

emy of Science he obtained the diamond slab from a New York diamond cutter for \$400, which is a new high—or low—in professional discounts.

The illustration on the cover of this week's SCIENCE NEWS LETTER shows the diamond resting on top of a cork.

*Science News Letter, November 19, 1938*

## ARCHAEOLOGY

## Vandals Blamed For Loss Of Indian Rock Pictures

**A**MERICA is losing its outdoor art galleries of Indian paintings. Vandals are mainly responsible.

This is the verdict of A. T. Jackson, field archaeologist for the University of Texas, author of a report on "The Picture-Writing of Texas Indians."

Texas is one of the states that can boast thousands of picture-writings, as the Indian paintings and engravings on rocks are generally called. The pictures decorate boulders and cliffsides with primitive figures of fighters, tipis, wild game, trees, and other objects. They are fascinating, not only to the archaeologists, who find them full of information about Indian life and customs, but also to any hiker or other member of the public who happens along.

Unfortunately, many who see the pictures fail entirely to think of them as antiquities, to be protected.

The result:

Visitors, young and old, scribble their names and dates over the Indians' work.

Hunters have been known to take a painted Indian as a target and riddle it with bullets, spoiling a fine example of ancient art.

And vandalism goes farther, Mr. Jackson reports: "It frequently happens that a group of youngsters—and sometimes elders—will carry a can of barn paint for miles across rugged mountains to paint pictures beside, or over, the prehistoric ones. Usually these frauds are easily detected, but often they ruin important primitive pictures."

Even photographers, meaning no harm to the pictures, often chalk the outlines to make them stand out. And this, according to more than one archaeologist, damages the Indian paint or distorts original outlines.

Weather and commercial activities do their share toward the general destruction, but not so much, in Mr. Jackson's opinion, as thoughtless visitors.

One remedy is to include picture rock areas—a few of the larger ones, at least—in national and state parks. Another is to treat carvings with preservatives.

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## PHYSIOLOGY

## Find Unrecognized Hormone That Speeds Metabolism

Produced by Middle Part of Pituitary, It Acts Independently of the Thyroid; Neutralizes Insulin

**A**N UNRECOGNIZED hormone, called "the specific metabolic principle" and produced by the middle part of the pituitary gland, has been chemically dissected from the tiny "master gland" by a research team from McGill University, headed by Prof. J. B. Collip. Associated with Prof. Collip were Drs. D. K. O'Donovan, E. F. Denstedt, A. H. Neufeld and L. W. Billingsley.

The new hormone speeds up the rate at which the body converts food, fuel or energy. This vital process is known as metabolism.

The new hormone stimulates metabolism quite independently of the thyroid gland, Prof. Collip and his associates have found. It does not work by first stimulating the thyroid, as does another pituitary hormone called the thyrotropic hormone. Doses of the hormone injected into rats, rabbit and guinea pigs from which the thyroid glands had been removed increased the metabolic rate

markedly within four hours.

The new hormone has other striking effects. It neutralizes to some extent the effect of insulin, diabetes remedy. Insulin ordinarily lowers the amount of sugar in the blood, but when the new hormone is given, the usual dose of insulin has a diminished effect on the blood sugar. Large doses of insulin, however, are not neutralized.

The new pituitary hormone also exercises some control over the adrenal glands, judging from its effect when given with adrenalin, one product of these glands. Adrenalin's effect on blood pressure is not affected by the new hormone, but the effect on blood sugar is. The amount of sugar in the blood goes up, instead of down, when adrenalin is given.

Prof. Collip described the hormone at the Third International Goiter Conference in Washington, D. C.

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## PHYSIOLOGY

## Chemical Found in Plants Has Effects Like Sex Hormone

Weak Solutions of Trimethylamine Produce Mating Behavior Out of Season in Amphibians; Is Poisonous

**A** WIDELY found organic compound known to chemists as trimethylamine, present in many plants and animals, has been shown to have physiological action like that of a sex hormone by Prof. Laszlo Havas of the University of Brussels. (*Nature*, Oct. 22)

The chemical is highly active, producing marked results in dilutions as weak as one part in 25,000, or even one part in 60,000. Injected into the stems of young tomato plants, half an ounce or so of the solution produced an increase by 22 per cent. in number of flowers.

Frogs placed in a trimethylamine so-

lution moulted their skins and prepared for mating activities, even though the mating season was three months past. Other amphibians similarly treated also showed signs of having their mating instincts roused.

The substance is somewhat poisonous, however, and the treatment had to be discontinued after a few days lest the animals be harmed. The solution also stimulated the growth of plant tumors in tomato stems that were first inoculated with the bacteria that cause plant cancers, and then treated with the 1:60,000 concentration.

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