

NUTRITION

**Strange Chinese Foods
Rich in Minerals**

THE WAYS OF CHINESE cookery may be strange but they are particularly good in providing calcium and phosphorus in the diet, it appears from experiments at Oregon State College. The results were explained to the American Home Economics Association.

The dish chosen for the tests was a typical Chinese one, it was reported by Pik Van Hoh and Jessamine C. Williams. The dish was pork spare ribs cut in small pieces and cooked in a solution of rice vinegar, soybean sauce, salt, and sugar for one hour at a low temperature.

An individual serving of this dish contains more calcium and almost half the phosphorus required in a day's diet, according to a minimum standard.

Most of the calcium and phosphorus were present in the finished dish, the experimenters concluded, as a result of the acid solution used in cooking, which drew these food elements out of the pork bone.

Science News Letter, July 29, 1933

PHYSICS

**Uncertainty Principle
Extension Under Test**

FAIN T LIGHT may be incapable of forming a distinct image of a very small area.

This extension of the uncertainty or indetermination theory of the new physics is being tested by Prof. John Q. Stewart and Dr. A. M. Skellett at Princeton University in a photographic study. Preliminary results reported in a letter to the *Physical Review* seem to show that scratches on a glass plate are fuzzier in focus when photographed in very faint blue light than when photographed in bright light.

One of the philosophically intriguing consequences of the new wave mechanics in physics is the uncertainty principle of Heisenberg, who in 1927, pointed out that it is possible to measure the exact position of a small particle, such as an electron, only at the expense of uncertainty as to its position. This principle of indetermination has been more disturbing to the older physical concepts than even the principle of relativity.

Three years ago, Prof. Stewart, reasoning by analogy, speculated that this

matter of uncertainty might extend to faint light forming images. Since then he and associates have been carrying out tests.

The source of light is a pinhole in a dark room, the pinhole being illuminated from behind through a blue filter. At a distance of 2.5 meters (about 2½ yards) is mounted a glass slide having numerous fine scratches forming a scale of tenth-millimeters. A sturdy camera photographs these fine markings using only light from the pinhole. Faint light exposures varying from an hour or two up to twelve days have been made and compared with bright light exposures. The faint light exposures show a decidedly more blurred focus than the photographs made with brighter light. The experiments are being continued.

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PHYSICS

**Cosmic Rays Studied
On Himalayan Heights**

STUDY of the elusive cosmic rays which bombard the earth without revealing so far their true nature, has taken an Indian physicist to high ridges of the Himalayas 19,500 feet above the sea.

The mountain climb is part of the world-wide cosmic ray survey organized by Prof. A. H. Compton of the University of Chicago. By gathering data on the intensity of the rays from space as they strike the earth at different altitudes and in different latitudes, physicists hope to learn the character of this radiation.

Reporting his journey, to the *Urusvati Journal* of the Himalayan Research Institute in New York, Prof. J. M. Benade expresses the belief that he has carried the cosmic ray search to a new height record for mountain work. Prof. Benade is professor of physics at Forman Christian College, Lahore. His part in the world survey is to take measurements of rays in Ceylon, Java, Singapore, Penang, Rangoon, Calcutta, Lahore, and at the highest attainable altitudes in the Himalaya.

The physicist and his party made their highest measurements at the mountain pass Lanyar La. Here they pitched an observation tent and spent two days taking readings. An effort to reach a 20,000 foot point of observation was unsuccessful.

Prof. Benade has forwarded his data to Prof. Compton.

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IN SCIEN

SEISMOLOGY

**Earthquake Barrage
Recorded on Seismographs**

A BARRAGE of earthquakes kept the world's seismographs shaking Wednesday, July 19. Records telegraphed to Science Service enabled the U. S. Coast and Geodetic Survey experts to locate the epicenter of the shock just south of the Aleutian chain, off the coast of Alaska, near the international date line and the island of Atcha. Three shocks were definitely located, all originating at about the same place at 5:45.5, 8:32.5, and 9:59.9 a. m. Eastern Standard time.

Complete study of the earthquake records will probably show that other shocks occurred in the same place during the day. The longitude and latitude of the epicenter are 51 degrees north and 174 degrees west. Since the center of disturbance was at sea, no reports of damage were expected.

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PHYSIOLOGY

**Green Lips Tell
How Fast Blood Flows**

GERMAN physiologists have worked out an ingenious method of estimating the velocity of blood circulation, which depends on the peculiar light reaction of the dyestuff fluorescein. The presence of this dye in the blood is indicated by a greenish color of the lips, viewed under pure blue light in a darkened room.

In making a test, a small amount of fluorescein solution is injected into the blood stream, and the number of seconds it takes until the lips shine with the greenish light are noted. The method is being used in the study of various circulatory and cardiac disorders, and also in research on the physiological effects of sports. The minimum circulation time thus far observed has been seven seconds; an average circulation time is approximately twenty-one seconds.

