

ANIMAL PSYCHOLOGY

"Gentled" Baby Rats Stand Stress Better

► BABIES WHO get T.L.C. (tender loving care) probably will be better able to stand stresses and less likely to develop heart trouble, high blood pressure or stomach ulcers when they grow up than babies not so gently handled. Studies in which baby rats were "gentled" for a few minutes every day seem to show this.

The studies were reported by Dr. Otto Weinger of the University of Toronto at the meeting of the American Association for the Advancement of Science in Boston.

The gentling consisted of holding the rat nestled in the scientist's hand close to his chest and stroking its back from the head to base of the tail.

These gentled rats gained more weight, their bones grew more and they were less fearful in a strange situation. When put under severe stress as adults, including being held immobile and without food or water for 48 hours, the gentled animals showed less damage to heart, blood vessels, stomach and intestines than the non-gentled ones.

Dr. Weinger explains the relative immunity to stress damage in the gentled animals as due probably to a decreased ACTH output from the pituitary gland, with consequently less release of hormones from the adrenal glands. The non-gentled rats showed heavier adrenal glands following stress than the gentled ones, bearing out this explanation.

A fundamental change in the relation between the thinking part of the brain and the part related to emotions apparently occurred in the gentled rats, resulting in a major change in the way the hypothalamus responded to alarming stimuli, he suggests. As a result, there was a reduction or blocking of massive sympathetic nervous system signals in response to alarm and consequently a decreased ACTH output from the pituitary.

Science News Letter, January 2, 1954

DERMATOLOGY

Shave and Haircut Takes 427 Days of Man's Life

► THE TIME spent on shaving and haircuts takes 3,400 hours, or 427 working days, of the lifetime of the average American male, Dr. E. J. Van Scott of the U. S. Public Health Service's National Institutes of Health, Bethesda, Md., has calculated.

Dr. Van Scott called this time devoted to removing keratin from the skin in his report to the American Academy of Dermatology and Syphilology, meeting in Chicago.

Keratin is the substance that covers the entire surface of the body, is mostly thinner than tissue paper, and includes the hair and nails.

"How much time the average American woman spends on the decorative arrange-

ment of her scalp keratin is hazardous to estimate," Dr. Van Scott said.

The keratin layer on the skin surface forms a natural barrier against bacteria. Lately, Dr. Van Scott said, there appears to have been an increase in skin irritations coincident with the use of soaps and detergents that attack the structural integrity of the keratin layer.

The amount of skin trouble caused by these synthetic detergents, sometimes called soapless soaps, is probably not much greater than that caused by strong, old-fashioned soaps, in the opinion of another dermatologist, Dr. George E. Morris of Boston. However, he likewise reported that they are one of the causes of housewives' eczema and may cause dryness, scaling, water blisters or secondarily infected sores of the hands. Soda clerks may be affected, he said, by the detergents used for cleaning glassware and dishes.

Some relief for these detergent-caused skin troubles may be had from silicone creams and ointments now on the market, Dr. Frank W. Crowe of the University of Michigan, Ann Arbor, Mich., reported.

The silicones are inert, water-repellent agents, he explained. At present they are thought to be the best protective material available for skin troubles caused by water and water-soluble products.

Science News Letter, January 2, 1954

INVENTION

Electronic Gunsight Gets Patent After 11 Years

► A STABILIZED electronic gunsight for airplanes has received its patent after an eleven-and-a-half-year wait.

Probably a forerunner to the still-secret sight that gave United Nations' pilots a great advantage over MIG pilots in Korea, the "stabilized tracking and fire control system" was held up from May, 1942, until now because of its military value.

The device is an improvement over other gunsighting devices which work well under "smooth" flying conditions, but which are not effective in high-speed maneuvers or when flying conditions are poor.

It uses gyroscopes, similar in principle to the string-walking variety that children play with, to feed gunsighting information into its computer. The target dimension, the indicated air speed of the craft, altitude of the craft, present position of the target relative to the craft, and the rate at which the target is changing its position relative to the craft, are all fed into the computer along with gun azimuth data. Then the guns can be aimed to riddle a future position of the target with bullets.

