

GEOLOGY

Rocky Mountain Glaciers Found To be Growing Again

ROCKY Mountain glaciers are now growing again after almost ten years of rapid retreat, mountaineers report, as a result of heavy late snows in the higher ranges.

Arapaho Glacier, near Boulder, Colo., reputed to be the largest glacier in the state, is noisily in motion again, after several years of quiescence. When last measured, it was advancing 27 feet a year. This year's motion, according to geologists, may be much greater.

Fair Glacier, whose melt waters are one of the sources of the Colorado River, has grown almost 10 per cent. since 1936, photographs indicate, and the other glaciers in the nearby Crater Lake Hellhole are likewise growing.

Glaciers in Rocky Mountain National Park are either growing or holding their own, each glacier being a separate problem.

Glaciologists point out that this year's glacial advance is not evidence of a new Ice Age to come in the near future, but merely the result of a minor climatic variation, of which several have occurred in the recent past. A slight shift toward wetness brings a glacial advance like the one at present; a slight shift toward dryness brings drought and dust-storms, like those of 1934-36. In a few years, they predict, the glaciers will again be in slow retreat as they were in 1928-30.

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PSYCHOLOGY

Ink Blot Tests Given In Penitentiary

IMAGINE asking a hard-boiled criminal to look at an ink blot and tell what he sees in it. It sounds rather fanciful, but it is actually being done as part of a scientific study of delinquency and here is why:

A Swiss psychiatrist, Dr. Hermann Rorschach, found some years ago that a clue to understanding the personality of mentally sick persons might be gained by learning what their imaginations let them see in ink blots. You have probably noticed yourself, as many normal persons have, that a chance blot of ink on your blotting pad looks like a butterfly or a witch or a cat or some other object or creature. Dr. Rorschach believed that the sort of things one sees in ink blots depends on one's personality. Shy, imaginative persons might see ro-

mantic, poetic objects in ink blots, and matter-of-fact persons might see more prosaic objects. So he devised and attempted to standardize an ink blot test which many psychiatrists now use, calling it by his name.

Dr. M. J. Pescor of the U. S. Public Health Service was, as he says in his recent report, "intrigued by the possibility of using it as a routine procedure in studying the mental make-up of delinquent individuals."

"Incidentally," he added, "experimentation might also reveal whether it is really a test or merely a crystal ball in which the examiner may read whatever he wants to believe about his patient."

Consequently he gave the test to 500 prisoners who had been admitted to the U. S. Northeastern Penitentiary during an eleven months' period, and studied the results to see, first, whether the age of the tested person had any bearing on his score.

The age of the prisoners ranged from 17 to 77 years with average of 33.4 years, but the age factor, he concluded, is of no statistical significance in Rorschach Test performance, so far as delinquents are concerned. He did find a tendency for older men to choose original responses and for the younger men to select vulgar replies.

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FORESTRY

Funds Sought for Medal For Forest Fire Heroism

THE AMERICAN Forestry Association has launched a campaign to raise funds to endow an American Forest Fire medal to be awarded each year to an outstanding individual for courageous service in fighting forest fires. Suggested by the U. S. Forest Service, the medal is intended to bring recognition to the fact that forest fire fighting is today one of the most hazardous tasks performed in the United States.

Three thousand dollars is needed to endow the medal. Although a number of large donations have been received, the Association plans to secure small donations from a large number of people in order to spread appreciation of the award.

Any individual or public officer would be eligible for the award after "unquestionable evidence is presented that he has performed an act worthy of consideration for such an award," according to a Forest Service statement. The medal may be awarded posthumously.

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IN SCIENCE

BOTANY

Hayfever Pollen Found At 9,000 Feet Altitude

HAYFEVER pollen grains fly high, Oren C. Durham, botanist of the Abbott Laboratories, discovered in the course of a week's research cruise back and forth across the ragweed belt in transport planes of the United Air Lines. But despite the presence of pollen in the air outside, passengers within the big cabin planes were safe from sneezes. The pollen concentration inside was practically zero.

Pollen ceilings had previously been reported as varying from 3,000 to 4,000 feet. In this survey the ceiling was found to vary from 4,800 to 9,000 feet above the ground. Heavy concentrations of pollen were found over northern Ohio and Indiana up to about 6,000 feet. Small amounts of pollen were found in eastern Colorado as high as 9,000 feet above the ground. Definite pollen ceilings were found to be marked by cloud layers, whether these layers were continuous or merely consisted of numerous cumulus clouds.

In perfectly clear skies there seems to be no well marked level at which pollen contamination stops. Rain interfered considerably with the study, clearing the air of pollen at certain low levels and hindering exposures part of the time.

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BIOCHEMISTRY

New Vitamin Discovered By Nobel Prize Winner

RECENTLY discovered and synthetically prepared by Nobelist Adolf Windaus and his colleagues at the University of Göttingen is a new vitamin, designated as Vitamin D₃, which has been proven highly effective in preventing rickets in young chicks.

Hint of its existence was given when it was found that purified Vitamin D₂ was less effective in preventing rickets than the tuna fish oil from which D₂ was extracted. This led to the suspicion, confirmed by experiment, that the oil contained another, hitherto unknown vitamin.

