

## OF THE WEEK

leakey's new skull	324
the moon's liquid center	324
a time-reversing universe	325
foster mother for turkeys	325
water quality standards	326
air degradation forbidden	326
albert lasker awards	326

## NOTES

behavior	323
earth sciences	323
astronomy	330

## ARTICLES

corporal punishment	332
---------------------	-----

Cover: Caning and paddling of school-age children are still used in the educational system. But some behavioral scientists say corporal punishment is not only ineffective but physically and psychologically harmful. See p. 332. (Wood cut: Culver Pictures Inc.)

<b>Publisher</b>	E. G. Sherburne Jr.
<b>Editor</b>	Kendrick Frazier
<b>Aerospace</b>	Everly Driscoll
<b>Behavioral Sciences</b>	Robert J. Trotter
<b>Earth Sciences</b>	Louise A. Purrett
<b>Environment</b>	Richard H. Gilluly
<b>Medical Sciences</b>	Joan Arehart-Treichel
<b>Physical Sciences</b>	Dietrick E. Thomsen
<b>Copy Editor</b>	Nadine Clement
<b>Assistant to the Editor</b>	Esther Gilgoff
<b>Production Manager</b>	Davida Daemon
<b>Books</b>	Margit Friedrich
<b>Circulation Manager</b>	Lawrence Cope
<b>Advertising</b>	Scherago Associates, Inc. 11 W. 42nd St., New York, N.Y. 10036 Fred W. Dieffenbach Sales Director

Copyright © 1972 by Science Service, Inc., 1719 N St., N.W., Washington, D.C. 20036. Reproduction of any portion of SCIENCE NEWS is strictly prohibited.

Subscription Department  
231 West Center Street  
Marion, Ohio 43302

Subscription rate: 1 yr., \$10; 2 yrs., \$18; 3 yrs., \$25. (Add \$2 a year for Canada and Mexico, \$3 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code.

Printed in U.S.A. Second class postage paid at Washington, D.C. Established as Science News Letter ® in mimeograph form March 13, 1922. Title registered as trademark U.S. and Canadian Patent Offices.

Published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255). Cable: SCIENSERV.

november 18, 1972

# behavior

## A get-sober pill?

Researchers at the Tucson Veterans Administration Hospital have been able to reduce intoxication time in rats by administering harmless chemicals. C. D. Eskelson reported at a recent regional meeting of the American Chemical Society that injections of vitamin B<sub>3</sub>, and vitamin B<sub>5</sub> with cystine, were successful in lowering the intoxication time of rats. Glycerinaldehyde, however, was effective when ingested, and sodium acetate (still untested orally) is expected to be even more effective. A pill having the same effects—speeding up the body's use of alcohol—would be something a party-goer could take before driving home. The Ceres Company of Holland, Mich., is testing a pill containing dried yeast, vitamin B<sub>1</sub>, B<sub>2</sub> and niacin. In experiments with intoxicated humans, the pill is reported to have produced relative sobriety within 30 minutes.

## Hyperkinetic adult

The hyperkinetic syndrome has been assumed to be a juvenile condition. Eugene Arnold, Donald Strobl and Allen Weisenberg of Ohio State University now report the condition in an adult. In the Nov. 6 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION they discuss the case history of a 22-year-old hyperkinetic male. With this adult, as with hyperkinetic children, the paradoxical effect of amphetamines was evident. Normal subjects taking these drugs tend to feel higher and more irritable or anxious. This subject, on dextroamphetamine, became almost anxiety-free, the researchers say.

## Physicians and marijuana

Many studies of marijuana use have concentrated on the younger segments of society. Martin R. Lipp and Samuel G. Benson of the Stanford University Medical Center now report on marijuana use among physicians. They questioned 1,314 physicians (chosen at random from four geographical areas) and found that 37 percent had been exposed to the drug, 25 percent had used it and 7 percent were currently using it. In general, the researchers found that experience with cannabis varied with age and location. "If medical authorities cannot convince physicians to refrain from trying or using marijuana, convincing the public at large seems unlikely," the researchers conclude in the November AMERICAN JOURNAL OF PSYCHIATRY.

# earth sciences

## Artificial clouds

One of the effects of Alaska's cold climate is a troublesome phenomenon called ice fog. In the winter months when the sun is low and skies are clear, the ground loses infrared radiation steadily, producing rapid cooling. This cooling, say K. O. L. F. Jayaweera and Takeshi Ohtake of the University of Alaska, creates a strong temperature inversion with ground temperatures as low as minus 40 degrees C. In places where human activity produces large amounts of water vapor, ice fogs form and may persist for days.

The two researchers found that under proper conditions an artificial cloud can be formed in a cloudless atmosphere at temperatures below 0 degrees C. by seeding with dry ice. They theorize in the Nov. 5 SCIENCE that such artificial clouds could be used to inhibit radiative cooling of the ground and thus prevent ice fogs.

## NH in the stratosphere?

The possible effects of nitrogen compounds from supersonic aircraft on the earth's stratospheric ozone shield has been a source of great concern.

While testing a spectrophotometer they had built to study stratospheric ozone, A. W. Brewer, P. A. Davis and J. B. Kerr of the University of Toronto discovered that some unknown substance in the stratosphere was absorbing certain wavelengths of light. It turned out that these were the wavelengths absorbed by nitrogen hydride (NH). The researchers concluded that there is a layer of NH in the stratosphere at a height of between 40 and 50 kilometers. The amount of radiation absorbed varies with time and from place to place. The three physicists write in the Nov. 3 NATURE that they cannot tell yet where the NH came from and how much there is of it.

## Warm vs. cold

Oxygen isotope analyses of two new Caribbean sediment cores, added to those previously gathered from the Caribbean and Atlantic, have enabled Casare Emiliani of the University of Miami to construct a record of past temperatures more complete than previous ones. He concludes in the Oct. 27 SCIENCE that the refined curves demonstrate that intervals of temperatures as high as present ones are "wholly exceptional episodes" in the past million years. Duration of temperature cycles varies from 40,000 to 70,000 years.

323