MILITARY SCIENCE

Rockets Add Their Force To Palawan Bombardment

See Front Cover

➤ ROCKETS STREAK out from a vessel of the Seventh Fleet, as shown in the official U. S. Navy photograph on the front cover of this SCIENCE NEWS LETTER, to add their force to the bombardment which blanketed the shore near Puerto Princessa in smoke.

The action took place on Feb. 28 when troops of the Army's 41st Division were landed on Palawan by the Seventh Fleet in another of the series of sure and well-timed strokes which has marked the Philippine campaign.

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ETHNOLOGY

Werewolves on the Loose In Germany, Nazis Say

➤ THE WEREWOLF is on the loose again in Germany, according to Nazi propaganda, to raise a reign of terror in the Fatherland for Germans who accept office in conquered territory under control of the Allies, and for Allied soldiers caught off guard within the Reich. The werewolf of medieval days was only a superstitious belief; the present werewolves are members of an underground party, and are real, the Nazis say, and they will strike with suddenness and without warning.

The werewolf of medieval days, also called the werwolf or the wehrwolf, was a person who, according to the superstitions of the time, was able at will to assume the body of a wolf, retaining, in part at least, the human mind, but taking on the beast's cunning, strength, savagery, and desire for human flesh. He assumed the form of the beast usually at night, and then preyed on wanderers in lonely places to satisfy his cannibalistic taste for human flesh.

Belief in werewolves was common in much of Europe. The were-jaguar was a similar superstition among the Indians of the Amazon basin. Other peoples believed in the were-bear, were-tiger and were-hyena.

The word werewolf means literally man-wolf. In Norse it was vargulf, meaning a wolf worse than any other kind of wolf. Perhaps this is the name the Nazi underground should have adopted. Scientists explain that the werewolf superstition is a belief in lycanthropy, the power which some persons were supposed to have of becoming wolves, or, in some regions, the fiercest animal existing there. The basis of the superstition is the belief in transformation, but its special form is due to mental aberration, persons of diseased minds imagining they were wolves and, acting as such, preying on other humans.

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MEDICINE

Link Between Kidney And Ovarian Functions

➤ EXISTENCE of a hitherto unknown action of female sex hormones, which may be responsible for certain disorders of women, is indicated by experiments which Dr. Kurt A. Oster, director of the department of pharmacology in the research laboratories of McKesson & Robbins, Inc., reports in *Endocrinology*.

The experiments have demonstrated for the first time that there is a definite link between the kidney and ovarian functions, a fact often suggested by physicians who noted changes in the function of the kidney in the menstrual cycle and especially during pregnancy, the report reveals.

By using a stain with a specific affinity for a particular group of organic chemicals, Dr. Oster demonstrated that these substances occur in the normal kidney in a clearly defined distribution pattern. He found that the kidney exhibited varying degrees of staining in four zones which parallel the functional units into which physiologists have divided the kidney, and that the intercortico-medullary or ICM zone tends to lose and then regain its deep staining quality in synchronization with the cycle of the egg in the ovary.

During pregnancy, the stain disappears from this kidney zone almost entirely, and with the resumption of the normal ovarian functions, the cyclic nature of the staining returns, he found.

Dr. Oster concluded that this phenomenon indicates a disappearance and reappearance of a chemical in the kidney cells, rather than an alteration of cell structure, since a structural change can be demonstrated with ordinary staining methods.

Preliminary experiments conducted by Dr. Oster indicated that ovarial hormones alone are responsible for the change in the kidney.

The studies described in the paper have been going on in the McKesson laboratories for nearly two years under the direction of Dr. Oster with the assistance of Miss Jean G. Baum.

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IN SCIEN

HORTICULTURE

New Orange Variety Ripens 5 to 8 Weeks Earlier

➤ ORANGES from Florida may reach Northern markets a month, or even two months, earlier than they now do, once a new variety on which U. S. Plant Patent 657 has been issued becomes more widely propagated. The new variety originated as a bud sport in the top of a tree of one of the standard orange types, in the grove of the late Harold E. Cornell of Winter Haven. He propagated it by grafting, and since his death his widow, Mrs. Thelma Cornell, has carried on the work.

The one thing that distinguishes this tree in appearance is a tendency to thorniness; the fruits, medium to large in size, look and taste very much like other high-quality oranges. But they have the great advantage of ripening from five to eight weeks earlier than any other known Florida orange variety.

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ANIMAL HUSBANDRY

Hens Lay Better In Artificial Light

➤ ARTIFICIAL light in the henhouse means more money to the farmer, experiments in the poultry department at Cornell University indicate.

Tests for the first year show that 125 pullets of high-producing strains receiving artificial light produced 26,085 eggs, or 2,757 more than the same number of pullets without lights. Eggs from the former sold at retail for $1,045, or $45 more than for the latter. The additional income from each pullet was $1.

One flock received no light in the 13-month test period, and the other was lighted from Sept. 15, 1943, to April 25, 1944, and again from Aug. 15 to Oct. 15, 1944.

The lighted flock laid 3,260 more eggs than the unlighted one from September to April, when egg prices are higher, but 503 fewer eggs during the rest of the period. Part of this difference, according to F. E. Andrews of the poultry staff, was due to a somewhat higher mortality in the unlighted flock during the early part of the laying year.