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CE FIELDS

ASTRONOMY

Tiny Planet Identified As Old Friend

THE TINY planet 1933HH, which was discovered April 22 at the Union Observatory, in Johannesburg, S. Afr., is identical with a minor planet that has been known for many years as 192 Nausikaa. Astronomers had been puzzled and wondered how an object so bright had escaped detection.

Observations by Dr. H. E. Wood, of the Union Observatory, on June 1, made it possible to compute accurately its orbit, which showed that it is not a new heavenly body.

The planet is now about ninth magnitude and it is becoming brighter. Moving northward through the constellations of Aries and Perseus, it can be seen in the eastern sky in the early morning. It may become bright enough to be seen with the naked eye before the end of the year, and it will be easily visible with small telescopes.

This planet is one of the numerous family of "asteroids," small bodies a hundred miles or less in diameter, most of which travel between Mars and Jupiter. Nearly 1,500 of them are known to astronomers, but the great majority are never visible except with large telescopes.

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BOTANY

Eel Grass Dying Of Mysterious Disease

EEL-GRASS, a valuable plant of the shallow waters along the coasts, is apparently threatened with extinction on the Atlantic seaboard. A study just completed by Clarence Cottam of the U. S. Biological Survey shows that it is practically wiped out over considerable areas and reduced to a mere remnant of its former abundance in many other places.

Eel grass is not eaten by eels, nor is it a grass. Its long, ribbon green leaves, as it trails in its masses under water, suggest both eels and tall grass, whence the name. It formed an important part

of the food of certain species of geese, ducks and other wild fowl; so much so that after its dying out last year ducks were reported to be dying of starvation. Many lesser marine animals also depended on it for food, so that its passing will affect at least indirectly most of the animal life in the regions where it grew.

It had a direct economic importance for man, too, for it was harvested in considerable quantities for use as packing material, upholstery stuffing and a compost for fertilizer. Furthermore, its disappearance removes a flexible but effective breakwater that used to protect certain shorelines against destructive wave action, so that now erosion is going on more rapidly.

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ENGINEERING

New Italian Method Saves Steel in Buildings

BUILDINGS practically suspended around a central steel structure with no outside posts are now being constructed in Italy according to a plan worked out by the architect Guido Fiorini.

The scheme depends upon a special arrangement of tension members to balance the total weight of the structure about one or more central piers. The advantages claimed for this style of building are, a reduction in weight of the steel used to 70 per cent. of that of the conventional steel skeletons, and a saving of 50 per cent. in building costs due to a reduction in the number of foundations required. In addition, the "tension structure" system appeals to architects of the new school who are now able to design buildings with outside walls consisting almost entirely of glass if they so desire. Wide arcades at the street level are also possible.

Until comparatively recently, steel building construction has lagged in Italy because of the high cost of structural steel as compared with reinforced concrete in that country. A reduction in steel prices, however, together with the invention of the process of fusion welding, have given an impetus to steel construction. The new "tension structure" is a further effort in the direction of popularizing steel buildings. The French are also making use of Fiorini's invention in the development of a section of the city of Algiers.

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NUTRITION

Add Minerals to Milk to Make it Better Diet

A METHOD of adding copper and iron salts and manganese to milk has been developed at the University of Wisconsin by Prof. E. B. Hart and associates. This new treatment makes milk more nearly a perfect food on which man or other animals could live exclusively.

Despite its tremendous food value, it was found several years ago that milk could not be relied on as a sole source of nourishment. Animals fed solely on milk died of anemia. Prof. Hart and associates were among the first to discover that this was because milk was deficient in copper and iron salts, necessary for production of hemoglobin. Manganese has recently been found a necessary element of diet also.

The effect of the milk which has been mineralized by Prof. Hart's new process has been tested on experimental animals and on one of the students at the university. This young man lived for two months on a diet of this mineralized milk. He did not lose weight and he never complained of hunger.

Yorkshire pigs kept on an exclusive diet of this milk and cod liver oil for four and one-half months averaged about the same weight at the end of the period as pigs fed the usual full diet.

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ASTRONOMY

Spanish Astronomer Discovers New Comet

A COMET, presumably new, has been sighted by Prof. R. Carrasco Garrarena of the Madrid Astronomical Observatory, the international clearing house of astronomical telegrams at Copenhagen has been notified.

This Carrasco comet is a tenth magnitude object which should be visible through moderate sized telescopes in the southwestern evening sky just south of the constellation of Virgo and not far from the bright star Spica.

Observatories throughout the world have been notified by cable of the discovery and as soon as other observations of its position and motion are obtained, astronomers will compute its orbit. Then it will be known whether there is a chance that it will be seen with unaided eyes.

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