GENERAL SCIENCE

College Deferments To Remain Level

➤ COLLEGE DEFERMENTS under Selective Service will continue under the present regulations and at the same levels until about this time next year at least.

This is now the expectation in Washington, despite tightening of regulations that were planned before the Korean truce actually went into effect.

Young men in college can look forward to at least another year of study to allow fitting themselves for more useful military as well as civilian service to the nation.

The pinch is expected to come about August next year, and a tightening of the situation will occur even if the actual fighting does not resume. The present size of the armed forces will require the drafting of more than those who become 18 and one-half years old.

The return to civilian life of Korean veterans is expected to add to the ranks of veterans in college. These students, having done their military service, will be able to look forward to uninterrupted college work, and they will be added to the trained manpower that will be available in a few years to industry.

Already the numbers of veterans from Korea who are taking advantage of the college provisions of the new law exceed those that Veterans Administration officials predicted would be going to college.

The tight draft situation that will arise next year has renewed discussion of a universal military training program, but there is no possibility of any action by Congress until next year, if then.

Science News Letter, August 15, 1953

GEOGRAPHY

Persian Gulf Pirates Turn to Oil Industry

➤ THE PIRATES, smugglers and slave traders on the shores of the Persian Gulf, formerly known as the "Pirate Coast," have given up their ancient "trades" to work for the oil industry.

This is reported by Dr. Alexander Melamid of the New School for Social Research to the American Geographical Society's *Geographical Review* (April).

The port of Sharjah, near the eastern end of the coast line, sends about 350 boats out to do pearling, and in addition has about 100 fishing boats. For the most part, however, the coast, now called Trucial 'Oman, is virtually empty of human beings today.

Qatar at the northwestern end of the coast now ranks eleventh in oil-producing states of the world. Many wells yield more than 5,000 barrels a day, compared with an average in the U. S. of 12.8 barrels.

Since ex-President Truman's claim in 1945 to United States jurisdiction over the oil resources under the shallow seas of the U. S. continental shelf, no fewer than 11 states in the Persian Gulf area have asserted similar or more sweeping claims.

These claims are often conflicting, due to the fact that no boundaries are clearly defined on the land, let alone under the sea. But so far oil has been struck at only one offshore point and that is in the extreme northwest part, effectively claimed by Saudi Arabia.

Piracy has practically ceased since 1835 when Great Britain signed a treaty with the sheiks of Trucial 'Oman, in which the sheiks agreed not to fight one another on the sea nor to engage in piracy and Britain, on its part, agreed not to interfere with the many land wars of the sheiks. Great Britain recognized no boundaries between the sheikdoms.

Six local sheiks signed the treaty in 1835. Only five sheiks existed in 1914. Today there seem to be seven. When Great Britain had a quarrel over oil concessions in Iran, they rerouted their air routes to India over Trucial 'Oman instead of Iran. Rights to land planes at Sharjah were obtained and overnight quarters for passengers with permanent armed guards were established in a fortified compound near Sharjah.

Today, larger planes can fly directly from Bahrein to Karachi and few landings are made in Trucial 'Oman.

Science News Letter, August 15, 1953

ANTHROPOLOGY

Respect Man's Right To His Own Culture

➤ TWO ANTHROPOLOGISTS believe that we must accept a man's right to his own culture, just as we have accepted his right to his own religion.

They are Dr. Ralph Beals and Dr. Harry Hoijer of the University of California at Los Angeles whose new book, "An Introduction to Anthropology," has just been published.

They point to these examples: 1. Some Eskimos make a practice of killing their grandparents. 2. Among the Trobrianders of Melanesia, fathers are not required to support, educate or discipline their children. 3. A Navajo man must not speak or even look at his mother-in-law.

"In many cases these customs have a logical economic or social basis," say the U.C.L.A. anthropologists.

The food supply of some Eskimos is often barely enough to maintain children and working adults. To prohibit killing of grandparents is to condemn the group as a whole to slow starvation. Thus, unless we can help better the conditions that gave rise to the practice, we have no right to interfere with it, say the anthropologists.

Masculine responsibility for child care is not lacking among the Trobrianders. It is the function of an uncle.

As for the Navajo husband-mother-in-law relationship, there are probably those who would find it quite acceptable in our own society, the professors add.

