NUTRITION

England Guards Against Hunger During Battle

ENGLAND expects that every man, woman, and child will be fed, even during full onslaught of Nazi blitzkrieg.

The country has been divided into 800 self-contained areas, each with food depot and buffer food depot, according to Dr. Brinley Thomas of the British Library of Information in New York. Food cargoes unloaded at British ports are dispatched to these depots. Special routes are traveled, to avoid hampering movements of troops and material. Depot stocks of vegetables, dairy products, meat, and staples are constantly used and replenished.

Even were Nazi attackers to succeed in dislocating for a time the usual channels of communication, the people would still get their food, he declared, adding:

"So long as British sea power and the Royal Air Force remain, neither the enemy's submarines nor his aircraft can stop British supplies from coming in; and the formidable military and civil defense forces will be sufficient to see that the emergency inside the country is only temporary."

If necessary, Britain could get the bulk of her food imports through her west coast ports alone, it is believed. In peacetime, Britain imports two-thirds of what she eats. British war gardens, planted even on home lawns, and kitchen economy and rigid war planning have spurred the country toward greater self-sufficiency.

Science News Letter, August 31, 1940

ZOOLOGY

Sea Otters Prefer To Eat Sea Urchins

SEA OTTERS of the Pacific coast, once believed near extinction but now staging a comeback, have food habits quite different from those of their smaller freshwater relatives, the river otters. River otters are about the most agile and skilled of all animal fish-catchers, whereas sea otters feed mainly on sea urchins and eat almost no fish.

The food habits of these little known, elusive animals have recently been studied closely by O. J. Murie of the U. S. Biological Survey, both in Alaska and California waters. Apparently the otters do not mind swallowing scratchy roughage, for they eat the Alaska sea urchins, shells, spines and all. However, the commonest California sea urchin has quite long spines, so on that coast the otters take the trouble to open them up.

Sea otters are also very fond of mollusks of various sorts, especially mussels (in Alaska) and abalones, which of course are found only in the California part of their range. They have a most peculiar way of opening smaller, strong-shelled mollusks. Picking up a flat stone from the sea bottom, an otter will roll over on its back in the water and rest the stone on its chest. Then it hammers the luckless shelled creature on this natural improvised anvil until its armor cracks. Mr. Murie has obtained motion pictures of an otter engaged in this shell-smashing operation.

Science News Letter, August 31, 1940

NUTRITION

Low-Cost Diet Adequate For Expectant Mothers

A WOMAN who is going to have a baby can live on a diet costing as little as 34 cents a day, and still get generous amounts of all the food substances she needs.

This expectant mother diet was worked out by Columbia University nutrition students, and announced by Dr. Clara Taylor, Columbia University assistant professor of nutrition. The 34-cents-a-day diet is rich in minerals and vitamins without appreciably increasing calories.

A sample day's menu consists of:

Breakfast—four prunes; one cup of oatmeal with a little sugar; two slices of whole wheat toast; one tablespoon butter; one glass of milk.

Lunch—cream of tomato soup made from one-half cup tomatoes, one-fourth cup evaporated milk, one teaspoon flour and one teaspoon fat; salad of one egg, lettuce, mayonnaise; cheese sandwich (three ounces of cheese and teaspoon of butter) on whole wheat bread; one glass of milk.

Dinner—three ounces broiled beef liver; one baked potato; one cup kale; two slices whole wheat bread; two tablespoons butter; one banana; one glass of milk.

Sugar allowance for a day is one ounce.

Vitamin B, calcium, and iron are most likely to be deficient in the food eaten by families on low incomes.

Vitamin B, Dr. Taylor points out, can be obtained from whole grain cereals, calcium from milk, and iron from green leafy vegetables and eggs.

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IN SCIEN

GENETICS

Funds Available to Aid Studies in Human Heredity

FUNDS are available for grants in aid to further studies on human heredity, it is announced on behalf of the National Research Council. Applicants are requested to write to any member of the committee, stating the nature and status of their problems, time required for completion, amount of money needed and how it will be spent.

The committee consists of Halbert L. Dunn, Bureau of the Census, Washington, D. C.; L. C. Dunn, department of zoology, Columbia University; K. S. Lashley, department of psychology, Harvard University; George L. Streeter, bureau of embryology, Carnegie Institution of Washington, Baltimore, Md.; Sewall Wright, department of zoology, University of Chicago, and Laurence H. Snyder, chairman, department of zoology, the Ohio State University.

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ZOOLOGY

Beavers' Feet Marked For Identification

A METHOD of marking beaver for identification, as cattle are branded on the range, has been worked out by Shaler E. Aldous of the U. S. Biological Survey. It consists simply in punching small holes through the webs connecting the beavers' hind toes. Since there are four of these webs connecting the five toes of each hind foot, a considerable number of animals can be marked without repeating, by assigning a code number to each web.

The work of marking can be done rapidly and easily by one or two men, using a standard leather punch, Mr. Aldous reports. It is practically painless, thereby presenting a considerable advantage over other suggested methods, such as tattooing the tail or putting tags in the ears. Furthermore, field experience has shown that it marks most of the animals permanently.

