



KENNARD D. HORACE, Ft. Yukon, Alaska



THREE MEMBERS of the Institute of Arctic Biology at the University of Alaska prepare to take a blood sample from a reindeer in connection with a research project designed to study adaptability of reindeer

to the Alaskan tundra. From left are John Henshaw, project coordinator; Deborah Pomeroy, radiation lab technician and Robert Dieterich, institute veterinarian.

(UA Photo by HARRY ARAB)

5-year Reindeer Study Underway

By PATRICIA PARNELL

A grant of \$400,000 from the Atomic Energy Commission (AEC) is financing a 5-year study of reindeer nutrition and metabolism at the University of Alaska.

The study is primarily concerned with the metabolic changes that take place in the animals as they adjust to the severe climate of the Alaskan tundra. Dr. Jack R. Luick of UA's Institute of Arctic Biology is directing the study.

Metabolic processes are the internal chemical activities that control life. They include such all-important processes as the effects of enzymes and hormones.

Many of the achievements of modern science, such as the control of diabetes, have been brought about through studies of the metabolism of animals, plants and men, Dr. Luick noted.

The AEC is interested in the project because the main source of food for reindeer in winter is the lichen, a creeping plant common on the tundra, which accumulates large numbers of isotopes from radioactive fallout.

Unlike most plants in more temperate areas, these slow-growing, non-vascular (without stems) plants do not replace their leaves each year.

Being rootless, they absorb all of their food through the leaves. Thus, the isotopes in fallout dust become absorbed into the plant tissue in unusually large quantities.

The effect of these isotopes on the animals which eat the lichens will

not be directly studied at this time, Dr. Luick explained.

Nevertheless, information about the animals' nutrition and metabolism will contribute to a better understanding of the fallout problem.

Extensive research has been done on the metabolism of domestic animals, but very little work has been done with reindeer.

Dr. Luick serves as an associate professor of nutrition at the Institute and is a specialist on the metabolism of large animals. He formerly was with the University of California and in 1964 was sent to Yugoslavia for a year as an international AEC expert in nutrition.

He then spent a year in Australia as a Fulbright research scholar before coming to the University of Alaska campus in 1966.

Others on the reindeer research team are Dr. Mohamed Yousef, Dr. Robert A. Dietrich and John Henshaw. Ray Cameron is a graduate student participating in the project and A.M. Gau and Deborah Pomeroy are technicians.

A specially-constructed group of corrals has been built to handle the 2 reindeer bulls, 4 cows and 6 calves that were brought to the campus in October from the Bureau of Indian Affairs model herd at Nome. A series of gates control movement of the animals and aid in taming them.

"The arrangement should be able to handle any wild animals, up to and including elephants— or at least

moose!" said Dr. Luick.

Plans have been made to capture other wild animals for similar research projects. He said helicopters can be used to approach animals close enough to shoot them with a syringe dart containing drugs that cause immobility.

The animals then can be hung beneath the craft in a sling and transported to trucks.

When testing procedures have been perfected, and a sufficient number of reindeer tamed, the animals will be equipped with back-packs containing apparatus to take data on such metabolic processes as respiration and digestion.

The apparatus will be operated by remote control and the controlling equipment will be kept at a mobile station located nearby, perhaps in a trailer, where recording devices will also be located.

Blood samples, for example, will be taken periodically via teflon tubing permanently inserted in the blood vessels. Pumps to pull blood samples will be activated by electronic signals from the control station. Radioactive tracers will be used in the studies.

Groups of animals equipped with the back-packs will then be hobbled, and, accompanied by members of the research team, will be released on the Alaska tundra, possibly at Cantwell near McKinley Park, or at Nome.

Thus, data obtained will reflect typical environmental conditions.



JAMES HONEA, Ruby, Alaska

ANCHORS AWEIGH for three Alaskan youths. The following Navy Blue Jackets are at the U. S. Navy Training Center, San Diego, California where they are undergoing Recruit Training, as enlistees under the Navy's program in which they will receive training in the field of their choice.

Frenzied Activity Harvesting Herring Eggs Soon at Craig, Sitka, Klawock

Craig, Sitka and Klawock will soon be the site of frenzied activity that is peculiar to Alaska. The annual herring spawn harvest will soon be held in the offshore areas of these communities.

Because of this, Labor Commissioner Thomas J. Moore announced this week that the Alaskan child labor law prohibits the employment of minors under the age of

eighteen on any floating food processing plant, barge, or boat. This includes the loading and unloading of floating vessels.

Moore said that Department of Labor officials will be on hand in Craig, Sitka and Klawock to enforce strict compliance with this law.

He also stated that employment of minors under 18 in connection with the spawn harvest may be allowed on land areas and docks, provided that the minors register with the Department of Labor and obtain a signed exemption form.

The minors must register with the office of the Department of Labor in Juneau. However, this may be accomplished by writing to the Department of Labor, Wage and Hour Division, Box 1149, Juneau, Alaska.



Ready for the unexpected?

Next time an emergency arises, you'll be ready—if you start buying U.S. Savings Bonds now.

U.S. Savings Bonds