Strange Animals—*Cont'd*

high prices from the Chinese, who use the hide and horns of rhinos in medicine, that they were secretive about the business and did not share their knowledge with scientists. Photographs obtained by Dr. Vageler, however, show that the animal is something entirely new to science. No effort has been made, so far as is known, to capture one of these creatures alive.

Java, Sumatra and Borneo, it is possible, may have other interesting animals to offer which are now unknown to science. The natives have some queer legends, and folk-lore quite frequently has a basis in truth. When Dr. Ales Hrdlicka, curator of physical anthropology at the U. S. National Museum, was in Sumatra on the track of ancient man three years ago he was told of a "wild man" who inhabited the jungle fastnesses. Perhaps a rare and odd monkey might have been responsible for these tales.

There is now no specimen in the United States of the wisent, or European bison. This splendid animal, like the North American bison in appearance, was almost wiped out in the world war. At the outbreak of hostilities it was represented by two herds—one in the Caucasus and one in Lithuania. At the beginning of 1914 the two herds numbered about 1500. In 1925 a census showed only 66 of them in Europe—all on private estates or in zoological gardens. A society has been formed for their preservation.

But if one peruses the list of animals that have lived at one time or another in the great zoological garden of London, he will find as far as the mammalia are concerned a most wonderful array of animals named. Certainly few mammals that the layman could name have not been exhibited at some time or other. The pangolin, heavily scaled and almost impossible to keep alive, has been exhibited on numerous occasions. The fossa cat from Madagascar, the aard-vark, the takin, the bandicoot, the pouched Tasmanian wolf, have all been seen there by the public. Each year brings animals new to collections into captivity. The bongo, a wonderful red and white antelope of West Africa, until recently stood preeminent among the list of animals never seen in captivity, but one is now in the zoo at Paris. The nyala is living in Washington, and both St. Louis and San Diego have captive sea elephants.

At the present time many well-known large and (*Turn to next page*)

Prize Research May Help Sufferers

Medicine

Out of the research that won the $1,000 prize of the New York meeting of the American Association for the Advancement of Science, just closed, there may come new treatments for severely burned fire victims, water-logged fat people, and sufferers from diabetes insipidus.

Dr. Oliver Kamm, the research director of the Detroit drug manufacturers, Parke, Davis and Company, who was honored for his paper on "Hormones from the Pituitary Gland," has studied for the past few years one of the smallest and most important organs of the human body.

About the size of a green pea, the pituitary gland is located near the brain, carefully protected and inaccessible. The front or anterior portion of the gland is responsible, when it is overactive, for some giants of the circus and other ungainly, unfortunate individuals whose skeletons have grown abnormally.

Dr. Kamm investigated the back or posterior lobe of the gland, and found two hormones, called alpha and beta, produced by it.

If you could buy these hormones, they would cost you millions of dollars a pound. As it is, Dr. Kamm has been able to produce only a very few fractions of announce. So limited is the quantity that the chemical analysis must be performed under the microscope and the pituitary glands of 50,000 cattle must be used to obtain enough hormones for a single laboratory experiment.

The alpha hormone promises the women of the world some relief from the pains of childbirth, as it aids that process. At present its cost price, at the rate of $3,000,000 a pound, prevents practical use.

The beta hormone has the important function of controlling the utilization of water in the tissues of the body. Dr. Kamm has been able to classify individuals as "physiologically wet" or "physiologically dry."

"Some individuals, the physiological wets, are (*Turn to next page*)

X-Ray Evolution Study

Biology

Money in excess of $25,000, a loan of $40,000 worth of radium, together with other facilities are now available for studies on the effects of X-rays, radium rays and other forms of radiation on living organisms. Announcement to this effect has just been made by a special committee of the National Research Council, headed by Dr. W. C. Curtis of the University of Missouri, through the agency of Science Service. The committee desires that qualified research workers who have problems in hand falling within the scope of the present program should get in touch immediately with the Division of Biology and Agriculture, National Research Council, 21st and B streets, Washington, D. C.

The funds now available, the committee states, are only the results of the first canvass of the field of possible donors; more may be expected later. The whole period provided for will extend over five years. It is expected that the applicants who qualify will be connected with universities or research institutions, which will continue to pay their salaries, and will also provide general laboratory facilities for their research. The expenditures from the fund will be used only in prosecution of special problems of research. (*Turn to next page*)

Anti-Evolution Protest

General Science

Protesting against all legislation and administrative interference with the presentation of the facts and theories of science, deploring the anti-evolution laws now on the statute books of three states, the American Association for the Advancement of Science and the American Association of University Professors, the two representative societies of science and education, announced in resolutions a fighting attitude against present and further encroachments upon the freedom of science and teaching.

At the November elections Arkansas passed an anti-evolution law by a large popular vote. Tennessee and Mississippi had previously placed a ban on evolution, and even more powerful in some cases are the unwritten prohibitions that many institutions impose upon teachers with loss of their jobs as the penalty.

This growing menace caused the scientists and educators to emphasize the basic principles of free and untrammeled teaching and plan steps toward a reformation.