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CE FIELDS

ZOOLOGY

Too Much Fish in Diet Fatal to Silver Foxes

SILVER fox ranchers who feed their foxes a diet containing 10% or more of fish are inviting serious trouble, it is shown by a report of investigations conducted by Prof. R. G. Green of the University of Minnesota and C. A. Evans of the U. S. Biological Survey. (*Science,* Aug. 16).

A grave nervous ailment in silver foxes, seriously interfering with power of movement and ending fatally in a large proportion of cases, was traced to too much fish in the food pan, on fox ranches located in five different states. Basically, the disease is a vitamin B_1 deficiency, identical with the human malady known as Wernicke's hemorrhagic polioencephalitis. The human disease, however, is not caused by too much fish, but usually by too much alcohol.

Science News Letter, August 31, 1940

BIOLOGY

Fly Families Inbred For 200 Generations

THE OLD notion that close inbreeding causes families to "go to seed" and die out receives something of a jolt from two colonies of blow-flies maintained for the past ten years in the laboratories of Ohio State University by Prof. D. F. Miller (*Science,* Aug. 16).

During the decade these flies have produced approximately 200 inbred generations. In human terms, it is as though a single family had been intermarrying since the earliest gray dawn of Egyptian history, back in 4000 B.C.

It is true that Egyptian royalty practised brother-and-sister marriage, as did the Incas in South America. But one of these inbred dynasties never lasted for more than a few centuries. Then it died out—or was wiped out by war or assassination, and another took its place. Prof. Miller's flies have been maintained in unbroken line for the full 200 generations.

The two colonies, representing two different genera of blowflies, were started in 1930 in connection with the then recently discovered value of fly maggots in hastening the healing of infected wounds. Prof. Miller states that they have been found useful in research on such widely diverse subjects as osteomyelitis, insect physiology, insecticide testing, and as class material.

Since blowflies are flesh-eating insects, the adults are kept supplied with lean beef, supplemented by sugar and distilled water. The maggots or larvae are fed on fresh hamburger.

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ECONOMICS

Experiment in Rationing Tried in Japanese Cities

IF SIX "guinea pig" cities of Japan prove apt and docile at buying sugar and matches by ration card, Japanese officials, keenly watching success of their system, are expected to plunge into rationing many everyday articles.

Already scheduled for rationing are certain kinds of cotton goods and medical supplies, says a report to the American Council of the Institute of Pacific Relations, here. Other articles mentioned are the all-important rice, eggs, soy bean soup, soy bean sauce, bean paste, powdered milk and charcoal.

Though Japan has not resorted to rationing in three years of war, she approaches the necessity even now very gingerly, says the report. Sugar and matches, test materials rationed since June, were chosen, not because they are shorter than various other supplies, but because nearly every one uses them and because regulating these industries offered no peculiar difficulties.

Japan's sugar ration looks skimpy, only four-fifths of a pound per person per month. But while this is only about one-third the sugar allowed in England and Germany, it is close to the amount Japanese normally buy, if confectioneries are not counted.

Loopholes in the system are seen as endangering its success. To discourage bootlegging, officials have prohibited rural dealers to sell sugar outside their districts. Speculating, another problem, has proved troublesome in the industrial rationing of gasoline, with gasoline tickets sold undercover at high price. While Japan is only now venturing into individual consumer rationing, she has controlled sale of important commodities to industry for some time.

Science News Letter, August 31, 1940

INVENTIONS

Inventions To be Shown At New York World's Fair

AMERICAN inventors will have the opportunity of showing to the public and to fellow inventors their new devices, machines and processes during a special inventors' day to be held by the Hall of Inventions at the New York World's Fair on Tuesday, Sept. 24. Arrangements are now being made to receive models and exhibits whether patented or not. Officials of the Hall of Inventions expect that many of the exhibits will deal with aids to national defense.

New plants and flowers may even be shown on inventors' day because certain kinds of plants and flowers can now be patented and thus are considered to be inventions.

Science News Letter, August 31, 1940

GENERAL SCIENCE

Utah Holds High Rank as Birthplace of Scientists

UTAH leads all the states of the Union in number of scientific men born there in proportion to the population, it is revealed by a analysis of *American Men of Science,* famous Who's Who of science. The study is reported by Prof. E. L. Thorndike, of Teachers College, Columbia University (*Science,* Aug. 16).

In general, the states of the West and Northwest produce many men of science, but they do not hold them in competition with manufacturing states or attract them from other places, Dr. Thorndike found.

Massachusetts is another leading birthplace of scientists, as are also Colorado, Idaho, Iowa, Maine, New Hampshire, South Dakota and Vermont.

Delaware leads in drawing power for scientists born in other states in proportion to total immigrants to the state. Other states attractive to scientific men are Maryland, Massachusetts, Connecticut, Maine, New Hampshire, New York, and Pennsylvania.

Scientific men coming to the United States from foreign lands seem attracted to the southern states more than to the eastern states popular with native-born scientists. North Carolina, Tennessee, South Carolina and Virginia lead.

With the exception of Canada and Newfoundland, Russia is the birthplace of the largest number of foreign-born American men of science. England and Germany are close second and third.

Science News Letter, August 31, 1940