

Prof. Moore treated opossum young from three to 100 days old with male and female gland extracts or hormones. The substances were either mixed into ointments and rubbed on the animals' naked skins or were injected as solutions.

The experiments showed that even as early as the third day of post-natal development, sex is already sufficiently determined that it cannot be reversed by

hormone treatment, for neither male nor female sex glands were turned from the course of development they had started by the action of the opposed sex hormone. On the other hand, a number of changes, some of them quite radical, took place in the accessory and secondary sex structures. Female hormones caused male characters to shift in the female direction, and vice versa.

*Science News Letter, January 25, 1941*

GENERAL SCIENCE

## Canadian Science Supports Dominion's War Effort

### Workers Calibrating Gauges, Making Optical Parts, Studying Personnel Selection Methods and Nutrition

CANADA'S war efforts are receiving the benefits of scientific researches in many fields, the National Research Council of Canada reports, on the basis of a check-up of the activities of workers coordinated through its agency. These benefits of science are derived both directly, as in the munitions and aircraft industries, and indirectly in such things as safeguarding the Dominion's health and food.

One very critical spot, at the outbreak of hostilities, was the work of calibrating gauges of all kinds, in the Council's section on metrology. Little work of this kind had been done in Canada before the war, so that it was necessary to send representatives to Britain to study latest methods in testing munitions gauges. Now there are two laboratories, one at Ottawa and one at Toronto, where the greatly increased volume of gauge calibration work is being taken care of.

There was also a grave shortage of military optical instruments, such as range-finders and telescopic sights. This has now been remedied, and the Na-

tional Research Council's own shop can produce any kind of precise optical part. Other precise physical instruments developed in Canada include an electrical plotting device for sound range finding and a chronometer for measuring muzzle velocities of artillery shells.

Work on improvement in aircraft ranges from tests of plastics used in making accessory parts and bonding fabric and plywood wing materials to investigation of improved light armor and anti-icing devices for propellers. Many improvements have been made in engines and landing gear, especially in the adaptation of skis and floats for use in far northern patrol areas.

National Research Council psychologists and medical scientists have conducted extensive investigations into the best testing method for selecting personnel, again especially for the flying service. They have been concerned with problems in oxygen requirement, "black-outs" of pilots in steep dives or rapid spins, and rapidity of mental-muscular coordination in situations requiring split-second reactions for success in combat and safety in handling and landing planes.

Feeding of troops and civilian population has presented many important problems. The Council's division of biology and agriculture cooperated in the preparation of the new ration schedule for the troops, and also worked with the medical division on the study of proper cold storage methods to use in blood banks.

Changes in the smoking, shipping and storing of the famed Canadian bacon

make it possible to extend the time of its use from less than forty days to at least seventy—a matter of considerable practical importance in victualling troops now in England and on the Mediterranean fronts.

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### for YOUR CONVENIENCE unusual chemicals and supplies



**PURPLE - X** Ultra - Violet lamp—a powerful source of U.V. (250 watts. 50 hours, 110 volts, ordinary socket). Minerals, dyes, vaseline, natural teeth shine in its rays. On a party, see who has false-teeth or paint skull on face with vaseline. Useful to teachers. \$2.00, express chgs. collect.

**ALNICO** permanent magnets—super-powerful alloy of Aluminum, Nickel, Cobalt. On your office desk, these will attract much comment. C-102-1 1/4" high, \$1.00 each, \$1.50 per pair. C-103-1 1/4" high, \$1.50 each, \$2.25 per pair. C-103 best buy.



**FLEX-RAY**—Like pure quartz, curves light around corners. The perfect bedside flashlight. Illuminate throat, interiors of drawers, radio sets. Hand-somely made for medical use, not a premium. \$1.50.

**VITAMINS**—Each two capsules contain 20,000 units A, 2,000 D, and E in the form of wheat-germ oil, 250 units B<sub>1</sub>, 500 units C, 25 units G (B<sub>2</sub>), PLUS LIVER EXTRACT AND IRON. 72 capsules in all . . . \$2.00. Compare the price and features.



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**SOILLESS SALTS**—Make a chemical garden or give your plants new vigor . . . Each tablet contains all elements necessary plus vitamins B<sub>1</sub> and B<sub>2</sub> . . . 50 tablets \$1.00 (50 quarts solution).



**MT-Scope**—locates buried metals by radio waves. Circular 25c.

**BRYOPHYLLUM LEAF**—Tropical sprouting leaf, free with each order.



**PURE VITAMINS**—B<sub>1</sub>, G, Nicotinic, B<sub>6</sub>, C, E, Pantothenic Acid (Calcium Pantothenate). Quotations on request.

## CAMBRIDGE LABORATORIES

Dept. 7

Wellesley, Mass.

### ● Earth Trembles

Information collected by Science Service from seismological observatories resulted in the location by the U. S. Coast and Geodetic Survey of the following preliminary epicenter:

Sunday, Jan. 5, 1:46.7 p.m., EST

in the region of Flores Island, east of Java and south of Celebes. Latitude, 9 degrees south. Longitude, 121 degrees east.

Monday, Jan. 13, 11:27.7 a.m., EST

North on New Guinea. Latitude, 3 degrees south. Longitude, 144 degrees east. Severe shock.

For stations cooperating with Science Service, the Coast and Geodetic Survey, and the Jesuit Seismological Association in reporting earthquakes recorded on their seismographs, see *SNL*, Feb. 24, 1940.