

## CHEMISTRY

**What Happens Inside a Hot Potato Is Investigated**

**S**CIENTISTS believe they have solved a kitchen mystery—why potatoes grown on dry land cook faster than irrigated potatoes of the same variety.

What happens inside the potatoes while cooking has been investigated by means of a penetrometer, Miss Emma J. Thiessen, of the University of Wyoming, reported to the American Home Economics Association.

Readings of the instrument showed that an irrigated potato when cooked softens throughout at the same general rate of speed. The outer layer of a dry land potato offers greater resistance to softening, but the potato on the whole cooks faster.

Miss Thiessen examined the cell structure of the two kinds of potatoes and found that the larger the cells, the more readily they soften when cooked. The dry land potatoes have notably large cells.

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## GEOLOGY

**"Elephant Eldorado" Mined In Southeastern Oklahoma**

**B**ONES of extinct elephants of Ice Age times have been removed by the ton from several mounds near Eldorado, Okla., by scientists from the University of Oklahoma and Kansas State College. The place is a veritable fossil mine; it has yielded to date seven skulls and many assorted bones, tusks and teeth of the giant Columbian elephant, one of the largest elephant species that ever lived. The total weight of the material removed is about 7,500 pounds.

The scientists who have been concerned in the development of this great "bone mine" have been Prof. J. Willis Stovall, Prof. C. E. Decker and L. I. Price, of the University of Oklahoma, and Seward E. Horner and Russell R. Ballou. The mounds are on a farm belonging to E. K. Webb.

The mounds had long been known to residents in the region, and amateur digging had been carried on in them for many years. But it was not until Prof. Stovall's attention was called to them by Prof. Decker that systematic scientific exploration began. The project has been supported in part by Federal aid funds.

In addition to the numerous elephant

remains, bones of extinct species of camel, horse and bison have been excavated. The bones are all in rather fragile condition, and great care has to be exercised to get the pieces out without further breaking them. The elephants range in age from mature individuals down to young ones from five to seven years old.

Geologic evidence, says Prof. Stovall, indicates that in the days when the elephants ranged the West, this place was a water-hole with a bottom of very soft mud, in which the animals were mired. At present the clays are very hard and tough, breaking out in very irregular blocks.

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## CHEMISTRY

**All "Appetite Vitamin" In World Shown to Doctors**

**T**HE WORLD'S entire supply of synthetic vitamin B<sub>2</sub>, amounting to four grams, or about sixty grains, has been shown to members of the American and Canadian Medical Associations at their Atlantic City meeting.

The precious stuff, seen as brownish crystals in a small flask, was prepared by a pharmaceutical supply house under the direction of Prof. P. Karrer, of Zurich, Switzerland, who discovered the chemical formula for the vitamin from which the crystals were made in the laboratory.

Known as the anti-pellagra vitamin and also as the appetite vitamin, the new material, when available commercially, is expected to be a big aid to worried mothers whose children refuse to eat. A small amount of the synthetic vitamin, it is believed, will stimulate the appetite so that there will be no more difficulty with these children at meal times.

Lack of appetite is only one of many symptoms which scientists believe are due to deficiency of this vitamin in the diet. Others are inflammation of the mouth and tongue, intestinal disturbance, discoloration of the skin and certain skin diseases.

Vitamin B<sub>2</sub> is found in the whey of milk, grains, and certain leafy vegetables. It occurs in such small amounts in these foods that a child or adult with a poor appetite would not be apt to eat enough of the vitamin and the further lack of it further lessens his appetite, thus creating what physicians term a vicious circle.

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**IN SCIENCE**

## FISHERIES

**Oklahoma Catfish Eat Jackrabbits**

**C**ATFISH bite jackrabbits, in Oklahoma.

This is not a result of recent floods in the state's rivers, celebrating a bit too enthusiastically the breaking of the drought. The catfish, which are of the valuable channel cat species, live at a fisheries station, and the jackrabbits are brought to them.

Once a week they get rations of beef liver, and once or twice a week a treat of jackrabbit meat. Employees go out into the brush with shotguns at dusk and easily get enough rabbits for their wide-mouthed charges.

Since Oklahomans like channel catfish, and don't care especially for jackrabbit, the arrangement is satisfactory all around.

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## CHEMISTRY—MEDICINE

**"Colloids" May Aid in Treating Hopeless Cancer**

**T**HE possibility that the "colloid" chemist may be able to play a significant part in the fight against cancer was demonstrated by Prof. E. F. Burton of the University of Toronto at the Colloid Symposium held by Cornell University.

Two patients suffering from cancer in a hopeless stage were apparently cured by having injections into their veins of pure metallic arsenic in colloid form, Prof. Burton reported.

The use of this form of arsenic in treating these cancer patients was suggested by a practising physician of Toronto, Dr. A. C. Hendrick. The arsenic "colloid" was prepared by Prof. Burton by mixing arsenic with water and using some gelatin as a binder to keep the arsenic from precipitating out of the solution. The resulting mixture, in which the tiny particles of arsenic are held suspended in the liquid, even though they will not dissolve in it, is known as a colloid.