Science News Letter, August 15, 1953

IN SCIEN

PALEONTOLOGY

Death Valley Home Of Ice Age Mastodon

➤ EVIDENCE THAT elephant-like mastodons roamed Death Valley during the Ice Age of 10,000 to 15,000 years ago has been uncovered with the discovery of a 39-inch tusk near the site of an extinct lake there.

The tusk was eight inches in diameter at one end and four inches at the other. In spite of all precautions taken by its finder, Dr. Thomas Clements, University of Southern California geologist, the ancient tusk crumbled to pieces when it was removed.

Science News Letter, August 15, 1953

PSYCHOLOGY

Mice Defeated in Fights Have "Combat Fatigue"

➤ MICE THAT are defeated repeatedly in fights with other mice develop "combat fatigue" just as some soldiers do.

This has been discovered in experiments at the Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Me. While the investigations by Dr. J. P. Scott and Mary-Vesta Marston were on one strain of the famous pure-bred Jackson Laboratory mice, scientists hope to obtain hints that will be useful to doctors in treating similar anxiety states that are called "combat fatigue" in human beings.

The long persistence of escape behavior, as it is called, seems to have a physiological basis, involving the nervous and other bodily systems.

Male mice were allowed to be beaten up by other male mice at 30-minute intervals every other day. After four to six days of such persistent defeat, these mice could not be trained to defend themselves with the mouse equivalent of their fists, as ordinary mice can be trained. They avoided fights. They developed an inhibition which in some cases persisted after two months of rest.

During this attempted fight training, the mice reduced their jumping and squeaking, which are emotional motor reflexes occurring involuntarily. But in voluntary behavior, the sort that is controlled by thought, the mice persisted in trying to avoid combat. The reflexes tend to die out in a few days, but the escape behavior may last for weeks or even months.

This makes the scientists believe that the escape behavior becomes associated as the cause of the emotional reactors. These in turn tend to stimulate more escape behavior.

Female mice were not used in the experiments.

Science News Letter, August 15, 1953

CE FIELDS

CHEMISTRY

Loco Weed "Mine" Yields Rare Selenium

➤ A RELATIVELY rich source of the scarce chemical element, selenium, has been discovered in "loco weeds" that poison cattle.

Artificial growing of this pea-like herb may prove to be a practical way of creating a "weed mine" and producing the chemical, important in the electronics, petroleum and rubber industries, Dr. Bruce W. Gonser, assistant director of the Battelle Memorial Institute, Columbus, Ohio, reports in *Industrial and Engineering Chemistry* (Aug.).

Even if the soil in which the loco weeds grow does not contain sufficient selenium to make direct extraction economical, the plant blots up the element and concentrates it in its tissues. As much as 1.5% selenium by weight is contained in a plant in soil that contains only 0.005% of the chemical.

At present selenium is a by-product of the electrolytic production of copper and the supply is inadequate.

Science News Letter, August 15, 1953

INVENTION

$300,000 Paid for Atomic Patent

➤ PAYMENT OF $300,000 as compensation for partial revocation of a patent granted to seven atomic scientists in 1940, and for infringing use by the U. S. Atomic Energy Commission and the Manhattan Engineer District, has been approved by the AEC. The patent involved has been assigned to the U. S. government.

The patent, entitled "Process for the Production of Radioactive Substances," was granted on the basis of work by the seven scientists in Rome prior to 1934. One of the group was Enrico Fermi, who later played a leading role in the development of the U. S. atomic bomb.

Bruno Pontecorvo, who disappeared in September, 1950, after flying to Finland from England, and is believed to be in the Soviet Union, also was in the group. Pontecorvo originally held an eighth interest in the patent, but he assigned half of his interest to Eugene Ghiron-Fubini, Glen Head, Long Island, N. Y., in October, 1942. Pontecorvo gave his power of attorney to the attorney for the applicants before his disappearance.

The one-sixteenth share still assigned to Pontecorvo will be deposited in the U. S. Treasury pursuant to Treasury Departmental Circular No. 655, governing payment of funds to persons in certain countries.