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CE FIELDS

BIOCHEMISTRY

Fungus Found to Be Source Of Vitamin B Complex

➤ A FUNGUS that causes one of the most destructive of plant diseases, flax wilt, has been found to be a potential source of most of the B vitamins, in researches by a four-man team in the laboratories of Fordham University.

The fungus, known to botanists as *Fusarium lini,* was grown in quantity on a stock culture medium containing glucose. The matted growth was ground up after being dried, and added to a vitamin-deficient diet fed to rats. It was found necessary to add thiamin (vitamin B_1), but the dried mold-like substance proved an adequate source of other vitamin B constituents, "comparing favorably with brewer's yeast."

Collaborating in the research, which is reported in *Science* (April 13), were Leonard J. Vinson, Prof. Leopold R. Cerecedo, Robert P. Mull and F. F. Nord.

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ENGINEERING

Color Speeds Production Of Army's B-32 Dominator

➤ THE ARMY'S new B-32 Dominator superbombers are flying into the blue skies at an increasing pace as the result of color control systems on the assembly lines that improve the safety features and operating ease of many machines at Consolidated Vultee Forth Worth plant.

All machines in the entire plant are painted a sea-water green that is easy on the eyes and makes the production areas seem more cheerful to workers. Working areas on the machines are all painted yellow, so that when a plane builder sees a yellow section on a machine he knows that it contains moving parts of which he must beware when the machine is in operation. Red paint is used on all electrical switches and buttons that control the machines.

In addition, each one of the ten work stations along the assembly line is designated by a different color. The color for each station is clearly shown by a color control board, showing work to be performed, hung beside the plane itself. Thus a continual visual reminder is provided of every job to be performed and who is to do it. The boards are made up of small removable strips of paper on which information is printed so that as assembly instructions change, the color boards can be kept up to date.

Employees, too, are aided by the color system. Accustomed to the color boards, they waste no time in trying to determine just where station No. 1 or No. 6 or No. 10 might be. All they need do is glance at the board.

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GENERAL SCIENCE

Drafting Young Scientists Endangers War Effort

➤ DRAFTING the country's younger scientists away from their laboratories and classrooms to throw them into action as combat troops endangers both the present war effort and the postwar job program, warns the American Association of Scientific Workers in a statement issued under the signature of Dr. Harry Grundfest of Princeton University.

The Association's protest is provoked by the recently established Selective Service policy, of reclassifying research students and laboratory workers in the 18-to-30 age group and inducting them into military service. It is also expected that the 30-to-38 age group will be called up soon.

The Association's statement comments:

"Unless these steps are halted, scientific personnel on college staffs and on research projects of less immediate importance to the prosecution of the war will shortly be swept into the armed forces. In terms of manpower, the total number of people involved is small. Induction or deferment of these groups can do little, therefore, to affect the requirements of the armed forces.

"In terms of the loss to society and to science, however, the induction of these younger scientists will bring about a grave situation. It will deprive society and science of a group which is probably at the height of its originality and promise. It will furthermore seriously curtail the teaching facilities of the colleges, and thus bring about a still greater deficit in the postwar supply of scientists."

Officers of the Association have made representations to War Manpower Commissioner McNutt, Selective Service Director Hershey, and to various scientific bodies. They have also issued a general call to scientific societies, to colleges and universities, and to individual scientists, to make their protests felt.

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RESOURCES

Present Supply of Kapok Will Be Gone in 8 Months

➤ LIFE JACKETS and life preservers used by the armed forces and merchant marine will soon be packed with a new fibrous glass material as the 10,000,000-pound stockpile of kapok, and substitutes such as milkweed fiber and Ecuador kapok, threatens to become depleted by the end of this year, reports the U. S. Coast Guard.

Selected as the best substitute for kapok life-jacket filler after exploratory tests had been conducted on a number of materials at the Mellon Institute of Industrial Research, fibrous glass has many superior qualities. It is fireproof, more resistant to being packed down under compression, and does not absorb water as rapidly as kapok.

Before the war, America imported up to 10,000 tons of kapok annually. Most of it came from Java, and this source of supply was cut off when that country was invaded by the Japs. A soft, fluffy fiber, kapok is secured from the pods of the bombax tree. The clumps of fiber were removed from mature pods, cured in the sun and compressed into bales by native labor.

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RESOURCES

Mountain Leather May Have Many Commercial Uses

➤ MOUNTAIN leather, a type of asbestos that has been only a museum curiosity in the past, is now found adaptable to industrial uses, particularly in filtering, sound-proofing and shock-absorbing materials. A deposit of limited size has been discovered near the entrance to Glacier bay, Alaska, and experiments, conducted by the U. S. Bureau of Mines, give promise of possible wide commercial uses.

This native material is known to geologists as paligorskite. When dry it is light in weight, tough, resembles buckskin, and tears somewhat like heavy cardboard. Upon wetting, it absorbs considerable water, swells and becomes soft, can be torn easily, resembles paper pulp, and is slimy to touch. In this condition it can probably be converted to a pulp in conventional paper-mill beaters, and then formed into many lightweight, acid- and fire-proof products.

A special report on mountain leather and its possible uses has been issued by the Bureau.

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