

MEDICINE

**Heart Disease Rarer
Among Animals Than Men**

HEART disease is much less frequent among domestic animals than it is among human beings, declare Dr. H. H. Dukes and H. T. Batt, veterinary surgeons on the Cornell University faculty.

Why this should be so is not definitely known, for the research program is as yet only in its opening stages. However, Dr. Dukes suggested several factors favoring lower incidence of heart disease among animals.

Animals are not addicted to excessive alcoholism, he pointed out; neither are they troubled with venereal diseases. They are not subjected to the same kinds of mental strains and worries that plague modern civilized man.

Above all, he continued, they do not usually grow old. A horse that is no longer able to work, a cow too old to give milk is usually killed. If aged animals generally were kept alive as long as possible, at the expense of their offspring or of the state, there might be more cardiac cases among them.

Dr. Dukes and his associates have also made extensive electrocardiographic studies on dogs and other domestic animals. They find that their heart action, like that of human beings, is stimulated by love, fear, anticipation and exercise.

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ETHNOLOGY

**Roman Bride Wore White,
But Styles Have Changed**

WHAT the bride wore at a wedding in ancient Rome was never written up in a chatty society column.

But it is now reported by an archaeologist, Dr. Lillian M. Wilson, who has been studying the way Romans dressed in their statuary appearances, and delving into remarks of early historians on the subject of clothes.

Dr. Wilson has gone further. She has corralled young students and posed them in togas and tunics cut and draped in authentic Roman manner—to bring ancient fashions to life.

Result of this historic dressmaking is an archaeological report, "The Clothing of the Ancient Romans," brought out at the Johns Hopkins University, wherein Dr. Wilson tells what you may have suspected: that the toga was as inconvenient a costume as could have been devised. Nevertheless, she praises the toga as a beautiful style of dress.

We are told by Dr. Wilson that toga

styles changed. That a toga was considered the only proper dress for a Senator. That Romans had to be prodded into wearing togas by occasional Imperial decree. Frock coat of the Roman era, the toga was supposed to be worn on formal occasions by free-born Romans, even though workers wore tunics for everyday.

And the bride! The Roman bride wore white, but her gown was wool. Her girdle was tied with a Herculean knot. Wedding veil and shoes were deep orange gold.

For luck, the bride's tunic gown must be "woven upwards by those standing," in other words, on an old-fashioned loom.

The bride's hair offers an idea that modern beauty shops have somehow overlooked. It was plaited in six braids and bound around the head. And it was supposed to be parted with a sword! But there archaeology gives up. Exactly how or why the Romans, with very good combs, used a sword for hair-dressing on what must have been so excited an occasion, is hard to explain.

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ANTHROPOLOGY

**Government Bans Voodoo,
But Haiti Clings to Magic**

GOVERNMENT efforts recently to stamp out the Voodoo cult in Haiti, by enforcing laws against it, have resulted only in reducing the ceremonies held publicly.

So the American Anthropological Association was informed when Dr. George E. Simpson, sociologist of Temple University, told of the power witch doctors and magic still hold over Haitian peasants.

Strong belief in magic has been economically ruinous to many peasants in Haiti, he declared. Some witch doctors charge nominal fees for treating sickness and foiling enemies of their customers. But when hougans, as Voodoo witch doctors are called, are unscrupulous, they get what they can. Some Voodoo hougans maintain impressive establishments, with assistants, pupils and servitors.

Neurotic individuals may be helping to keep the Voodoo cult alive in Haiti, Dr. Simpson suspects. Some of the witch doctors who believe they are visited by African gods in dreams and given special powers, may be suffering from epilepsy, hysteria, and paranoia, he said, adding that the whole question needs medical investigation.

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IN SCIENCE

CHEMISTRY

**Varnish Oil From Soybeans
Discussed in Report**

SOYBEAN oil treated chemically so that it will make a good varnish without the addition of other drying oils now becoming difficult to obtain is a new product of research by scientists of the Bureau of Chemistry and Soils described in a report to the Secretary of Agriculture by Dr. Henry G. Knight, chief of the bureau. Varnish manufacturers have shown considerable interest in the new product.

There is promise also of the development of a new plastic for molding purposes from soybean proteins. At present the only commercial protein molding plastics are made from casein, which require a prolonged hardening process. The soybean plastic, it is expected, will be ready for regular handling immediately upon being taken out of the mold.

Bagasse, or fibrous sugarcane waste, may become a new source of print paper, research results already completed indicate. Bagasse is already the material for a successful and widely marketed wall-board.

Among new food products described in the report by Dr. Knight are spice-flavored citrus butter from pulp now largely wasted, jellied grapefruit juice for use in salads, and a new type of refined sorgo sirup quite different from the dark, strong-tasting "sorghum" which many a middleaged man remembers on his boyhood griddle-cakes.

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TECHNOLOGY

**Paper Gas Masks Are
Introduced In Finland**

GAS MASKS of paper have been successfully tested and introduced to the public in Finland.

The main portion of the mask consists of two sheets of kraft paper with a layer of bitumen in between. The kraft paper is cheaper than cloth and also more impenetrable to gases. Another variety of mask uses a cloth exterior and a kraft inner sheet. They do not, however, last as long as the standard cloth variety.

