

● RADIO

Saturday, Jan. 12, 1952, 3:15-3:30 p.m. EST

"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Hart E. Van Riper, medical director of the National Foundation for Infantile Paralysis, and Dr. Jonas E. Salk, department of bacteriology, University of Pittsburgh, will discuss "The Fight Against Polio."

BIOCHEMISTRY

Alcoholics Are Born With Food Needs Hard to Satisfy

► PEOPLE LIKELY to become alcoholics are those born with dietary needs that are hard to satisfy, Prof. Roger J. Williams of the University of Texas declared at an American Chemical Society meeting in Austin, Tex.

"As soon as they begin violating the rules of good nutrition by drinking quantities of alcoholic liquor, deficiencies develop," he said. "These deficiencies stimulate craving for alcohol and a vicious cycle is developed. People who get everything they need nutritionally never become alcoholics."

Animals on the best diets, research at the University has shown, do not drink alcohol. Those on deficient diets always do. This study has been extended to humans with an intense craving for alcohol.

Many have had their craving completely abolished by getting their nutritional needs satisfied so that they need not drink in an uncontrolled manner any longer, Prof. Williams reported.

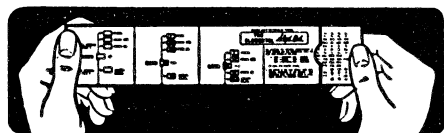
"Even the taste of liquor," he stated, "does not act as a compelling force to make them drink more."

The same idea applies to certain mental diseases, in Prof. Williams' opinion. Certain people are born with metabolic machinery which is susceptible to damage and likely to become deficient as a result of mental stress.

So-called "thick-skinned" persons have systems which are not readily disturbed. They function whether nutrition is ideal or not. Such persons, Prof. Williams said, never have mental disease.

Science News Letter, January 5, 1952

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GENERAL SCIENCE

Botanist Helps Time Death

► A PROFESSOR of botany who could tell the rate of growth of a vine and the season at which it had its growth helped a coroner solve a dead-body mystery, the coroner, Dr. S. R. Gerber of Cleveland, told the American Association for the Advancement of Science meeting in Philadelphia.

The "Time of Death" symposium at which Dr. Gerber spoke was crammed with scientific facts detective story writers and even gangsters would find useful, although it was planned to help law enforcement officials, doctors and the general public in pursuit of justice.

The botany case reported by Dr. Gerber was one in which a tendril of vine was growing through the hair of the corpse when found. The body was nearly completely decomposed. And the validity of a divorce and marriage as well as the disposition of considerable property would be affected, Dr. Gerber knew, by the date of death in this case. So the professor of botany was called in to tell about the vine's growth.

Bacteriologists and entomologists can also

help solve mysteries by correlating chemicals manufactured by putrefying bacteria with the life cycles of insects and larvae invading a body found some time after death.

Specialists in telling the mineral composition, structure and texture of rocks, by analyzing the dirt on a child's clothing and body, were able to rule out the probability of a hit-run accident having killed a little girl found dead of wounds that could have been made by a broken grill of a car.

These and other examples were given by Dr. Gerber of what he calls "associated evidence."

"It is only in the detective stories of fiction," he pointed out, "that the case is solved by one fact alone."

Associated evidence, though not infallible in itself, should be weighed against all other evidence before reaching a conclusion about the time of death. And many branches of science can be used to study and give the meaning of this associated evidence.

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PHYSIOLOGY

Synthesize Firefly Light?

► HOPE FOR being able to manufacture artificially the stuff which makes fireflies glow was seen by Dr. E. Newton Harvey, professor of physiology at Princeton University, in intensive studies now under way there.

He pointed out that Princeton's Dr. H. S. Mason had recently found two types of luciferin in a shelled creature called *Cypridina*. Luciferin is a chemical compound which, when acted upon by the enzyme, luciferase, produces the emission of light which is characteristic of about 40 different animal groups and two plant groups.

These two types of luciferin are being intensely studied in the Princeton biological laboratories. The hope is that this study will lead to a knowledge of luciferin and finally to its synthesis.

Dr. Harvey said, in the annual Sigma Xi lecture before the American Association for the Advancement of Science meeting in Philadelphia, that there appears to be no definite evolutionary trend toward light-producing animals. Sometimes, he said, in higher animals, the photogenic cells which produce the light are surrounded by a reflector, a pigment screen and a lens, forming a complicated lantern. In other light-giving creatures, bacteria supply the source of light. Sometimes the host animal has developed an opaque screen which, like a shutter, controls the source of light.

Light of all colors has been seen in the

various groups of light-emitting animals—red, yellow, green and blue. Some animals have developed lights of two or three different colors, said Dr. Harvey.

The lights are used, in some cases, to attract the opposite sex for purposes of mating, in other cases as a lure in obtaining food, or to scare off bigger fish in search of food for themselves.

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Yosemite Field School

A Workshop in Interpretive Methods

Twenty selected college graduates will have the opportunity to spend the summer in Yosemite National Park under the tutelage of the National Park Service Naturalist Division. They will receive intensive, varied training in the presentation of natural and human history to the public, and in the techniques of interpretation—on nature walks, with children, at campfires. Also considered will be related matter such as museum methods and the use of museum and library materials. Twelve days will be spent in the High Sierra, an opportunity for maturing, exhilarating personal experience. Students pay own expenses, plus modest incidental fee.

Application deadline, February 28.

For prospectus, address:

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