

CHEMISTRY

**Prune Pit Oil Rich
In Vitamins E and A**

FROM the pits of prunes comes a new and promising California by-product, prune pit oil, reddish in color with pleasant aroma and taste. Relatively rich in vitamin A and apparently in vitamin E. Authority: Dr. Agnes Fay Morgan, head of the home economics division of the University of California's College of Agriculture.

Science News Letter, June 1, 1940

MILITARY SCIENCE

**Armor for British Tommy
Advised by Surgeon**

IF THE European war gets past the Blitzkrieg stage to anything like trench warfare, British soldiers may be wearing armor plates in the respirator boxes of their gas masks. According to word just received at the American Medical Association, Kenneth Walker, English surgeon with experience in treatment of wounds in front line conditions during the last war, now recommends the use of such armor.

His recommendation seems likely to be followed in view of the fact that such an armor device which he suggested near the close of the last great war won the approval of Winton Churchill, then Minister of Munitions and now Prime Minister, to the extent that Mr. Walker was recalled to work at the ministry as expert in light armor.

A soldier cannot, because of the weight, wear armor that would protect him against bullets, but nearly two-thirds of the wounded in the World War were put out of action by projectiles other than bullets, Mr. Walker recalls now in a report to the *British Medical Journal*. Over one-third of those found dead on the battlefield had chest wounds. Mr. Walker noted that a large number of men died in the trenches as a result of being hit in the front of the chest by tiny fragments of grenades or shell that tore open a large blood vessel, death following as a result of hemorrhage.

A steel plate, curved to fit the chest, would, Mr. Walker believed, protect the most fatal area if worn in the box respirator when the latter is carried in the alert position. His suggestion for such a device during the World War was pigeon-holed for a time until a friend brought it to the attention of Churchill. Mr. Walker declined the position as light armor expert then offered him, because

it had taken two years to get the steel helmet introduced and the war was nearly over.

Now, however, he believes that since the principle of protecting the head from projectiles of low penetrating power has been accepted, it is time to extend the principle to other vulnerable areas.

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PHYSIOLOGY

**Too Much Vitamin A
May Cause Blackheads**

BLACKHEADS may result from too much vitamin A in the diet, Dr. Richard L. Sutton, assistant professor of dermatology at the University of Kansas Medical School, declared at the meeting of the American Academy of Pediatrics in Kansas City.

This is the first time, Dr. Sutton said, that such an effect has been traced to vitamin A. This vitamin, needed by children for normal growth, "has not previously been accused of being harmful even in large dosage."

Vitamin A is one of the vitamins in cod liver oil. Butter, carrots and green leafy vegetables are other sources of the vitamin.

Acne, Dr. Sutton believes, is due to improper metabolism of fatty ingredients in the diet. Successful treatment, he has found, is to exclude milk, butter, cream, ice cream and cod liver oil from the diet. He also gives thyroxin, the thyroid gland hormone, to help the patient take care of oily substances in the diet, and resorts to local surgery to open the blackheads and pimples and remove their fatty deposits.

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BIOLOGY

**Chromosomes Increased
By Chilling of Eggs**

ANIMALS with three times the normal number of chromosomes in their cells were reported by Dr. Raymond B. Griffiths of Princeton University to the American Association of Anatomists meeting in Louisville. The animals were newts, which are long-bodied, tailed relatives of frogs and toads. Dr. Griffiths was able to produce specimens with the triple chromosome count by chilling their eggs at temperatures a few degrees above freezing. He also obtained newts with half the normal chromosome number by the same chilling technique.

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ZOOLOGY

**Raccoon Saves Life of
His "Natural Enemy"**

See Front Cover

NATURAL animosity between a raccoon and a coati-mundi "refugee" from the tropics was overcome at the Denver Zoo when Keeper Clyde E. Hill secured the two as babies and brought them up together.

The affection which developed between the two animals saved the life of the thin-coated tropical animal during the severe cold of last winter. The heavy coat of the raccoon kept both warm. The two animals, cuddled together, are shown on the cover of this week's SCIENCE NEWS LETTER in a photograph by Pat Coffey.

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MEDICINE

**Clinch Allergy Diagnosis
By Finding of Cells**

DISCOVERY of rosy-stained cells in nasal secretions will often settle the question of whether a child has a cold, or sinus disease or an allergy like hay fever, Dr. French K. Hansel, of Washington University School of Medicine, told the American Academy of Pediatrics.

The rosy-stained cells are called eosinophiles because they can be easily stained for microscopic detection by the red coal tar dye, eosin. These cells are found in large numbers in the nasal secretions of patients with respiratory allergy, Dr. Hansel said.

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ZOOLOGY

**Strange Beast and Birds
Sent Back from Liberia**

PIGMY hippopotamuses, a huge eagle that preys on jungle monkeys, an armored anteater and a group of monitor lizards are among the strange beasts and birds sent back from Liberia, on the west coast of Africa, by Dr. William M. Mann, leader of the Smithsonian-Firestone expedition. Not the first of refugees from Africa, it is hoped.

