitating the crab's "lifting" technique, through the use of rods or brushes, that sea anemones can be "persuaded" to release themselves and be placed on shells much as the crab does.

Dr. Ross also found that the crab can distinguish left and right and has some memory about the difference.

"If you give a hermit crab two sea anemones, he puts the first one on the left. But if you take the first one off the right shoulder before giving him the second anemone, he will still put the second one on the left."

Hermit crabs live in empty snail shells into which they withdraw to ward off attack by other creatures. They are usually safe from most predators when inside the shells.

Sea anemones are found usually on the shells of these large crabs, attached firmly by their pedal discs.

The spoken word ... taken for granted and used almost continuously each day. But have you ever taken a long hard look at the spoken word? If you've read this far, it's because you did take a look whether or not it was long and hard at the spoken word. That peculiar looking landscape? op? pop? art? cross-section? ... whatever you may call it ... is a voice print of the words unevenly spaced beneath the wiggles and squiggles. Visitors to the department of linguistics in Room 742 of the General Services Building No. 16 will have an opportunity ot have their own voice print made and at the same time find out what goes on in a linguistics department which devotes itself exclusively to experimental linguistics. In addition to the experimental study of language as a product or a 'thing', linguistics research here is also devoted to analyzing what the human does with this special tool what mental and physical processes are used and how are they used—both the production and the perception of speech.

Numerous displays will show the work of the department and some of the complex equipment used to do that work, as well as course and career information. By the way, the heavy black patterns in the voice print above indicate the time-frequency variations in the various sounds of the words spoken while the mountain-like peaks and valleys along the top edge show the volume of each sound made by the speaker.

Not every day you get DIPPS or "hunt the Wumpus"

The open house visitor seeking variety of purpose would do well to drop in to the department of computing science. Only there can you see a digitized picture of yourself; only there can you see the instructional game "hunt the wumpus."

The digitized pictures come from DIPPS - the Digital Picture Processing System. Located in room 628 in the General Services Building number 16 on the centre fold map DIPPS will demonstrate the input, manipulation and output of pictures. The output of a TV camera is digitized and stored in the PDP-9 computer and the digitized picture can be manipulated by linear transformations on the grap levels, spatial transformations, and the detection of edges.

The pictures will be displayed on a 611 storage oscilliscope in either store or non-store mode. Output in the form of polaroid pictures will be provided.

In room 669 of General Services, you will encounter a midi-computer laboratory containing DEC PDP 11/45 and Nanodate QM1 computers. These machines are used for computer systems research but for open house they'll assume a "fun" image and demonstrate a variety of instructional games such as chess, blackjack, moo, and, of course, "hunt the wumpus."

To complete this scientific diversion, Alberta Research (Atmospheric Sciences) will make their "lunar lander" and other graphics programs available for inspection.

Understanding our minds

The nature of man has long been a subject for inquiry by scientists.

And at the Open House a number of displays will be concerned with investigations in this area. Two of the departments taking part are especially concerned in this area psychology and linguistics, both in the Faculty of Science.

The psychology displays, located in the Psychology Wing of the Biological Sciences Building 15e on the centre fold map will have a number of themes for their display.

The displays showing how psychologists study the world of color will deal with human detection of color, color memory and the relationship of color to mood and expectation. Visitors to the displays will have the opportunity to have their color memory tested.

Research into the self regulation of brainwaves is helping psychologists to gain a new understanding of the relationships between mental and physical events, and of an organism's capacities for control of these events. Biofeedback training is becoming the preferred form of therapy for a number of mental and physical illnesses.

A video-tape presentation on teaching language to emotionally disturbed (autistic) children will be used to demonstrate how behavior change techniques, derived from experiments investigating how animals and humans learn, are used today in the treatment of behavioraliy disturbed children. This presentation will show how these basic principals are being used by a local treatment agency, The Edmonton School for Autistic Children.

Although memory is usually thought of as a unitary system, psychologists have now identified three types of memory systems. A display will answer questions regarding the relationship between the systems, the permanance of information in each, how information is lost, and how it might be better retained.

Another display will consist of two demonstrations: a demonstration of brain laterality on a member of the audience, and a demonstration of brain asymmetry in a video tape simulation of the performance of a split-brain subject.

The department of linguistics located in the General Services Building 16 on the map will have displays related to man's use of speech. Besides viewing the displays, visitors will have a chance to see a voice print made perhaps of their own voice.