The other scientists who had an interest in the patent are Edoardo Amaldi, Istituto fisico della Universita, Rome; Oscar d'Agostino, Istituto di Sanita Pubblica, Rome; Franco Rasetti, Johns Hopkins University, Baltimore; Emilio Segre, Berkeley, Calif., and Guilio Cesare Trabacchi, Istituto di Sanita Pubblica, Rome. Each of them, along with Fermi, held an eighth interest. G. M. Giannini and Co., Inc., of Pasadena, assignee and legal owner of the patent, also held an eighth interest.

The discovery involved in the patent was that radioactive isotopes of a number of elements can be produced by exposing the elements to neutrons which have been slowed down by passage through a moderating material. This principle has been applied in the atomic energy program.

The patent, granted in 1940, was partially revoked under the Atomic Energy Act of 1946.

Science News Letter, August 15, 1953

PUBLIC HEALTH

Examinations Complete Physical Will Include

➤ A GOOD many persons these days have had routine X-ray examinations of their chests. These are made to pick up unsuspected cases of tuberculosis. They also have helped spot unsuspected cases of cancer of the lungs.

Other persons have had routine checks of blood or urine. Many women go regularly to their doctors for routine examination of cervical smears for cancer. These routine checks are good for special purposes, but they should not lead the person to believe that he has been examined thoroughly and found normal, warns Dr. J. D. Mortensen of the Mayo Foundation, Rochester, Minn.

A complete physical examination, he states in a report to the American Academy of General Practice, should include the following: a thorough medical history, careful checking of the skin, posture, head and neck, eyes, ears, nose, throat, lungs, abdomen, genitalia, rectum, extremities and back.

X-ray examination of the chest, the blood Wassermann test and a urinalysis should all be routinely performed and brief neurologic and mental examinations should be made. All women should receive a pelvic examination.

If, after this, the doctor tells you that he has found nothing wrong with you, you have cause for celebration. Do not, Dr. Mortensen advises, feel that you have wasted your time or money. For many, the relief from worry that something dreadful is wrong with them and the peace of mind gained from such a complete physical examination are worth all the time and money that it costs.

For those in whom the examination detects trouble early enough for cure, the examination has been the means of giving them a longer lease on life.

Science News Letter, August 15, 1953

TECHNOLOGY

Toy-Like Gyroscope To Help Guide Missiles

➤ A TINY gyroscope about the size of a flashlight cell soon will be in mass production to help steer thousands of guided missiles to their targets.

String-walking gyroscopes regularly appear as children's toys. With their rotors spinning rapidly, the devices can hang as if by magic from the lip of a glass. One end of the toy is suspended in space, while the other end is supported only by the lip of the glass.

Once their rotors are whirling, gyroscopes have the property of resisting a change in the way they are oriented in space. Thus if the rotor is brought up to speed while lying in a horizontal plane, it resists being shifted into a vertical plane. This quality makes gyroscopes particularly good for keeping airborne radar antennas sweeping the same area of sky regardless of the pitching and rolling of the plane.

A joint product of the United States Time Corp., Waterbury, Conn., and Sanders Associates, Inc., of Nashua, N. H., the new gyro is less than an inch in diameter, less than two inches long and weighs less than three ounces. Its precision rotor comes up to running speed of 24,000 revolutions a minute in less than 10 seconds.

In addition to helping guided missiles find their targets, the gyros will go into aircraft instruments and fire control systems. They also will help stabilize radar antennas.

Science News Letter, August 15, 1953

MEDCINE

Advise Air Conditioning For Heart Patients

➤ PATIENTS WITH heart disease should have air conditioning in their rooms or hospital wards during hot, humid weather, the American Medical Association advises.

The reason is that as the temperature and humidity go up, the heart has to work harder because the heart and blood vessels help cool the body through increased flow of blood through the skin.

Rest in bed in a warm bed and room may rest the skeletal muscles of the body, but it will increase the work of the heart, the association points out. Rest in bed in an air-conditioned room, however, rests the heart.

The best guide for adjusting the temperature and humidity of the patient's room is his comfort, the association advises in *Archives of Internal Medicine*. Differences in climate, in bed clothing and in the patient's activity in bed will affect this. In some regions of the country, air-conditioning may not be necessary. Oxygen tents should be used on hot humid days primarily for their influence on the temperature rather than for the oxygen itself.

Science News Letter, August 15, 1953