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CE FIELDS

PSYCHOLOGY

Identical Twins' Minds Resemble Each Other

JUST how much more identical twins resemble each other in intelligence than do other brothers and sisters is revealed by statistics reported to the Eastern Psychological Association by Dr. James D. Page, of the University of Rochester.

The chances, as figured by Dr. Page, are that nearly 50% of identical twin pairs will differ by less than five IQ (Intelligence Quotient) points as measured on the standard Stanford-Binet test. Only 23% of ordinary brothers and sisters would so closely resemble each other in intelligence. And such a small difference could be expected in only 17% of unrelated chance pairs.

More than 80% of identical twin pairs will score within 10 points of each other, and differences greater than 15 IQ points may be expected in only 5% of such twins.

The probability is that one in every 25 ordinary brother or sister pairs will differ by 35 or more IQ points and one out of every seven unrelated chance pairs would differ that much.

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PSYCHOLOGY

Ink Blot Test Distinguishes Psychosis from Neurosis

WHEN a mental disease strikes a victim, the fright and worry over his plight often make him appear much "crazier" than he really is.

The importance of distinguishing these complicating "neurotic" symptoms from those of the organic disease itself was stressed by Dr. Zygmunt Piotrowski, of Columbia University, speaking before the Psychologists League in New York City.

The man who is acutely disturbed over his condition and worried into a state of great excitement may appear to the physician examining him as in a worse condition than another man whose mental disease is actually much more serious. But the prospects for his recovery are much better.

A simple psychological test, using what looks like an ordinary ink blot, enables the psychologist to sort out these "neurotic" patients from those whose illness is caused by uncomplicated mental disease. It takes only one hour. The test also aids the physician by revealing which symptoms are due to the mental disease itself and which result from the secondary neurosis.

The patient, looking at the blot, is asked to tell what he sees in the fanciful shape, as one might see pictures in clouds or curls of cigarette smoke. From the answers, Dr. Piotrowski said, it is possible to tell "with astonishing accuracy" whether the patient's mind is really deteriorated or whether his fears and worries prevent him from using the capacities he has.

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AGRICULTURE

Wealth of West Indies May Be Brought Back Home

Possible acquisition by the United States, as trustee for Western Hemisphere nations, of Caribbean islands and mainland colonies, offers opportunity to rectify one of the strangest of history's ironies.

One of the objectives of Christopher Columbus was the fabled wealth of the Indies—gold, spices, sugar. He found these things in the West Indies on which he stumbled, and many things besides which did not exist in the East Indies which he never knew that he had missed: the comfort of tobacco, the powerful healing of quinine, the manifold usefulnesses of rubber, the appealing flavors of vanilla and cacao, not to mention the solid utilitarian qualities of such staple foodstuffs as corn, potatoes and beans.

And behold what we have done with some of the best of these gifts of the New Indies: rubber and quinine have been transplanted bodily to the now-threatened East, and are produced no more in their original homelands. Even sugar has declined in its importance, in many of the islands (like Guadeloupe, for example) whence it once ruled the world market. Tin, of more real worth in the world than foolishly re-buried gold, is relatively neglected in the Andes, while it is being pushed in far-off Malaya.

Is it not high time some of these things, readily producible in our own dooryard gardens, be brought back home again from their perilous Far Eastern exile?

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PSYCHOLOGY

Hope for Older Addicts If They Have Good Record

THE POPPY'S bondage of narcotic drug addiction can be permanently broken by the man about 40 years old, brought up in a comfortable home, with normal childhood and a steady employment record who has become a narcotic drug addict probably by accident. This is the type of drug addict for whom there is a good outlook, Dr. Michael D. J. Pescor, U. S. Public Health Service, discovered from studying more than 1,000 drug addicts at the federal health service's narcotic farms.

The outlook for permanent cure of drug addiction is bad, however, for the "uncooperative voluntary patient over 50 years of age, who sought admission to the hospital because the law was 'hot on his heels,'" Dr. Pescor told the American Psychiatric Association.

This addict has probably tried all kinds of drugs, Dr. Pescor pointed out, and during his 20 years of addiction has had three or more compulsory cures in jails and penitentiaries. As a child he was incorrigible and antisocial. His parents were marginal, his own work record was bad, and he violates other laws.

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MEDICINE

Blood Cancer Transmitted By Virus-Like Substance

FURTHER evidence that the cancer group of diseases can be caused by viruses or virus-like substances in the body fluids was presented to the American Association of Anatomists by Drs. Arthur Kirschbaum and Kurt G. Stern, Yale University School of Medicine. They were able to transmit leukemia, which is a kind of blood cancer involving wildfire growth of white corpuscles, from diseased chickens to previously healthy fowl, by injections of blood.

Then they separated the blood into fractions of differing molecular weights by whirling it in an ultracentrifuge until it had been subjected to a force of 67,300 times gravity for half an hour. They found that the heavier fractions had high leukemia-causing capacity, while the lighter portions had little ability to transmit the disease. In physical and chemical properties the leukemia-causing portions of the blood were found to resemble a cancer-causing extract previously obtained by ultracentrifuging cultures of a chicken tumor.

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