The device was invented by Carl G. Holschuh, Glen Head, N. Y., Edmund B. Hammond Jr., and Walter T. White of Brooklyn, N. Y. The device received patent No. 2,660,793, assigned to The Sperry Corporation.

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IN SCIEN

PALEONTOLOGY

Prehistoric Mexicans Stoned Elephants

► A STRANGE fossil find in Mexico that may be evidence for a stoning to death of elephants by prehistoric Americans is reported by Dr. Helmut de Terra, Columbia University geologist, discoverer of Mexico's famous Tepexpan Man who lived 11,000 years ago.

Two pairs of elephant tusks, perfectly preserved, were excavated from a pocket in a pumice sand quarry, along with bones of camels, horses, bison, birds, carnivores, rodents and other animals. Above and below the elephant tusks, which were matching and perfectly preserved, were boulders. Some of the other bones were broken up, as though human beings had eaten the flesh that once was upon them.

Dr. de Terra suggests in his report to *Science* (Dec. 18, 1953) that the larger animals were slain by prehistoric men catapulting the boulder down upon the beasts bogged on a lake shore. No human skeletons, tools or old campfires were found in the area to verify the impression that early man was actually responsible, but he suggests that further finds may clear up the mystery.

The new find was excavated by the same scientists of the National Institute of Anthropology and History of Mexico, Luis Aveleyra, M. Maldonado-Koerdell and Arturo Romano, who made earlier excavations of a mammoth and human artifacts in the region where Tepexpan Man was found.

Science News Letter, January 2, 1954

MEDICINE

Mold Remedies May Change Heart Rhythm

► A HINT that aureomycin and perhaps other antibiotics, or so-called mold remedies, may affect the rhythm of the heart beat appears in studies reported by Drs. Paul A. Harvey and Wei Yang of San Francisco State College to *Science* (Dec. 18, 1953).

Frog and turtle hearts, isolated from the animals' bodies, showed rhythm changes when treated with aureomycin, they found. Contractions of the heart muscle were first augmented and then retarded under the aureomycin treatment.

Whether this and other antibiotics have a similar effect on human hearts is not reported by the California scientists who point out that information on this is "very meager, despite the hazards involved in their therapeutic use without this knowledge."

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CE FIELDS

GENERAL SCIENCE

Duane Roller Is Named Editor of Science Journal

► DR. DUANE ROLLER, physicist, has been named editor of *Science* and the *Scientific Monthly*, published by the American Association for the Advancement of Science.

The position has been filled temporarily for several months by Dr. Bentley Glass, professor of biology at the Johns Hopkins University.

Dr. Roller has been assistant director of Hughes Aircraft Research and Development Laboratories in California, and he has taught physics at the University of Oklahoma, Hunter College and Wabash College. He founded and for 15 years was editor of the *American Journal of Physics*.

He is a member of the governing board of the American Institute of Physics and a member of the board of trustees of SCIENCE SERVICE.

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AERONAUTICS

Rockets May Whisk Freight Across Oceans

► TODAY'S GUIDED missiles may shed their military armament in the "peaceful future" to become economical freight carriers over long distances, Lt. General D. L. Putt, commander of the Air Force's Air Research and Development Command, reported to the American Rocket Society meeting in New York.

Speaking on "Long Range Applications of Rocket Power," Gen. Putt said the missiles, guided and unguided, already are finding their places in scientific research. He said the commercial and civilian possibilities for them are legion.

As early as 1931 an Austrian engineer made several successful "mail deliveries" to remote areas by rocket. This sparked the imaginations of inventors for a while, but little has been heard of such schemes in recent times, he reported. Nevertheless, Gen. Putt said it may become possible to move not only mail but freight across continents or oceans by rockets traveling at "terrific" speeds and at low costs.

Gen. Putt also told the rocket engineers he foresees the day when the guided missile will replace the bomber airplane, relegating the latter to a mere logistical vehicle. In the same spirit, guided rockets will replace anti-aircraft batteries.

"Spectacular" German rocket projects were discovered by the Allies at the close of World War II. Among them was the "Natter," a piloted rocket interceptor de-

signed to go straight up to seven miles altitude in 60 seconds, he said.