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# E FIELDS

## ENTOMOLOGY

### Flashing Fireflies Form "Constellations"

**F**IREFLIES that flash simultaneously in large numbers do not always behave alike. They vary according to species, claims Gerrit S. Miller, Jr., of the U. S. National Museum, commenting (*Science*, June 14) on an explanation offered by John Bonner Buck, of the Johns Hopkins University, for the simultaneous flashing of fireflies over a whole meadow or lawn.

Mr. Miller presents observations made by himself in Jamaica. Here a different firefly species flashes in large groups or "constellations," but these "constellations," though within sight of each other, do not adopt the same flash-rhythm, as observed by Mr. Buck. Instead, each group is a law unto itself for a time. Then a disintegration of the rhythm sets in, and the flashes come wholly at random.

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## PSYCHOLOGY

### U. S. Children Excel In Scientific Thinking

**T**HE CHILDREN of the United States possess a level of scientific thinking superior to that of the young of other countries.

That the scientific tradition in this country has made the thinking of children more logical is the conclusion of Miss Jean L. Marquis, of the Institute of Child Welfare, University of Minnesota, expressed before the American Association for the Advancement of Science.

In Miss Marquis's experiment, 700 children were asked such questions as "What makes the wind blow?" "What causes thunder?" "How is it that airplanes can stay up in the air?"

Investigators in other countries have found that young children think of such matters as governed by some spirit or force. They do not make any attempt at a scientific explanation. Yet Miss Marquis found that even among the 8-year-olds she questioned, only a small percentage, 13 per cent., gave such "pre-

logical" replies. All the others implied a material or naturalistic cause for these phenomena.

The schooling and experience of the child have a lot to do with his outgrowing his babyish, unscientific way of thinking. The adequacy of the children's answers were found to be more closely related to school grade than to intelligence. They improve steadily with age, and are better for the boys than for the girls.

The child does not seem to attain a certain level of reasoning as a result of his maturity and intelligence alone, Miss Marquis concludes. He explains each phenomenon in the light of his experience and training with his intelligence and age acting as limiting factors.

Show the young child of your acquaintance that a candle is extinguished when you put a glass jar over it, and ask him why. You may be surprised at the excellence of his answer.

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## GENERAL SCIENCE

### Dr. Irving Langmuir Elected to Royal Society

**D**R. Irving Langmuir, American Nobel prize winner in chemistry and scientist of the General Electric Company at Schenectady, N. Y., has been elected to foreign membership in the Royal Society.

Foreign membership in the Royal Society is one of the highest honors scientists of the British Empire can bestow on an alien scientist. Foreign members are limited to fifty, throughout the world. The Royal Society received its charter from the King in 1662 and is one of the oldest scientific organizations in the world.

Only seven other Americans besides Dr. Langmuir are listed as foreign members of the Royal Society. They are: Dr. W. W. Campbell, astronomer, Lick Observatory, Hamilton, Calif.; Dr. Simon Flexner, Rockefeller Institute for Medical Research, New York City; Dr. George E. Hale, astronomer, Mt. Wilson Observatory, Pasadena, Calif.; Dr. Thomas Hunt Morgan, geneticist, California Institute of Technology, Nobel Prize winner in medicine and physiology; Dr. Robert W. Wood, physicist, The Johns Hopkins University, Baltimore, Md.; Dr. Henry Fairfield Osborn, paleontologist, American Museum of Natural History, New York City; and Prof. Edmund B. Wilson, biologist, Columbia University, New York City.

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## ANTHROPOLOGY

### Bones Tell of Cannibalism In Ancient Minnesota

**C**ANNIBALISM of a unique form, practised by Indians in Minnesota long ago, has been detected by archaeological investigation. A burial mound at Laurel, Minnesota, revealed this new type of cannibalism. Lloyd A. Wilford, anthropologist, reported the discovery, which was made by a University of Minnesota expedition.

From damage done to many leg and arm bones and skulls, in these burials, Mr. Wilford concludes that the long bones were deliberately crushed near the end to allow the marrow to drain out, and skulls had the lower part of the occiput removed so that the brain could be extracted. Both children and adults were so treated. The bones, which the anthropologist believes to have been stripped of their flesh for cannibalistic purposes, were thus broken to yield additional material before being packed into bundles and buried.

"The purpose of such crushing and breaking," said Mr. Wilford, "was no doubt to secure the marrow fat and the brain for food or for industries such as tanning."

"It is well known that the Indians used animal brains in their skin-dressing operations, and animal grease such as marrow was always welcome for industrial purposes."

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## AGRICULTURE

### "Farm Chemurgic Council" Formed Following Meeting

**A** "FARM Chemurgic Council," designed to promote the use of farm products in industry, has been formed in Chicago following the recent meeting of the Conference of Agriculture, Industry and Science at Dearborn, Mich. Francis P. Garvan, president of the Chemical Foundation, Inc., was elected president of the new organization.

Among the projects to be fostered by the Farm Chemurgic Council are the use of soy bean oil in the paint industry, to replace imported drying oils, and the blending with gasoline of alcohol made from surplus grain and other farm products. It is the hope of the Council that by such means idle acres can be put back into production, supplying American industry with substitutes for raw materials now obtained from abroad.

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