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E FIELDS

BIOLOGY

Self-Sterility of Hybrids Caused By Special Genes

EXPLANATION for the notorious inability of hybrids to reproduce themselves is offered by Dr. Holger Klingstedt of the Zoological Institute. (*Nature*.)

There are special genes or hereditary factors that produce sterility, Dr. Klingstedt states. They are recessives; that is, they have to work in pairs to produce their result. In the reproductive cells of sterile hybrids they are so arranged that such pairing does take place, thereby preventing offspring.

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BOTANY

Plant Growth-Substances Discussed in New Book

SINCE the discovery, a few years ago, that roots can be induced to grow at will on any part of a plant simply through the application of certain chemicals, there has been, besides a good deal of regular commercial application, almost a craze of experimentation on the part of enthusiastic amateurs.

Several leading chemical companies have put the necessary compounds on the market, but a continuing handicap has been lack of suitable instructions in their use. This is now supplied in a compact book, entitled *Plant Growth-Substances*, written in England by Hugh Nicol and published in this country by The Chemical Publishing Company.

The first two chapters only are definitely dedicated to the layman. Chapter 1 tells in simple language what the substances are and the principles on which they operate. Chapter 2 tells how to use the commercial growth-substances in quickening the rooting of cuttings.

From there on, the book "goes technical" in the estimation of the author, although anyone with a moderately good understanding of the freshman course in chemistry can make pretty smooth sailing of it. In any case, many persons will undoubtedly consider the book worth buying for the first two short chapters alone.

Two growth-stimulating chemicals are recommended by the author. The first, phenyl-acetic acid, is by far the cheaper, but the second, indole-acetic acid, is decidedly the more potent and hence can be used in the most dilute solutions. Proportions ranging from 1 to 100 parts of the acid to 100,000 parts of water are recommended.

Treatment of cuttings to induce roots is simple. Immerse the bottom third of the cuttings in the solution, and remove successive thirds after 12, 24, and 36 to 72 hours, respectively. This will establish the most favorable timing for the particular species under experimentation.

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PUBLIC HEALTH

New Disease Discovered By Federal Health Service

A NEW infectious disease caused by Rocky Mountain wood ticks has been discovered by Drs. Gordon E. Davis and Herald R. Cox, bacteriologists of the U. S. Public Health Service. The first recognized human case was that of a member of the staff of the U. S. National Institute of Health. Describing this case in the Public Health Reports, Dr. R. E. Dyer of the federal health service suggests that the new and still unnamed ailment may be the same as "Q" fever, a disease that has been found in Australia, particularly among workers in abattoirs and among dairy farmers.

Gradual onset, mild fever with chills and recurrent sweating and "tender" finger joints are the symptoms reported from the single case of the new American ailment. The patient recovered in about one month. He contracted the ailment while observing research on it in the federal health service's Rocky Mountain spotted fever laboratory in Hamilton, Mont.

The ease with which the infection was picked up in the laboratory plus the fact that the infection occurs naturally in ticks suggests that there may have been other human cases and that the disease may even be widespread, although it has not been previously recognized.

The germ of the disease was discovered in ticks that were being examined for Rocky Mountain spotted fever. The new disease is not the same as Rocky Mountain spotted fever nor is it the same as Colorado tick fever. It can be given to guinea pigs, but no cases have as yet been observed occurring naturally in animals. Blood serum from the one human patient protected guinea pigs from the infection.

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AERONAUTICS

Double-Slotted Wing Flap Slows Landing Speed

DEVELOPMENT of a flap with double slots to increase the lift of an airplane's wings and thus make flying possible at slower speeds was reported to the Society of Automotive Engineers by Carl J. Wenzinger, of the National Advisory Committee for Aeronautics.

Aimed at helping airplanes to get off the ground more easily and to land at safer, lower speeds, the double-slotted flap is the most efficient of the many high-lift devices the government aeronautical research committee has yet investigated, Mr. Wenzinger declared.

At the same time, since it is retractable, it does not seriously increase the drag of the wings at high speed, a defect which has made useless many an otherwise efficient high-lift device.

Studies on the double-slotted flap are being conducted as part of a long-range research program at the N.A.C.A.'s laboratory at Langley Field, Va., to improve the airplane's wings' ability to carry loads. Ten years of research are behind Mr. Wenzinger and his associates; at least as many years, he said, still lie before them.

In commonest use at present is a single flap on the trailing edge, familiar to everyone who has watched speedy pursuit ships or great transports come in for a landing. The double-slotted flap is also fixed on the trailing edge.

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AERONAUTICS

Small Deflector Plate Gives Plane Greater Lift

A SMALL curved deflector plate placed on the leading edge of the familiar airplane wing slots that cuts a plane's landing speed and shortens its take-off run was described before the Society of Automotive Engineers by Richard C. Molloy of the United Aircraft Corporation and Roger W. Griswold, II, aerodynamic consultant.

The new device, tested on a small Fairchild airplane, represents another of aviation's attacks on the problem of designing planes to land more safely and to make existing airports adequate.

The deflector plate makes the slot more efficient in lifting the plane by making the airstream flow smoothly over the flap, the scientists explained. Marked improvement over planes equipped with ordinary slots was observed.

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