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E FIELDS

GEOLOGY

New Hot Springs Area In Yellowstone Park

A NEW area of thermal activity, previously unreported and not included on any previous maps of the region, has been found a few hundred yards back of the grand loop highway system between Norris and Madison Junction in Yellowstone National Park by Superintendent Edmund B. Rogers.

The discovery was made by Superintendent Rogers while on a hiking trip into an adjacent hot springs area. Noting a steam column rising from the side of Paint Pot Hill, the superintendent and his party walked in that direction.

They found a sizable area including a multitude of small nozzles looking like miniature geyser cones. Each nozzle was a steam vent. The basin is unusual, the superintendent said, in that it is covered with white quartz sand. Hot springs in the park are usually surrounded by travertine and geyser basins have floors of silica or geyserite.

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BIOCHEMISTRY

Food Vitamins Unharmful By Freezing Methods

WITH modern canning and cold storage methods there is little or no loss to the vitamin content of foods. In fact in some cases of fruits and vegetables the canned variety may show a higher vitamin content than the usual "fresh" products that the ordinary housewife can buy at the market.

The reason is that, for vitamin C at least, the canned fruits, juices of vegetables are packed quickly at harvest before time permits the oxidation that results in vitamin C losses. The so-called fresh fruits and vegetables, sometimes stored for long periods, gradually lose their vitamin C content and may be inferior, in this respect, to the canned varieties.

Such, in summary, is the finding of Prof. R. Adams Dutcher of Pennsylvania State College. He cited the following as the human needs for vitamins and the known facts about vitamin preservation:

Vitamin A is needed to aid in preventing infection, for normal vision and normal growth. It is preserved by cold storage. Canned vegetables compare favorably, in vitamin A content, with the fresh variety.

Vitamin B₁ acts as a nerve stimulant. It is not destroyed by low temperature storage.

Vitamin B₂ is required for the proper functioning of the gastro-intestinal tract and the maintenance of a healthy skin. Enough is not yet known about it to give evidence on the effects of canning or cold storage.

Vitamin C prevents scurvy, helps the preservation of normal denture and gives strength and elasticity to the blood vessels of the body. Proper canning and proper refrigeration tend to preserve it.

Vitamin D prevents rickets by aiding the proper utilization of calcium and phosphorus in the bones and teeth. It is very stable and presents no preservation problem.

Vitamin E is the antisterility factor in the diet, is stable to heat and is easily preserved at ordinary temperatures.

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SURGERY

Appearances Improved by Plastic Surgery Methods

THE beauty of personal appearance as well as health is a concern of the surgeon now that plastic surgery techniques have improved so remarkably in the years since the World War. Plastic surgery has an esthetic as well as a reparative objective; it remedies the looks and appearances of individuals who enjoy good physical health but are weighed down psychologically by some deformity of appearance.

The deformity may be a flat, hooked, long, crooked or bulbous tipped nose. It may be a turkey gobbler or scrawny neck, a harelip, drooping eyelids, pendulous breasts, adipose tissues on the arms, legs or abdomen. Or it may be ugly scars, the tombstones of injuries. Thick lips, excessive wrinkles, outstanding ears, a receding or double chin, moles or birthmarks can also be remedied by the surgeon's knife.

One of the practitioners of this branch of surgery, Dr. Henry J. Schireson, of Philadelphia, tells in a book, "*As Others See You*", the fascinating details that will interest the layman. He feels that surgery for esthetic and psychological reasons will be as commonplace in another five years as neatness and cleanliness are today.

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PHYSIOLOGY

Ten Bricks of Protein Food As Necessary As Vitamins

WE HAVE heard much about vitamins and the necessity of having them in the food we eat. But did you know that one of the three long recognized food classes, the protein of the famous carbohydrate-fat-protein trilogy, contains substances that are just as essential to growth and life itself?

The amino acids, as they are called, are as essential factors in our diet as the vitamins. And there are more of them. They are the building blocks out of which the proteins of foods—beefsteak, cheese, etc.—are constructed.

For thirty years the relationship of these amino acids to growth has been studied, but since 1930 there has been an extensive push in the laboratory at the University of Illinois presided over by Prof. W. C. Rose.

Until recently there were only three of these compounds that had been shown to be indispensable components of food. Their names were tryptophane, lysine and histidine. Now through patient animal experimentation with foods whose protein content consists of carefully purified amino acids of various kinds, Dr. Rose and his co-workers have a list of ten amino acids finally classified as "essential to growth." They are in addition to the three previously so cataloged: phenylalanine, leucine, isoleucine, threonine, methionine, valine, and arginine.

Dr. Rose classes the other 12 of the known 22 amino acids as non-essentials so far as growth is concerned. Among them is cystine, one of the better-known amino acids, which previously was widely considered an indispensable component of food.

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BACTERIOLOGY

Young Bacteriologist Wins Eli Lilly Prize

DR. JEROME T. Syverton, assistant professor of bacteriology at the University of Rochester in Rochester, N. Y., was awarded the Eli Lilly and Company prize of \$1,000 and a gold medal for the outstanding contribution made during the past year to bacteriology and immunology by an American scientist under 31 years of age. The award was granted in recognition of Prof. Syverton's contributions to knowledge of the filterable viruses. He is 31 years old.

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