

PUBLIC HEALTH

Broken Pods Dangerous

Broken peanut pods contain a large amount of poisonous aflatoxins which caused liver cancer in animals and killed turkey poults in England.

► BEWARE OF broken peanut pods, researchers on dangerous peanut mold warn peanut processors.

Three Texas scientists reported in *Science* 148:1228, 1965 that aflatoxins, produced by the mold *Aspergillus flavus* Link, are not found in peanuts with undamaged pods, but that visibly damaged kernels from broken pods contain a large amount of the poison.

Since 1960, when a large number of turkey poults in England died of specific mold-caused toxins, later identified and named aflatoxins, the U. S. Department of Agriculture has been promoting special research to safeguard our country from the danger of aflatoxins getting into food for animals or humans. Liver cancer in animals in England has been attributed to aflatoxin, *SCIENCE SERVICE* reported in 1961.

Only a small proportion of the peanut kernels in a crop is damaged by molds, but the USDA, the peanut industry and the Food and Drug Administration are cooperating to eliminate contaminated peanuts from the market.

Samples of shelled peanuts, peanut meal and peanut butter are being analyzed for the presence of aflatoxin by six laboratories in the eastern and southern parts of the U.S. The USDA's Consumer and Marketing Service is responsible for the inspection and testing of peanut butter purchased for needy

families and school-lunch programs, and for testing samples of the Commodity Credit Corporation peanut stocks.

To date, *SCIENCE SERVICE* learned, analyses have been made on 1,400 samples of peanut butter, 2,800 samples of shelled peanuts and 200 samples of peanut meal.

The USDA modified its 1964 peanut price support program to control the quality of peanuts marketed for edible use. Extensive chemical tests have been made on various grades and qualities of peanuts during the current year to check on aflatoxin. As a result of these tests, manufacturers have rejected less than one-tenth of one percent of the better quality of peanuts marketed for edible use.

The report in *Science*, which covers only one of many types of research going on in this country, was co-authored by Lee J. Ashworth Jr., who was in the plant sciences department, Texas A&M University, College Station, Tex., when the research was done, but who is now with the U.S. Cotton Research Station, Shafter, Calif.

Also collaborating in the research were H. W. Schroeder of the market quality research division, Agricultural Research Service, USDA, College Station, and B. C. Langley, Texas Agricultural Experiment Station, Stephenville.

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PUBLIC HEALTH

Cleaning Agents Harmful

► TOOTH POWDERS as well as the cleansing agents used to scrub pots and pans may bring severe respiratory problems to the unknowing persons who have used them over the years.

This "cleaning powder" disease is known as crystallosis. Salt crystals from the dust of the cleansers are deposited in the body tissues of persons who have breathed or swallowed these substances during a long period.

The crystals are so small that they can be detected only when tissue specimens are examined under a polarized-light microscope, Dr. Hobart A. Reimann, professor of medicine at the Hahnemann Medical College and Hospital, Philadelphia, told the National Tuberculosis Association and the American Thoracic Society meeting in Chicago.

In a study to determine the effects of these crystals Dr. Reimann fed a group of rats tricalcium phosphate, a main ingredient of denture cleaners and pulverized sand, the principal component of kitchen cleansers.

He found that the crystals from both substances penetrated the intestine and became deposited in organs throughout the body. Even the heart muscle of the rats became inflamed.

"These observations," he said, "raise questions as to the possible danger of the continuous exposure of people for years or decades to many artificially pulverized insoluble substances."

However, Dr. Reimann pointed out that the danger to normal persons appears small, although those with sensitive tissue may be more susceptible.

Other substances, such as talc, asbestos and even snuff are possible sources of dust diseases of the respiratory tract, the physician said.

However, he cautioned that except for asbestos, no relationship between crystallosis and cancer has been found in humans or animals.

Dr. Thelma Ducanes was co-author of the report.

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General Dynamics Company

ASHERAH—Named for a Phoenician sea goddess, Asherah can descend to a depth of 600 feet and moves at speeds up to four knots. She will be used primarily to study the complexities of working in a submarine.

OCEANOGRAPHY

Two Man Submarine To Study Ocean Floor

► THE ASHERAH, a two-man submarine built by the General Dynamics Company of Groton, Conn., will be used to explore the sea floor off parts of the New England coast.

Dr. John T. Conover, assistant research professor of oceanography at the University of Rhode Island, will attempt to survey the density and locations of plants up to 140 feet deep.

Dr. Robert L. McMaster, associate professor of geological oceanography, who conceived the project, said he also wants to explore the underwater hills, valleys, and other topographical features of the area.

The submarine has six viewpoints which allow observation forward, downward and to the sides.

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TECHNOLOGY

Collapsible Ladder Could Be Stored on Ship

► A NEW BOARDING LADDER for ships, collapsible for compact storage on deck but automatically becoming rigid when thrown overboard, is on the market.

The ladder, tested for a pull of one ton, comes in varying lengths up to 40 rungs. A six-foot ladder collapses to a unit five inches high and sixteen inches long, and weighs 11 pounds.

In use, each rung locks under its own weight and remains rigid until self-locking studs are unlocked. It is a product of Antifyre Ltd., London.

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