The special committee of scientists, empowered with the delegated authority of over 20,000 scientists and over fifty scientific organizations, consisted of Prof. Edwin G. Conklin of Princeton, Prof. S. J. Holmes of the University of (*Turn to next page*)

Prize Research—*Continued*

extremely sensitive to the action of the beta hormone," Dr. Kamm said in explaining his work. Others readily return to normal after administration of the hormone, and they are the physiological drys.

"The fleshy type of individual is almost invariably of the wet type, whereas the slender, scrawny individual is usually a dry. The suggestion is therefore made that we have here possibly one of the important explanations why the former is fleshy and why the latter fails to put on weight readily in spite of an excessive intake of food and water.

"It is apparent that the portly person who is desirous of reducing must cut down on his liquid intake, as well as on his intake of solid food. As for the scrawny person, gland therapy may possibly be indicated, but here the work is still in the investigative stage and conclusions cannot be drawn."

Since the beta member of the "pituitary twins" affects the body's water content, it may prove useful in the treatment of severe burns which produce their damage by dehydrating the tissues of the body. Diabetes insipidus, characterized by disturbed water conditions of the body, may be better understood and treated through the use of the beta hormone when its cost is reduced to a price much less than its present value of three million dollars a pound.

The post-pituitary hormones are very similar in chemical behavior in spite of their different physiological action. One of the effects that is produced with equal facility by either of them is the increasing of the sugar content of the blood to counteract, for example, an overdose of the hormone, insulin, which science gave the world only a few years ago as a treatment for diabetes mellitus.

Science News-Letter, January 12, 1929

Strange Animals—*Cont'd*

striking animals easily obtainable are not exhibited in the United States on account of the quarantine laws. These animals are practically all hoofed species, inhabitants of regions subject to communicable diseases which must not be brought into the United States because of the great risk of infecting our domestic animals here. A single case of the foot and mouth disease imported by the tiny mouse deer would cause a loss of millions of dollars. From regions in which these diseases occur animals cannot be imported, and so at the present time our collections all lack such specimens as the big-horned gower and the goyal and their small relative the banting (a tiny buffalo of the East Indies), the four-horned deer and the musk deer, the dainty chevrotain of West Africa, and the curious Andean deer.

Science News-Letter, January 12, 1929

Anti-Evolution—*Cont'd*

California. Dr. Henry Fairfield Osborn, president of the American Museum of Natural History; Dr. R. A. Millikan, president of the California Institute of Technology and newly elected president of the American Association for the Advancement of Science, and Dr. J. C. Merriman, president of the Carnegie Institution of Washington.

"We deplore all efforts to restrict the freedom of teaching and learning in science," the resolution stated. "We deplore such action first because evolution in some form is accepted by practically all competent men of science the world over, and second, because the idea of evolution has so profoundly influenced the thinking of mankind in biology, psychology, ethics, social science and philosophy that no one can pretend to have a liberal education who is ignorant of its grounds and import. We deplore these measures also for a deeper reason, which should appeal to all Americans of whatever creed who believe in intellectual and religious liberty whether they accept or reject the theory of evolution, namely, that such restrictions constitute a violation of a fundamental principle of freedom essential to all progress. What is taught as science should be determined by qualified experts in their fields rather than by popular vote."

Science News-Letter, January 12, 1929

The Biology of Fear

Medicine—Psychiatry

WILLIAM S. SADLER in *The Truth About Mind Cure* (McClurg):

Fear is biologic. The tendency is inherent. It is easy to implant in the mind of a young child. It grows luxuriantly and flourishes extraordinarily, and if it is not counteracted by the diligent cultivation of faith, comes finally more or less to possess the mind and soul of its victims. If the individual happens to be the possessor of an inherent wobbly nervous system and has not been blessed with mental discipline and nerve training in his younger years, then he is well on the road to becoming a lifelong sufferer from fears, phobias, and other imaginary dangers and delusions.

We know that savage races and primitive peoples are fear-ridden. The Zulus and the Hottentots, as well as other aborigines, are slaves to fear and superstition, and yet, who ever heard of a Hottentot having "nervous exhaustion" or a Zulu being afflicted with "brain-fag"? If these simple people worry so much and are so constantly exercised by fear, why do they not suffer more from "nerves"? The answer is simple. Fear alone will seldom cause a nervous breakdown. The mischief-making combination is fear plus concentration. It is spasm of the attention that does the wicked business.

Before fear can injure your health very much you have to go to school—attend college—and learn the civilized art of a high degree of mental concentration. It is the better educated individual who has mastered art of concentration and who is so unfortunate as to concentrate his well trained mind on a disastrous fear-thought; it is such a combination of fear and continuous concentration that constitutes worry, and worry is nothing more nor less than chronic fear—spasm of the attention.

This is the explanation of why uneducated races and undisciplined minds can indulge in constant fear of all the phenomena of nature and live lives of perpetual anxiety, and yet be strangers to the nervous disorders which afflict the modern civilized races.

Science News-Letter, January 12, 1929

X-Ray Fund—*Cont'd*

The field which the new fund will help to develop was opened up only recently by a number of widely scattered and independent workers, who discovered, almost simultaneously, that pronounced changes can be produced in the hereditary nature of animals by subjecting their reproductive cells to bombardments of powerful radiation. Evolutionary changes of certain types have been speeded up over a thousand per cent. in some of the experiments.

Science News-Letter, January 12, 1929