However, Gen. Putt reminded the engineers that the Russians captured great masses of technical data from Germany just as America did after the war. Knowledge of Russia's current position in the field of rocketry is "quite limited."

"There is little doubt that the Soviets are pursuing their missile program with equal vigor and success, using some of the foremost German experts to help them try to outdevelop and outproduce us," Gen. Putt added.

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PSYCHIATRY

To Certify Doctors as Mental Hospital Heads

► LATEST STEP taken by the American Psychiatric Association to raise standards of treatment and care of mentally sick persons is to set up a committee to certify "qualified mental hospital administrators."

The Committee will conduct examinations periodically and issue qualification certificates to successful applicants. The object is to help insure that the chief executives of mental hospitals shall not only be physicians adequately trained in psychiatry, but that they shall also be skilled in business and personnel management, community relations, budget control, procurement and other essential administrative techniques.

Ever since 1844, the Association has maintained that the chief executives of mental hospitals must be physicians specialized in psychiatry. The Association regards as unsound proposals to separate "administrative" from "medical" responsibility in the hospital, with corollary suggestions that doctors should confine themselves to medical matters only. It believes that all mental hospital operations bear a direct relation to the progress of a patient, and accordingly, that only a physician may assume total responsibility for them.

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WILDLIFE

Missing Rare Cranes Land at Texas Refuge

► THREE MISSING whooping cranes have landed at the Aransas National Wildlife Refuge in Texas, bringing the total number of cranes to 24, a gain of three over last spring. (See SNL, Dec. 5, 1953, p. 365.)

The three missing birds were photographed in Saskatchewan, Canada, in November when 21 birds had already landed at the refuge. Since that time, no authentic report of the birds had been heard.

Richard E. Griffith, biologist in the refuge division of the Fish and Wildlife Service, said that no further information on these whooping cranes was available.

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ASTRONOMY

Name Asteroid for Planetarium Designer

► THE DESIGNER of most of the big planetaria in use in the United States, Dr. Walter Bauersfeld of Oberkochen, Wurttemberg, Germany, has a minor planet named in his honor, Dr. Paul Herget of the Cincinnati Observatory has announced.

Planetaria are elaborate projection devices by which images of the stars and planets visible to the naked eye are projected upon a large dome, giving the audience seated below a realistic effect of the night sky. They can reproduce the skies as seen from almost anywhere on earth at any time in the past, present or future.

Dr. Bauersfeld, who will be 75 on Jan. 23, 1954, is now at the Zeiss-Opton works in Oberkochen. Until World War II, all planetaria were made in Germany, but some have now been made in the United States.

The minor planet, or asteroid, now named for Dr. Bauersfeld was discovered by Dr. K. Reinmuth of Heidelberg, Germany, on Jan. 13, 1940, and was previously known only by its number, 1553.

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FORESTRY

Lightning, Drought Bring Fires to National Parks

► LIGHTNING AND drought combined in 1953 to give National Park Service firefighters a hazardous and busy time, Conrad L. Wirth, director of the park system, reported to Secretary of the Interior Douglas McKay.

More lightning-caused fires struck the national parks in 1953 than in any previous year for which there are records, Mr. Wirth said. A bright side to the forest fire picture was a drop in the relative number of man-caused fires.

Lightning without rain started 32 fires in a three-day period at Yosemite National Park during September. Rangers and special crews in Yellowstone Park during the summer found themselves fighting 30 fires at one time, Mr. Wirth said.

A total of 14,700 acres of park land was burned. Of this, 6,200 acres were forested and the remainder was brush land.

Half of the man-caused fires were started by park visitors. Mr. Wirth said that without greater caution from the public during the drought the fire conditions would have been much worse.

In fighting the fires, the park service used Indian crews which were transported by air to the worst fires. At the height of a Yosemite fire, one Indian was heard to remark, "Let's give the country back to the white men."

The total number of fires last year was less than average. Mr. Wirth said that public education on the danger of forest fires was responsible for the decline.

Science News Letter, January 2, 1954